

BOOK OF PROCEEDINGS

II International Congress on Interdisciplinarity in Social and Human Sciences

11th - 12th May 2017



Research Centre for Spatial and Organizational Dynamics
University of Algarve
Faro, Portugal

TECHNICAL INFORMATION

Proceedings of the II International Congress on Interdisciplinarity in Social and Human Sciences

11th - 12th May 2017

University of Algarve, Faro, Portugal

Editors: Saul Neves de Jesus and Patrícia Pinto

Publisher:

CIEO – Research Centre for Spatial and Organizational Dynamics

University of Algarve

Gambelas Campus, Faculty of Economics, Building 9

8005-139, Faro

cieo@ualg.pt

www.cieo.pt

Editing, Page Layout and Cover:

Marlene Fernandes

CIEO Secretariat

Organizing Commission:

Saul Neves de Jesus, University of Algarve (Chair)

Patrícia Pinto, University of Algarve

Alexandra Gomes, University of Algarve

Joana Santos, University of Algarve

João Viseu, University of Algarve

Julietta Rosa, University of Algarve

Marlene Fernandes, University of Algarve

NOTE:

Please take in consideration that the articles language published in this issue correspond to the original version submitted by the authors.

ISBN: 978-989-8472-82-3

INTRODUCTION

Interdisciplinarity is the main topic and the main goal of this conference.

Since the sixteen century with the creation of the first Academy of Sciences, in Napoles (Italy) (1568), and before that with the creation of the Fine Arts Academies, the world of science and arts began to work independently, on the contrary of the Academy of Plato, in Classical Antiquity, where science, art and sport went interconnected. Over time, specific sciences began to be independent, and the specificity of sciences caused an increased difficulty in mutual understanding.

The same trend has affected the Human and Social Sciences. Each of the specific sciences gave rise to a wide range of particular fields. This has the advantage of allowing the deepening of specialised knowledge, but it means that there is often only a piecemeal approach of the research object, not taking into account its overall complexity. So, it is important to work for a better understanding of the scientific phenomena with the complementarity of the different sciences, in an interdisciplinary perspective.

With this growing specialisation of sciences, Interdisciplinarity acquired more relevance for scientists to find more encompassing and useful answers for their research questions.

CIEO (Research Centre for Spatial and Organizational Dynamics) organises this conference, being Interdisciplinarity an important issue.

It is focused on social sciences with an integrative focus in the questions of well-being in society, and it is funded by the Foundation for Science and Technology. FCT rated CIEO with a classification of “Very Good” and one of the main reasons for this good evaluation was surely our potential for Interdisciplinarity.

CIEO has researchers from various scientific fields, and one of its main features is to develop knowledge from the interactions between complementary scientific areas of interest.

This conference was an excellent opportunity for strengthening and enriching our interdisciplinary systematic approach, not only for the CIEO members, but also for all the delegates researching in different scientific fields.

It was also an opportunity to show innovative research in social and human sciences, and to improve networks between researchers from different scientific disciplines.

The conference themes included topics from the following scientific fields: Economics, Management, Sociology, Psychology, Education, Sport, Tourism, Landscape Architecture, Geography and Political Sciences, just to mention a few.

As the CIEO is structured along three research areas, we have tried to organize the communications in parallel sessions corresponding to these three areas: 1) Cities and Spatial Dynamics; 2) Organizations, Innovation and Learning Spaces; 3) Tourism, Communities and Behaviour. There was also a significant number of communications included in the category of “Other topics”.

In this conference we had more than 300 communications presented in symposiums, parallel sessions, conferences and posters.

The diversity of papers and communications submitted enabled us to compile a scientific program which builds a bridge between theory and application. With its multidisciplinary focus, the scientific program covered a large number of topics, which we hope will provide many opportunities for stimulating exchange between participants in an interdisciplinary perspective.

Participants came from several countries, namely from Spain, Brazil and Portugal, and so, although the official language of the congress was English, presentations in Portuguese and Spanish were permitted.

In this “Book of Proceedings” papers could be written in English, Portuguese and Spanish.

101 of the communications presented at the conference are published here. They are organized in six parallel sessions and posters, corresponding to the structure of the conference program.

We believe this book can be an important contribution to establish the state of the art in the field of Interdisciplinarity in Social and Human Sciences.

The editors
Saul Neves de Jesus
Patrícia Pinto

TABLE OF CONTENTS

Introduction	3
PARALLEL SESSION I.....	7
Utilización de internet en la promoción de estrategias de éxito en la universidad	8
Liderança para a melhoria dos resultados escolares: Estudo de caso	15
Evaluation of stakeholder engagement of Brazilian companies: A text mining approach	25
Influence of personal characteristics of nursing professors in Brazil and Portugal on their organizational commitment	35
Influence of sustainability and innovation on the entrepreneurial intention of brazilian and portuguese university students	47
Cartografias contemporâneas – Olhar a natureza, regressar à cidade	61
Why does language matter? Evidence from EU and MERCOSUR trade	68
Equidade e bem-estar no uso de paragens de autocarro	80
The social and spatial structures in management situations	91
Sociology of tourism education in Argentina: An analysis of the educational offer and research structures in tourism	101
PARALLEL SESSION II.....	114
Régimen de responsabilidad en la contratación de viajes vinculados	115
¿Quo Vadis Derecho turístico de la Unión Europea? A propósito de las competencias normativas de las regiones del estado español	122
Bienes comunales y bienes comunes: Viejas y nuevas estrategias para una gestión sostenible del territorio	134
Análisis de las políticas de inclusión y acogida de inmigrantes en Europa	144
Promotion of the economy and social development in Honduras. Integrated municipal markets (MERCOIM): Master plan and logical framework	156
Implementing continuous improvement. The case of Cantabria	162
Collective action and tourism	173
Food and nutritional education in schools	183
Analysis of the viability a non-invasive cardiologic method of diagnosis and its contribution for the patient's quality of life	187
Espacios de aprendizaje de nueva generación en la formación profesional	192
Interdisciplinarity and interprofessionality in professional master's: Concepts, practices and skills developed according to master's students	197
The implementation of a core of university extension of transdisciplinarity and entrepreneurship: A proposal for professional complementation for the market	205
The phases of serial killers	213
Espacios verbales del lenguaje visual: Arteterapia y secuencias narrativas en personas mayores	221
PARALLEL SESSION III.....	282
Los trabajadores fronterizos y su afectación turística	283
Construção de testes de escolha múltipla	291
WOLFRAM ALPHA: Uma ferramenta de aprendizagem ativa em Cálculo I	301
Innovation as a mediating variable on the cooperation and performance of agribusinesses	307
Comportamiento del consumidor de turismo gastronómico en sistemas conversacionales de mensajería móvil: Los chatbots	315
Study of female entrepreneurship. An empirical evidence in the municipality of León in Nicaragua	323
The quality of life as presupposed by the social management in public politics	335

<u>The azorean-madeiran (i)migration of middle of the eighteenth century and the process of occupation and spatial organization of the Santa Catarina Island, southern of Brazil.....</u>	340
<u>The different dimensions of urban public space and its influence on designing plans and projects of urban restructuring.....</u>	348
<u>A paisagem sonora de Évora no século XVII: Perspectivas a partir da actividade musical das instituições religiosas da cidade</u>	355
<u>Evaluation of customers satisfaction in hypermarkets: The impact of national culture and SERVQUAL dimensions.....</u>	360
<u>Cod-nations: Trade of an expanding commodity.....</u>	370
<u>Gender relations within the social stratification in female employment in rural India.....</u>	379
<u>Trabajar por proyectos en educación primaria: Una experiencia desde ciencias.....</u>	396
<u>Trabajar actividades económicas en el Grado de Educación Primaria: Una experiencia en la Ciudad del Arcoíris.....</u>	417
 PARALLEL SESSION IV	423
<u>Prediction of irregular socio-economic data</u>	424
<u>Modelo matemático + sistema físico = teoria dos sistemas.....</u>	433
<u>Aplicações de transformadas integrais em processamento de sinais</u>	442
<u>Bem-estar psicológico e rendimento académico: Um estudo com estudantes do ensino secundário.....</u>	445
<u>Dream makers Erasmus+ project: A creative approach to education.....</u>	452
<u>Determinantes da indisciplina escolar em alunos do 2.º e 3.º Ciclo do Ensino Básico</u>	459
<u>A utilização de aprendizagem ativa no ensino superior resulta num melhor desempenho do aluno?</u>	466
<u>A assimetria do coeficiente de correlação e propriedades na detecção de variáveis endógenas.....</u>	472
<u>Estratégias de aprendizagem ativa versus aprendizagem tradicional: Resultados de um pequeno estudo de caso</u>	479
<u>Educação financeira: Um projeto piloto para a educação e formação de adultos e para a formação contínua de professores e educadores.....</u>	486
<u>Atividades experimentais no ensino das ciências: Reações dos professores no âmbito de um curso de formação continuada.....</u>	497
<u>The use of a global management simulator to consolidate transversal knowledge.....</u>	505
<u>Attitudes towards social robots: The role of gender, belief in human nature uniqueness, religiousness and interest in science fiction</u>	509
<u>Who wants to work with social robots? Using the theory of reasoned action and the theory of planned behavior to predict intention to work with social robots.....</u>	515
<u>Pedestrian and cycling routes and paths: Tourist animation in the Algarve.....</u>	523
<u>The relevance of cross-border cooperation (CBC) processes to achieve territorial cohesion and sustainable development.....</u>	542
<u>Quality of life of students in an undergraduate nursing course from a portuguese public school.....</u>	552
<u>Innovation as an ally of strategic management in small and medium business enterprises: A case study of Brazil</u>	568
<u>Innovation management in micro and small commercial enterprises: An analysis of the level of innovation</u>	580
<u>Sociedade algorítmica, pluriactividade e rendimento básico universal (RBU): Uma utopia para o século XXI?</u>	587
<u>Como os alunos jovens vêem a escola do século XXI?.....</u>	595
<u>Relationship between education in pharmaceutical sciences and profession: An interdisciplinary perspective</u>	601
<u>Teaching in two cycles of professional life: A comparative brazilian case study.....</u>	609
<u>Achievement goals profiles in school physical education: Differences at the nature of athletic ability beliefs.....</u>	616
 PARALLEL SESSION V.....	623
<u>People, ageing communities and diversity.....</u>	624
<u>Community interventions to promote healthy aging.....</u>	631
<u>Retirement experiences, mental health and quality of life in seniors of the republican national guard transit detachment of Beja</u>	638

Sense of community and productive aging: Protective factors of wear of an elderly informal caregiver	648
Interactive introduction to first-order ordinary differential equations and its applications	656
Solving second-order linear ordinary differential equations by using interactive software	664
Bilingual teaching in Algarve and its advantages	674
Extending the social tradition on organisational learning - ethics, gender and citizenship	679
Sustentabilidade: Práticas na hotelaria	686
Diabetes literacy among higher education students	698
Mental health and sleep-vigil disturbances in high school students: Sleep hygiene consultation	707
Reaching for the moon: An observational study on the invisibility of women in city urbanization	713
The cinematographic cultural practice in the pedagogy students teaching training	719
Impact of service quality, brand image, perceived value, customers' satisfaction and behavioural intentions in the traditional retailing in the north of Portugal	726
Padrões de mobilidade do idoso em Faro	738
Incorporação da experiência de consumo no desenho do serviço de alojamento hoteleiro no Alentejo	747
Macho onde?! Mal onde?! Corpo, identidade e saúde em clínicas de fisioterapia	761
Structural empowerment and satisfaction in nursing work in primary health care	769
Escola: Cenário de violência simbólica	776
Initial motivation and pedagogical support to physical education academics of unipampa-rs as spaces to learn positively	779
 PARALLEL SESSION VI.....	785
Consumer behaviour of babies mothers. Repercussions in the psycophysical separation	786
Education today: $12 + 5 < 4$ – lessons of educational reforms in Portugal and beyond	798
Knowledge-based economy	806
Hotel rating procedure and wellbeing. Adapting criteria to promote energy efficiency	816
The olympic gaze	830
Service culture as a key determinant in services marketing	840
Transformações urbanas em Santos SP Brasil: Turismo como uma alternativa para promover o bem estar	849
Literacia estatística: A importância das competências básicas	867
Vulnerabilidades e solidariedades em contexto urbano	878
Determinantes psicossociais no trabalho e sua relação com variáveis de saúde psicológica em condutores profissionais rodoviários	882
The determinants of teachers' satisfaction and its influence in strategic management of human resources in the institute of education sciences in Kwanza South province	895
Educação afetivo-sexual e prevenção de abusos sexuais em lares de acolhimento de menores	904
Psicología del lenguaje diplomático y político	918
Assessing the impact of precision agriculture techniques in maize production under mediterranean conditions	929
 POSTERS.....	936
A voyage in time. History at the museum: Educational space for dynamic intervention	937
A teoria da mente em indivíduos socialmente ansiosos e não-ansiosos – Avaliação da dimensão sócio-percetiva	946
A qualidade e internacionalização no ensino superior em Portugal: Um estudo de caso nas universidades do Minho, Aveiro e Algarve	960
Effect of ultrasound in bioactive compounds and antioxidant activity in during the storage of a monofloral honey	972

PARALLEL SESSION I

UTILIZACIÓN DE INTERNET EN LA PROMOCIÓN DE ESTRATEGIAS DE ÉXITO EN LA UNIVERSIDAD

Alda Martins
Universidade de Algarve

Saul Neves de Jesus
Universidade de Algarve

Juan Tobal
Universidad Complutense de Madrid

RESUMEN

Muchos alumnos inician los estudios superiores sin las competencias necesarias para superar con éxito las dificultades de este nivel de estudios. Varios autores han identificado como causas del fracaso escolar factores personales, académicos y psicosociales. Basado en estos factores, se ha desarrollado un curso on-line de competencias de organización personal y métodos de estudio. Participaron en esta investigación-acción 42 alumnos universitarios, 21 de ellos del grupo control. Como instrumento de evaluación fue utilizada la Escala de Evaluación de Estilos de Vida y Métodos de Estudio para la Educación Superior (Martins & Jesus, 2007). Esta escala se aplicó tanto antes como al final del curso. Los resultados demostraron que los alumnos que han seguido el curso mejoraron significativamente su desempeño respecto a la organización personal y adquisición de estrategias de estudio eficaces. La eficacia del programa se acentúa porque en el grupo control no se verificaron alteraciones significativas en las variables estudiadas.

Palabras-clave: Programa de Intervención, Éxito Académico, Estilos de Vida, Métodos de Estudio, Alumnos Universitarios, Gestión del Tiempo, Ansiedad.

1. INTRODUCCIÓN

Los estudios superiores requieren competencias de estudio que muchas veces no fueron desarrolladas previamente, visto que los alumnos tienen que adaptarse a nuevos métodos de estudio, así como a ritmos de aprendizaje más exigentes. Además, los cambios psicosociales aumentan los niveles de estrés y la dificultad en organizar nuevos horarios, tareas académicas y personales que pueden comprometer el rendimiento escolar (Santos y Almeida, 2001).

Existen diversos modelos que debaten los factores que interfieren en el desempeño escolar de los alumnos. Walberg (1982) o Tinto (1987), por ejemplo, han estudiado el conjunto de factores que parecían influenciar a los alumnos del ensino universitario. Estos modelos, comprobados por diversas investigaciones posteriores, destacan factores individuales, factores académicos y factores psicosociales (Bruinsma y Jansen, 2007; Jansen, 2004; Ma y Wang, 2001; Wang y Staver, 2001).

En el primero grupo de factores destacan la auto-confianza (e.g. Eccles y Wigfield, 2002; Garger, Thomas, y Jacques, 2010), la autonomía personal (e.g.; Lamborn y Groh, 2009) motivación (e.g. Eccles & Wigfield, 2002; Martins, Pacheco y Jesus, 2008), la procrastinación y la gestión del tiempo (Bruinsma y Jansen, 2007, 2009).

Respecto de los factores académicos, se ha comprobado una relación entre los conocimientos previos del alumno, la utilización de métodos de estudio adecuados (Jansen, 2004; Van der Hulst y Jansen, 2002; Santos y Almeida, 2001), la percepción de la calidad evaluación/encino, el tiempo de estudio y el éxito escolar (Bruinsma y Jansen, 2007).

Por último, los alumnos con mejor apoyo social, es decir una buena relación con amigos, compañeros y familia, y con un buen ambiente en clase tienen más satisfacción personal (e.g. Yalçin, 2011), menor estrés y mejor rendimiento académico (Feldman, Gonçalves, Puignau, Zaragoza, Bagés, y Pablo, 2008; Jansen y Bruinsma, 2005).

A pesar de que algunos autores defienden que el ingreso en la universidad debe ser un proceso de independización del alumno y que estos deben, si es posible, intentar por sí mismos adquirir estrategias eficaces para lidiar con los nuevos problemas que surgen (Ferreira y Hood, 1990; Mather y Winston, 1998; Taub, 1995), otros autores consideran complejo este proceso. Para estos autores se debe ofrecer a los alumnos ayuda específica para una mejor adaptación y superación de las dificultades encontradas (Ferraz & Pereira, 2002; Jesus, 2002; Nelson *et al.*, 1993; Schunk y Zimmerman, 1998; Wolters, 1998).

Así, es importante definir programas de intervención que fomenten la adquisición de capacidades y promuevan el desarrollo y autonomía de los alumnos, contemplando no solamente la aprendizaje de métodos de estudio si no también las competencias personales que van permitir un mejor ajustamiento al contexto universitario.

Muchas universidades tienen centros de apoyo al alumno a un nivel psicológico. Por un lado, tienen intervención individual con alumnos con problemas y, por otro, desarrollan programas para mejorar el desempeño escolar de sus alumnos, focalizándose en los alumnos de primer año. No obstante, esos programas raramente son evaluados para detectar su eficacia y publicados para conocimiento científico. De esta manera, es muy difícil encontrar programas de intervención dirigidos a

la educación superior con eficacia comprobada. Todavía, los programas encontrados en la literatura muestran resultados positivos en la salud psicológica de los alumnos y hay una incrementación de los resultados.

Tavares *et al.* (2006) han realizado un programa de intervención en la Universidad de Aveiro (Portugal) con base en la creación de una asignatura de opción libre con el objetivo de dotar los alumnos de estrategias que permitan la obtención de un mejor rendimiento escolar. La asignatura fue considerada por los alumnos que la frecuentaran como muy importante para el desarrollo de estrategias de métodos de estudio. Sin embargo, las dificultades relativas a los horarios para frecuentar la asignatura llevaron a que muchos alumnos no participasen.

Iglesias *et al.* (2005) también han demostrado la eficacia de un programa de control del estrés, donde los alumnos bajaron los niveles de estrés, ansiedad, furia y neuroticismo.

En hecho, la adhesión a cualquier tipo de programa de prevención con estudiantes tiene sido un problema en la implementación del programas de intervención. Puede ser que los estudiantes crean que no tengan tiempo para participar, se queden desmotivados e poco interesados, por desconocieren los beneficios de este tipo de intervención. Algunos alumnos solamente piden ayuda cuando su nivel de mal estar no es más soportable, otros tan poco llegan a pedir ayuda y abandonan sus estudios.

En este sentido, Brown (2000) desarrolló un programa sustentado por un soporte informático, para alumnos del encino secundario, donde los participantes han aprendido diversos tipos de competencias, necesarias para un mejor desempeño escolar: competencias de estudio, escrita, presentación de trabajos, investigación y pensamiento. Chiauzzi, Brevard, Thurn, Decembrele, y Lord (2008) han desarrollado un programa a través de internet para el control del estrés con una grande adhesión de los alumnos. Los alumnos han disminuido los niveles de estrés, mejorado las relaciones familiares y cambiando algunos estilos de vida, como la práctica de ejercicio físico.

Actualmente, cada vez más estudiantes utilizan frecuentemente internet tanto para actividades lúdicas, como para buscas académicas. Muchos profesores disponen los resúmenes, apuntes u otro tipo de recursos a través de este medio. De esta manera, internet es un recurso en permanente ascenso y que cuenta cada vez con más usuarios, permitiendo la enseñanza a la distancia y facilitando la interacción y el feedback (Arenas & Hernández, 2002). Así, parece ser un medio muy importante para llegar más fácilmente a los alumnos, incrementando los niveles de motivación y adhesión.

La organización de un curso de aprendizaje de métodos de estudio y otro tipo de competencias para conseguir el éxito escolar debe, así, atender a algunos aspectos como la flexibilidad del horario y el atractivo de los contenidos y de la presentación del curso.

Para eso, se cree que la informática tiene muchas opciones que contemplan estas dos características.

Centrado en estos presupuestos, el objetivo de este artículo es desarrollar un curso de competencias de estudio que tenga en cuenta los intereses de los alumnos y que englobe los factores identificados como determinantes en el desempeño académico.

2. MÉTODO

2.1. Sujetos

Al inicio del estudio, 31 alumnos de diversos cursos de la Universidad del Algarve (Portugal) se han presentado voluntarios para participar en un programa sobre métodos de estudio. No obstante, solamente 21 de esos alumnos rellenaron el cuestionario al final del programa, representando la muestra analizada. Los participantes tenían edades comprendidas entre los 18 y 25 años ($M = 21,2381$), siendo 14 del sexo femenino y 7 del sexo masculino.

Para constituir el grupo control fueron seleccionados 21 cuestionarios al azar de un grupo de alumnos voluntarios que no participaron en el curso y que respondieron al cuestionario en los dos momentos de evaluación. En la selección de los cuestionarios se intentó la equivalencia del género, pero no ha sido posible la equivalencia de la edad.

Así, la distribución por género fue la misma (14 del sexo femenino y 7 del sexo masculino) y las edades variaran entre 18 y 28 años ($M = 22,38095$).

2.2. Material

Para la realización del curso de competencias de organización personal y métodos de estudio, fue construido un programa de dos módulos presentados en una animación del tipo Microsoft PowerPoint a la que podían tener acceso los alumnos inscritos a través del portal de la Universidad de Algarve.

El primero módulo englobaba contenidos relacionados con la calidad de vida y bienestar, como la gestión del tiempo, los hábitos personales y las condiciones de trabajo. El segundo módulo, a su vez, incidía en la motivación y en las metodologías de estudio, como las técnicas de estudio, de lectura, esquematización y resumen, las clases y los exámenes.

Para evaluar la eficacia del programa se ha recurrido al “Questionário de Avaliação de Estilos de Vida e Métodos de Estudo” (cuestionario de evaluación de estilos de vida y métodos de estudio), desarrollado para la población universitaria por Martins y Jesus (2007). El cuestionario presenta una buena fiabilidad, bien como escala global ($\alpha = 0,853$), bien en cada una de las sub-escalas: organización personal ($\alpha = 0,779$) y métodos de estudio ($\alpha = 0,749$). La primera sub-escala permite conocer los hábitos relativos a gestión del tiempo, procrastinación, sueño, ejercicio físico, ansiedad, condiciones ambientales, condiciones personales y motivación. La segunda sub-escala evalúa la interacción en las clases y exámenes, así como en los hábitos de estudio relativos a lectura, esquematización, resumen, ejercicios, comprensión y concentración. Para cada uno de los 36 ítems del cuestionario, el sujeto debe indicar la frecuencia con que ejecuta las acciones indicadas a través de una escala

tipo Lickert de 1 a 5 (siempre, casi siempre, algunas veces, casi nunca, nunca). Algunos ítems se encuentran formulados al revés, siendo la acotación invertida.

2.3. Procedimiento

El curso de métodos de estudio fue divulgado en los distintos campus de la Universidad del Algarve, con el objetivo de encontrar alumnos voluntarios para participar en el programa.

En un primer momento, los alumnos tenían 15 días para rellenar el cuestionario a través de su área personal en el portal de la Universidad del Algarve, para confirmar su inscripción en el curso de competencias personales y métodos de estudio. Después de ese periodo, los alumnos inscritos podrían acceder al primer módulo en los primeros diez días y al segundo módulo en los diez días finales. En la plataforma se ha dejado también actividades para practicar los contenidos y un chat para aclarar dudas y cambiar impresiones.

Para la visualización de cada uno de los módulos del curso, el alumno tenía que consultar una asignatura creada para permitir la visualización del material del curso y la interacción entre los alumnos y el tutor. Para que los participantes pudiesen consultar más fácilmente los contenidos se ha permitido el download de los mismos. Las actividades eran entregadas a través de la plataforma o por correo electrónico y el alumno recibía el feedback después de la corrección hecha. Dos semanas después del término del segundo módulo los sujetos respondían nuevamente al cuestionario inicial, enviado por correo electrónico.

Para el grupo control, se ha pedido a varios sujetos a través del correo electrónico personal de alumno que rellenasen un cuestionario quince días antes del inicio del curso. Quince días después del final del curso, se volvió a pedir, utilizando el mismo método, que rellenasen el cuestionario, basándose en su experiencia en la última semana.

3. RESULTADOS

Para evaluar la eficacia del curso implementado a lo largo de 20 días, el cuestionario ha sido aplicado al inicio y al final del curso. Los resultados de los dos cuestionarios fueron comparados a través del “Paired Sample T-Test” para las dos sub-escalas, en su global, y para cada conjunto de los ítems, teniendo en cuenta el grupo experimental y el grupo control.

Respecto a la primera sub-escala que corresponde a la Organización Personal, en el primer momento de evaluación los alumnos que acudieron al curso obtuvieron una media de 3,114, subiendo hasta un 3,410 en el segundo momento de la evaluación ($t = -6,412$). Para la segunda sub-escala, las medias obtenidas en el primer y segundo momento de evaluación fueron de 2,917 y de 3,307 respetivamente ($t = -6,983$). A pesar de que la diferencia media fue más acentuada en la segunda sub-escala (-0,390 versus -0,296), se constata una diferencia significativa en ambas ($p = 0,00$). El grupo control presentó en la sub-escala 1 una media de 3,239 en el primer momento de evaluación y de 3,178 en el segundo momento. La diferencia de 0,061 no se reveló significativa ($p = 0,106$). En la sub-escala dos, la media del primer cuestionario fue de 3,375, bajando hasta 0,103 en la segunda evaluación. La diferencia de 0,103 no se presenta significativa ($p = 0,084$).

Al analizar cada conjunto de los ítems de la sub-escala uno – Organización Personal (Tabla 1) se verifica la existencia de una diferencia significativa para la mayor parte de los conjuntos de ítems en el grupo experimental, excepto para los ítems de ejercicio físico y condiciones personales. Los ítems relativos a gestión del tiempo, sueño y ansiedad obtuvieron una diferencia media entre el primer y el segundo cuestionario más acentuada que los restantes ítems (0,507, 0,477 y 0,476 respectivamente).

Tabla 1. Resultados antes y después para los ítems de la sub-escala Organización Personal

	Grupo Experimental			Grupo Control		
	Antes	Después	<i>t</i>	Antes	Después	<i>t</i>
Gestión del Tiempo	2.429	2.936	-5.207**	2.873	2.841	0.641
Procrastinación	3.000	3.349	-3.736**	3.412	3.325	0.932
Sueño	2.571	3.048	-3.627**	2.786	2.691	0.722
Ejercicio Físico	3.191	3.238	-0.370	2.714	2.571	1.142
Ansiedad	2.905	3.381	-3.760**	3.548	3.595	-0.418
Cond. Ambientales	3.988	4.214	-2.321*	3.580	3.651	-0.679
Cond. Personales	3.405	3.571	-1.673	3.655	3.458	1.181
Motivación	3.112	3.429	3.298**	3.343	3.293	0.674

Nota. Los valores presentados se refieren a las medias obtenidas en el cuestionario presentado en el inicio y al final del curso.

* $p < .05$ ** $p < .01$

Los ítems sueño y ansiedad que presentaron inicialmente una media negativa (por debajo de 3) han subido hasta un resultado positivo en la evaluación realizada en el segundo momento.

Respecto del grupo control, no se reveló significativa ninguna de las diferencias, a pesar de que los valores encontrados para los ítems ejercicio físico y condiciones personales demostrasen diferencias más elevadas.

La Tabla 2 presenta los resultados referentes a los ítems evaluados en la sub-escala 2 – Métodos de Estudio. En el caso

del grupo experimental, todos los conjuntos de ítems revelan diferencias significativas entre los resultados presentados en el primer y en el segundo momento de evaluación. La diferencia media más grande se verifica en los ítems referentes a las técnicas de resumen y de lectura (0,572 y 0,556 respectivamente).

Tabla 2. Resultados antes y después para los ítems de la sub-escala Métodos de Estudio

	Grupo Experimental			Grupo Control		
	Antes	Después	<i>t</i>	Antes	Después	<i>t</i>
Lectura	3,246	3,802	-6,217**	3,334	3,165	1,183
Esquematación	3,500	3,905	-4,250**	3,377	3,286	0,799
Resumen	2,738	3,310	-5,435**	2,833	2,833	0,000
Ejercicios	3,476	3,929	-4,663**	3,643	3,619	0,295
Comprensión	3,238	3,476	-2,024*	3,929	3,786	1,000
Concentración	2,619	3,048	-3,544**	3,286	3,191	1,000
Clases	3,095	3,381	-3,294**	3,238	3,131	1,253
Exámenes	2,714	3,095	-4,985**	3,357	3,167	1,793

Nota. Los valores presentados se refieren a las medias obtenidas en el cuestionario presentado en el inicio y al final del curso.

* $p < .05$ ** $p < .01$

Los ítems que obtuvieron una media negativa antes de la realización del curso en el grupo experimental (resumen, concentración y exámenes) han subido hasta medias positivas en la evaluación siguiente, no registrándose ningún ítem con resultados inferiores a 3 en la evaluación hecha después del curso.

Tal y como ha sucedido con el grupo control en la sub-escala 1, ninguno de los ítems presenta diferencias significativas entre los dos momentos de evaluación.

4. DISCUSIÓN

El presente estudio demuestra la eficacia de un curso de aprendizaje de estrategias de calidad de vida y métodos de estudio. Los alumnos que siguieron el curso presentaron mejoras significativas en sus habilidades, tanto en la organización personal, como en la utilización de métodos de estudio adecuados.

A través del análisis de los resultados se verificó, por un lado, que los alumnos que siguieron el curso mejoraron significativamente en casi todos los ítems evaluados en las dos sub-escalas del cuestionario. Por otro lado, los alumnos que no siguieron el curso no mejoraron significativamente en ningún área. Los resultados obtenidos fueran los esperados, en la medida en que el curso fue construido con base en las áreas donde los alumnos presentan mayores dificultades, identificadas anteriormente en varios estudios (Bruinsma y Jansen, 2007; Jansen, 2004; Ma y Wang, 2001; Wang y Staver, 2001). Además, otros autores que implementaron cursos de métodos de estudio obtuvieron resultados positivos, aunque la evaluación del programa hubiera sido realizada mediante procedimientos cualitativos (Brown, 2000; Tavares *et al.*, 2006). Por otra parte, los cursos de control del estrés también han presentado resultados positivos (Chiauzzi *et al.*, 2008; Iglesias *et al.*, 2005). Estos resultados muestran la eficacia de estos cursos en la calidad de vida de los alumnos, mejorando sus competencias.

Extrañamente, los alumnos que no siguieron el curso bajaron sus medias en la segunda aplicación del cuestionario. Estos valores, a pesar de no ser significativos, pueden ser explicados por el momento en que el cuestionario fue rellenado. El primer momento, al inicio de Mayo, corresponde a una época de clases, mientras que el segundo momento, en Junio, es un periodo de exámenes. En esa época es normal un cambio de métodos de estudio y estilos de vida, en la medida en que muchos alumnos no realizan un estudio continuado, pero sí poco antes del momento de evaluación de la asignatura (König y Kleinman, 2005). Además, debido a la acumulación de contenidos para estudiar y la falta de estrategias eficaces para hacerlo, se produce una disminución de la práctica de ejercicio físico, de actividades sociales y de divertimento, evaluados por los ítems de las condiciones personales. Todo esto puede traducirse en un aumento de la ansiedad y disminución en la práctica de actividad física (Giacobbi, Tuccitto, y Frye, 2007). De este modo, es de destacar que los alumnos que siguieron el curso, no disminuyeron sus actividades lúdicas y sociales o la práctica de ejercicio físico. Así, a pesar de que los resultados no fueran significativos, el pequeño aumento de estas prácticas puede ser considerado como positivo, atendiendo a esta época específica.

Se destaca que los ítems que han revelado diferencias menos acentuadas son ítems relacionados con la personalidad y por eso tienen un carácter más estable, como por ejemplo la tendencia a procrastinar, el gusto por la práctica de ejercicio físico, las condiciones personales (hábitos de socialización y bienestar psicológico), la motivación, la comprensión de la materia, la participación activa en las clases o la preparación de los exámenes (Almeida, 2002; Ferraz y Pereira, 2002).

Los ítems relacionados con el aprendizaje de métodos de estudio prácticos fueron implementados más fácilmente en la rutina académica, como fue el caso de las técnicas de lectura, esquematización, resumen y concentración. Las técnicas relacionadas con la higiene del sueño y la gestión de tiempo, como la ejecución de un horario semanal, donde se prevén horas para el estudio, para el divertimento, para las actividades físicas y para los hábitos personales (alimentación, sueño y

higiene personal) también fueron fácilmente aprendidas por los alumnos, debido posiblemente a su carácter eminentemente práctico.

Posiblemente, la mejora del control de la ansiedad está relacionada con el aumento de las competencias a nivel de organización personal y de métodos de estudio. Costa y Boruchovich (2004), en un estudio donde relacionaron la ansiedad con las estrategias de aprendizaje, han constatado que los alumnos que no utilizan estrategias de estudio presentan niveles de ansiedad superiores a los alumnos que utilizan estrategias de estudio simplificadas. A su vez, los alumnos que utilizan estrategias de estudio complejas tienen menores niveles de ansiedad respecto a los otros dos grupos referidos (utilización de estrategias de estudio simplificadas y no utilización de estrategias de estudio).

A pesar de existir una mejoría significativa de las competencias de organización personal y métodos de estudio, la mayor parte de los resultados obtenidos en la segunda aplicación del cuestionario, no sobrepasa los 4 valores. Este resultado puede significar que los alumnos no llegaron un nivel de adquisición de competencias de organización personal y métodos de estudio muy elevado. Posiblemente sería necesario un curso con contenidos más detallado que permitiese a los alumnos más tiempo para entrenar los contenidos abordados.

Uno de los puntos discutidos en la introducción remitía a la utilización de internet como modo de aumentar la adhesión a los cursos de métodos de estudio. La adhesión a este curso no fue muy elevada (inicialmente 31 sujetos), a pesar de ser a través de internet y en un periodo de tiempo reducido (un mes). No obstante, no se utilizó ningún tipo de incentivo, como la equivalencia del curso con créditos ECTS (Tavares *et al.*, 2006), aspecto que se pretende concretar en futuras intervenciones.

Otra de las limitaciones pertinentes es la presentación del curso on-line. Puede ser que con esta modalidad, los alumnos tengan más dificultad en percibir la realización de algunas tareas como los ejercicios de relajación y no lo comuniquen al tutor. En futuras investigaciones pretendiese aplicar el curso también presencialmente para percibir se existen diferencias entre la modalidad presencial y on-line.

A pesar de los resultados positivos de esta investigación, se recomienda futuros trabajos que puedan comprobar los beneficios de este tipo de intervención. El hecho de utilizar una muestra reducida y de que el grupo control no presentara los mismos niveles medios para los ítems en cada una de las sub-escalas, son limitaciones que deben ser superadas en futuras investigaciones.

Por otra parte, se deben evaluar estrategias que motiven los alumnos a seguir este tipo de cursos, ya que se verifican bajas tasas de adhesión en los programas de este tipo (Brown, 2000; Tavares *et al.*, 2006). Se sugiere la creación de una asignatura orientada para la adquisición de competencias personales y de métodos, que permita a los alumnos obtener créditos ECTS con su participación.

La eficacia de los métodos de estudio utilizados depende muchas veces del tipo de materia enseñada en cada asignatura. Así, es importante correlacionar el éxito de las estrategias utilizadas con el tipo de curso que los alumnos frecuentan. Para eso, es necesario tener una muestra representativa de cada carrera, imposible de realizar en este estudio. Podría ser útil, para comprobar si un periodo de enseñanza más extenso posibilita la obtención de mejores resultados, un análisis con base en la extensión de curso.

Otra de las limitaciones presente en esta investigación es el hecho de no ser comprobado en la práctica, a través de los resultados curriculares, el éxito escolar de los alumnos que han participado en el curso. Se sugiere para futuras investigaciones, contemplar los resultados obtenidos en momentos anteriores de evaluación, comparándolos con los resultados obtenidos en momentos de evaluación posteriores a la realización del curso. Se recomienda también que sea aplicado el mismo cuestionario en un tercer momento, algunos meses después de la participación en el curso, para verificar la permanencia de los resultados.

En su aspecto global, y teniendo en cuenta los resultados obtenidos y el *feedback* de los participantes, el curso on-line si ha revelado mucho positivo para los alumnos, demostrando poder ser eficaz para mejorar las competencias de organización personal y métodos de estudio que pueden contribuir para su éxito académico.

Es que ya se hizo un estudio preliminar de la adaptación de la Escala de Evaluación de Estilos de Vida y Métodos de Estudio para España (Martins, Casado, Jesus & Tobal, 2011), y ahora estamos adaptando el programa de intervención para que pueda ser aplicado a los estudiantes en las universidades españolas.

REFERÊNCIAS

- Almeida, L. (2002). Facilitar a aprendizagem: ajudar os alunos a aprender e a pensar. *Psicologia Escolar e Educacional*, 6 (2), 155-165.
- Arenas, J. y Hernández, J. (2002). La alfabetización en información en las universidades. *Revista de Investigación Educativa*, 20 (2), 469-486.
- Brown, J. V. (2000). Technology integration in a high school study skills program. *Journal of adolescent & adult literacy*, 43 (7), 634-637.
- Bruinsma, M. y Jansen, E. P. (2007). Educational productivity in higher education: An examination of part of the Walberg educational productivity model. *School Effectiveness and School Improvement*, 18, 45-65.
- Bruinsma, M. y Jansen, E. P. (2009). When will I succeed in my first-year diploma? Survival analysis in Dutch higher education. *Higher Education Research & Development*, 28 (1), 99-114.
- Chiauzzi, E., Brevard, J., Thurn, C., Decembrele, S., y Lord, S. (2008). MyStudentBody-Stress: An Online Stress Management Intervention for College Students. *Journal of Health Communication*, 13 (6), 555-572.

- Costa, E. y Boruchovitch, E. (2004). Compreendendo relações entre estratégias de aprendizagem e a ansiedade em alunos do Ensino Fundamental de Campinas. *Psicologia Reflexão e Crítica*, 17, 15-24.
- Eccles, J. y Wigfield, A. (2002). Motivational beliefs, values and goals. *Annual Review of Psychology*, 53, 109-132.
- Feldman, L., Gonçalves, L., Puignau, G., Zaragoza, J., Bagés, N., y Pablo, J. (2008). Relaciones entre estrés académico, apoyo social, salud mental y rendimiento académico en estudiantes universitarios Venezolanos. *Universitas Psychologica*, 7 (3), 739-751.
- Ferraz, M. y Pereira, A. (2002). A dinâmica da personalidade e o homesickness (saudades de casa) dos jovens estudantes universitários. *Psicologia, Saúde & Doenças*, 3 (2), 149-164.
- Ferreira, J. A. y Hood, A. B. (1990). Para a compreensão do desenvolvimento psicossocial do estudante universitário. *Revista Portuguesa de Pedagogia*, 24, 391-406.
- Garger, M., Thomas, M., & Jacques, P. (2010). Early antecedents to students' expected performance. *International Journal of Educational Management*, 24 (2), 129-138.
- Giacobbi, P., Tuccitto, D. y Frye, N. (2007). Exercise, affect, and university students' appraisals of academic events prior to final examination period. *Psychology of Sport and Exercise*, 8 (2), 261-274.
- Iglesias, S., Azzara, S., Squillace, M., Jeifetz, M., Lores-Arnais, M., Desimone, M., y Diaz, L. (2005). A study on the effectiveness of a stress management programme for college students. *Pharmacy Education*, 5 (1), 27-31.
- Jansen, E. P. (2004). The influence of the curriculum organization on study progress in higher education. *Higher Education*, 47 (4), 411 – 435.
- Jansen, E. P. y Bruinsma, M. (2005) Explaining achievement in higher education. *Educational Research and Evaluation*, 11 (3), 235-252.
- Jesus, S. (2002). *Pedagogia e apoio psicológico no Ensino Superior*. Coimbra: Quarteto Editora.
- König, C. y Kleinmann, M. (2005). Deadline Rush: a time management phenomenon and its mathematical description relationships between critical thinking and attitudes toward women's roles in society. *The Journal of Psychology: Interdisciplinary and Applied*, 139, 33-45.
- Lamborn, S. y Groh, K. (2009). A four-part model of autonomy during emerging adulthood: Associations with adjustment. *International Journal of Behavioral Development*, 33 (5), 393-401.
- Ma, X. y Wang, J. (2001). A confirmatory examination of Walberg's model of educational productivity in student career aspiration. *Educational Psychology*, 21, 443 – 453.
- Martins, A. y Jesus, S. (2007). Escala de Avaliação de Estilos de Vida e Métodos de Estudo. *Psyc@n@re*, 1 (1), 1-9.
- Martins, A., Casado, M., Jesus, S. & Tobal, J. (2011). Escala de Evaluación de Estilos de Vida Y Métodos de Estudio para el Ensino Superior: Adaptación à la población Española – resultados preliminares. *Anais do II Congresso Luso-Brasileiro de Psicologia da Saúde*. São Bernardo do Campo: Universidade Metodista de São Paulo.
- Martins, A., Pacheco, A. y Jesus, S. (2008). Estilos de vida de estudantes do ensino superior. *Mudanças – Psicologia da Saúde*, 16 (2), 100-107.
- Mather, P. C. y Winston, R. B. Jr. (1998). Autonomy development of tradicional-aged students: Themes and processes. *Journal of College Students Development*, 39 (1), 33-50.
- Nelson, B., Dunn, R., Griggs, S. A., Primavera, L., Fitzpatrick, M., Baciliou, Z. y Miller, R. (1993). Effects of learning style intervention on college students retention and achievement. *Journal of College Student Development*, 34, 364-369.
- Santos, L. y Almeida, L. (2001). Vivências acadêmicas e rendimento escolar: Estudo com alunos universitário do 1º ano. *Análise Psicológica*, 19 (2), 205-217.
- Schunk, D. H. y Zimmerman, B. J. (1998). Conclusions and future directions for academic interventions. In D. H. Schunk, & B. J. Zimmerman (Eds.), *Self-regulated learning: From teaching to self-reflective practice* (pp. 225-235). New- York: The Guilford Press.
- Taub, D. J. (1995). Relationship of selected factors to tradicional-age undergraduate women's development of autonomy. *Journal of College Student Development*, 36 (2), 141-151.
- Tavares, J., Pereira, A., Gomes, A., Cabral, A., Fernandes, C., Huet, I., ...Monteiro, S. (2006). Estratégias de promoção do sucesso académico: Uma intervenção em contexto curricular. *Análise Psicológica*, 24, 61-72.
- Tinto, V. (1987). *Leaving college: Rethinking causes and cures of student attrition*. Chicago: The University of Chicago Press.
- Van der Hulst, M. y Jansen, E. P. (2002). Effects of curriculum organization on study progress in engineering studies. *Higher Education*, 43, 489-506.
- Walberg, H. J. (1982). Probing a model of educational productivity in high school science with national assessment samples. *Journal of Educational Psychology*, 74 (3), 295-307.

- Wang, J., y Staver, J. R. (2001). Examining relationships between factors of science education and student career aspiration. *Journal of Educational Research*, 94, 312-319.
- Wolters, C. A. (1998). Self-regulated learning and college students regulation of motivation. *Journal of Educational Psychology*, 90 (2), 224-235.
- Yalçın, I. (2011). Social Support and Optimism as Predictors of Life Satisfaction of College Students. *International Journal for the Advancement of Counselling*. In press.

LIDERANÇA PARA A MELHORIA DOS RESULTADOS ESCOLARES: ESTUDO DE CASO

Maria Helena Santos Gregório

Centro de Investigação sobre o Espaço e as Organizações

(mhgregorio@ualg.pt)

RESUMO

Desenvolvemos este trabalho com o propósito de analisar e compreender como o contrato de autonomia determina ou influencia a gestão das organizações escolares. Nestas organizações, a descentralização, a autonomia e a liderança para a melhoria dos resultados escolares dos alunos têm vindo a receber mais atenção na sua compreensão e análise.

Seguimos a metodologia de investigação qualitativa e optámos pelo estudo de caso, de escolas da região algarvia. Para a análise dos dados recolhidos junto de líderes escolares (de topo e lideranças intermédias), utilizámos a análise de conteúdo, realizada através de computador. Os resultados apurados são apresentados numa perspetiva análise global.

Encontramos, nos resultados apurados, indicadores referentes a descrições sobre como se vivenciam, no dia-a-dia, os processos de gestão e de liderança. Estes não se referem apenas ao contratualizado e ao modo como as escolas tiveram que criar condições para a sua aplicação, mas também em vários âmbitos e extensões do desenvolvimento organizacional e profissional. Destacam-se os papéis desempenhados pelas lideranças de topo e lideranças intermédias (distribuídas), que se tornaram mais assertivas e com uma ação mais robusta na obtenção dos melhores resultados dos alunos.

Palavras-chave: Políticas Educativas, Organizações Escolares, Contratos de Autonomia, Liderança para a Melhoria.

JEL Classification: I28

1. INTRODUÇÃO

A gestão educativa é uma atividade complexa que abrange todos os sistemas de uma organização escolar (Formosinho, Fernandes, Machado & Ferreira, 2009). O projeto piloto de contratos de autonomia e desenvolvimento das escolas veio acrescer a complexidade da sua gestão ao introduzir alguns aspetos com os quais estas organizações ainda pouco lidavam até àquele momento (Lima, 2010).

O desenvolvimento da contratualização no sistema público de educação implicou a realização de metas concretas acordadas entre as partes e assegurou a autonomia adequada para a gestão dos meios com vista a sua consecução. O contrato vem estimular a ação dos protagonistas no sentido de alcançar os objetivos pré-estabelecidos e apelou a uma gestão muito próxima da verificação das discrepâncias entre os objetivos negociados e os resultados obtidos.

Esta questão da contratualização emerge como uma modalidade de gestão escolar alternativa à normalizada e à descentralizada para as autarquias (Formosinho, Fernandes & Machado, 2010), fora de um modelo liberal ou de um modelo de escola privada ou, ainda, de características empresariais (Formosinho & Machado, 2010).

A noção da governação por contrato pressupõe negociação entre a escola e o Ministério da Educação acerca das metas e dos compromissos a realizar, do período da sua realização e dos esforços de ambas as partes à sua realização (Formosinho & Machado, 2010; Gaudin, 2007).

O reforço da autonomia da escola através da contratualização revela-se um desenvolvimento no processo da reconceptualização da intervenção do Estado na educação, apelando a um maior envolvimento e responsabilização dos atores educativo locais. (Formosinho & Machado, 2007).

O grande propósito destas medidas é a melhoria das aprendizagens dos alunos, as suas melhores classificações académicas e o aumento dos níveis de escolarização da toda a população em geral (Formosinho & Machado, 2010).

O grande propósito deste trabalho foi o de analisar e compreender como o Contrato de Autonomia determinou ou influenciou os processos de gestão e liderança das organizações escolares analisadas.

2. DESCENTRALIZAÇÃO E AUTOGESTÃO EM EDUCAÇÃO E LIDERANÇA ESCOLAR

A motivação para a descentralização reside no pressuposto segundo o qual os profissionais, e outros governantes dentro das escolas, se encontram em melhores condições do que os políticos e agentes de governação nacional, para realizar uma avaliação mais precisa das necessidades específicas dos alunos e lhes proporcionar programas de maior qualidade e ajustados às suas necessidades (Caldwell, 2012).

As organizações educativas trabalham ou operam num quadro legislativo estabelecido por um governo estadual e um dos aspetos deste quadro é o grau de descentralização dentro do sistema educativo. Os sistemas fortemente centralizados tendem a ser burocráticos e a permitir pouco autonomia às escolas e às comunidades locais. Por seu lado, os sistemas descentralizados

delegam, transferem ou transmitem grandes poderes ao nível subalterno, e estes poderes quando são devolvidos ao nível organizacional ou de escolas pode ser chamada de autogestão (Bush, 2008).

O processo de descentralização exige a redução do papel do governo central na planificação da educação e este pode assumir muitas formas pois a descentralização em educação significa uma mudança na distribuição da autoridade *top down*, do centro para a periferia.

Investigações realizadas em Inglaterra e País de Gales, por investigadores como Bush, Coleman e Glover. (1993), Levacic (1995) e Thomas e Martin (1996), sugerem que a mudança da escola no sentido da autonomia tem sido benéfica, resultados estes que são congruentes com os publicados pela OECD em 1994, que conclui que esta prática se torna eficaz pois leva a uma maior flexibilidade e a um melhor uso de todos os recursos humanos e materiais, ao desenvolvimento profissional, ao maior conhecimento dos pais pelos professores, a melhores decisões financeiras, e a um melhor planeamento e implementação baseados na prioridade dos resultados dos alunos e nas suas necessidades.

A importância da autogestão no desenvolvimento da liderança reside na esfera de ação para a liderança e a gestão ser maior e, enquanto os gestores dos sistemas centralizados se encontram confinados à implementação de políticas e decisões feitas pelos altos níveis da hierarquia, os líderes das escolas com autonomia têm maiores responsabilidades pelos orçamentos, pessoal e relações externas, bem como na interpretação e implementação do currículo. Este tem mais oportunidade para inovar do que os líderes limitados e constrictos a contextos centralizados (Bush, 2008).

Muitas escolas em autonomia têm estruturas de lideranças mais abrangentes que, por vezes, incluem líderes séniores e lideranças intermédias (*middle managers*), em vários cargos de liderança. Um estudo de Young (2006) com escolas do primeiro ciclo inglesas, mostra um padrão elaborado de liderança com um vasto número de pessoal a exercer papéis de liderança. Este crescimento do número de líderes e de âmbitos de ação das lideranças tem vindo a desenvolver o interesse pelo estudo da liderança distribuída, partilhada, participada ou intermedia, pois segundo Harris (2004), o envolvimento de um vasto número de pessoas na liderança aumenta a necessidade do desenvolvimento de líderes eficazes.

3. CONCEITO DE LIDERANÇA ESCOLAR

De acordo com a OECD (2001, 2008), é vasta a literatura que explora a conceção genérica de liderança, e o elemento central à maioria das definições de liderança é que esta envolve um processo de influenciar outros. Para Yukl (2002), grande parte das definições de liderança refletem a assunção de que esta envolve um processo de influência social, no qual prevalece a influência intencional que é exercida por uma pessoa ou grupo de pessoas sobre outra pessoa ou grupo de pessoas com o objetivo de estruturar as atividades e as relações num grupo ou numa organização (Bush & Glover, 2003). O termo “intencional” utilizado por este autor é muito importante, uma vez que a liderança se baseia em objetivos e resultados articulados, os quais são esperados alcançar com o processo de liderança (OECD, 2008). Ainda, Yukl (2002) usa as palavras “pessoa” e “grupo” para enfatizar que a liderança pode ser exercida tanto por equipas como por indivíduos (Bush & Glover, 2003). Esta visão da liderança como uma ação plural, repartida, é reforçado por autores como Harris (2002) e Leithwood (2001), que defendem que a liderança distribuída por distintos níveis (*distributed leadership*), é uma alternativa aos tradicionais modelos de liderança de cima para baixo (*top down*) (Bush & Glover, 2003). Ogawa e Bossert (1995), também referem que a liderança se traduz na influência que é exercida nos outros, concordando que esta pode ser desenvolvida por qualquer pessoa dentro de uma organização.

Cuban (1988) refere que a liderança assumida por “pessoas” que levam os outros a mudar as suas motivações, se pode traduzir em “ações” que, uma vez realizadas, permitem alcançar determinados objetivos. Este processo implica a tomada de decisões, bem como a assunção de certos riscos. Esta conceção de liderança evidencia que o processo de influenciar outros tem propósitos e procura obter resultados específicos, aspeto reforçado por Fidler (1997), que acrescenta que os seguidores ou colaboradores do(s) líder(es) são influenciados para a consecução de metas ou propósitos.

A ideia de partilha que está subjacente ao ato de liderar é defendida por Stoll e Fink (1996), quando se referem à forma como os líderes operam nas escolas. Para estes autores, e num contexto de uma organização educativa, a liderança tem a ver com comunicação ou transmissão de mensagens convidativas aos indivíduos e grupos com os quais os líderes interagem, para construir e agirem numa visão partilhada e envolvente, que aumente as experiências educativas dos alunos (Stoll & Fink, 1996).

3.1. Efeitos e impactos do conceito de liderança nas escolas

Um corpo crescente de investigações acentua os efeitos da liderança nos respetivos locais onde esta é estudada. Enquanto alguns investigadores argumentam que este foco nos efeitos da liderança apenas refletem um desejo humano de estar no controle da situação, outros afirmam que embora o impacto da boa liderança possa ser difícil de determinar, os efeitos de uma má liderança, de uma liderança fraca, ou da ausência de liderança, são fáceis de identificar.

Segundo Bush (2008), uma visão clara da organização desenvolve as escolas, embora a evidência empírica da sua eficácia permaneça ainda complexa, pois a questão dos líderes escolares conseguirem desenvolver uma visão específica das suas escolas, apesar da influência dos seus governos centrais, em vários dos aspetos da sua gestão, deverá ainda ser melhor abordada.

A liderança é, assim, um processo de influenciar outros para a realização de propósitos comuns, onde os líderes de sucesso desenvolvem uma visão das suas escolas, a partir dos seus valores pessoais e profissionais, através da articulação entre esta visão e cada oportunidade de a partilharem com os seus colaboradores e todos os interessados no processo da educação (stakeholders), onde a filosofia, a estrutura e as atividades da escola são orientadas para o alcançar esta visão partilhada (Bush & Glover, 2003).

Aceitando que existem elementos comuns e tendências nas práticas da liderança dentro os vários setores e lições a serem apreendidas em todos estes contextos, todos podem ser aplicados à liderança escolar (OECD, 2008).

Uma visão clara da organização é importante para o estabelecimento da natureza e do sentido da mudança organizacional, também é importante ter a certeza de que as inovações são implementadas de forma eficiente e que as tarefas funcionais da escola são realizadas eficazmente (Bush, 2008).

3.2. Liderança e gestão

O conceito de liderança sobrepõe-se ao conceito de gestão. Segundo a OCDE (2008) e Dimmock (1999) a distinção entre liderança, gestão e administração escolar reconhece a responsabilidade dos líderes escolares que, por vezes, têm que atuar nestas três áreas. Assim, a liderança consiste em dar prioridade às tarefas distribuídas para o desenvolvimento dos colaboradores, alunos e desempenhos dos alunos, e a gestão será a manutenção das rotinas com vista às operações e a administração dos deveres menores (ou cumprimento de atividades de caráter normativo ou burocrático).

Bush (2008) e Cuban (1988) relacionam a liderança com a mudança e a gestão com a manutenção de atividades de rotina. Estes autores providenciam uma clara distinção entre estes dois termos e referem a importância destas duas dimensões na atividade organizacional. Para os autores a liderança será “influenciar a ação dos outros para a obtenção dos propósitos desejáveis. Os líderes são pessoas que modelam os seus objetivos, motivações e ações dos outros. Com frequência estes iniciam mudanças para a obtenção de objetivos planeados ou novos objetivos.” (Bush, 2008, p. xx). De acordo com os mesmos autores, a gestão consiste em “manter o funcionamento corrente da organização de forma eficaz e eficiente, e mesmo que a gestão exija capacidade de liderança, a sua principal função tem mais a ver com a manutenção do que com a mudança.” (Bush, 2008, p. xx).

Dimmock (1999) distingue liderança, gestão e administração escolar, embora reconheça que o líder escolar tem responsabilidade sobre os três. Nas palavras do autor, “independentemente da forma como estes termos são definidos, os líderes escolares sentem dificuldade na tomada de decisão sobre a harmonia entre as tarefas mais importantes para o desenvolvimento do pessoal, dos alunos e o desempenho da escola (liderança), as rotinas de manutenção das operações presentes (gestão) e afazeres menos importantes (administração)” (Dimmock, 1999, p. 18). Os três elementos estão de tal maneira entrelaçados que não será muito fácil para um dos elementos ter sucesso sem a sua relação com os outros dois.

3.3. Abordagem teórica ao estudo da liderança

Durante o século XX foram desenvolvidas teorias de grande influência no domínio da liderança. As primeiras focaram-se nas qualidades dos líderes e dos seus colaboradores (Jesuino, 2005; Silva, 2010), as seguintes focaram-se em outros fatores, como a situação e a relação entre líderes e colaboradores. Uma abordagem à liderança que emerge na década de 80, pelos trabalhos de Burns (1978), é a abordagem transformacional. Esta defende que o líder conduz os colaboradores para além dos interesses pessoais imediatos, através de uma influência idealizada, inspiração, estímulo intelectual ou, ainda, de considerações individuais. Isto eleva o nível de maturidade do colaborador bem como as suas preocupações com as suas concretizações, o bem-estar dos outros, das organizações e da sociedade.

A liderança transformacional acontece quando o líder visiona um futuro ideal, operacionaliza a forma como este pode ser atingido, estabelece um exemplo para ser seguido, determina os padrões de desempenho e mostra determinação e confiança. Os colaboradores querem identificar-se com este tipo de liderança. O estímulo intelectual acontece quando o líder ajuda os colaboradores a se tornarem mais criativos e inovadores, e a consideração individual acontece quando os líderes prestam mais atenção às necessidades de desenvolvimento dos seus colaboradores e apoiam e desenvolvem atividades de *coaching* perante estas necessidades. Assim, os líderes delegam tarefas que se constituem como oportunidades de crescimento para quem as desenvolve. Os membros das equipas que se regem pelos princípios de uma liderança transformacional preocupam-se mais uns com os outros, estimulam-se intelectualmente, inspiram-se uns aos outros e identificam-se com os objetivos da equipa, o que torna o seu desempenho altamente funcional.

Existem evidências na literatura de que a liderança transformacional é bastante eficaz. Alguns estudos sugerem que existe uma relação positiva entre liderança transformacional e indicadores efetivos de desempenho (Bass, 1985). Os fatores transformacionais encontram-se regra geral altamente correlacionados com resultados de eficácia e de satisfação dos colegas, bem como com a sua contribuição para a inovação e a melhoria. No entanto, ainda falta muito para explicar na forma como a liderança transformacional funciona.

Um dos modelos mais atuais é o de Kouzes e Posner (1995; 2002). Este modelo baseia-se em várias investigações empíricas, e inclui uma série de qualidades que devem ser adquiridas e práticas que devem ser aplicadas, bem como sugestões acerca de como agir em situações difíceis.

As investigações de Kouzes e Posner, levadas a cabo durante mais de 20 anos, sugerem que a liderança não é uma posição, mas sim um colírio de práticas e comportamentos. Estas práticas são os componentes essenciais do conceito de liderança transformacional, traduzem-se nas seguintes etapas: i) desafiar o processo; ii) inspirar uma visão partilhada; iii) levar os outros a agir; iv) mostrar o caminho; e v) encorajar a vontade que de seguida passamos a enunciar.

Desafiar o processo traduz a capacidade dos líderes para, através de novas ideias, mostrarem a vontade de desafiar o sistema com vista a transformar essas ideias em ações e a conseguirem novos produtos, processos ou serviços. Ou seja, procuram “janelas de oportunidades” e buscam formas inovadoras de melhorar as organizações.

Quando inspiram uma visão partilhada, os líderes acreditam que conseguem fazer a diferença ao antecipar o futuro e idealizar imagens organizacionais. Inspiram uma visão nos seus colaboradores tão positiva que geram entusiasmo para uma visão comum através do uso adequado de metáforas e linguagem positiva.

Levar os outros a agir consiste em acalantar a colaboração e o *empowerment* (capacitação) dos colaboradores, envolvê-los na planificação e dar-lhes liberdade de escolha nos processos de tomada de decisão, o que lhes dará a possibilidade de fazerem o seu trabalho e concretizarem o seu potencial. Estes líderes criam um ambiente de confiança e dignidade e ajudam cada um a sentir-se capaz.

Mostrar o caminho, configura um cenário em que os líderes dão exemplos de práticas a serem seguidas e, desta forma, estabelecem compromissos que geram progresso.

Encorajar a vontade, visa o incentivo para a realização de propósitos da organização. Ao influenciarem a motivação dos colaboradores, os líderes articulam reconhecimento e recompensa no desempenho dos colaboradores, e ao celebrarem a obtenção das metas juntos levam todos a sentirem-se parte significativa da organização, o que gera o sentimento de pertença; quando os líderes encorajam os colaboradores através do reconhecimento e da celebração, inspiram os colaboradores a um melhor desempenho.

Esta abordagem da liderança transformacional remete-nos as qualidades dos líderes bem como para o seu trabalho a ser desenvolvido, diariamente, junto dos colaboradores.

4. LIDERANÇA PARA A MELHORIA DA ESCOLA

A liderança começa a encontrar-se, na literatura, relacionada com a melhoria das escolas e há já duas décadas atrás Beare, Caldwell e Millikan (1992) afirmavam a importância da liderança neste contexto. Harris (2004) reforça este ponto de vista afirmando que os líderes eficazes exercem uma influência indireta, embora de relevo, na eficácia da escola e nos resultados académicos dos alunos. A relação entre a qualidade da liderança e o sucesso dos alunos tem vindo a acolher um reconhecimento global.

Esta evidência largamente disseminada que a liderança e a gestão são fatores significativos na determinação dos resultados escolares não se encontra ainda suficientemente suportada empiricamente no que toca à extensão e natureza dos efeitos da liderança. Em relação a este aspeto, Hallinger e Heck (1996) creem que os efeitos da liderança escolar acrescem 3 a 5% na variação dos desempenhos dos alunos.

O *International Successful School Principalship Project (ISSPP)*, é um projeto internacional de investigação que tem o propósito de procurar quais as práticas para a escola de sucesso, a serem desenvolvidas pelos gestores escolares. A primeira fase do ISSPP incluiu um total de 63 estudos de caso com uma abordagem multi-perspetiva em 8 países (Austrália, Canada, China, Dinamarca, Inglaterra, Noruega, Suécia e EUA) com vista à identificação das práticas de liderança para o sucesso educativo. Destes estudos de caso Leithwood e Riehl (2003), identificaram um conjunto de práticas básicas de liderança. Estas práticas passam pelo estabelecimento objetivos, reorganizar a organização, gerir o currículo educativo e construir parcerias. De acordo com Leithwood (2001), estas práticas são passíveis de serem adaptadas pelos líderes e contingentes, ao momento específico em que estes ocorrem.

Em Portugal existem alguns trabalhos de caráter académico sobre este tema, no entanto, ainda é um tema pouco explorado. Desde o Decreto-lei nº 75/2008 de 22 de abril, que a liderança das escolas é assumida como unipessoal na figura do Diretor da escola, isto porque o programa do XVII Governo Constitucional identificou a necessidade da revisão do regime jurídico da autonomia, administração e gestão das escolas no sentido do “favorecimento da constituição de lideranças fortes”. (Decreto Lei nº 75/2008, de 22 de abril, p. 2341). Onde se procura o reforço das lideranças das escolas, impondo-se a criação de condições para que se afirmem boas lideranças e lideranças eficazes, para que em cada escola exista um primeiro responsável, dotado da autoridade necessária para desenvolver o projeto educativo da escola e executar localmente as medidas de política educativa. A este diretor é confiada a gestão administrativa, financeira e pedagógica, assumindo de igual modo a presidência do conselho pedagógico. (Decreto Lei nº 75/2008 de 22 de abril). E a responsabilidade de acompanhar este desenvolvimento ficou a cargo da Inspeção Geral do Ensino e Ciência (IGEC) que até esta data tem vindo a fazer o acompanhamento no sentido da sua implementação e melhoria.

5. METODOLOGIA

O desenvolvimento deste trabalho, seguiu a opção por um trabalho exploratório, descritivo, interpretativo e heurístico, assente na metodologia qualitativa. A escolha recaiu sobre o Estudo de Caso pois este encara o caso numa perspetiva holística, sistémica, ampla, integrada, e tem como propósito compreender o caso no seu todo e na sua unicidade. A escolha do Estudo de Caso de tipo coletivo ou multicase, que se verifica quando são estudados vários casos, foi opção para possibilitar um conhecimento aprofundado sobre o fenómeno em análise.

Quanto à seleção dos casos, esta foi intencional, seguindo o caso de conveniência, as duas escolas com Contrato de Autonomia assinado, em 2007, na região do Algarve, dada a proximidade do investigador aos casos permitir os melhores procedimentos de recolha dos dados favorecendo a melhor gestão de tempo e dos recursos humanos e materiais. A seguir designadas, por questões de confidencialidade, por Escola A e Escola B.

A seleção dos protagonistas da investigação aconteceu em função da literatura consultada e após a obtenção de todas as respetivas autorizações necessárias. Fizeram parte do estudo os elementos da gestão de topo e da gestão intermédia de ambas as escolas bem como os professores mais antigos dessas escolas (*sénior staff*), num total de 11 professores, distribuídos da seguinte forma: 6 professores no Caso A (Diretor, Subdiretor, 2 Adjuntos, Diretor de Turma, *Sénior Staff*) e 5 professores no Caso B (Diretor, Subdiretor, 2 Adjuntos, 2 Assessores). Na escola B, o diretor e o subdiretor assumiram-se, igualmente, como *Sénior staff* (dado o tempo de serviço e as diversas funções de lideranças já desenvolvidas).

Nos procedimentos metodológicos, como técnicas e instrumentos de recolha de dados, recorremos a uma entrevista semiestruturada cujo guião foi construído a partir dos itens que constam no modelo do quadro de referência para avaliação externa das escolas (IGEC, 2011; 2012), e no *International Successful School Principals' Project (ISSPP)* (Day, 2007). A análise documental foi realizada a partir dos documentos recolhidos junto das respetivas organizações produtoras que os disponibilizam para consulta, alguns na sua página virtual (v.g., IGEC, 2012). As notas de campo resultaram de observação naturalista realizada durante os contactos com as escolas.

Ainda, nos procedimentos metodológicos e para o tratamento e análise dos dados recolhidos, procedemos à análise de conteúdo, assistida por computador. Começamos pela construção de categorias, a partir das quais identificamos subcategorias emergentes e procedemos, de seguida, à distinção de indicadores a partir da análise dos segmentos de texto dos documentos recolhidos. A triangulação metodológica foi utilizada por forma a validar os resultados do nosso trabalho.

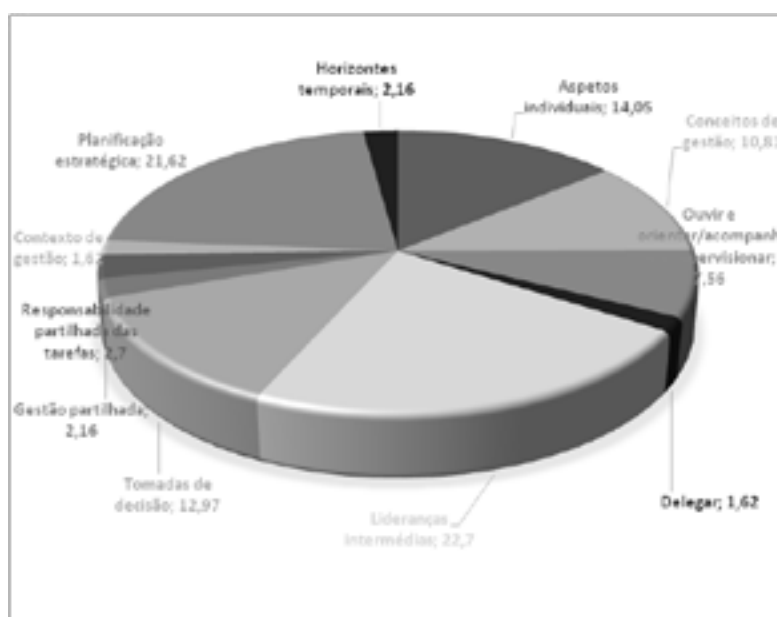
6. ANÁLISE E DISCUSSÃO DOS RESULTADOS

A análise de conteúdo, assistida por computador, realizada aos dados recolhidos pela entrevista semiestruturada, que construímos e validamos para o efeito desta investigação, e que foram, entretanto, complementados pelos dados recolhidos da análise documental e das notas de campo, revelou-nos várias categorias de análise, das quais emergiram um número variável de subcategorias, com um número, igualmente, variável de indicadores identificados por cada subcategoria.

Para a descrição e análise de resultados apurados que aqui nos propomos desenvolver vamos centrar-nos na categoria a que denominamos de “perfis de liderança”. Nesta categoria foram agregados todos os aspetos relacionados com a liderança e os processos que nela se encontram envolvidos ou ainda subjacentes.

Apresentamos e discutimos esta categoria segundo uma ordem que reflete os principais processos implicados na prática da liderança e que se expressa na seguinte sequência: aspetos individuais; conceitos de gestão; ouvir e orientar/acompanhar e supervisionar; delegar; lideranças intermédias; tomadas de decisão; gestão partilhada; responsabilidade partilhada das tarefas; contexto de gestão; planificação estratégica; horizontes temporais. O gráfico 1 ilustra esta distribuição dos segmentos de texto apurados em cada uma das subcategorias emergentes.

Figura 1. segmentos de texto apurados em cada uma das subcategorias emergentes



As subcategorias “lideranças intermédias” e “planificação estratégica” reúnem a maior quantidade de unidades de registo apuradas, 22,70% e 21,62%, respetivamente. A subcategoria “aspetos individuais” surge, de seguida, com 14,05% do total apurado, “tomadas de decisão”, com 12,97% e “conceitos de gestão” com 10,81%.

Estes aspetos aparecem abundantemente referidos na literatura, pois não só a planificação é importante, como o apoio das lideranças intermédias é crucial para a melhoria das escolas (Bolívar, 2012; Day *et al.*, 2011; Leithwood, 2001; Mourshed, 2007; OCDE, 2008). Os aspetos individuais da figura do diretor têm bastante influência na melhoria da escola (Wang & Howell, 2010) bem como as tomadas de decisão.

A subcategoria “lideranças intermédias” tem a ver com a emergência do papel das lideranças intermedias ou distribuídas (Bush & Glover, 2003) na escola pública, como dos diretores de departamento, de turma, e com o peso que lhe foi sendo atribuído, nas escolas públicas, com contrato de autonomia. Desta subcategoria emergiram os indicadores que passamos a apresentar na tabela 1.

Tabela 1 . Subcategoria “lideranças intermédias” e indicadores apurados

	Unidades de registo	
	N	%
1. Importância da liderança intermedia na gestão	16	38,09
2. Liderança partilhada	2	4,76
3. Da supervisão à delegação do líder nas lideranças intermédias	3	7,14
4. Lideranças intermedias como apoio aos líderes de topo	5	11,90
5. Transição para cultura de liderança	4	9,52
6. As lideranças intermédias no contrato de autonomia	4	9,52
7. Da liderança à transição para responsabilização para as lideranças intermédias	8	19,04
Total	42	100

O indicador “importância da liderança intermedia na gestão” apresenta uma percentagem de 38,09% de unidades de registo e o segundo indicador com mais unidades de registo foi “da liderança à transição para responsabilização para as lideranças intermédias”, com 19,04%. Estes resultados relevam a importância das lideranças intermédias na gestão da escola, onde segundo os autores, as lideranças intermédias ou distribuídas, bem organizadas, contribuem para a melhoria da prestação do serviço educativo das escolas (Bolívar, 2012; Bush, 2010; Leithwood, 2001; Vidoni & Grassetti, sd.).

A subcategoria “planificação estratégica” diz respeito à organização que segue um plano e objetivos, num espaço e num tempo. Desta subcategoria emergiram os indicadores que passamos a apresentar na tabela seguinte.

Tabela 2. Subcategoria “planificação estratégica” e indicadores apurados

	Unidades de registo	
	N	%
1. Planificar é projetar	5	12,5
2. Da preparação à valorização das pessoas	7	14
3. Planificar é flexibilizar	2	5
4. Contrato de autonomia levou à planificação por objetivos	3	7,5
5. Planificar é antecipar	10	25
6. Planificar é supervisionar	2	5
7. Planificar é ter visão real	1	2,5
8. Planificar é organizar	1	2,5
9. Planificar é construir um Conselho Pedagógico eficaz	1	2,5
10. Planificar é definir funções e competências	8	20
Total	40	100

O indicador com mais unidades de registo foi “planificar é antecipar” com 25% do total apurado; em segundo lugar surge o indicador “da preparação à valorização das pessoas”, com 14%; o terceiro indicador em número de referências foi “planificar é projetar” com 12,5%; e o indicador “contrato de autonomia levou à planificação por objetivos” junta 7,5% das unidades de registo apuradas. Estes indicadores remetem para as questões ligadas à metodologia de trabalho de projeto, nomeadamente para a parte da planificação que estrutura toda a sequência do trabalho a desenvolver para a boa prossecução dos objetivos do trabalho (Barbier, 1993; Guerra, 2006; Serrano, 2010), desenvolvida nas escolas desde o Decreto-Lei nº 43/89, de 3 de fevereiro, e que, no âmbito da autonomia das escolas, se assume como Projeto Educativo de Escola. Este consiste num modelo geral de organização da escola e num instrumento de gestão das organizações educativas (Costa, 1991; 2004; Grade, 2008) e de apoio à avaliação interna e externa da escola (Afonso, 2010).

A subcategoria “aspectos individuais”, integra todas as unidades de registo que se referem às características de personalidade ou aspectos particulares da personalidade da figura do diretor da escola, que assumem grande relevo quando este se relaciona com os outros nas suas atividades de liderança.

Nesta subcategoria foram identificados quatro indicadores, que passamos a apresentar por ordem de implicação nos aspectos das inter-relações pessoais e a que demos as denominações que se apresentam na tabela abaixo.

Tabela 3. Subcategoria “aspectos individuais” e indicadores apurados

	Unidades de registo	
	N	%
1. Contrato de autonomia parte de pessoas e construído por pessoas	8	30,76
2. Da complementaridade à colaboração	8	30,76
3. Da personalidade aos interesses de cada um	5	19,23
4. Personalidade da figura do diretor	5	19,23
Total	26	100

Os indicadores “contrato de autonomia parte de pessoas e construído por pessoas” e “da complementaridade à colaboração” reúnem, ambos, 30,76% dos resultados apurados. Os indicadores “da personalidade aos interesses de cada um” e “personalidade da figura do diretor” reúnem, igualmente, cada um 19,23% das unidades de registo apuradas. Isto leva-nos a inferir que este é um trabalho realizado com “pessoas”, e que coloca a tónica nas relações humanas ou nas relações interpessoais, aspeto muito importante para pôr em prática o contratualizado e trabalhar para a melhoria dos resultados dos alunos. Como a comunicação se pode converter em troca de ideias e partilha de opiniões, será desta interação que sairão as ideias mais adequadas para as práticas de gestão e liderança para a melhoria da escola (Kouzes & Posner, 1995). A dimensão pessoal dos envolvidos nos processos de liderança encontra-se aqui bastante bem expressa, assim como aspetos da personalidade do diretor (Glatter, Mulford & Shuttlesworth, 2003).

A subcategoria “tomadas de decisão” refere-se aos processos e procedimentos, e ainda lugares e momentos inerentes à tomada de decisão em relação aos aspetos da gestão da escola. Desta subcategoria emergiram os três indicadores que se apresentam em seguida, na tabela 4.

Tabela 4. Subcategoria “tomadas de decisão” e indicadores apurados

	Unidades de registo	
	N	%
1. Tomadas de decisão: desde o ouvir todos à decisão em conjunto ou em colaboração	11	45,83
2. Do tipo e tempo da tomada de decisão aos momentos próprios de tomada de decisão	10	41,66
3. Responsabilização das lideranças intermédias e concessão da sua autonomia	3	12,5
Total	24	100

O indicador “tomadas de decisão: desde o ouvir todos à decisão em conjunto ou em colaboração” apresenta uma prevalência de 45,83% de unidades de registo apuradas, logo seguido do indicador “do tipo e tempo da tomada de decisão aos momentos próprios de tomada de decisão”, com 41,83% de unidades de registo apuradas. As tomadas de decisão são momentos de grande importância nos processos de gestão e liderança escolar. Associados a estes processos, encontram-se o tipo de decisão, os momentos de tomada de decisão e a importância e a responsabilização crescente das lideranças intermédias nestes processos (Bush & Glover, 2003).

A subcategoria “conceitos de gestão” diz respeito a conceções ou ideias pessoais referentes ao conceito de gestão de escola. Nesta subcategoria foram identificados quatro indicadores, que passamos a enunciar por ordem de implicação nas conceções individuais de gestão, na tabela 5.

Tabela 5. Subcategoria “conceitos de gestão” e indicadores apurados

	Unidades de registo	
	N	%
1. Definição de gestão: da dificuldade de definir à liderança e programação	3	15
2. De liderar a delegar	6	30
3. Da gestão ao tempo de reflexão	1	5
4. Liderar: das relações interpessoais ao ensino de qualidade	10	50
Total	20	100

Os indicadores identificados com uma percentagem mais elevada de unidades de registo foram liderar: das relações interpessoais ao ensino de qualidade”, com 50%, ou seja, metade das unidades de registo apuradas, e “de liderar a delegar”, com 30%. Esta conceção de gestão em aspetos que se prendem com as relações interpessoais é um aspeto referido na literatura, que nos diz que liderar envolve processos de influência de uma pessoa ou grupo de pessoas sobre outra pessoa ou grupo de pessoas, com vista à estruturação das atividades numa organização (Bush & Glover, 2003). E constituem aspetos

importantes para compreender as conceções de gestão dos protagonistas que, neste caso, assumem a gestão como um aspeto fortemente ligado à liderança, embora a maioria dos autores não o faça. Distinguem liderar como o processo de influenciar outros no sentido da obtenção de objetivos comuns (Leithwood & Riehl, 2003), e gerir como a execução de atividades no sentido da manutenção da organização (OCDE, 2008). No entanto, estes indicadores apontam no sentido das relações interpessoais e das lideranças intermédias, circunstância que os gestores e líderes ainda se encontravam a consciencializar, pois a figura do Diretor escolar emergiu, como já vimos, com o Decreto-Lei nº 75/2008, de 22 de abril e os contratos de autonomia haviam sido celebrados em 2007 (estas entrevistas foram realizadas no final de 2012, início de 2013), o que nos remete para o desenvolvimento de práticas ainda pouco trabalhadas.

7. CONSIDERAÇÕES FINAIS

Numa perspetiva global os resultados obtidos sugerem a prática de muitos dos aspetos referidos na nossa revisão da literatura. A contratualização contribuiu, de modo geral, para o desenvolvimento organizacional das escolas (Bolívar, 2012), do desenvolvimento dos profissionais, e do seu desenvolvimento pessoal também.

A contratualização permitiu, igualmente, o aprofundamento da autonomia através do maior envolvimento das lideranças intermédias (Bolívar, 2012; Day *et al.*, 2011; Leithwood, 2001; Mourshed, 2007; OCDE, 2008) pois as lideranças distribuídas, organizadas, são um bom contributo para a melhoria da prestação do serviço educativo das escolas (Bush, 2010; Vidoni & Grasseti, *sd.*). Neste processo emerge a importância da personalidade do diretor, no desenvolvimento de práticas assentes nas interações com os seus colaboradores, mobilizadoras do propósito comum da prestação de um serviço educativo de sucesso a toda a comunidade escolar (Glatter, Mulford & Shuttleworth, 2003).

Da contratualização emergem, ainda aspetos como a planeamento estratégico que remete para as questões ligadas à construção de um Projeto Educativo de Escola ao abrigo do Decreto-Lei nº 43/89, de 3 de fevereiro, que se assuma como instrumento de gestão e liderança das organizações educativas e de apoio à prestação de contas junto da Tutela, no âmbito da autonomia das escolas (Afonso, 2010; Costa, 1991; 2004; Grade, 2008).

Nos resultados apurados, no contexto deste trabalho, encontramos os processos de tomadas de decisão como momentos de grande importância na gestão e liderança da escola, onde o tipo de decisão, os momentos da tomada de decisão, a importância e a responsabilização crescente das lideranças intermédias nestes processos vem aumentando, gradual e progressivamente (Bush & Glover, 2003).

Da análise dos dados apurados encontramos conceções de gestão como um aspeto fortemente ligado à liderança. Estes indicadores apontam no sentido das circunstâncias em que os gestores e líderes ainda se encontravam a masterizar estas práticas, uma vez que a figura do Diretor escolar surge no Decreto-Lei nº 75/2008, de 22 de abril, após a celebração dos contratos de autonomia em 2007. O que nos remete para práticas em experimentação e desenvolvimento.

Algumas práticas passíveis de fomentar a liderança para a melhoria dos resultados dos alunos foram apenas sugeridas pelos resultados obtidos neste trabalho, como a crescente responsabilização das lideranças distribuídas, as características individuais dos diretores e a sua capacidade para a interação com os seus colaboradores com vista o alcançar de objetivos comuns, a planificação estratégica traduzida num documento agregador dos esforços de todos e a tomada de decisão nos momentos adequados e em consonância com a respetiva ação. No entanto, todos os aspetos aqui analisados requerem maior exploração dado ainda se encontrarem em desenvolvimento.

REFERÊNCIAS

- Afonso, A. J. (2010). Gestão, autonomia e accountability na escola pública portuguesa: breve diacronia. *Revista Brasileira de Política e Administração da Educação*, 26 (1), 13-30.
- Barbier, J. (1990). *Avaliação em Formação*. Lisboa: Ed. Afrontamento.
- Bass, B. (1985). *Leadership and Performance beyond Expectations*. New York, Free Press.
- Beare, H., Caldwell, B., & Millikan, R. (1992). *Creating an Excellent School*. London: Routledge.
- Bolívar, A. (2012). *Melhorar os processos e os resultados educativos: o que nos ensina a investigação*. VNGaia:FMLeão
- Burns, J. M. (1978). *Leadership*. New York: Harper Raw.
- Bush, T. & D. Glover (2003). *School Leadership: Concepts and Evidence*, NCSL, Nottingham.
- Bush, T. (2008). *Leadership and management development in education*. London: Sage
- Bush, T. (2010). *Theories of Educational Leadership and Management*. (4ª ed.). London: SAGE
- Bush, T., Coleman, M. & Glover, D. (1993) *Managing Autonomous Schools: the Grant Maintained Experience*. London: Paul Chapman
- Caldwell, B. J. (2012). Review of related literature for the evaluation of empowering local schools. *Report to Empowering local schools section of the National school reform support branch curriculum assessment and teaching*. Retirado de <http://www.btadvisorybodies.catholic.edu.au/images/product/file/50/ReviewRelatedLiteratureEmpoweringLocalSchools.pdf>
- Costa, J. (1991). *Gestão escolar – participação, autonomia, projecto educativo de escola*. Lisboa: Texto Editora.

- Costa, J. (2004). Construção de Projectos Educativos nas Escolas: traços de um percurso debilmente articulado. *Revista Portuguesa de Educação, Volume 17, nº 2, 851-14.*
- Costa, J.A. (1996). *Imagens Organizacionais da Escola*. (3ª ed.). Porto: ASA
- Cuban, L. (1988). *The Managerial Imperative and the Practice of Leadership in Schools*. Albany, NY: State University of New York Press.
- Day, C. (2007). Sustaining the Turnaround: What Capacity Building Means in Practice. *International Studies in Educational Administration, 35 (3), . 39-48.*
- Day, C., Jacobson, S., & Johansson, O. (2011). Leading organisational learning and capacity building. In R. Ylimaki e S. Jacobson (Eds.) *U.S. and crossnational policies practices and preparation: Implications for successful instructional leadership, organizational learning, and culturally responsive practices*. (pp. 29-49). Dordrecht: Springer
- Dimmock, C. (1999). Principals and school restructuring: conceptualising challenges as dilemmas. *Journal of Educational Administration, 37 (5), 441-462.*
- Fiedler, F.E. (1967). *A theory of leadership effectiveness*. New York: McGraw Hill.
- Formosinho, J. & Machado, J. (2007). Avaliação das escolas e programas de desenvolvimento, In A. Barca, M. Peralbo, A. Porto, B. Duarte Silva e L. Almeida (Eds.). *Libro de Actas do IX Congreso Internacional Galego-Portugués de Psicopedagogía* (pp. 3342-3349). A Coruña: Universidade da Coruña.
- Formosinho, J. & Machado, J. (2010). Escola, autonomia e avaliação. O primeiro ano de governação por contrato. In J. Formosinho, A.S. Fernandes, J.Machado e H. Ferreira (orgs) *Autonomia da escola pública em Portugal*. (pp. 121-146) Gaia: FML
- Formosinho, J., Fernandes, A.S., Machado, J. & Ferreira, H. (2009). Democracia, gestão e autonomia da escola a governação por contrato. Atas do X congresso da SPCE. Bragança: SPCE
- Gaudin, J.P. (2007). *Gouverner par contrat*. (2ª edição). Paris: Presses de Sciences Po
- Glatter, R., Mulford, B. & Shuttleworth, D. E. (2003). Governance, Management and Leadership. In OECD (Eds.). *Schooling for Tomorrow. Networks of Innovation*. (pp. 65-86). Paris: OECD
- Grade, L.S. (2008). *A centralidade do projecto educativo na administração escolar*. Lisboa: Edições colibri
- Guerra, I. (2006). *Pesquisa Qualitativa e Análise de Conteúdo. Sentidos e Formas de Uso*. Cascais: Principia – Publicações Universitárias e Científicas.
- Hallinger, P., & Heck, R. H. (1996). Reassessing the principal's role in school effectiveness: A review of empirical research, 1980-1995. *Educational Administration Quarterly, 32(1), 5-44.*
- Harris, A. (2002). Distributed Leadership in Schools: Leading or Misleading?, Paper presented at the British Educational Leadership, Management and Administration Society annual conference, Birmingham: BELMAS
- Harris, A. (2004). Distributed leadership: leading or misleading. *Educational Management and Administration, 32(1), 11-24*
- IGEC (2011). *Avaliação Externa das Escolas – Novo Ciclo. Relatório final do GT de 2006*. Retirado de http://www.ige.min-edu.pt/upload/Relatorios/AEE_06_RELATORIO_GT.pdf
- IGEC (2012). *Avaliação externa das escolas: avaliar para a melhoria e a confiança - 2006-2011*. Lisboa: MEC. Retirado de http://www.ige.minedu.pt/upload/Relatorios/AEE_2006_2011_RELATORIO.pdf
- Jesuino, J. (2005). *Processos de Liderança*. Lisboa: Livros Horizonte
- Kouzes, J. M., & Posner, B. J. (2002). *Leadership challenge* (3rd ed.). San Francisco: Jossey-Bass.
- Kouzes, J. M., & Posner, B. Z. (1995). *The leadership challenge: how to keep getting extraordinary things done in organizations*. California: Jossey- Bass.
- Kuckartz, U. (2010). *Realizing Mixed-Methods Approaches with MAXQDA*. Marburg: Philipps-Universitaet Marburg
- Leithwood, K. (2001). School Leadership in the Context of Accountability Policies. *International Journal of Leadership in Education, 4 (3), s.p.*
- Leithwood, K. A., & Riehl, C. (2003). *What we know about successful school leadership*. Philadelphia, PA: Laboratory for Student Success, Temple University.
- Levacic, R. (1995) *Local Management of Schools: Analysis and Practice*. Buckingham: Open University Press.
- Lima, L. (2010). A educação faz tudo? Crítica ao pedagogismo na ‘sociedade da aprendizagem’. *Revista Lusófona de Educação, 15, 41-54.*
- Mourshed, M. (2007). *How the world's best performing school systems come out on top*. Retirado de <http://www.smhc-cpre.org/wp-content/uploads/2008/07/how-the-worlds-best-performing-school-systems-come-out-on-top-sept-072.pdf>
- OECD (2001). *New School Management Approaches*. Paris: OECD

- OECD (2008). *Improving School Leadership. Volume 1: Policy and Practice*. Paris: OECD
- Ogawa, R., & Bossert, S. (1995). Leadership as an organisational quality. *Educational Administration Quarterly*, 31, no. 2, 224-43.
- Serrano, G.P. (2010). *Elaboración de Proyectos Sociales: casos prácticos*. Madrid: Narcea.
- Silva, M. (2010). *Avaliação de Competências de Liderança nos Líderes Intermédios Desempenho/Eficácia Organizacional Estudo de caso numa Empresa Multinacional do Ramo Farmacêutico*. Tese de Mestrado. Coimbra: Universidade de Coimbra.
- Stoll, L. & Fink, D. (1996). *Changing Our Schools: Linking School Effectiveness and School Improvement*. Buckingham: Open University Press
- Thomas, H. & Martin, J. (1996) Managing resources for school improvement: creating a cost-effective school. London: Routledge.
- Vicente, N. A. L. (2004). *Guia do gestor escolar – Da escola de qualidade mínima garantida à escola com garantia de qualidade*. Porto: Edições ASA
- Vidoni, D & Grasseti, L. (s.d.). *The Role of School Leadership on Student Achievement: Evidence from Timss2003*. Retirado de http://www.iea.nl/fileadmin/user_upload/IRC/IRC_2008/Papers/IRC2008_Vidoni_Grasseti.pdf
- Wang, L. (2011). *Educational Leadership and Policy Studies*. Indiana University. Bloomington: Indiana
- Wang, X.-H. & Howell, J. M.(2010). Exploring the dual-level effects of transformational leadership on followers. *Journal of Applied Psychology*, 95(6), 1134-1144,doi:10.1037/a0020754
- Young, V. M. (2006). Teachers' use of data: Loose coupling, agenda setting, and team norms. *American Journal of Education*, 112(4), 521–548.
- Yukl, G. A. (2002), *Leadership in Organizations*. Upper Saddle River: NJ.:Prentice-Hall

LEGISLAÇÃO CONSULTADA

- Decreto-Lei nº 43/89 de 3 de Fevereiro. Diário da República nº 29/89 - Série I. Lisboa: Ministério da Educação.
- Decreto-Lei nº 75/2008 de 22 de Abril. Diário da República, nº 79/2008 - I Série. Lisboa: Ministério da Educação.

EVALUATION OF STAKEHOLDER ENGAGEMENT OF BRAZILIAN COMPANIES: A TEXT MINING APPROACH

Sílvia Maria Dias Pedro Rebouças
Universidade Federal do Ceará/Universidade do Algarve
(smdpedro@gmail.com)

Eugénia Maria Dores Maia Ferreira
Universidade do Algarve
(ecastela@ualg.pt)

Maria Purificación Galindo Villardón
Universidade de Salamanca
(pgalindo@usal.es)

Rômulo Alves Soares,
Universidade Federal do Ceará
(romuloalves61@gmail.com)

Mônica Cavalcanti Sá de Abreu
Universidade Federal do Ceará
(mabreu.ufc@gmail.com)

ABSTRACT

Sustainability reports have been gaining importance through the years because, differently from the financial reports, they cover aspects of a company other than their financial and economic performance. They bring information about environmental and social policies, its corporate governance practices, stakeholder engagement, among others. The quantity of information in these reports also makes them more complex and harder to evaluate. Given this situation, this study aims to develop a tool to evaluate the organization's stakeholder engagement, disclosed in these reports, using a text mining approach. In order to achieve this goal, we use reports of Brazilian companies that were published under the G4 guidelines of the Global Reporting Initiative during 2016. The results showed that the most mentioned stakeholders were employees, clients, market and suppliers, and the major concern raised by them relates mainly to the environment. We also find that the firm-characteristics did not played any part in differentiating the companies with high and low stakeholder engagement.

Keywords: Sustainability Report, Text Mining, Stakeholders Engagement.

1. INTRODUCTION

Companies have to meet the needs of a diverse set of stakeholders (e.g. employees, clients, suppliers, government, NGOs) that pursue different economic, environmental and social interests. In this context, sustainability reports represent an important channel through which companies try to meet these demands (Hahn; Kühnen, 2013).

Kolk (2010) shows that sustainability-related reports went through changes in their focus along the years. During the 1970s, reports focused heavily in traditional financial statements, sometimes complemented by social information. In the 1980s, the focus changed from the social to environmental information, on account of natural disasters like the Bhopal gas tragedy in 1984. During the 1990s, both social and environmental information began to be heavily disclosed by the companies.

The increase in the number of sustainability reports along with the growing interest among the various stakeholder groups, have made those reports harder to evaluate and created a new challenge in obtain metrics from them (Modapothala; Issac, 2009).

These reports being highly qualitative often pose serious concerns to the users of information in terms of analysis, comparability and assessing (Modapothala; Issac, 2009). So, it is important to develop techniques of text mining to automate the analysis of these texts. According to Nisbet, Elder and Miner (2009), text mining consists in the discovery of new information or associations, from a collection of texts, also called corpus. Makhabel (2015) consider that a text is a collection of unstructured documents and the purpose of text mining is to process it and transform it into a numerical and structured representation.

In a context where sustainability reports have a growing importance, but are also more complex to evaluate, due to the number of stakeholders they have to address, and considering the proficiency of text mining tools to extract information from collections of texts, we aim evaluate stakeholder engagement disclosed in CSR reports using a text mining algorithm.

We also use the results from the text mining analysis to evaluate the companies regarding their stakeholder engagement and how they relate with other firm-level characteristics such as their size, level of governance, type of ownership and debt ratio.

The proposed method should facilitate pattern recognition in texts, minimizing or eliminating the need for time-consuming techniques, such as, content analysis, that are usually used in the analysis of CSR reports.

The results showed that Brazilian companies consider a set of nine stakeholders and reports a set of twelve stakeholders' concerns. The most mentioned stakeholders were employees, clients, market and suppliers, and the most mentioned concern

of them is related to the environment. We also find that the firm-characteristics did not play any part in differentiating the companies with high and low stakeholder engagement.

2. STAKEHOLDER ENGAGEMENT AND SUSTANABILITY REPORTS

The power growth experienced by companies since the beginning of the 20th century has developed concerns in many segments of society. Berle (1931) was among the first scholars to express his view about this issue. In an essay called *Corporate powers as powers in trust*, he argues that the rising power of companies would require an adaptation from society to a new reality. Bowen's book *Social responsibilities of the businessman*, published in 1953 is considered the initial mark in the Corporate Social Responsibility theory.

Frederick (1960) understands that the companies should aim to achieve an economic system capable of supplying public needs, so the resources should be employed in a way that could allow the general welfare state. McGuire (1963) also express this feeling, when he says that companies should have responsibilities beyond the economic and legal aspect, being also responsible for providing community welfare, education and employee happiness.

The view that a company should have other responsibilities other than those in the economic aspect was in conflict against the *shareholder theory* view, which stated that the main goal of the company was to maximize the shareholder's wealth. This economic view started to be questioned by a new, emerging *stakeholder theory*, according to which, the shareholders are a part of a broader group of stakeholders, whose needs and expectations should be considered in the corporate decision process (Jones, 1995).

Following Lee (2008), the first concepts of *stakeholders* emerged during 1960s, but only in 1984, Freeman was able to synthetize those concepts in a comprehensive framework and therefore made the foundations for the Stakeholder Theory. Freeman (2001) define a stakeholder as any group or individual who can affect, or can be affected, by a company's activity.

Prado-Lorenzo, Gallego-Alvarez and Garcia-Sanchez (2009) state that for a company to survive and grow, it must perform well and undertake socially desirable actions to benefit the groups from which they derive their power. The authors also emphasize the role that social reporting has as a mechanism through which a company can show their compliance with those desires.

González-Benito and González-Benito (2006) proposed a framework to study environmental proactivity. They argue that this proactivity has three key aspects: organizational, operational and communicational practices. The first one is related to the decision of implementing an environmental proactive conduct, then the second aspect is related to the actual implementation of the processes that would lead to this proactivity, and the last aspect is related to communicate the results of the implementation of this conduct. The authors go ahead and highlight the importance of the CSR reports to integrate the stakeholders in this process.

From the 1990s, companies around the world began to disclose non-financial information related to socio-environmental issues, such as preservation of the environment, protection of human rights, well-being of employees and contributions to society. In 2010, according to a survey conducted by KPMG (KPMG, 2011), the percentage of Global 250 companies that issued this type of report reached 95%.

As stated by Cho *et al.* (2012), the discussion between the informational potential of the disclosure of social-environmental information and the fact that it is just another public relations tool for companies, still does not present a consensus. Du and Vieira (2012) argue that there is anecdotal evidence that companies with unscrupulous business practices can resort to socio-environmental disclosure as a strategy to promote, minimizing the effects caused by environmental disasters, for example. For Arena, Bozzolan and Michelon (2014), one element that contributes negatively to this debate is that socio-environmental disclosure is still essentially voluntary and deregulated.

This scenario began to change with the creation of the Global Reporting Initiative (GRI). In 1997, the leaders of the Coalition for Environmentally Responsible Economies (CERES), after realizing that there was a lot of inconsistency in disclosing aspects related to the social and environmental performance of companies, which made it impossible to compare information between companies, defined as a goal, to work so that a global standard of disclosure of sustainability information is achieved. The organization received the support of the United Nations Environment Program (UNEP), which had already established its own standard of disclosure for sustainable corporate practices and was used primarily in Europe. This same standard came to be borne by CERES, still in 1997, culminating in the creation of the GRI (Willis, 2003).

The GRI guidelines for sustainability reporting offer principles, content and an implementation manual so that different organizations, despite their size, sector or location, can produce sustainability reports (GRI, 2017).

Based on the Disclosure Theory, many authors argue that companies that disclose a higher level of information can achieve competitive advantages over other companies. Most of these advantages are due to the reduction of the informational asymmetry between the management and the investors, reducing the risk perceived by the latter, and also encouraging them to negotiate their roles.

3. TEXT MINING AND THE RECOGNITION OF PATTERNS IN CSR REPORTS

In recent years, there has been an immense increase in the amount of text data available in internet, such as social media comments, blogs, news, emails, government and enterprise documents. This has led to a growing demand for tools to help people analyze and manage the amount of text data effectively and efficiently (Zhai & Massung, 2016).

Text mining encompasses a wide range of theoretical approaches and methods with one thing in common: text as input data (Feinerer *et al.*, 2008).

Feldman and Sanger (2007) describe text mining as a knowledge-intensive process that tries to solve the information overload problem by using techniques from data mining, natural language processing, information retrieval and knowledge management.

The first applications in text mining come from the data mining community, like document clustering and document classification. For both, the idea is to transform the text into a structured format and subsequently apply standard data mining techniques (Feinerer *et al.*, 2008).

Data mining is the analytical process of exploration of large databases, which aims, from the application of statistical and artificial intelligence techniques, to recognize patterns or systematic relationships between variables or objects and do their validation using new data (Tufféry, 2011).

Supervised and unsupervised classification, to discover interesting patterns, are the main goals of data mining studies. In a typical supervised classification scenario, we consider a dependent variable or response, of a qualitative nature (which defines groups), which we intend to predict from a set of independent variables. By providing data about these variables for a set of observations, we construct predictive models (classifiers) capable of predicting the value of the response variable for new observations. While in the supervised classification the group that generates each pattern is known, in the unsupervised one, also called cluster analysis, there is no variable response that identifies groups, trying to find a structure in the data that allows classification.

A text mining system takes an input (text documents) and generates various types of output, such as patterns, maps of connections and trends. This process involves the preprocessing of document collections, the storage of the intermediate representations, the analysis of these intermediate representations (such as distribution analysis, clustering, classification, trend analysis, and association rules), and the visualization of the results (Feldman & Sanger, 2007).

Modaphothala; Issac (2009) analyzed a large sample of 2415 reports, mostly from manufacturing sector, followed by tertiary and primary sectors, to measure the corporate environmental reports in terms of economic, environmental and social performance indicators using GRI guidelines. A Java program was wrote to do text mining. The article indicates that by adopting the GRI guidelines, the global corporate environmental reports are now undergoing fragmented reporting in its incremental approach. The results of one-way ANOVA indicated that economic performance is similar across industries, while environmental and social performances are different.

Modaphothala *et al.* (2010) used text mining to analyze a large sample of 2650 reports. One-way ANOVA indicate that the disclosures made by the companies differ across the industrial sectors. Organizational issues are widely reported followed by social, environmental and economic issues. Multivariate discriminant analysis was then applied to determine which variables discriminate between the naturally occurred groups and allowed to conclude that the environmental variable is a greater significant contributing factor towards explanation of sustainability report.

Rivera *et al.* (2014) focuses on demonstrating a method for identifying, tracking, and reporting of sustainability indicators specific to a region using digital news articles with text mining methods. A supervised classification algorithm with natural language processing techniques was applied to analyze sustainability content in news articles and compare the results with the sustainability indicators obtained by traditional methods performed by a regional entity. Results showed that the text mining approach could identify all of the indicators highlighted as important in the reports.

Tremblay *et al.* (2015) utilized text mining to analyze the contents of corporate sustainability reports produced by seven Dow Jones companies in three years. The goal of their study was to find evidence that environmental sustainability has become embedded in corporate policy. Supervised techniques of text mining were applied on the whole corpus of the core business discourse to verify whether deductive machine learning would perform in a similar way as humans at the task of classifying contents from CSR reports into one of the five Sustainability dimensions that are based on the Sustainability Accounting Standards Board (SASB) (2014): business, governance, environment, human capital and social capital. The authors presented metrics of accuracy of three supervised classification models: decision tree, neural network and memory-based reasoning model. The neural network model had the best performance, assessed by the lowest misclassification rate. Unsupervised classification techniques (cluster analysis) were then applied to the data of each year, to show clusters that exhibit a tendency for business components to increasingly group with environmental components through time.

4. METHODOLOGY

4.1 Population, sample and variables

In this paper, we studied Brazilian companies that report their economic, social and environmental practices using the Global Reporting Initiative as their framework. Currently, GRI have two generations of guidelines in use, the third generation (G3 and G3.1) and the fourth (G4, the most up to date). Even though most companies still use the G3 and G3.1 guidelines, we opted to use the G4 version in our study, as stakeholder engagement is better addressed in the fourth generation (Constantinescu & Kaptein, 2015).

We searched in the GRI database during March 2017, for reports of Brazilian companies that were issued using the G4 guidelines that were published in 2016, resulting in 25 reports whose companies composed our sample. We chose this year because it represented the most recent information available, as there were no reports published in 2017 when we made our research in the GRI database.

In order to study the stakeholder engagement, we chose two index from the GRI framework, G4-24, that asks the company to provide a list of their stakeholders, and G4-27, to which the company must disclose which are the key topics, issues and concerns that raises from stakeholder engagement, and how the company respond to them. The general standard disclosures related to the stakeholder engagement also comprehend two other indexes, G4-25 and G4-26, that are related to

the way the company identifies and how they approach these stakeholders. They were not considered in this analysis due to their textual complexity, once the objective was to implement a text mining tool, and because the companies were not able to clearly differ those two indexes.

Aside from information about the stakeholder engagement, we also collected other firm-level information about the company. This information and their source are presented in Table 1.

Table 1 – Other firm-level variables used in this study

Variable	Formula	Source
Size	Natural logarithm of Total Assets	Balance Sheet
Debt Ratio	Total Debt/Total Assets	Balance Sheet
Type of Ownership	State, Family, Foreign or Institutional	Formulário de Referência (Equivalent to Form 20F)
Governance	Participation in the Índice de Governança Corporativa (Corporate Governance Index – IGC)	Bovespa

4.2 Data analysis

We begin through descriptive statistics to present the companies that composed our sample. We show their frequency by economic sector, participation on IGC and by type of ownership.

The first step of the text mining process was the construction of a corpus, which is a collection of text documents that can be processed with text mining functions. In this study, the text documents include the sections of the reports of the 25 companies in which the stakeholder engagement, more specifically, G4-24 and G4-27, was disclosed. The processing of the corpus included the follow procedures: remove punctuation, remove numbers, transform letters to lower case, strip whitespaces, stem words (to retrieve their radicals), remove stop words (words that do not add informational content, such as articles, conjunctions, common verbs and qualifiers) and replace terms by synonyms.

The next step was the creation of a document term matrix (DTM), which is a matrix that represents the relationship between terms and documents, where each row represents a term and each column a document. The values are, typically, the number of occurrences of the terms in the documents, called term frequency. There are others possibilities, but the term frequency was the value adopted. To reduce the dimension of the DTM, only the terms that appear at least in 5 documents were included.

The DTM were then submitted to a descriptive analysis, aiming to show the range of stakeholders and issues/concerns mentioned and the frequency they were mentioned by the companies in their reports.

The DTM was also used as input variables in a hierarchical cluster analysis. Cluster analysis is a generic name given to techniques which objective is to combine objects in groups that present similar characteristics (Tufféry, 2011). In a hierarchical cluster analysis, the similarities among objects is computed for their variables using a measure of distance, generally the Euclidian distance, and the most similar objects are those with the smaller distances (Everitt & Hothorn, 2011).

We used the clustering to compare the companies regarding to their range of stakeholders, and range of issues addressed, to see if there are clusters of companies that have better engagement to stakeholders than others. We also compared the clusters using the other firm characteristics to see if companies with better stakeholder engagement had any characteristics that should be highlighted. To do these comparisons, we used T and Wilcoxon tests. We used both parametric and non-parametric tests as a robustness check to our results, once our sample is small and that can lead to bias. Both tests are used to test the null hypothesis that two groups have the same behavior regarding a numerical variable. T tests compare the groups' means, while Wilcoxon uses variable rankings.

For qualitative variables, such as participation on IGC and type of ownership, we used Chi-square test to compare them between the clusters. The null hypothesis in this test is that there is no association between the cluster and the firm characteristic.

All the analysis was made on the software R 3.3.3 (R Core Team, 2017). We used the package tm to implement the text mining, SnowballC to word stemming, stats to do the descriptive statistics and T, Wilcoxon and Chi-square tests, and stats and NbClust to implement the hierarchical cluster analysis.

5. RESULTS

We conduct our analysis, first describing the companies that compound our sample, considering their economic sector, adherence to IGC and their type of ownership. The results are shown in tables 2, 3 and 4.

Table 2 – Companies by sector

	Absolut frequency	Percentage
Banks	4	16.00%
Beverages	1	4.00%
Chemistry	2	8.00%
Computers	1	4.00%
Electricity	9	36.00%
Financial services	1	4.00%
Food	2	8.00%
Oil & gas	1	4.00%
Personal care	1	4.00%
Telecommunications	2	8.00%
Transport material	1	4.00%
Total	25	-

We can see that companies in the Electricity sector represent 36% of the companies using the GRI G4 to the 2015 report. This can be explained by the regulation the sector is submitted from the *Agência Nacional de Energia Elétrica* (National Agency of Electrical Energy – ANEEL), that imposes high environmental, among others, standards to the companies (Souza; Lima; Barbosa; Coutinho; Albuquerque, 2015). Banks also highlights from the other sectors. O'Sullivan (2015) emphasizes the importance that social accounting has to investment banks as a mean to achieve external assurance.

Table 3 – Companies by adherence to IGC

	Absolut frequency	Percentage
IGC	17	68.00%
Non-IGC	8	32.00%
Total	25	-

In Table 3, we can see that, in general, the companies issuing G4 GRI reports are also concerned with better governance, as 68% of them are a member of one of the upper governance segments of Bovespa.

Table 4 – Companies by type of ownership

	Absolut frequency	Percentage
Foreign	8	32.00%
Family	7	28.00%
State	6	24.00%
Institutional	4	16.00%
Total	25	-

As for the type of ownership, Table 4 shows that 32% of the companies are owned by foreign investors, 28% are controlled by a family, 24% are state-owned companies, and 16% are companies whose ownership belongs to a national institution.

Continuing the analysis, we submitted the GRI reports parts that were related to stakeholder engagement (G4-24) to a text mining algorithm. We could identify nine stakeholders mentioned by the companies. Table 5 presents those stakeholders, the number of companies that mentioned them and the total amount of times they appeared.

Table 5 – Stakeholders identified through text mining

Stakeholder	Reporting companies	Frequency of report	Percentage
Shareholders	18	52	4.09%
Clients	24	237	18.65%
Community	22	121	9.52%
Suppliers	25	199	15.66%
Employees	23	271	21.32%
Government	18	56	4.41%
Market	24	200	15.74%
Midia	14	30	2.36%
Society	19	105	8.26%
Total	-	1271	-

Results show that *employees* are the most mentioned stakeholder, even though 23 out of 25 companies added them in their report. All companies mentioned their *suppliers* as their stakeholders, while *market* and *clients* were listed by 24 companies. Interestingly, the *shareholders*, usually appointed as one of the most stakeholders due to the risk they assume (Jones, 1995), were not among the most mentioned group. This may be due to the ownership concentration in Brazil. As Iturriaga and Crisóstomo (2010) point out, the non-diversified ownership of Brazilian public companies turns the agency conflict among them, be, in most cases, between majority and minority shareholders. So, based on Mitchell, Agle and Wood (1997) and Magness (2006), minority shareholders in Brazil have less power to impose their demands than other stakeholders such as the *employees*, *suppliers*, *market* or *clients*.

We also analyzed the reports to find the issues or concerns that were appointed by the stakeholders (G4-27). Here, we aggregated more specific terms in more broad constructs to make the analysis easier. Table 6 shows the results.

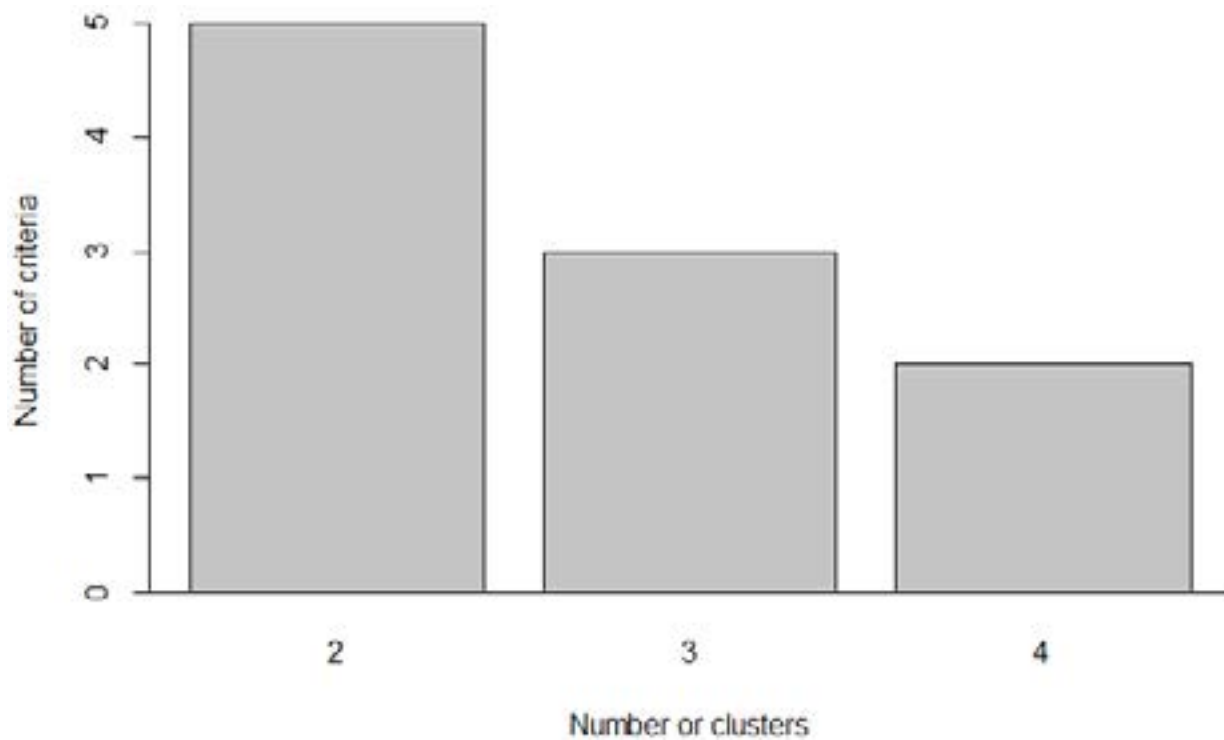
Table 6 – Issues and concerns appointed by the stakeholders disclosed in the reports

Issues	Reporting companies	Frequency of report	Percentage
Climate	16	37	3.17%
Economy	20	55	4.72%
Education	13	50	4.29%
Finance	15	55	4.72%
Product	18	85	7.29%
Health	17	69	5.92%
Security	19	88	7.55%
Social issues	17	92	7.89%
Sustainability	25	174	14.92%
Work issues	13	18	1.54%
Environment	23	339	29.07%
Ethics	22	104	8.92%
Total	-	1166	-

We can see that the main issues appointed by the stakeholders that are disclosed by the companies are related to environment, present in 23 companies, and representing 29.07% of all the mentioned words. It is worth noting that, even though employees were the most mentioned stakeholder, issues related to work were the less mentioned, an unexpected behavior. This result suggests that, as Ferreira-Quilice and Caldana (2015) points out, sustainability reports are treated like a public relation tool rather than a transparency tool.

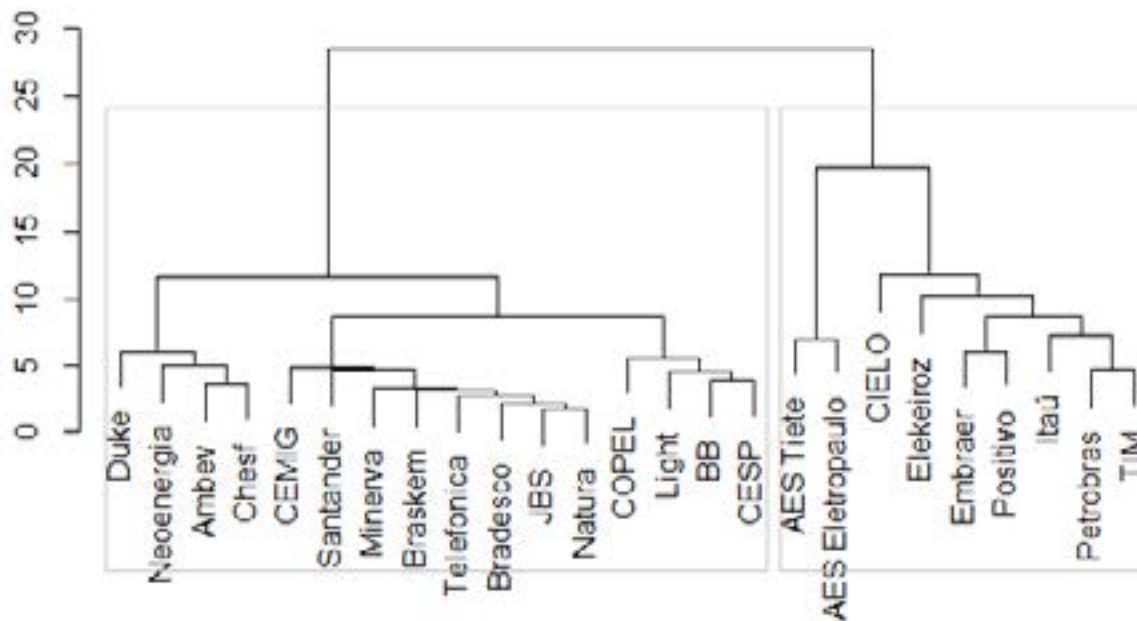
Our next step was a hierarchical cluster analysis using the text mining output as variables for the classification of the companies in groups. First, we used ten criteria from the package *NbClust* to determine how many clusters we should consider in our analysis. The results in figure 1 shows that two clusters fit better in our sample.

Figure 1 – Number of clusters that should be considered in the analysis



The dissimilarity matrix was generated using Euclidian distances, and the Wards minimum variance method was used to form the clusters. Figure 2 shows the dendrogram and the companies assigned to each cluster.

Figure 2 – Cluster dendrogram and companies' distribution



In order to better understand the clusters, we compared both considering their stakeholder approach and other characteristics. We called *Cluster A*, the smaller one, composed of 9 companies, and *Cluster B*, the bigger one, composed of 16 companies. The results are presented in tables 7, 8 and 9.

Table 7 – Comparison of clusters A and B regarding their stakeholders

Stakeholder	Mean Cluster A	Mean Cluster B	T-Test	Wilcoxon-Test
Shareholders	3.5555	1.2500	0.1523	0.3674
Clients	15.3333	6.1875	0.0286	0.0144
Community	8.3333	2.8750	0.0153	0.0088
Suppliers	17.1111	2.8125	0.0291	0.0001
Employees	25.2222	2.7500	0.0293	0.0007
Government	4.0000	1.2500	0.1721	0.0554
Market	13.7778	4.7500	0.0082	0.0063
Midia	2.1111	0.7500	0.0529	0.0317
Society	7.5556	2.3125	0.1282	0.0202

Results show that only the *market* was significant at 1% for both tests. *Clients*, *community* and *suppliers* showed 5% of significance for T test and 1% for Wilcoxon. *Shareholders*, *government* and *society* didn't present any level of statistical significance for the T test, rendering both groups similar regarding those stakeholders. *Employees* were the most mentioned stakeholder for the *cluster A* and *clients* for *cluster B*.

Table 8 – Comparison of clusters A and B regarding their stakeholder's issue

Issues	Mean Cluster A	Mean Cluster B	T-test	Wilcoxon-test
Climate	2.1111	1.1250	0.2559	0.4636
Economy	3.3333	1.5625	0.0786	0.0786
Education	4.6667	0.5000	0.0312	0.0013
Finance	2.8889	1.8125	0.3833	0.0483
Product	6.2222	1.8125	0.0314	0.0048
Health	4.6667	1.6875	0.1417	0.0729
Security	6.0000	2.1250	0.1619	0.1190
Social issues	7.4444	1.5625	0.0547	0.0055
Sustainability	11.4444	4.4375	0.0793	0.1444
Work issues	1.4444	0.3125	0.0001	0.0005
Environment	25.2222	7.0000	0.1513	0.0124
Ethics	7.8889	0.2063	0.0004	0.0002

Considering a significance level of 1%, only issues related to *work* and *ethics* can be considered different between *clusters A* and *B* (for both tests), with the first one having a better performance. Raising the significance to 5%, both *education* and *product* can also be considered concerns for the stakeholders that a different in *clusters A* and *B*.

Table 9 – Comparison of other characteristics in Clusters A and B

Variable		Cluster A	Cluster B	T-test	Wilcoxon-test	χ^2
Size (Mean)		17.0651	17.7316	0.4946	0.4867	-
Debt ratio (Mean)		0.4483	0.4905	0.6234	0.6771	-
IGC (Qty)	Yes	7	10	-	-	0.7343
	No	2	6			
Ownership (Qty)	State	1	5	-	-	0.6905
	Foreign	3	5			
	Family	3	4			
	Institutional	2	2			

Considering other characteristics of the companies in the clusters, such as their size, debt ratio, adherence to IGC and type of ownership, we can see that none of those variables present differences that could be considered significant. This suggests that other factors may affect the way companies disclose information about their stakeholder engagement. Based on these tests, we can state that we have a group of companies with a higher stakeholder engagement (*cluster A*) but they not differ from the group with lower stakeholder engagement (*cluster B*) regarding other characteristics usually appointed as determinants to this engagement.

6. CONCLUSION

This article aimed to apply a text mining algorithm to evaluate stakeholder engagement. In order to do this, we used a sample of 25 Brazilian companies, who used the G4 GRI guidelines to report their economic, social and environmental practices.

Following the work of Neu *et al.* (1998), we used the number of terms related to a theme as a measure of the engagement of the company with it. Based on two GRI indicators, G4-24, that accesses which stakeholders the company recognized, and G4-27, that disclosed which issues and concerns these stakeholders have, we composed a range of information to evaluate the companies. Then we used the number of terms each company reported in this range of themes to classify them in two groups using a cluster analysis.

We compared the resulting two groups regarding their stakeholder engagement and firm-level characteristics and found out that we had a cluster of high engagement, that was composed by 9 companies, and a cluster of low engagement, composed of 16 companies. They showed differences in the stakeholders *clients*, *community*, *employees* and *market* but when we compared them using other firm-level characteristics (size, debt ratio, governance and type of ownership) we didn't find any differences that were statistically significant.

The non-significance of these firm-level characteristics diverge from previous studies like Prado-Lorenzo *et al.* (2009) and Baumann-Pauly, Wickert, Spence and Scherer (2013). Despite that, we can attribute this result to the fact that we had a small sample, and we considered companies that were among early users in Brazil of G4 GRI guidelines, which implementation will only be compulsory after 1 July 2018. Because of that, we may have a rather homogeneous and small sample.

We also must highlight the fact that the tool we chose to perform the text mining analysis (package *tm* from R) was clearly optimized to work with English language, so its implementation to reports write in Portuguese showed some setbacks that can have some impact on the results.

Despite that, we conclude that text mining analysis to evaluate CSR reports can be a very useful tool. Future studies could implement this type of analysis in different contexts like, corporate governance or social and environmental performances. It is also possible to perform this type of analysis in different languages to compare the results and see if they present similar difficulties.

REFERENCES

- Arena, C.; Bozzolan, S.; Michelon, G. (2014). Environmental reporting: transparency to stakeholders or stakeholder manipulation? An analysis of disclosure tone and the role of the board of directors. *Corporate Social Responsibility and Environmental Management*.
- Baumann-Pauly, D.; Wickert, C.; Spence, L.; Scherer, A. (2013) Organizing corporate social responsibility in small and large firms: Size matters. *Journal of Business Ethics*. 115 (4): 693-705.
- Berle, A. (1931) Corporate powers as powers in trust. *Harvard Law Review*. 44 (7): 1049-1074.
- Cho, C.; Michelon, G.; Patten, D. (2012). Impression management in sustainability reports: An empirical investigation of the use of graphs. *Accounting and the Public Interest*. 12 (1): 16-37.
- Constantinescu, M.; Kaptein, M. (2015) CSR standards and corporate ethical virtues: A normative inquiry into the way corporations integrate stakeholders expectations. In book: *Corporate Social Responsibility and Governance – Theory and Practice*. Springer. New York.
- Du, S.; Vieira, J.; Edward, T. (2012). Striving for legitimacy through corporate social responsibility: Insights from oil companies. *Journal of Business Ethics*. 110 (4): 413-427.
- Everitt, B.; Hothorn, T. (2011). *An introduction to applied multivariate analysis with R*. Springer-Verlag. New York.
- Feinerer, I.; Hornik, K.; Meyer, D. (2008). Text mining infrastructure in R. *Journal of Statistical Software*, 25 (5): 1-54.
- Feldman, R.; Sanger, J. (2007) *The text mining handbook: Advanced approaches in analyzing unstructured data*. Cambridge University Press. United Kingdom.
- Ferreira-Quilice, T.; Caldana, A. (2015) Aspectos negativos no modelo de reporte proposto pela GRI: a opinião das organizações que reportam. *Revista de Administração RAUSP*. 50 (4): 405-415.
- Frederick, W. (1960). The growing concern over business responsibility. *California Management Review*. 2 (4): 54-61.
- Freeman, R. (2001) A stakeholder theory of the modern corporation. *Perspectives in Business Ethics*. 3: 144.

- González-Benito, J.; González-Benito, Ó. (2006). A review of determinant factors of environmental proactivity. *Business Strategy and the Environment*. 15: 87-102.
- GRI – Global Report Initiative (2017). *G4 Sustainability Reporting Guidelines*. Disponível em: < <https://g4.globalreporting.org/Pages/default.aspx>>. Acesso em: 22 mar. 2017.
- Hahn, R.; Kühnen, M. (2013). Determinants of sustainability reporting: a review of results, trends, theory, and opportunities in an expanding field of research. *Journal of Cleaner Production*. 59: 5-21.
- Hussey, D.; Kirsop, P.; Meissen, R. (2001). Global Reporting Initiative guidelines: An evaluation of sustainable development metrics for industry. *Environmental Quality Management*. 1-20.
- Iturriaga, F.; Crisóstomo, V. (2010). Do leverage, dividend payout, and ownership concentration influence firms' value creation? An analysis of Brazilian firms. *Emerging Markets Finance & Trade*. 46 (3): 80-94.
- Jones, T. (1995). Instrumental Stakeholder Theory: A synthesis of ethics and economics. *Academy of Management Review*. 20 (2): 404-437.
- Kolk, A. (2010). Trajectories of Sustainability Reporting by MNCs. *Journal of World Business*. 45: 367-374.
- KPMG (2011). *KPMG international survey of corporate responsibility reporting 2011*. Amsterdã.
- Lee, M. (2008). A review of the theories of corporate social responsibility: its evolutionary path and the road ahead. *International Journal of Management Reviews*. 10 (1): 53-73.
- Magness, V. (2006). Strategic posture, financial performance and environmental disclosure: an empirical test of legitimacy theory. *Accounting, Auditing and Accountability Journal*. 19(4): 540-563.
- Makhabel, B. (2015). *Learning data mining with R*. Packt Publishing. Mumbai.
- McGuire, J. (1963). *Business and Society*. McGraw-Hill. New York.
- Mitchell, R.; Agle, B.; Wood, D. (1997). Toward a Theory of Stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*. 22 (4): 853-886.
- Modapothala, J.; Issac, B. (2009). Study of economic, environmental and social factors in sustainability reports using text mining and bayesian analysis. *Proceedings of the IEEE Symposium on Industrial Electronics and Applications*. Kuala Lumpur, Malaysia.
- Modapothala, J.; Issac, B.; Jayamani, E. (2010). Appraising the corporate sustainability reports: Text mining and multi-discriminatory analysis. *Innovations in Computing Sciences and Software Engineering*. Springer. 489-494.
- Neu, D.; Warsame, H.; Pedwell, K. (1998). Managing public impressions: Environmental disclosures in annual reports. *Accounting, Organizations and Society*. 23 (3): 265-282.
- Nisbet, R.; Elder, J.; Miner, G. (2009). *Handbook of statistical analysis and data mining*. Academic Press. San Diego.
- O'Sullivan, N. (2015) The Global Reporting Initiative Guidelines and External Assurance of Investment Bank Sustainability Reports: Effective Tools for Financial Sector Social Accountability? K. Wendt (ed.) *Responsible Investment Banking, CSR, Sustainability, Ethics & Governance*. Springer. Switzerland.
- Prado-Lorenzo, J.-M.; Gallego-Alvarez, I.; Garcia-Sanchez, I. (2009) Stakeholder engagement and corporate social responsibility reporting: the ownership structure effect. *Corporate Social Responsibility and Environmental Management*. 16: 94-107.
- R Core Team (2017). R: A language and environment for statistical computing. R Foundation for Statistical Computing. Vienna.
- Rivera, S.; Minsker, B.; Work, D.; Roth, D. (2014) A text mining framework for advancing sustainability indicators. *Environmental Modelling & Software*, 62: 128-138.
- Silge, J.; Robinson, D. (2016). tidytext: Text mining and analysis using tidy data principles in R. *Journal of Open Source Software*, 1 (3). doi:10.21105/joss.00037.
- Souza, G.; Lima, N.; Barbosa, F.; Coutinho, Á.; Albuquerque, A. (2015) Corporate governance and performance of the stocks of companies from the Brazilian electricity sector listed in Bovespa. *Revista de Negócios – Studies on emerging countries*. 20 (1): 13-28.
- Tremblay, M.; Castellanos, A.; Parra, C. (2015) Corporate social responsibility reports: Understanding topics via text mining. *Proceedings of the Twenty-first Americas Conference on Information Systems*. Puerto Rico.
- Tufféry, S. (2011). *Data mining and statistics for decision making*. John Wiley & Sons Ltd. United Kingdom.
- Wickham, H. (2014). Tidy Data. *Journal of Statistical Software*. 59 (1): 1-23.
- Willis, A. (2003). The role of Global Reporting Initiative's sustainability reporting guidelines in the social screening of investments. *Journal of Business Ethics*, 43: 233-237.
- Zhai, C.; Massung, S. (2016) Text data management and analysis: A practical introduction to information retrieval and text mining. *Association for Computing Machinery and Morgan & Claypool*. New York.

INFLUENCE OF PERSONAL CHARACTERISTICS OF NURSING PROFESSORS IN BRAZIL AND PORTUGAL ON THEIR ORGANIZATIONAL COMMITMENT

Maria José Baltazar dos Reis de Pinto Gouveia
(mjgouveia@ualg.pt)

Jeffrey D. Newman
(j.d.newman@cranfield.ac.uk)

Sílvia Maria Dias Pedro Rebouças
(smdpdro@gmail.com)

Serafim Firmo de Sousa Ferraz
(sfsf@uol.com.br)

Emanuel Dheison dos Santos Penha
(emanueldheison@hotmail.com)

ABSTRACT

The constant social and economic changes in society have raised the need for adaptations in higher education organizations. The studies on people management have emphasized the importance of organizational commitment to the excellence of organizations. Organizational commitment has been one of the most studied constructs over the past decades in many areas of knowledge. However, there are few scientific studies on work commitment among professors, especially in higher education. This article has three goals: validate a scale of organizational commitment, in Portuguese language, applied to professors of public nursing schools; compare the level of organizational commitment of professors in public nursing schools in Portugal and Brazil; and evaluate the influence of personal characteristics of the professors on the affective, normative and continuance components of organizational commitment. A quantitative research was conducted, with an online questionnaire responded by 127 professors. The analysis of the data includes descriptive statistics, confirmatory factor analysis, independent samples Mann-Whitney tests and Spearman's correlations. The results show evidence of the influence of gender on normative commitment. The affective commitment is influenced by instruction level, being professor in a Post Graduate Program and distance from home to university. The personal characteristics of the professors have no influence on continuance commitment. The commitment doesn't show significant differences between countries.

Keywords: Organizational Commitment, Nursing Professors, Personal Characteristics, Confirmatory Factorial Analysis, Inferential Statistics.

1. INTRODUCTION

The current socio-economic changes in economic, financial and social instability have led to greater job insecurity for workers, requiring them to become more flexible. According to Meyer and Allen (1997) studies on organizational commitment do not lose relevance, despite conditioning in relation to changes in organizational structure and configuration. It is increasingly important to have a workforce committed to the organization, considering it as a preponderant factor of competitive advantage, and it is therefore fundamental that organizations understand the mechanism by which commitment develops and how it influences attitudes and behaviors.

Nursing professors are struggling with the effects of changes in higher education; evaluating the effectiveness and efficiency of education organizational systems, the demand for quality indicators of excellence, partnerships between schools/universities/work contexts and the adequacy of regulatory observatories of institutional dynamics (Santiago *et al.*, 2005).

The competitiveness between institutions is increasingly prominent worldwide, leading institutions that centralize the focus on processes to redirect them towards the results. In this context, many times, employees are challenged to perform tasks for which they were not trained, undergoing constant changes (Siqueira and Kurcgant, 2012). The paradigm shift in higher education requires a transformation in nursing education and the roles of professors in teaching.

Concerns of nursing professors include socio-professional changes that fall within nursing education in the field of policy, regulation education and educational decision-institutional decision, which justifies greater attention to people management policies and the commitment and satisfaction of social transformations in organizations. These changes, of influencing challenges in performing daily tasks and can produce satisfaction in some and dissatisfaction in others (Spector, 2004).

Authors such as Armenakis and Bedeian (1999) and Meyer, Srinivas, Lal and Topolnytsky (2007), have pointed out that commitment is one of the most important factor involved in employees' support for change initiatives.

On the other hand Mowday (1998) recognized that organizational commitment may have multiple forms and suggests alternative management strategies leading to desired behaviors in the workplace.

According to Abreu *et al.* (2013) is possible to identify behavioral differences for employees with different commitment profiles. Rhoades and Eisenberger (2002) in turn, demographic characteristics of employees say that are important factors often used as control variables to rule out alternative explanations of the organizational commitment.

In this context came the following research question: Will the personal characteristics of nursing professors influence organizational commitment?

For this, we have outlined the following goals of this research: validate a scale of organizational commitment, in Portuguese language, applied to professors of public nursing schools; compare the level of organizational commitment of professors in public nursing schools in Portugal and Brazil; and evaluate the influence of personal characteristics of the professors on the affective, normative and continuance components of organizational commitment.

The present study aims to contribute to the advancement of studies in the area of people management with an innovative way of measuring policies for managing people through the diagnosis of the studied institutions. This study will contribute to better decision-making by managers in order to improve individual commitment, leading to the achievement of more relevant organizational results. Rowe, Bastos and Pinho (2013) demonstrate the lack of scientific studies on work commitment among professors, especially in higher education.

2. LITERATURE REVIEW

2.1 Organizational Commitment

Mowday *et al.* (1979) and Mowday *et al.* (1982), in addition to being pioneers in the study of organizational commitment, also gave rise to most studies in this area. These authors emphasize the affective nature of the process of identification of the individual with the goals and values of the company; considering organizational commitment as the identification and involvement of the individual with particular company strength. They characterize commitment as a strong belief and acceptance by the individual's values and goals of the organization; a desire to exert considerable effort on behalf of the organization; and a strong desire to remain a member of the organization.

Organizational commitment has been one of the most studied constructs over the past decades in many areas of knowledge. According to Siqueira and Gomide (2004), its multidisciplinary character triggered the emergence of various conceptions about the subject. Yet because of this range of approaches related to the construct Bastos (1993) states that there is no consensus in the literature with regard to its conceptualization, as well as, the proposed measures are also varied.

According to Siqueira and Gomide Júnior, (2004), while affective commitment includes affective links with the organization and is within the scope of affectivity, both continuance commitment as the norm represent particular cognitive dimensions of the relationship between employee and organization. Siqueira (2000) suggests that continuance commitment can be seen by the act of the employee to remain in the organization from the motivation of individual perceptions of costs/losses resulting of the investment from the shutdown of the organization. That is, the organization will have the employee while she is attractive to him. The same author states that the employee's beliefs about the social debt to the organization, or need to return a favor integrate the normative organizational commitment.

Thus, Demo *et al.* (2013) employees who have a high level of normative commitment feel trapped in the organization that, in turn, has different ways to make its employees feel unable to leave it. In these organizations, there is considerable contact between organization and employees in a similar way to a family with rules of conduct and very strong mission to bring the employee to the conviction that the organization needs them to continue succeeding. In other words, employees who are normatively committed to continue working for the organization have a sense of debt or further obligation. Hence if the employee remains in the organization because he feels morally bound to it or to colleagues, the presence of normative commitment is present.

Allen and Meyer (1996) proposed a three-component commitment model because a one-dimensional model did not capture the diverse nature of organizational commitment among individual employees. The three components of the model reflect the emotional desire to work in the company (affective commitment), the perceived cost of job change (continuance commitment) and the moral obligation to remain (normative commitment). Meyer and Allen (1991) argued that one of the most important reasons for distinguishing between different forms of organizational commitment is that they have different implications for behavior.

In the present study, we used this three-component commitment model. The description of the three components according to Siqueira (2008) is shown in Table 1.

Table 1. Dimensions of Organizational Commitment

Dimension of Commitment	Description
Affective	Individual's identification with the goals and values of the organization. Scientific equivalent of "wear the organization".
Continuance	Product of rewards and costs perceived by the employee in the condition of the integral part of the organization.
Normative	Set of normative pressures of social norms that define the relationship of the employee with the company.

Source: adapted from Siqueira (2008)

2.2 Antecedents associated with affective, continuity and normative commitment

The researches demonstrate the relevance that has been given to the study of antecedents and results of commitment to the organization. According to Meyer, Vandenberghe and Becker (2004) this interest derives from the evidence that a

motivated and committed workforce provides benefits to the organization. Meyer and Allen (1991) pointed out that the essential nucleus of organizational commitment is the feeling of being linked to the goals of the company.

Allen and Meyer (1990) consider affective commitment as an emotional attachment to the organization in such a way that individual identities strongly committed to, are involved and enjoy membership to the organization. The affective commitment tries to have a sense of belonging, leading to feeling emotionally attached and feeling part of the company (Bloemer and Odekerken-Schroder, 2003).

The propensity for instrumental commitment stems from a general expectation about the quality of the exchange with the organization in terms of expected benefits and rewards in return for performance at work. The propensity for normative commitment is a general moral obligation to the organization. Thus, after entering the organization, the instrumental commitment is confirmed and the employee develops an affective commitment demonstrated by their identification, evidencing an emotional involvement and a sense of belonging to the organization.

Upon entry into the organization, the instrumental commitment is confirmed and the employee develops an affective commitment demonstrated by identification with him, emotional involvement, and a sense of belonging.

Meyer, Hecht, Gill and Toplonytsky (2010) pointed out that affective impairment was greatest when the perceived culture of the organization was similar to the individual's preferred culture.

Marsden, Kalleberg and Cook (1993) pointed out that gender can have an impact on affective commitment depending on the characteristics of the work and previous experience. McColl-Kennedy and Anderson (2005) argue that the feminine focus is on participating in "connection," mutuality, interdependence, and collectively, rather than the traditionally male focus on self-gratification, autonomy, competition, and independence.

Mathieu and Zajac (1990) suggest that there is a significant but weak relationship between age and affective commitment.

Meyer and Allen (1997) added that older employees are more likely to have a positive work experience than younger employees. Unlike age, educational level appears not to be significantly related to affective commitment.

Meyer and Maltin (2010) demonstrate some evidence that affective commitment to career or occupation may have positive implications for the health and well-being of employees. A strong relationship between performance and health benefits can be achieved by promoting employee commitment to company goals.

Meyer, Hecht, Gill and Toplonytsky (2010) pointed out that affective impairment was greatest when the perceived culture of the organization was similar to the individual's preferred culture.

Luchak, Pohler and Gellatly (2008) have shown that employees experiencing stronger levels of affective commitment are more likely to promote later retirement. We also think it is important to mention that Powell and Meyer (2004) argue that the satisfaction of working conditions is positively related to affective commitment. Allen and Meyer (1996) reported that affective impairment is positively correlated with work experiences and organizational characteristics.

Abreu *et al.* (2013) examined the long-term influence of five employee personal characteristics (type of employment, job level, gender, education level and service time) on the organizational commitment of the employees of a Brazilian energy company. The results pointed that the type of employment had the greatest impact on affective and normative commitment, while service time and education level are the most significant contributors to continuance commitment. Gender and job level didn't presented evidences of influence in commitment.

With the purpose of analyzing the workers perception regarding human resources management and organizational commitment in the Portuguese banking sector, Monteiro (2013) conducted a study which results pointed that the service time on institution is positively correlated with affective and normative commitment, age and instruction level are correlated with normative commitment and gender doesn't influenced the organizational commitment.

3. METHODOLOGY

This research is descriptive, exploratory and transversal, with quantitative nature. The population is all the professors in nursing career of Public Nursing Schools in Portugal or Brazil. The survey sample consists of 130 professors who responded to the online questionnaire sent to the entire population. 69 of the respondents live in Brazil and 61 live in Portugal.

The necessary elements for a characterization of the organizational commitment and the sociodemographic characteristics of the professors were collected. A diversified set of data related to the sociodemographic characterization of these professors was obtained, namely, age, gender, marital status, instruction level, having children, number of children, service time at university, exclusive dedication to the university and distance from house to university. On the other hand, data about their organizational commitment were also collected.

3.1 Instrument of data collection

To measure organizational commitment, the scale developed by Meyer, Allen and Smith (1993) for identification of affective organizational commitment (6 items), continuance organizational commitment (6 items) and normative organizational commitment (6 items) were used. The items are presented in Table 2.

Table 2. Organizational Commitment Scale

Affective commitment
I would be very happy to spend the rest of my career with this organization
I really feel as if this organization's problems are my own.
I do not feel a strong sense of "belonging" to my organization.
I do not feel "emotionally attached" to this organization.
I do not feel like "part of the family" at my organization.
This organization has a great deal of personal meaning for me.
Continuance commitment
Right now, staying with my organization is a matter of necessity as much as desire.
It would be very hard for me to leave my organization right now, even if I wanted to.
Too much of my life would be disrupted if I decided I wanted to leave my organization now.
I feel that I have too few options to consider leaving this organization
If I had not already put so much of myself into this organization, I might consider working elsewhere.
One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.
Normative commitment
I do not feel any obligation to remain with my current employer
Even if it were to my advantage, I do not feel it would be right to leave my organization now.
I would feel guilty if I left my organization now.
This organization deserves my loyalty
I would not leave my organization right now because I have a sense of obligation to the people in it.
I owe a great deal to my organization.

Source: Adapted from Meyer, Allen and Smith (1993)

3.2 Data Analysis

Data analysis included descriptive statistics, confirmatory factor analysis (CFA) and inferential statistics. Descriptive statistic techniques, including frequencies tables, crosstabs and descriptive measures, such as minimum, maximum, mean, mode, median and standard deviation, allowed characterize the sample and describe the organizational commitment.

Then, confirmatory factorial analysis (CFA) was applied to the scale. This multivariate technique aims to reduce the number of variables in a smaller number of factors. Marôco (2010) states that CFA is used to assess the quality of adjustment to a theoretical model. In the AFC, it was verified the convergent validity, measured by the average variance extracted (VEM), which must be greater than 0.5; the factorial validity, verified when the factor loadings are greater than 0.5; discriminant validity, which is verified by comparing the VEM of the factors with the square of their correlations, VEM must be greater than the square of the correlation; and the composite reliability, which must be greater than 0.7. In this article, CFA were used to validate the scale in the population of professors in public nursing schools and obtain the factor loadings that were used as weights in the calculation of means that reflect the levels of each dimension of organizational commitment. These levels were compared between Portugal and Brazil and according to all the other personal characteristics of the professors considered in this research, using non parametric tests because the distributions of the scores differ from a normal distribution. To evaluate the relation between the levels of commitment and the quantitative personal variables, the correlation of Spearmann was used. For qualitative personal variables, Mann-Whitney test for independent samples was used.

Statistical data analysis was done using the softwares IBM SPSS (Statistical Package for Social Sciences) and IBM SPSS Amos (Analysis of MOment Structures), versions 22.0.

4. RESULTS

4.1 Descriptive statistics of the characteristics of professors

The first stage of the data analysis was the descriptive analysis of the sociodemographic characteristics of professors and of the variables that characterize professor's situation at the university. This stage allows to profile the sample under study. Regarding the sociodemographic characteristics of professors, was analyzed data about age, gender, marital status, instruction level, if the professor has children and the number of children that the professor has.

Table 3 present descriptive measures of the age of the respondents. The age ranged from 28 to 64 years, with a mean of 47.69, standard deviation of 9.61 and median and mode equal to 50 years.

Table 3. Descriptives measures of the age

Mean	Std. Deviation	Minimum	Median	Maximum	Mode
47.69	9.61	28	50	64	50

With respect to gender, 78% of the professors are women, as can be seen in Table 4. This predominance of women is a typical feature of nursing schools. 74.8% are married or lives in a stable union, which can be classified has “Living with someone”. 10.2% of the professors are divorced, 13.4% are singles and 1.6% are widowers. These three categories were grouped and classified has “Not living with someone”, representing 25.2% of the sample, to guarantee the representative of this group in other analysis. About the instruction level, 51.2% of professors have PhD and 9.4% are post-doctors, totalizing 60.6% of the sample. From the 39.4% that are not doctors, 9 professors are only graduate and 41 have a master degree.

Table 4. Frequencies table of the gender

		Frequency	Percent
Gender	Male	28	22.0
	Female	99	78.0
Marital status	Living with someone	95	74.8
	Not living with someone	32	25.2
Instruction level	Not doctor	50	39.4
	Doctor	77	60.6
Having children	Yes	106	83.5
	No	21	16.5

Most professors (83.5%) have children, as showed in Table 4. Table 5 shows that the maximum number of children is 5 and median and mode are both 2 children. The number of children has a mean of 1.54 with a standard deviation of 0.97.

Table 5. Descriptives measures of the number of children

Mean	Std. Deviation	Minimum	Median	Maximum	Mode
1.54	.97	0	2	5	2

In order to characterize the professor's situation at the university, the variables analyzed were: service time at university, having exclusive dedication to the university, having a management position, being professor in a post graduate program and distance from the house to the university.

The time of career ranged from 1 to 38 years, with a mean of 16.22 and a standard deviation of 10.32, as can be seen in Table 6. The median is 15 (near the mean), but it is interesting that the mode is much smaller (5 years).

Table 6. Descriptives measures of the service time at university

Mean	Std. Deviation	Minimum	Median	Maximum	Mode
16.22	10.32	1	15	38	5

Almost all professors (87,4%) have exclusive dedication to the university, 48.0% have a management position and 56.7% of professors teach in a Post Graduate Program, as shown in the Table 7.

Table 7. Frequencies table of the exclusive dedication, management position and Post Graduate Program

		Frequency	Percent
Exclusive dedication	Yes	111	87.4
	No	16	12.6
Management position	Yes	61	48.0
	No	66	52.0

Professor in a Post Graduate Program	Yes	72	56.7
	No	55	43.3

The mean of the distance from the house of the professors to the university is 11.16km, with a standard deviation of 15.59km. This distance varied from 0.5 to 110km, with a median of 5km and 3km, as presented in Table 8.

Table 8. Descriptives measures of the distance from house to university

Mean	Std. Deviation	Minimum	Median	Maximum	Mode
11.16	15.59	.5	5	110	3

4.2 Validation of the scale of organizational commitment

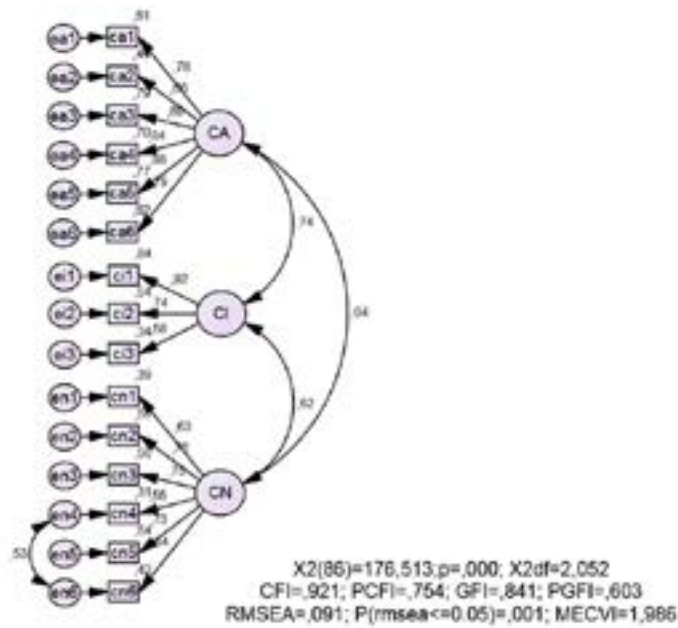
The analysis of organizational commitment starts with the descriptive analysis of the responses to the items of the respectively scale. Table 9 shows some descriptive measures, namely, minimum, maximum, mean and standard deviation, of the responses of the 127 professors to the items of the scale of organizational commitment. All items exhibit great variability in the responses, ranging from 1 to 5. The items of affective commitment present the highest means and the items of normative commitment present the lowest. The greatest mean (4.000) was obtained for the item CA6 “This organization has a great deal of personal meaning for me” and the lowest (2.373) for the item CN3 that represents “I would feel guilty if I left my organization now”.

Table 9. Descriptives measures of the responses to the items of the scale of organizational commitment

	Min.	Max.	Mean	St.dev.
Affective commitment				
I would be very happy to spend the rest of my career with this organization. (ca1)	1.0	5.0	3.811	1.213
I really feel as if this organization's problems are my own. (ca2)	1.0	5.0	3.504	1.090
I feel a strong sense of “belonging” to my organization. (ca3)	1.0	5.0	3.866	1.086
I feel “emotionally attached” to this organization. (ca4)	1.0	5.0	3.787	1.110
I feel like “part of the family” at my organization. (ca5)	1.0	5.0	3.417	1.231
This organization has a great deal of personal meaning for me. (ca6)	1.0	5.0	4.000	1.054
Continuance/instrumental commitment				
Right now, staying with my organization is a matter of necessity as much as desire. (ci1)	1,0	5,0	3.819	1.164
It would be very hard for me to leave my organization right now, even if I wanted to. (ci2)	1,0	5,0	3.528	1.284
Too much of my life would be disrupted if I decided I wanted to leave my organization now. (ci3)	1,0	5,0	3.252	1.391
I feel that I have too few options to consider leaving this organization. (ci4)	1,0	5,0	2,559	1,307
If I had not already put so much of myself into this organization, I might consider working elsewhere. (ci5)	1,0	5,0	2,622	1,208
One of the few negative consequences of leaving this organization would be the scarcity of available alternatives. (ci6)	1,0	5,0	2,441	1,349
Normative commitment (CN)				
I feel the obligation of remain with my current employer. (cn1)	1,0	5,0	2,568	1,266
Even if it were to my advantage, I do not feel it would be right to leave my organization now. (cn2)	1,0	5,0	2,866	1,287
I would feel guilty if I left my organization now. (cn3)	1,0	5,0	2,373	1,251
This organization deserves my loyalty. (cn4)	1,0	5,0	3,754	1,191
I would not leave my organization right now because I have a sense of obligation to the people in it. (cn5)	1,0	5,0	2,772	1,274
I owe a great deal to my organization. (cn6)	1,0	5,0	3,252	1,297

The validation of the scale of commitment was made by confirmatory factor analysis. 3 items of this scale (ci4, ci5 and ci6) were excluded because they were not significant at a 5% level of significance. The greatest modification index is obtained for the correlation between errors en4 and en6 (M.I. = 24.334; Par change = .372), which suggest that the part of behavior of items cn4 and cn6 not explained by the factor CN is correlated, in other words, the items cn4 and cn6 share some other cause not included in the model. Because of this, the correlation between en4 and en6 was included in the final model to improve its adjustment. The final model is presented in Figure 1.

Figure 1.



In the model presented in Figure 1, all the standardized factorial weights are greater than .5 and significant, with p values less than .001. The item ca3 is the most important of the affective commitment (with a standardized weight of .890), followed by ca5 (.876), ca4 (.837), ca6 (.786), ca1 (.778) and finally ca2 (.663). With respect to instrumental commitment, the most important item is ci1 (.915), followed by ci2 (.735) and ci3 (.581). About the normative commitment, highlight the item cn2 (.764), followed by the items cn3 (.751), cn5 (.735), cn6 (.644), cn1 (.627) and cn4 (.555). Almost indexes of fit showed in Figure 1 indicate an acceptable fit of the model.

It was also verified that the model obtained composite reliability, convergent validity and discriminant validity of all dimensions of commitment. The values of the index of composite reliability are: $CC_{CA} = .952$; $CC_{CI} = .866$; $CC_{CN} = .896$, all greater than .7. Convergent validity was verified, with all the values of the mean variance extracted (VEM) greater than .5: $VEM_{CA} = .770$; $VEM_{CI} = .690$; $VEM_{CN} = .593$. The VEM of each factor is greater than the square of its correlation with each of the other factors, as shown in Table 10, which indicates the discriminant validity.

Table 10. Verification of discriminant validity of organizational commitment

Relation			R ²	VEM _{CA}	VEM _{CI}	VEM _{CN}
CA	<-->	CI	.552	.770	.690	
CA	<-->	CN	.415	.770		.593
CI	<-->	CN	.381		.690	.593

From this analysis, the professors' scores in the three dimensions of organizational commitment were calculated, which are the weighted averages of the items.

4.3 Comparison of the level of organizational commitment according to the personal characteristics of the professors

Some descriptive statistics of the score of each dimension of organizational commitment was calculated to characterize its distributions. Table 11 presents the values of these statistics and the results of the Kolmogorov-Smirnov test applied to check the normality of the distributions.

Table 11. Descriptive statistics and normality test of the dimensions of commitment

	Affective commitment	Continuance commitment	Normative commitment
Mean	2.726	3.312	2.934
Median	2.855	3.472	2.860
Mode	2.8 ^a	4.2	4.4
Std. Deviation	.6973	.9067	.9190
Minimum	.8	1.0	1.1
Maximum	3.7	4.5	5.0

KS normality test	Statistic	.101	.128	.052
	df	127	127	127
	p-value	.003	.000	.200
a. Multiple modes exist. The smallest value is shown				

The highest means and medians were obtained for the continuance commitment. Affective commitment presents the lowest mean (2.726), the lowest absolute variability represented by the standard deviation (.6973) and also the lowest minimum (.8) the maximum (3.7). The distributions of the scores of affective and continuance commitment are significantly different from the normal distribution, as can be verified by the small p-values of the Kolmogorov-Smirnov normality test. This test was also applied to check the normality of the three scores of commitment across categories of country of residence, gender, marital status, instruction level and all the others variables analyzed. In most situations, there was evidence that the distributions differ from normal. Therefore, it was decided to use non-parametric hypothesis tests to evaluate the relation between the scores of commitment to the personal characteristics of the professors. Table 12 presents the p-values obtained for the independent-samples Mann-Whitney U test used for the qualitative personal characteristics.

Table 12. P-values of the Mann-Whitney tests

	Affective commitment	Continuance commitment	Normative commitment
Country	.551	.496	.562
Gender	.159	.884	.045*
Marital status	.464	.613	.410
Instruction level	.037*	.471	.546
Has children	.283	.702	.758
Exclusive dedication	.785	.706	.774
Management position	.073	.768	.362
Post Graduate Program	.021*	.243	.090
*. Significant (< .05)			

Evidence was found that the gender of professors influences their normative commitment score (Mann-Whitney U = 1042; Wilcoxon W = 5992; Standardized test statistic = -2.001; p-value = .045). Table 13 shows that men present higher mean (3.259) and higher median (3.164) for the score of normative commitment.

Table 13. Descriptive statistics for the normative commitment across categories of gender

Gender	Mean	N	Std. Deviation	Median
Male	3.259	28	.9582	3.164
Female	2.842	99	.8911	2.795
Total	2.934	127	.9190	2.860

The instruction level, more specifically, be or not to be a doctor (have a PhD or not) presented evidence of influence the affective commitment (Mann-Whitney U = 1503; Wilcoxon W = 2778; Standardized test statistic = -2.082; p-value = .037). Table 14 shows that the professors with PhD are more affectively committed, with higher values for mean (2.825) and median (2.938).

Table 14. Descriptive statistics for the affective commitment across categories of instruction level

Instruction level	Mean	N	Std. Deviation	Median
Doctor	2.825	77	.6691	2.938
Not doctor	2.572	50	.7184	2.759
Total	2.726	127	.6973	2.855

Being a postgraduate professor increases the level of affective commitment, as shown in Table 15. The difference of affective commitment between the professors who are in a Postgraduate Program and who aren't is significant (Mann-Whitney U = 1507; Wilcoxon W = 3047; Standardized test statistic = -2.301; p-value = .021).

Table 15. Descriptive statistics for the affective commitment across categories of professor in a Post Graduate Program

Professor in a Post Graduate Program	Mean	N	Std. Deviation	Median
Yes	2.868	72	.5916	2.944
No	2.539	55	.7823	2.733
Total	2.726	127	.6973	2.855

To evaluate the correlation between the scores of commitment and the personal characteristics of the professors represented by quantitative variables, the non-parametric coefficient of correlation of Spearman was applied. Table 16 presents the results obtained.

Table 16. Correlation Spearman's rho coefficients and significance tests

		Affective commitment	Continuance commitment	Normative commitment
Age	Coefficient	,075	-,135	-,037
	p-value	,420	,144	,686
	N	119	119	119
Number of children	Coefficient	,090	,006	-,051
	p-value	,318	,949	,573
	N	124	124	124
Service time at university	Coefficient	,166	-,031	,052
	p-value	,062	,730	,560
	N	127	127	127
Distance from home to university	Coefficient	-,186*	-,142	-,146
	p-value	,037	,114	,104
	N	126	126	126

The only significant correlation was found between affective commitment and distance from home to university (coefficient = -.186, p-value = .037). This correlation is negative, which means that the longer the distance, the lower the affective commitment.

5. CONCLUSION

The present study had as specific objectives: to validate a scale of organizational commitment, in Portuguese language, applied to the professors of public nursing schools; compare the level of organizational commitment of the professors in the public nursing schools in Portugal and Brazil and also to evaluate the influence of the personal characteristics of the professors on the affective, normative and continuity components of the organizational commitment.

As for the first specific objective, although it is necessary to remove some items from the instrumental component of the model, the model presented composite reliability, discriminant validity and convergent validity in addition to good adjustment indices; so it was possible to confirm the theoretical framework of three factors.

In relation to comparing the level of professors in public nursing schools in Portugal and Brazil, there are no statistically significant differences when analyzing the three components of the commitment. This result is in agreement with the study by Meyer *et al.* (2002) which, when comparing studies conducted inside and outside the North America, observed without exploring the impact of cultural differences in organizational commitment.

Regarding the third specific objective, it was verified that the affective and normative components presented statistically significant differences in relation to some personal characteristics of the professors. Statistically significant differences were found for the affective component in relation to schooling - professors with a PhD degree are more affectively compromised - and distance from the home to the University, shows that how the greater is the distance, lesser is the affective commitment.

The affective commitment refers to the emotional attachment, identification, and involvement of the employee with the organization. Professors with a PhD degree are well regarded by the academics, because the title is culturally associated with higher payment and greater knowledge in the area in which they teach. Therefore, the professors' own expectation of its importance within university is greater when they have this title. Thus, this characteristic, although personal, is closely linked to the professors' experience at work. If the professor has the title, it is more respected and valued within the university.

This result corroborates with Meyer *et al.* (2002), who observed that the affective commitment had stronger correlations with work experiences - such as job satisfaction, involvement in work and occupational commitment.

As far as the distance of the domicile, it negatively affects the affective commitment, Meyer *et al.* (2002) indicated that affective impairment correlated negatively with stress. Since the distance from the home to the workplace is a stress factor,

it's understandable the result found here. People who travel a long way to work tend to be more stressed and stress correlates negatively with affective commitment.

The policy component reflects a sense of obligation to continue in the organization. Employees with a high level of normative commitment feel they must remain in the organization. The results of previous studies by Mathieu and Zajac (1990) and Meyer *et al.* (2002) didn't show a relationship between gender and normative commitment. Therefore, to clarify this result, a new qualitative study is needed to explain why male professors feel more obliged to stay in the University, than female professors.

As a limitation of this research we have the representativity of the sample, since the respondents were chosen for convenience and accessibility, which limits the generalization capacity of the results. The recommended, for having a better representation of the population, would be a probabilistic sample, in which, the elements that compose the sample are randomly selected.

To better analyze the personal characteristics differences in the commitment, it is suggested that this study must be replicated in more countries and also in professors of other courses. It would also be interesting to add to the survey method a qualitative method, in a proposal of mixed approach. We believe that this area of research is a very broad field, relevant and useful for the development of other studies.

REFERENCES

- Abreu *et al.*, (2013), Effects of personal characteristics on organizational commitment: evidence from Brazil's oil and gas industry, *International Journal Of Human Resource Management* Vol. 24, Iss. 20
- Alfes, K.; Truss, C.; Soane, E. C.; Rees, C.; Gatenby, M. (2013) The relationship between line manager behavior, perceived HRM practices, and individual performance: examining the mediating role of engagement, *Human Resource Management*, 52:6, p. 939-959.
- Allen, N.J., and Meyer, J.P. (1990), 'The Measurement and Antecedents of Affective, Continuance and Normative Commitment to the Organization,' *Journal of Occupational Psychology*, 63, 1–18.
- Allen, N.J., and Meyer, J.P. (1996), 'Affective, Continuance, and Normative Commitment to the Organization: An Examination of Construct Validity,' *Journal of Vocational Behavior*, 49, 252–276.
- Armenakis, A.A., and Bedeian, A.G. (1999), 'Organizational Change: A Review of Theory and Research in the 1990s,' *Journal of Management*, 25, 293–315.
- Bastos, A.V. B. (1993) Comprometimento organizacional: um balanço dos resultados e desafios que cercam essa tradição de pesquisa. *Revista de Administração de Empresas*, São Paulo, v. 33, n. 3, p. 56-64.
- Bloemer, J., and Odekerken-Schroder, G. (2003), 'Antecedents and Consequences of Affective Commitment,' *Australasian Marketing Journal*, 11, 33–43.
- Cohen, A. (2007) Commitment before and after: An evaluation and reconceptualization of organizational commitment. *Human Resource Management Review*, 17, p. 336-354.
- Cordeiro, J. (2014) Comprometimento Organizacional: o caso dos docentes de uma Instituição de Ensino Superior. Artigo Comunicação \347\3430, XXIV Jornadas Luso Espanholas.
- Demo, G. (2008) Desenvolvimento e validação da escala de percepção de políticas de gestão de pessoas (eppgp), RAM – *Revista de Administração Mackenzie*, V. 9, N. 6, p. 77-101.
- Demo, G.; Fogaça, N.; Nunes, L. (2011) Políticas de gestão de pessoas no novo milênio: cenário dos estudos publicados nos periódicos da área de administração entre 2000 e 2010. *Revista de Administração Mackenzie*, São Paulo, v. 12, n. 5, p. 15-42.
- Demo, G.; Martins, P.R; Roure, P. (2013) Políticas de gestão de pessoas, comprometimento organizacional e satisfação no trabalho na Livraria Cultura. *Revista Alcance*, v.20, n. 2, p. 237-254.
- Ferreira, J.M.; Neves, J.G. (2001) *Manual de Psicossociologia das Organizações*. Lisboa. McGraw-Hill.
- Ferreira, S.D. (2014) *Valores do trabalho e satisfação no serviço público: Um estudo na seccional da justiça Federal do Ceará*. 2014, 147 f. Dissertação (Mestrado em Administração e Controladoria) -Universidade Federal do Ceará, Fortaleza.
- Guest, D.; Conway, N. (2011) The impact of HR practices, HR effectiveness and a "strong HR sistem" on organisational outcomes: a stakeholder perspective. *The International Journal of Human Resource Management*, v. 22, n 8, p.1686-1702.
- Hair, Joseph F.; Tatham, Ronald L.; Anderson, Rolph E.; Black, William (2005) *Análise Multivariada de Dados*, Bookman, Porto Alegre.
- Kelloway, E.K. (1998) *Using LISREL for Structural Equation Modeling: A Researcher's Guide*, SAGE Publications, London.
- Lino, M.M. (1999) *Satisfação profissional entre enfermeiros da UTI: adaptação transcultural do Index of Work Satisfaction*. Dissertação. São Paulo. Escola de Enfermagem, Universidade de S.Paulo.
- Katou, A.A. (2012) Investigating reverse causality between human resource management policies and organizational performance in small Firms. *Management Research Review*, v. 35, n. 2, p. 134-156.

- Luchak, A.A., Pohler, D.M., and Gellatly, I.A. (2008), 'When do Committed Employees Retire? The Effects of Organizational Commitment on Retirement Plans Under a Defined-Benefit Pension Plan,' *Human Resource Management*, 47, 581–599.
- Magalhães, A.; Stoer, S.R. (2005) *A diferença somos nós – A gestão da mudança social e as políticas educativas e sociais*. Lisboa. Biblioteca das Ciências Sociais, Edições Afrontamento.
- Marôco, J. (2010) *Análise de Equações Estruturais – Fundamentos teóricos, Software & Aplicações*. Pêro Pinheiro. Ed. Report Number Ltda.
- Marsden, P.V., Kalleberg, A.L., and Cook, C.R. (1993), 'Gender Differences in Organizational Commitment: Influence of Work Positions and Family Roles,' *Work and Occupations*, 20, 368–390.
- McColl-Kennedy, J.R., and Anderson, R.D. (2005), 'Subordinate Manager Gender Combination and Perceived Leadership Style Influence on Emotions, Self-Esteem and Organizational Commitment,' *Journal of Business Research*, 58, 115–125.
- Mathieu, J.; Zajac, D. (1990) A review and Meta-Analysis of the Antecedents, Correlates, and Consequences of Organizational Commitment. *Psychological Bulletin*, v. 108, n.2, p. 171-194.
- Mestrinho, M. G. (2008) Profissionalismo docente. A complexidade das competências dos professores de enfermagem. In: *Complexidade. Um novo paradigma para investigar e intervir em educação?* -ISBN 978-972-8036-96-6.
- Meyer, J.P., and Allen, N.J. (1984), 'Testing "Side-Bet Theory" of Organizational Commitment: Some Methodological Considerations,' *Journal of Applied Psychology*, 69, 3, 372–378.
- Meyer, J.P., and Allen, N.J. (1991), 'A Three-Component Conceptualization of Organizational Commitment,' *Human Resource Management Review*, 1, 61–89.
- Meyer, J.P., and Allen, N.J. (1997), *Commitment in the Workplace: Theory, Research and Application*, Thousand Oaks, CA: Sage Publications.
- Meyer, J.P., and Maltin, E.R. (2010), 'Employee Commitment and Well-Being: A Critical Review, Theoretical Framework and Research Agenda,' *Journal of Vocational Behavior*, 77, 323–337.
- Meyer, J. P. et al. (2002) Affective, Continuance, and Normative Commitment to the Organization: A Meta-analysis of Antecedents, Correlates, and Consequences. *Journal of Vocational Behavior*, v. 61, p. 20-52.
- Meyer, J.P., Hecht, T.D., Gill, H., and Topolnytsky, L. (2010), 'Person-organization (Culture) Fit and Employee Commitment Under Conditions of Organizational Change: A Longitudinal Study,' *Journal of Vocational Behavior*, 76, 458–473.
- Meyer, J.P., Allen, N.J., and Smith, C.A. (1993) Commitment to Organizations and Occupations: Extension and Test of a Three-Component Conceptualization, *Journal of Applied Psychology*, 78, 4, p. 538–551.
- Meyer, J. P., & Smith, C. A. (2000) HRM practices and organizational commitment: test of a mediation model, *Canadian Journal of Administrative Sciences*, 17, p. 319-331.
- Meyer, J.P., Srinivas, E.S., Lal, J.B., and Topolnytsky, L. (2007), 'Employee Commitment and Support for an Organizational Change: Test of the Three-Component Model in Two Cultures,' *Journal of Occupational and Organizational Psychology*, 80, 185–211.
- Meyer, J.P., Vandenberghe, C., and Becker, T.E. (2004), 'Employee Commitment and Motivation: A Conceptual Analysis and Integrative Model,' *Journal of Applied Psychology*, 89, 991–1007.
- Monteiro, C. (2013) *Práticas de Gestão de Recursos Humanos e Comprometimento Organizacional no Setor Bancário Português*. Dissertação de Mestrado em Gestão Estratégica de Recursos Humanos. Instituto Politécnico de Setúbal.
- Mowday, R.T. (1998), 'Reflections on the Study and Relevance of Organizational Commitment,' *Human Resource Management Review*, 8, 4, 387–401.
- Mowday, R. T.; Porter, L.W. ; Steers, R.M. (1982) *Employee-organization linkages: the psychology of commitment, absenteeism and turnover*. New York. Academic Press.
- Mowday, R. T.; Steers, R. M.; Porter, L. W. (1979) The Measurement of Organizational Commitment. *Journal of Vocational Behavior*, v. 14, n.2, p. 224-247.
- Pfeffer, J. (2010) Building sustainable organizations: the human factor. *The Academy of Management Perspectives*, v. 24, n. 1, p. 34-45.
- Powell, D.M., and Meyer, J.P. (2004), 'Side-Bet Theory and the Three-Component Model of Organizational Commitment,' *Journal of Vocational Behavior*, 65, 157–177.
- Rhoades, L., and Eisenberger, R. (2002), 'Perceived Organizational Support: A Review of the Literature,' *Journal of Applied Psychology*, 4, 698–714.
- Rowe, D.E.O., Bastos, A.V.B.; Pinho, A.P.M. (2013) Múltiplos comprometimentos com o trabalho e suas influências no desempenho: um estudo entre professores do ensino superior do Brasil. *Organizações & Sociedade*, v. 20, n. 66, 501-521.
- Santiago, R., Magalhães, A. M., & Carvalho, T. (2005). *O surgimento do managerialismo no sistema de ensino superior português*.

- Siqueira, M. M. M. (2008) Satisfação no trabalho. In: Siqueira, M. M. M. (Org.). *Medidas do comportamento organizacional: ferramentas de diagnóstico e de gestão*. Porto Alegre, Artmed. p. 265-275.
- Siqueira, M. M. M. ; Gomide JR., S. (2004) Vínculo do Indivíduo com o Trabalho e com a Organização. In: Em Bastos, B. V. A.; Borges-andrade, E. J.; Zanelli, J. C. (Orgs.). *Psicologia, Organizações e Trabalho no Brasil*. Porto Alegre, Artmed, p. 300-328.
- Siqueira, A. T. A.; Kurcgant P. (2012) Satisfação no trabalho: indicador de qualidade no gerenciamento de recursos humano em enfermagem. *Rev Esc Enferm USP*. 46 (1):151-7.
- Spector, Paul E. (2010) *Psicologia nas Organizações*. 3ª Ed. São Paulo. Editora Saraiva.
- Xavier, V.M.C. (2005) *Locus of control, organizational commitment and job satisfaction: a correlational study*. P.99. Dissertação. (Mestrado em Psicologia) .Universidade Federal de Uberlândia, Uberlândia.

INFLUENCE OF SUSTAINABILITY AND INNOVATION ON THE ENTREPRENEURIAL INTENTION OF BRAZILIAN AND PORTUGUESE UNIVERSITY STUDENTS

Luis Eduardo Brandão Paiva
Universidade Federal do Ceará
(eduardobrandao@alu.ufc.br)

Eugénia Maria Dores Maia Ferreira
Universidade do Algarve
(ecastela@ualg.pt)

Sílvia Maria Dias Pedro Rebouças
Universidade Federal do Ceará; Universidade do Algarve
(smdpdro@gmail.com)

Raimundo Eduardo Silveira Fontenele
Universidade Federal do Ceará
(eduardo@ufc.br)

Tereza Cristina Batista de Lima
Universidade Federal do Ceará
(tcblima@uol.com.br)

Rômulo Alves Soares
Universidade Federal do Ceará
(romuloalves61@gmail.com)

ABSTRACT

This study consists of analyzing the influence of sustainable and innovative behavior on the entrepreneurial intention of Brazilian and Portuguese university students. The proposed model is based on the theory of behavior planned for the entrepreneurial intention, in the theory of adaptation-innovation for the innovative behavior, and on behavioral scales focused on environmental issues. This research is developed through an exploratory survey, applied to students from the Federal University of Ceará (Brazil) and the University of Algarve (Portugal). Multivariate analysis techniques, such as factorial analysis, logistic regression and classification and regression trees, are used to analyze the data. The results confirm that (i) there is a positive relation between the entrepreneurial intention of the students and the existence of a parent business; (ii) portuguese students have a greater entrepreneurial intent; (iii) there is no significant relationship between the professional experience of students and their entrepreneurial intention; (iv) there is a positive relationship between the sustainable behavior of students and their entrepreneurial intent; (v) there is no significant relation between the sustainable behavior and the entrepreneurial intention; and (vi) there is a positive relationship between the innovative behavior of university students and their entrepreneurial intent.

Keywords: Sustainable Behavior, Innovative Behavior, Entrepreneurial Intent.

1. INTRODUCTION

In recent decades, entrepreneurship has been considered preponderant for the economic development of a country (Hisrich, Peters & Shepherd, 2014, Teixeira & Davey, 2010). Entrepreneurship focused on sustainable development is based on the triple bottom line (Elkington, 1997), which balances the economic, social and environmental spheres.

Entrepreneurial intent is directly linked to entrepreneurship, and can be considered an intrinsic individual process. It leads to the contextualization of Ajzen (1991), to whom an intention is prior to the actual behavior of entrepreneurship, that is, it anticipates a creation or expansion of a particular business. Bird (1988), Liñán and Chen (2009), Thompson (2009) and Teixeira and Davey (2010) point out innumerable models that are based on entrepreneurial intent, which rely on predicting potential entrepreneurs.

Another phenomenon that is widely recurrent in research concerning entrepreneurship is innovation, since the entrepreneur can be considered an innovator, capable of proposing critical solutions to problem solving (Kirton, 1976; Taylor, 1989). Therefore, in order to understand innovative behavior, the theoretical perspective of Kirton (1976) - Theory of Adaptation-Innovation is used, which has notoriety and relevance in research related to the behavior of the individual linked to innovation.

In addition, the environmental dimension also complements the entrepreneurship axis, based above all on aspects related to the protection of the environment, with the aim of incorporating sustainable practices in the creation of new businesses (Boszczowski & Teixeira, 2012). Therefore, in order for some business to have a position favorable to the environment, the founders must be aware of the impact of their behavior and actions regarding the environment (Gonçalves-Dias *et al.*, 2009, Kuckertz & Wagner, 2010).

Considering the discussions that contextualize the topics in question, the following question is raised: "What is the relation of sustainable and innovative behavior in the entrepreneurial intention of university students?"

The main objective of this research is to analyze the influence of sustainable and innovative behavior on the entrepreneurial intention in Brazilian and Portuguese university students. The specific objectives are: (i) to identify the relationships between the profile of university students and their entrepreneurial intention; (ii) to analyze sustainable behavior in the entrepreneurial

intention of university students; (iii) to investigate innovative behavior in the entrepreneurial intention of university students; and (iv) to develop a model that predicts entrepreneurial intent based on the profile of university students and their sustainable and innovative behavior.

In general, the theoretical contribution of this study is based on the following questions, as proposed by Whetten (1989): “what”; “how”; “why”; “Who, where and when”. With regard to “what”, this research seeks to analyze the influence of sustainable behavior - through ecological awareness - and innovative behavior - through the individual’s cognitive style (information processing) in the entrepreneurial intention of Brazilian and Portuguese university students.

As to “how”, the purpose is to identify if the university student has an entrepreneurial intention (Liñán & Chen, 2009; Thompson, 2009); In addition, we seek to analyze the influence of sustainable behavior - using the theoretical-methodological perspective of Straughan and Roberts (1999) and Gonçalves-Dias *et al.* (2009); as well as grounding the innovative behavior through the Theory of Adaptation-Innovation (Foxall & Hackett, 1992; Kirton, 1976) in the entrepreneurial intention of Brazilian and Portuguese university students.

With regard to “why”, we highlight researches in the large portals of scientific research such as Spell and Scielo, especially noting the scarcity of studies that align innovation-entrepreneurship-sustainability. These individual phenomena are largely grounded in the empirical and conceptual literature; however, when it comes to the alignment of these phenomena, literature is scarce or almost non-existent.

In what represents the set “who, where and when”, the limitations in the propositions of explanations in scientific research, where the contextual factors are limited and when they can be understood as the extension of a certain theory stand out. This research is carried out in a specific moment, in which the Brazilian and Portuguese university students of the courses related to the management, like the course of administration are analyzed.

2. THEORETICAL FOUNDATION

2.1 Entrepreneurial Intent

Studies and discussions on entrepreneurial intention have been gaining visibility and relevance since the last two decades of the 20th century, in works such as the ones of Shapero and Sokol (1982), Krueger (1993), Davidsson (1995), Carvalho and González (2006) and Teixeira and Davey (2010).

Shapero’s seminal works mark the crucial point of researches concerning entrepreneurial intent (Shapero & Sokol, 1982). After this, researchers in the field of entrepreneurship studies recognized the value of entrepreneurial intention as a key part of understanding the process of creating a company (BIRD, 1988). Thus, with the evolution of the literature on entrepreneurial intention, some theories were considered crucial to explain this phenomenon (Autio *et al.*, 2001).

In reference to the behavioral aspects of entrepreneurship, starting with Ajzen and Fishbein’s Theory of Action (1977), which stimulated the Theory of Entrepreneurial Intentions of Shapero and Sokol (1982) and the Theory of Planned Behavior (TPB) of Ajzen (1991). These theories are characterized as being dominant theoretical models that explain the entrepreneurial intention in the light of behavioral psychology.

The intention of the individual in favor of entrepreneurship is addressed in the literature because it is influenced by many factors, namely: time; cooperation with others; propensity to innovate; financial resources; skills; among others. It represents, in turn, the behavioral control made by the individual, directed to the entrepreneurial behavior (Ajzen, 1991; Davidsson, 1995; Teixeira & Davey, 2010).

In addition, Carvalho and González (2006) demonstrate external and individual factors that influence the behavioral attitude-intention, and which are denoted in studies concerning the entrepreneurial intention, since, they have as a focus to predict behavioral aspects that highlight the intentions through attitudes, based on behavioral psychology.

2.2 Theory of Adaptation-Innovation

The Theory of Adaptation-Innovation proposed by Kirton (1976) shows that individuals are able to propose creative solutions to solve problems. In such a case, it exposes the involvement of the individual’s behavior through, mainly, creativity and innovation.

The KAI theory seeks to reveal tools aimed at creativity as well as solving team problems in order to achieve positive results (Stum, 2009). In addition, a number of empirical studies have sought to highlight the influence of KAI on the identification of potential potential entrepreneurs, such as Goldsmith (1984), Robinson *et al.* (1991), Taylor (1989), Bagozzi and Foxall (1995), Marcati, Guido and Peluso (2008), Kuckertz and Wagner (2010) and Chudry, Foxall and Pallister (2011).

Kirton (1976) considers style (innovative and adaptive), which influence behavior, but prevails problem solving and decision making. Cognitive styles are stable individual differences in the preference to obtain, organize, and use information for decision making.

Stum (2009) demonstrates the KAI as a cognitive style (information processing) that promotes organizational, personal and social changes. This author highlights the influence of globalization on organizations as they foster the individual’s ability to cope quickly with the constant changes in society and the marketplace. In Kirton’s (1976) perspective, the KAI index seeks to measure two styles of problem solving: adapter (“doing things better”) and innovative (“doing things differently”).

In general, the research proposed by KAI is to promote the creative style of each individual, making it possible to identify the individual’s cognitive style on a continuous scale (innovative and adaptive), which was proposed by Kirton (1976).

2.3 Sustainable Behavior

In this paper, we present the results of a study of environmental behavior in environmental psychology (Corral-Verdugo & Pinheiro, 1999), since it refers to studies that focus on environmental research (Günther, Pinheiro & Guzzo, 2004). Studies related to relatively recent environmental aspects are also emphasized, enabling the multidisciplinary and transdisciplinary field, which are constantly challenging researchers through multiple and diverse approaches.

For sustainable behavior, it is worth mentioning, firstly, the problems related to the environment, since they are becoming research concerns in research related to environmental themes, trying, therefore, to explain causes that influence environmental degradation or environmental conservation (in addition to the impact of the sustainable behavior of individuals, through environmental awareness, for or against environmental practices (Gonçalves-Dias *et al.*, 2009).

Corral-Verdugo (2012) considers sustainable behavior as a more negative than positive effect on the environment. It is worth noting also the studies related to the environmental behavior of Corral-Verdugo and Pinheiro (1999) and Gonçalves-Dias *et al.* (2009).

In this research, we present the sustainable behavior in the perspective of the individual's concern with environmental issues, which, consequently, are aligned with social issues (Gonçalves-Dias *et al.*, 2009; Kuckertz & Wagner, 2011; Pato & Tamaio, 2006). Sustainable behavior refers to the development of alternatives that seek to reduce environmental degradation, with a focus on protecting the development through social and environmental solutions.

When aligning entrepreneurship with sustainable behavior, it is based on the fact that an individual, while engaging in entrepreneurial activities, can positively or negatively impact on the environment (Kuckertz & Wagner, 2011), since when this individual has an environmental conscience, a positioning in favor or not in relation to the environment, its actions can directly impact the aspects of the triple bottom line (Elkington, 1997).

Considering the theoretical-methodological perspective of Gonçalves-Dias *et al.* (2009), this research seeks to identify the sustainable behavior of the individual, based on aspects of his/her daily life, namely: water and energy consumption, energy reduction, use of resources in the residence, and questions about the treatment given to the trash.

2.4 Hypotheses Development

It is worthy to emphasize a set of items that intend to measure traits, such as: entrepreneurial intention (Thompson, 2009); (Environmental awareness issues: water and energy economy, waste treatment, mobilization and domestic environment) (Gonçalves-Dias *et al.*, 2009; Kaiser, 1998; Pato & Tamayo, 2006); Innovative behavior, through the individual's cognitive capacities - information processing (Foxall & Hackett, 1992; Kirton, 1976); and sociodemographic variables (if you have entrepreneurial parents, professional experience, gender, country of origin, among others) (Carvalho & González, 2006; Kuckertz & Wagner, 2010).

In the findings of the studies done by De Wit (1993), Van Praag (1997) and Noorderhaven *et al.* (2003) found sufficient evidence to support the positive relation of the entrepreneurial intention of the individual who has parents with their own businesses. **H_{1a}**: There is a positive relationship between the entrepreneurial intention of university students and the existence of the parents' own business.

In addition, in relation to the profile of Brazilian and Portuguese university students, it is sought to identify, in the context of culture, which country - Brazil or Portugal - presents a greater number of students with an entrepreneurial intention. This research corroborates Hofstede (2011), since this author emphasizes that the profile of Brazilian and Portuguese students is not similar, which is worth mentioning aspects such as aversion to uncertainty and distance from power. Thus, another hypothesis emerges: **H_{1b}**: There is a positive relationship between the country of origin of university students and their entrepreneurial intent.

Considering that professional experience may influence the entrepreneurial intention of the university student, Kuckertz and Wagner (2010) confirm that professional experience has an impact on entrepreneurial intention. Therefore, the following hypothesis arises: **H_{1c}**: There is a positive relation between the professional experience of university students and their entrepreneurial intention.

It focuses on Kuckertz and Wagner (2010), referring to the impact that a person, through the creation of a business, can generate in the environment. In this context, environmental protection occurs through the consciousness of the individual, since their actions can protect or degrade the environment (Corral-Verdugo, 2012).

In relation to the issues related to the field of sustainability action that concerns the daily life of the individual, it is mainly based on Gonçalves-Dias *et al.* (2009), since environmental awareness has a positive or negative effect on the individual's behavior, as shown in Table 1.

Table 1. Dimensions of sustainable behavior

Dimension	Description
Consumption	It groups variables related to respondents' attitudes to consumption. It expresses the level of awareness of individuals about the environmental issues that involve the posture of the manufacturers and also a more active character in the search for ecologically correct product options.
Concern about Trash	It brings together variables related to the attitude of the individuals regarding garbage and cleaning of domestic and public environments.
Boycott via Consumption	It entails behavioral variables related to consumption, yet the character of the individuals' posture indicates a greater propensity to penalize ecologically incorrect products and services.
Mobilization	Adds behavioral variables related to a proactive stance in the search of awareness of other individuals with regard to environmental issues.
Domestic Environment	It groups variables related to the individual's behavior in the home life. The variables are related to the daily use of natural resources, such as electricity and water.

Source: Adapted from Gonçalves-Dias *et al.* (2009)

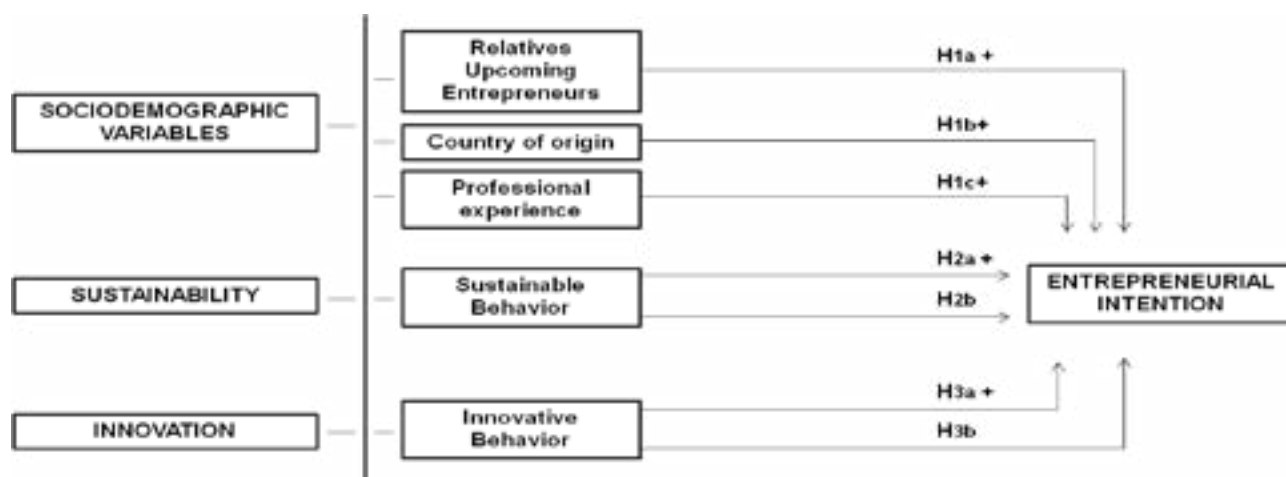
From the perspective of the empirical literature on entrepreneurship and sustainable behavior, the following hypotheses emerge: **H_{2a}**: There is a positive relationship between the sustainable behavior of university students and their entrepreneurial intention; and **H_{2b}**: There is no significant relationship to sustainable behavior in entrepreneurial intent among Brazilian and Portuguese university students.

In reference to the innovative behavior, the theoretical-methodological basis of the Theory of Adaptation-Innovation is used, which emphasizes the capacity of the individual to be innovative and able to propose creative solutions to problem solving (Kirton, 1976).

Considering the entrepreneurial intent (Thompson, 2009; Kuckerz & Wagner, 2010) related to the innovative behavior - propensity to innovate - through the individual's cognitive styles (Kirton, 1976; Taylor, 1989; Foxall & Hackett, 1992). The following hypotheses to be investigated: **H_{3a}**: There is a positive relationship between the innovative behavior of university students and their entrepreneurial intent; and **H_{3b}**: There is no significant relationship regarding the innovative behavior in the entrepreneurial intention between Brazilian and Portuguese university students.

In view of these approaches, it is fundamental to adopt the hypothetical model for this research, focusing on the influence of sociodemographic variables and sustainable and innovative behavioral constructs on the entrepreneurship intentions of Brazilian and Portuguese university students.

Image 1. Hypothetical model of the research



Source: Made by the author

+ Positive relationship with entrepreneurial intention

There is no significant relationship with entrepreneurial intention

3. METHODOLOGY

The classification proposed for this study by Collis and Hussey (2005) is considered, being a quantitative research, of descriptive nature. In addition, it is explanatory to establish relationships between variables. The method used to obtain the data is an intentional survey (Hair *et al.*, 2009).

Specifically, the population was composed of university students from the administration courses of the cities of Fortaleza (Brazil) and Faro (Portugal), both with courses related to management. The course of administration, in accordance with the

evidence of Paço *et al.* (2011), presents a wide incidence of studies and practices related to entrepreneurship, which supports the justification of the choice of this course for the chosen population.

It is possible to emphasize the choice of university students in Brazil and Portugal, confirming Thomas and Muller (2000), who list some reasons considered as fundamental for the choice of university students, in relation to research related to entrepreneurship, which also use Contribution to justify the population chosen in this research: (i) difficulty in accessibility of entrepreneurs, since they already have their own businesses; and (ii) relevance of analyzing the entrepreneurial intention of university students, as well as the homogeneity of the sample, allowing comparisons between different cultures.

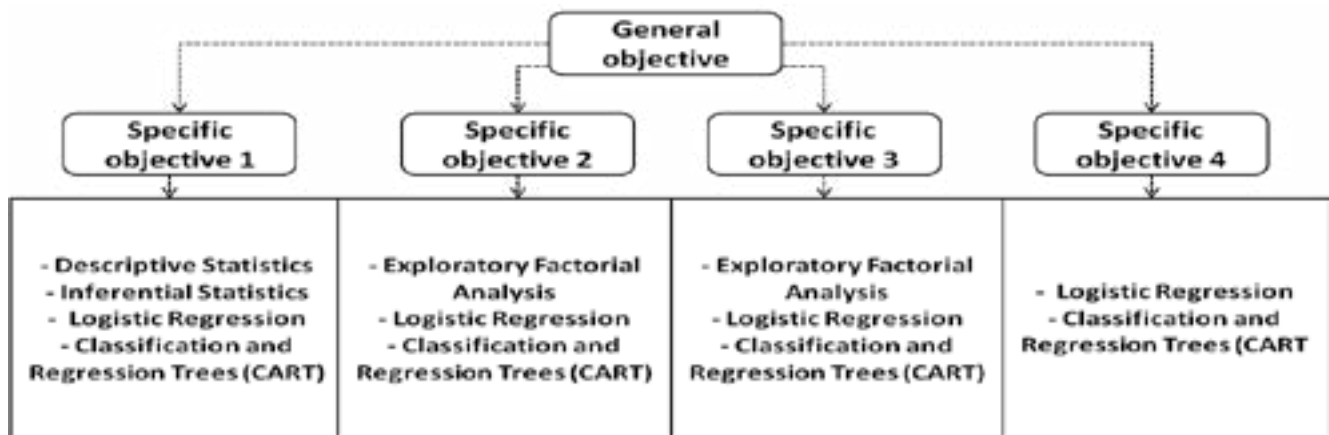
The methodology applied by Kirton (1976) is taken into account; Taylor (1989); Foxall and Hackett (1992); Carvalho and González (2006); Thompson (2009); Gonçalves-Dias *et al.* (2009) and Kuckertz and Wagner (2010), adopting the measurement of some aspects, namely: Relatives Upcoming Entrepreneurs; Country of Origin; Professional Experience; Sustainable Behavior and Innovative Behavior.

The questionnaire, the research instrument, was structured through a set of preestablished items, constituted, in the majority, in a likert scale of 5 points. With regard to entrepreneurial intention, the dichotomous analysis is used “yes / no” or if it is already entrepreneurial; for sustainable behavior ranges from 1 “never” to 5 “always”; in relation to the innovative behavior of 1 “totally disagree” to 5 “totally agree”.

For these analyzes, the rationale is based, mainly, through two scales - with relevant methodological bases in the empirical and conceptual literature on these themes: (i) Sustainable Behavior - Gonçalves-Dias *et al.* (2009) and (ii) Innovative Behavior - Foxall and Hackett (1992).

Image 2 summarizes the statistical techniques used to achieve the objectives. For the analysis of the data the statistical software of statistical treatment of data is used: Statistical Package for the Social Sciences (SPSS) (version 21.0).

Image 2. Synthesis of techniques of statistical analysis of data



Source: Made by the author

The descriptive statistics seek to portray the profile of the sample in relation to gender, age, semester, professional experience of university students and parents and country of origin, highlighting, in turn, comparative aspects between Brazilian and Portuguese students.

Exploratory factorial analysis was used to reduce the factors of sustainable and innovative behavioral aspects, with the Varimax orthogonal rotation type, and rotation is more used when the number of variables is to be reduced (Pallant, 2013). In addition, the criterion of the substitute variable is used for each factor of the construct, raising the variable used with greater factorial load, because it presents greater explanatory power in the construct (Hair *et al.*, 2009).

LR and CART aim to develop a model that allows predicting entrepreneurial intent from the profile of university students and their sustainable and innovative behavior. These steps are fundamental for the development of the hypothetical model of the study, as well as to supplant the empirical literature of the entrepreneurial intention and the sustainable and innovative behavior, identifying a scientific model that makes possible to highlight these behavioral and sociodemographic aspects in the entrepreneurial intention.

4. ANALYSES AND RESULT DISCUSSION

4.1 Search sample

The sample is made up of 400 university students, of these, 285 students in the “Brazilian sample”, in which there is predominance of university students with EI, in a total of 53.3%. In general, women have a lower quantitative value than men, considering individuals with Entrepreneurial Intent (EI). Most individuals work in the private sector, and these were the ones who were shown to have more EI.

As for the “Portuguese sample”, there is a quantitative of 115 individuals, of which 75.7% show EI. The amount of women and men with EI was similar, men reported having a little more than women. It is also observed that individuals with professional experience have a little more EI than individuals without professional experience.

In order to understand EI on students with entrepreneurial parents, a variable named Entrepreneur Close Relatives, it

is worth emphasizing the influence of Ajzen's Theory of Planned Behavior (1991), as well as the studies by De Wit (1993), Van Praag (1997), Noorderhaven *et al.* (2003) Carvalho and González (2006); it is noted that for college students who have entrepreneurial parents, 71.1% have EI; However, for those who have parents who already are entrepreneurs, but no more, 53.3% have EI and for individuals who have parents who were never entrepreneurs, 51.9% have EI, and this is pertinent to infer the relationship between EI and the entrepreneur relatives.

This result is in agreement with the findings of several researchers in the area of entrepreneurship, such as Davidsson (1995), Reynolds *et al.* (2010), and Teixeira and Forte (2011), and Geldhof *et al.* (2002), Carvalho and González (2006), Teixeira and Davey (2010), Van Der Zwan, Thurik and Grilo (2014).

University students of the University of Algarve (UALg) were predominant in EI when compared to university students of the Federal University of Ceará (UFC), (75.7% versus 53.3%). In addition, university students without EI, exhibited (20% versus 40%) when comparing UALg with UFC.

In relation to professional experience and EI, it can be seen that in the case of individuals who have never worked, 66.1% have EI, while those working in the private sector show 60.7% EI.

4.2 Factor analysis for behavioral constructs

The factors of the Sustainable Behavior (SB), under the methodology of Gonçalves-Dias *et al.* (2009), are arranged in 16 items, grouped into 5 factors (conscient consumption, concern with garbage, mobilization, domestic environment and boycott via consumption).

The explanatory variance for this construct found from the division was 64.357%. The degree of explanation of the data was 0.826 - Kaiser-Meyer-Olkin (KMO = 0.826), a value higher than 0.5 indicates that the factorial analysis is satisfactory.

Table 2. Factor analysis of the sustainable behavior construct

Variables	Factor loadings					Communalities
	Conscious Consumption	Concern with garbage	Mobilization	Domestic environment	Boycott via consumption	
SB1	.745					.597
SB2	.743					.653
SB3	.540					.581
SB4	.740					.680
SB5	.696					.524
SB10	.521					.591
SB6		.850				.744
SB7		.893				.823
SB8		.787				.670
SB11			.673			.658
SB12			.801			.657
SB13			.634			.511
SB14				.527		.508
SB15				.815		.679
SB16				.765		.610
SB9					.897	.812

Source: Research data

With the criterion of the substitute variable for each factor, it is clear to observe: Engaged consumption - SB1: "I have paid more for environmentally correct products" (factor load of 0.745); Concern with garbage - SB7: "I avoid throwing paper on the floor" (factor load of 0.893); Mobilization - "I mobilize people for the conservation of public spaces" (factor load of 0.801); Domestic environment - "I keep the refrigerator open for a long time, looking at what's inside" (factor load of 0.815); and Boycott via consumption - SB9: "I buy products from a company even though it knows that it pollutes the environment" (factor load of 0.897).

On an incial analysis of the innovative behavior, there are some insignificant variables to the analysis, since they did not meet the minimum level suggested by the literature (commonalities greater than 0.500). Therefore, a new factor analysis is performed, verifying an explanatory arrangement of 64.057% of the data variance. The Kaiser-Meyer-Olkin value (KMO = 0.700) and the Bartlett sphericity test (chi-square = 386,071) were shown to be significant ($p = 0.000$), and this indicates that there is a correlation between the variables, which results in a large amount of explanatory variance.

Table 3. Factor analysis of the construct innovative behavior

Variables	Factor loadings				communalities
	Preference to dynamism and creativity	Appropriateness to originality	Efficiency in details	Compliance with rules	
IB5	.700				.568
IB6	.733				.596
IB7	.765				.614
IB8	.360				.588
IB1		.767			.636
IB3		.820			.688
IB9			.804		.662
IB11			.808		.669
IB13				.845	.743

Source: Research data

It is worth mentioning the variables with higher factor loads within each factor: Preference to dynamism and creativity - IB7: "I share my ideas" (factorial load of 0.614); Adequacy to originality - IB3: "I have new perspectives for old problems"; Efficiency in details - IB9: "I prefer gradual rather than radical change"; and Compliance with rules - IB13: "I need the stimulus of frequent change."

This construct points to three factors, taking into account the perspective of some researchers in the field, such as Taylor (1989) and Foxall and Hackett (1992), which they call: appropriateness to originality, detail efficiency and rules compliance. However, since the results of the analysis of the factorial loads for this construct, given the Brazilian and Portuguese samples, provided four factors, an additional factor will be defined, preferably in terms of dynamism and creativity.

In this sense, based on the factorial structures of the EFA - which provided nine behavioral variables, the most representative within each factor, it is possible to portray, from a reliable point of view, the dimensions adopted for this research.

4.3 Search model results

The theoretical model proposed for this work is verified using Logistic Regression (LR) to use behavioral and sociodemographic variables (independent variables), in order to predict the entrepreneurial intention (dependent variable).

Table 4. Analysis of the logistic regression of the model variables

Variables	B	Sig.	Exp(B)
Conscious Consumption	-.032	.828	.968
Concern with garbage	-.236	.373	.790
Mobilization	.293	.006	1.341
Domestic environment	.233	.102	1.262
Boycott via consumption	.062	.685	1.064
Preference to dynamism and criativity	.050	.745	1,051
Appropriateness to originality	.552	.001	1.736
Efficiency in details	-.033	.785	.968
Compliance with rules	.458	.001	1.581
Gender(female)	-.546	.037	.579
Age	-.032	.355	.969
Married	-.101	.844	.903
Single	-1.820	.151	.162
Year you first enrolled in university	.005	.888	1.005
Semester	-.116	.037	.891
University (UAlg)	.712	.035	2.038

Professional experience (owner/partner)	2.991	.007	19.897
Professional experience (private sector)	.332	.303	1.394
Professional experience (public sector)	.278	.509	1.321
Professional experience (another)	-.049	.917	.952
Parent experience (no, but one of them used to be)	-.868	.011	.420
Parent experience (no, neither have ever been)	-1.164	.000	.312
Constante	-10.814	.870	.000

Source: Research data

For sustainable behavior, it is evident the mobilization - variable that refers to the mobilization that the individual provides to other people for conservation of public spaces, as well as to the importance of the environment. This relationship between the mobilization and the EI presents is significant (p-value of 0.006). The value of B for this relation was positive (0.293), and this indicates that the mobilization has a positive influence on EI. The other variables of sustainable behavior did not have statistically significant relationships in the model.

Thus, it is worth confirming H_{2a} : There is a positive relationship between the sustainable behavior of university students and their entrepreneurial intention.

Regarding the innovative behavior, they are pointed out as representative variables, adequacy to originality and compliance with rules, being possible to relate them as predictors to explain the IE of the university student. It is identifiable that appropriateness to originality exhibits p-value of 0.001 with B of 0.552 and compliance with rules p-value of 0.001 with B of 0.552. It is evident that the variable appropriateness to originality, referring to the original ideas; and the variable compliance with rules (which is the inverse), that is, the greater the compliance with the rules, the less the individual wants rules and norms, thus the demand of the stimulus of frequent change; both are positively related to EI.

H_{3a} is therefore confirmed: There is a positive relationship between the innovative behavior of university students and their entrepreneurial intent. Therefore, the innovative behavior can be considered a predictor of the EI of the university students, it is emphasized that the greater the innovative behavior of the individual - turned towards originality and compliance with the rules, the greater the possibility of the individual to have EI.

The variables related to the sample profile in the adopted model were also observed. Thus, the semester has a negative influence on the sample investigated, that is, the lower the semester, the higher the university student's EI (p value of 0.37 and B of -0.116). Regarding the gender, a negative influence is perceived in women and their EI, and this allows to infer that the male gender has a positive relation with EI.

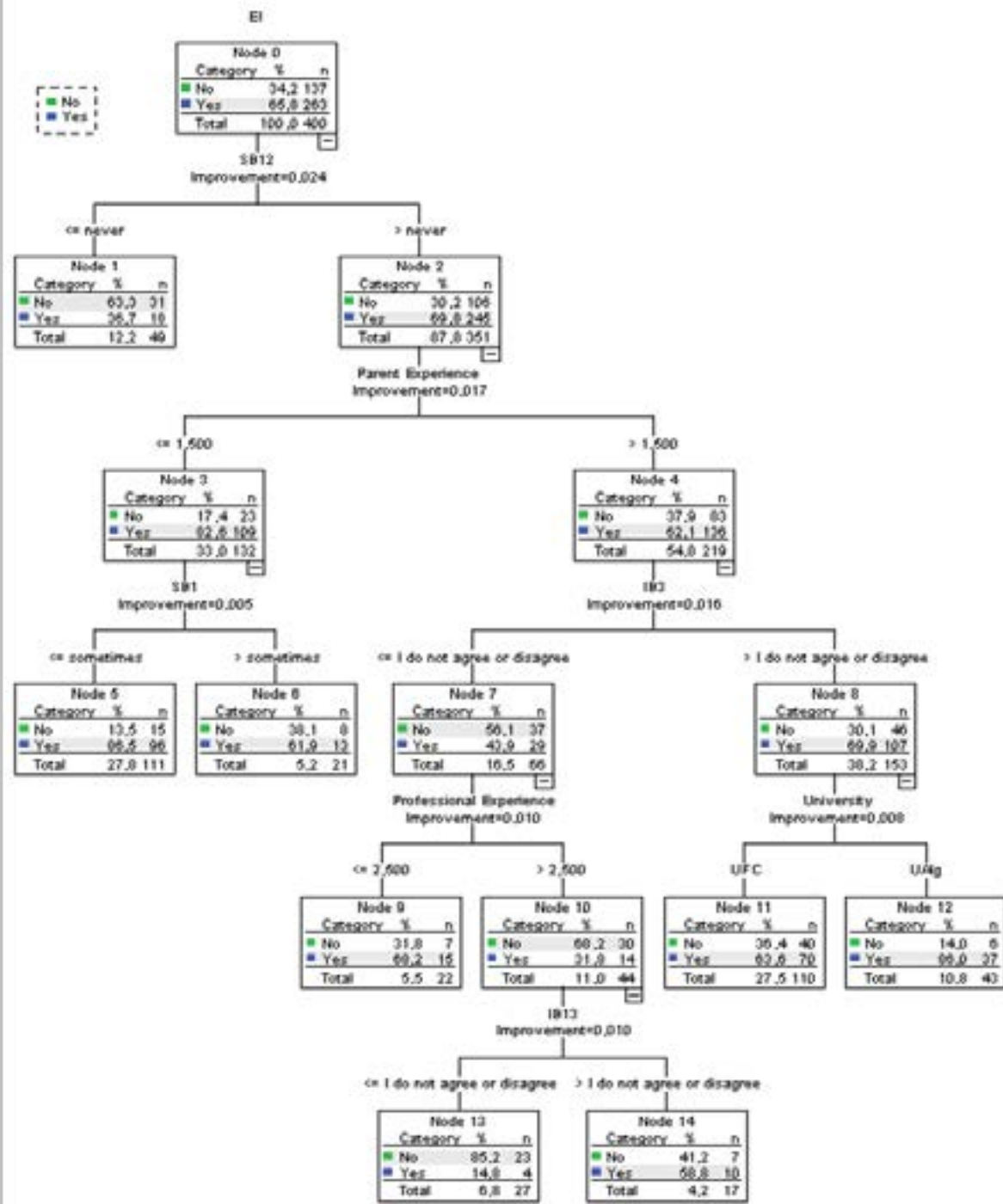
In addition, there is a positive relation for UAlg students, with $\text{Exp}(B) = 2.038$, which means that Portuguese students have the double of the chance to have entrepreneurial intent than the Brazilians. This results allows to confirm the hypothesis H_{1b} : There is a positive relationship between the country of origin of university students and their entrepreneurial intention.

Nevertheless, one can not infer the existence of the relation of professional experience with EI, and this is essential to reject H_{1c} : There is a positive relation between the professional experience of university students and their entrepreneurial intention.

In view of this model, it can be seen that the parent experience: at least one parent who was an entrepreneur, but no more (p value of 0.011 with B of -.868); and none of the parents was an entrepreneur (p value of 0.000 with B of -1,164), these negative values of B provide evidence that the IE of university students is lower when the parents are not entrepreneurs. The entrepreneurs close relatives strongly influence the EI of the university students. Therefore, it is understood that EI has a positive relation with close relatives of individuals, and this proves H1a: There is a positive relation between the entrepreneurship intention of the university students and the existence of own businesses of the parents.

The analysis of this logistic regression expresses Nagelkerke R^2 of 0.324. This value indicates that the adopted model is acceptable to explain the relation of the variables in the model. The likelihood ratio (p of 0.000) asserts the viability of the applied model. In order to further deepen the developed model, another method is adopted: Classification and Regression Tree (CART).

Image 3. Classification and Regression Tree - CART



Source: Research data

In addition, Table 5 identifies the CART method with the terminal node descriptions and their probability, considering university students who have entrepreneurial intention.

Table 5. Summary of the characteristics of terminal nodes

Terminal Node	Descriptions of nodes	Probability (Has EI)
1	1. SB12 (mobilization): never	0.367
5	1. SB1 (Conscious Consumption) ≤ Sometimes 2. Parent Experience: Yes, at least one is an entrepreneur. SB12 (mobilization) > never	0.865
6	3. SB1 (Conscious Consumption) > Sometimes 4. Parent Experience: Yes, at least one is an entrepreneur. 5. SB12 (mobilization) > never	0.619

9	6. Professional Experience: Owner of a business or has never worked 7. IB3 (Appropriateness to originality) <= I do not agree or disagree 8. Parent Experience: Yes, at least one is an entrepreneur. 9. SB12 (mobilization) > never	0.682
13	IB13 (Compliance with rules) <= I do not agree or disagree Professional Experience: Works in the public or private sector or other situation IB3 (Appropriateness to originality) <= I do not agree or disagree Parent Experience: Yes, at least one is an entrepreneur. SB12 (mobilization) > never	0.148
14	IB13 (Compliance with rules) > I do not agree or disagree Professional Experience: Works in the public or private sector or other situation IB3 (Appropriateness to originality) <= I do not agree or disagree Parent Experience: Yes, at least one is an entrepreneur. SB12 (mobilization) > never	0.588
11	UFC (University Federal of Ceará) IB3 (Appropriateness to originality) > I do not agree or disagree Parent Experience: Yes, at least one is an entrepreneur. SB12 (mobilization) > never	0.636
12	UAlg (University of Algarve) IB3 (Appropriateness to originality) > I do not agree or disagree Parent Experience: Yes, at least one is an entrepreneur. SB12 (mobilization) > never	0.860

Source: Research data

The CART find subgroups of student (nodes) with similar entrepreneurial intention. Based on the university students with EI, is highlighted the group that shows strong influence of the mobilization normalized importance 100%); entrepreneur close relatives (normalized importance 73.8%); with a neutral behavior for conscious consumption, which means that sometimes these individuals pay more for environmentally correct products. We can also see the influence of sustainable behavior, mainly by mobilization; and entrepreneur close relatives in EI of university students.

With this influence of the entrepreneur close relatives in EI of the university students, H_{1a} is confirmed: There is a positive relation between the entrepreneurial intention of the university students and the existence of parental entrepreneurial experience, and this is relevant to align this finding to the researches of De Wit (1993), Van Praag (1997), Reynolds *et al.* (2002), Noorderhaven *et al.* (2010), Van Der Zwan, Thurik and Grilo (2010), Teixeira and Davey (2010) and Teixeira and Forte (2011).

Concerning university students with EI, two more groups are considered with predominance for the following variables: mobilization; Appropriateness to originality (normalized importance 67.8%) and Portuguese sample - UAlg (standardized importance 60.8%); the other group is evidenced by all these nodes, however, in the last node, we have the Brazilian sample - UFC.

From this perspective, it can be seen that mobilization (sustainable behavior) and appropriateness to originality (innovative behavior) can also be considered variables that predict EI of the university student. In this sense, we hypothesize H_{2a} : There is a positive relationship between the sustainable behavior of university students and their entrepreneurial intention.

It is fundamental to explain that entrepreneurship related to the protection and conservation of the environment, facing the environmental conscience of the individual in relation to environmental issues, can impact the triple bottom line (economic, social and environmental spheres) (Dean & McMullen, 2007; Parrish, 2008), which explains the importance of sustainable behavior in the individual's EI (Kaiser, 1998; Liñán & Chen, 2009).

Therefore, it is assumed that university students with sustainable behaviors, in the face of practices, awareness and mobilization of the importance of environmental issues, may be the most likely to implement new business - focusing on sustainability and environmental protection (Kuckertz & Wagner, 2010).

In addition to this hypothesis, the results obtained by the CART make it possible to corroborate H_{3a} : There is a positive relationship between the innovative behavior of university students and their entrepreneurial intention.

Based on this question, it is emphasized that the innovative behavior of the individual, aimed at creating new businesses, is relevant to accentuate creative and original solutions for the market. Thus, an individual with an innovative spirit can impact the economy as a whole by creating new companies, since it provides jobs and income to society (Kuckertz & Wagner, 2010; Teixeira & Davey, 2010).

As these analyzes were recurrent and had influence in both samples (Brazilian and Portuguese), it is considered, therefore, that there is no significant relation with regard to the sustainable and innovative behavior in the entrepreneurial intention between Brazilian and Portuguese university students.

Thus, the hypothesis H_{2b} is also confirmed: There is no significant relation between sustainable behavior in entrepreneurial intention between Brazilian and Portuguese university students and H_{3b} : There is no significant relation with the innovative behavior in entrepreneurial intention among Brazilian university students and Portuguese university students.

Regarding another group formed from the group of individuals without EI, it is pertinent to refer to appropriateness to originality, which was not very recurrent; Professional experience, emphasizing, above all, those already in the labor market;

And little recurrent to the compliance to rules (which refers to preference for rules and norms), these have been shown, in general, not to have EI.

On the other hand, it is emphasized that when the individual has professional experience and is already inserted in the labor market, the latter, in turn, presents a lower EI level than individuals who have never worked. In this approach, it is worth rejecting H_{1c} : There is a positive relationship between the professional experience of university students and their entrepreneurial intent, which contrasts Kuckertz and Wagner (2010).

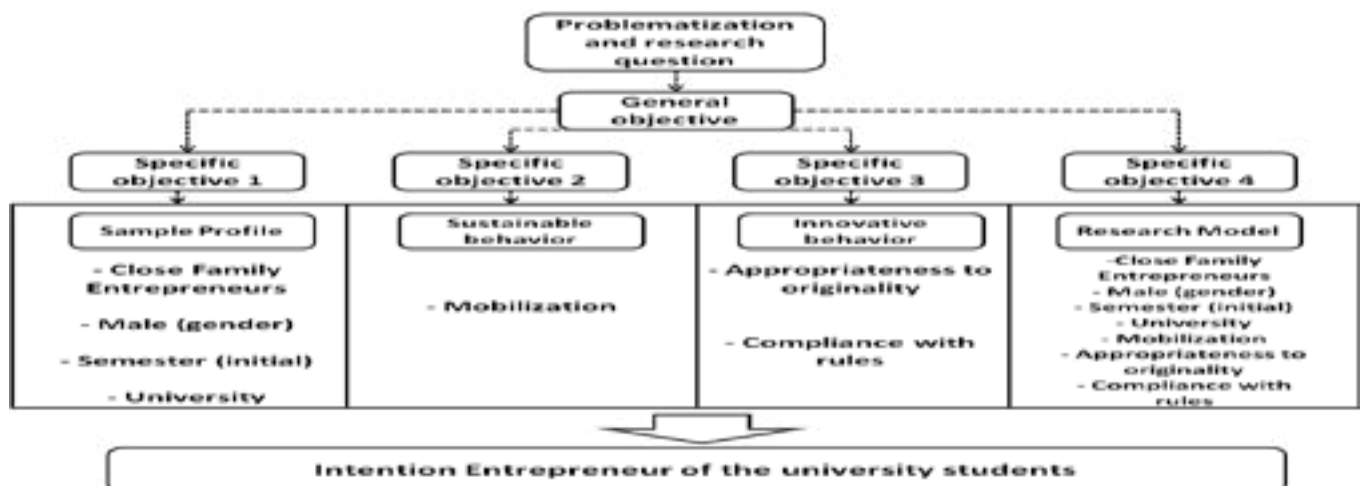
When verifying that both samples (Brazil and Portugal) presented significant relations to EI of the university student. The acceptance of H_{1b} is confirmed: There is a positive relationship between the country of origin of university students and their entrepreneurial intention.

In relation to sustainable and innovative behavior, there is a positive relationship for sustainable and innovative behavior in the entrepreneurial intention of Brazilian and Portuguese university students, and it should be noted that no significant relationship was found between the two samples, both of which presented a significant relation to the entrepreneurial intention.

The results of both LR and CART provided sufficient support for the confirmation of the hypotheses of this study, with the exception of H_{1c} , and this proposes a predictive model to predict the entrepreneurial intention from the profile of university students and their sustainable behavior and Innovative.

Image 4 summarizes the main results obtained from the perspective of the model proposed for this study. This summary is therefore intended to indicate the fundamental factors that culminate in the prediction of the entrepreneurial intention of university students.

Image 4. Summary of results in the proposed model



Source: Research data

5. CONCLUSION

This study had as main guideline to analyze the influence of sustainable and innovative behavior on the entrepreneurial intention of Brazilian and Portuguese university students. From the specific objectives and the hypotheses, it was confirmed that the methodology was pertinent to meet the objectives of the proposed research.

For the specific objective 1 - "to identify the relations between the profile of university students and their entrepreneurial intention"; identified a strong influence of Ajzen's Theory of Planned Behavior (1991), emphasizing, above all, the influence of external factors, such as social and family pressure - relevant to stimulate and encourage entrepreneurship. The influence of the entrepreneur close family in EI of the university students was verified.

When highlighting the professional experience in EI of the university students, this variable, in turn, did not have influence in the IE of the university student, and this was registered in the perspective that the university students without professional experience also revealed preponderance in having EI.

In view of these approaches, we conclude that the hypotheses were confirmed: H_{1a} e H_{1c} . Hypothesis H_{1b} did not obtain sufficient evidence for its acceptance, therefore, this hypothesis was rejected

For the specific objective 2 - "to analyze the sustainable behavior in the entrepreneurial intention of the university students", the influence of the sustainable behavior in the EI could be evidenced, emphasizing the mobilization dimension - that refers to the proactive position of the individual in the quest to incite other people with regard to environmental issues. Thus, H_{2a} was confirmed.

It should be noted that entrepreneurship, when aligned with the protection and conservation of the environment, based on environmental awareness, impacts the triple bottom line (economic, social and environmental spheres) (Dean & McMullen, 2007; Parrish, 2008), which is relevant to verify that the sustainable behavior is fundamental in the EI of the university students (Kaiser, 1998; Liñán & Chen, 2009).

As this analysis was predominant for both UFC and UAlg university students, it was possible to emphasize that there

were no significant relationships for sustainable behavior in EI between Brazilian and Portuguese university students, and this accepts H_{2b} .

In relation to the specific objective 3 - "to investigate innovative behavior in the entrepreneurial intention of university students", it was detected that the dimensions of originality and compliance with rules were substantial to predict the innovative behavior in EI of university students. In this context, it could be verified that individuals with behaviors more focused on originality, sharing ideas, being stimulating for other people and liking to vary already established routines; And those who consider themselves to need the stimulus of frequent change, these are, in turn, those that have manifested higher EI. It was also verified in the formation of the subgroups of the CART, that adequacy to the originality has normalized importance (67.8%) to explain EI.

In a central perspective, this question is alluding to the perspective that an entrepreneurial individual is an innovator, capable of proposing innovative and original creative solutions to the market, and this corroborates Kirton (1976) and Schumpeter (1984). Therefore, considering the findings of this research, that the appropriateness to originality and compliance with rules represent the innovative behavior, these dimensions were nevertheless considered predictors of EI. In this case, H_{3a} was ratified.

The results, appropriate to the innovative behavior, were predominant for both UFC and UAlg university students, and this pointed to the confirmation of H_{3b} . In a general context of innovative behavior in EI, the dimensions of compliance with originality and compliance with rules were considered.

The specific objective 4 - "to develop a model that allows the prediction of the entrepreneurial intention from the profile of university students and their sustainable and innovative behavior", highlighted the following variables that predict EI: mobilization; Appropriateness to originality; Compliance with rules; Close Family entrepreneurs; university; Gender (men) and the first semesters of the university.

From the point of view of the impact of this research in the short term, it is fundamentally perpetuated in the encouragement of policies and practices to university level institutions, with the purpose of boosting interest on environmental issues in university students, which, for the most part, are shown with EI (academic scope). Because EI is essential for entrepreneurship, in a long-term perspective, this research provides enough support to impact entrepreneurship as a whole.

Although the literature on entrepreneurial intent is broad, both in the national and international databases, no studies were found that would allow the alignment of innovation and sustainability in the entrepreneurial intention of university students, which is fundamental to bring an innovative character to this research.

In future research, these phenomena could be examined in a longitudinal perspective, with different courses, in other universities and comparing them among other countries. The main focus for future scenarios is to further understand innovation and sustainability in the context of entrepreneurship.

REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological bulletin*, 84(5), 888.
- Autio, E., Keeley, R. H., Klofsten, M., & Ulfstedt, T. (1997). Entrepreneurial intent among students: testing an intent model in Asia, Scandinavia and USA.
- Bagozzi, R. P., & Foxall, G. R. (1995). Construct validity and generalizability of the Kirton Adaption? Innovation Inventory. *European journal of personality*, 9(3), 185-206.
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of management Review*, 13(3), 442-453.
- Boszczowski, A. K., & Teixeira, R. M. (2012). O Empreendedorismo Sustentável e o Processo Empreendedor: Em Busca de Oportunidades de Novos Negócios como Solução para Problemas Sociais e Ambientais DOI-10.5752/P. 1984-6606.2012 v12n29p109. *Economia & Gestão*, 12(29), 141-168.
- Carvalho, P., & González, L. (2006). Modelo explicativo sobre a intenção empreendedora. *Comportamento Organizacional e Gestão*, 43-65.
- Chudry, F., Foxall, G., & Pallister, J. (2011). Exploring attitudes and predicting intentions: Profiling student debtors using an extended theory of planned behavior. *Journal of applied social psychology*, 41(1), 119-149.
- Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22(1), 29-49.
- Collis, J., & Hussey, R. (2005). *Pesquisa em administração: um guia prático para alunos de graduação e pós-graduação*. Bookman.
- Corral-Verdugo, V., & Pinheiro, J. Q. (1999). Condições para o estudo do comportamento pró-ambiental. *Estudos de Psicologia*, 4(1), 7-22.
- Corral-Verdugo, V. (2012). The positive psychology of sustainability. *Environment, Development and Sustainability*, 14(5), 651-666.
- Davidsson, P. (1995). Determinants of entrepreneurial intentions.

- De Wit, G. (1993). An m-sector, n-group behavioral model of self-employment. In *Determinants of Self-employment* (pp. 45-85). Physica-Verlag HD.
- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of business venturing*, 22(1), 50-76.
- Elkington, J. (1997). Cannibals with forks. *The triple bottom line of 21st century*.
- Foxall, G. R., & Hackett, P. M. (1992). The factor structure and construct validity of the Kirton Adaption-Innovation Inventory. *Personality and Individual Differences*, 13(9), 967-975.
- Geldhof, G. J., Weiner, M., Agans, J. P., Mueller, M. K., & Lerner, R. M. (2014). Understanding entrepreneurial intent in late adolescence: The role of intentional self-regulation and innovation. *Journal of youth and adolescence*, 43(1), 81-91.
- Goldsmith, R. E. (1984). Personality characteristics associated with adaption-innovation. *The Journal of psychology*, 117(2), 159-165.
- Gonçalves-Dias, S. L. F. G. et al. (2009). Consciência ambiental: um estudo exploratório sobre suas implicações para o ensino de administração. *RAE-eletrônica*, 8(1), 1.
- Günther, H., Pinheiro, J. Q., & Guzzo, R. S. L. (2004). Psicologia Ambiental: entendendo as relações do homem com seu ambiente. *Campinas: Alínea*.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Análise multivariada de dados*. Bookman Editora.
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2014). *Empreendedorismo-9*. AMGH Editora.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online readings in psychology and culture*, 2(1), 8.
- Kaiser, F. G. (1998). A general measure of ecological behavior. *Journal of applied social psychology*, 28(5), 395-422.
- Kirton, M. (1976). Adaptors and innovators: A description and measure. *Journal of applied psychology*, 61(5), 622.
- Krueger, N. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship: Theory and practice*, 18(1), 5-22.
- Kuckertz, A., & Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions—Investigating the role of business experience. *Journal of Business Venturing*, 25(5), 524-539.
- Liñán, F., & Chen, Y. W. (2009). Development and Cross-Cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship theory and practice*, 33(3), 593-617.
- Marcati, A., Guido, G., & Peluso, A. M. (2008). The role of SME entrepreneurs' innovativeness and personality in the adoption of innovations. *Research Policy*, 37(9), 1579-1590.
- Noorderhaven, N., Thurik, R., Wennekers, S., & van Stel, A. J. (2003). Self-employment across 15 European countries.
- Paço, A. M. F., Ferreira, J. M., Raposo, M., Rodrigues, R. G., & Dinis, A. (2011). Behaviours and entrepreneurial intention: Empirical findings about secondary students. *Journal of International Entrepreneurship*, 9(1), 20-38.
- Pallant, J. (2013). *SPSS survival manual*. McGraw-Hill Education (UK).
- Parrish, B. D. (2008). Sustainability-driven entrepreneurship: a literature review. *University of Leeds, School of Earth & Environment*.
- Pato, C. M. L., & Tamayo, Á. (2006). A Escala de Comportamento Ecológico: desenvolvimento e validação de um instrumento de medida. *Estudos de psicologia*, 11(3), 289-296.
- Reynolds, P. D., Camp, S. M., Bygrave, W. D., Autio, E., & Hay, M. (2002). Global entrepreneurship monitor gem 2001 summary report. *London Business School and Babson College*. Robinson, P. B., Stimpson, D. V., Huefner, J. C., & Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship theory and practice*, 15(4), 13-31.
- Schumpeter, J. A. (1984). Teoria do desenvolvimento econômico: uma investigação sobre lucros, capital, crédito, juro e o ciclo econômico. São Paulo: Abril Cultural, 1982. *Capitalismo, Socialismo e Democracia*. Rio de Janeiro: Zahar.
- Shapero, A., & Sokol, L. (1982). The social dimensions of entrepreneurship.
- Straughan, R. D., & Roberts, J. A. (1999). Environmental segmentation alternatives: a look at green consumer behavior in the new millennium. *Journal of consumer marketing*, 16(6), 558-575.
- Stum, J. (2009). Kirton's adaption-innovation theory: managing cognitive styles in times of diversity and change. *Emerging Leadership Journeys*, 2(1), 66-78.
- Taylor, W. G. (1989). The Kirton Adaption-Innovation Inventory: A re-examination of the factor structure. *Journal of Organizational Behavior*, 10(4), 297-307.
- Teixeira, A. A., & Davey, T. (2010). Attitudes of higher education students to new venture creation The relevance of competencies and contextual factors. *Industry and Higher Education*, 24(5), 323-341.

- Teixeira, A. A., & Forte, R. P. (2009). *Unbounding entrepreneurial intents of university students: a multidisciplinary perspective* (No. 322). Universidade do Porto, Faculdade de Economia do Porto.
- Thomas, A. S., & Mueller, S. L. (2000). A case for comparative entrepreneurship: Assessing the relevance of culture. *Journal of International Business Studies*, 31(2), 287-301.
- Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory and Practice*, 33(3), 669-694.
- Van Der Zwan, P., Thurik, R., & Grilo, I. (2010). The entrepreneurial ladder and its determinants. *Applied Economics*, 42(17), 2183-2191.
- Praag, C. M. (1997). Determinants of succesful entrepreneurship.
- Whetten, D. A. (1989). What constitutes a theoretical contribution?. *Academy of management review*, 14(4), 490-495.

CARTOGRAFIAS CONTEMPORÂNEAS – OLHAR A NATUREZA, REGRESSAR À CIDADE

João Minhoto Marques
Universidade do Algarve / CIAC
(jmarques@ualg.pt)

RESUMO

No enquadramento proporcionado pela tradição ocidental do bucolismo, a representação do espaço tem-se configurado por certos elementos que, pelo facto de terem sido objecto de elevado grau de codificação, funcionaram como constantes quase invariáveis nos mais variados domínios do trabalho artístico e da cultura, pelo menos até aos alvares da época moderna e contemporânea (*e.g.*, o princípio do *locus amoenus*, a recorrência da oposição cidade/campo, etc.).

Neste estudo, procurar-se-á discutir a capacidade impositiva dos referidos elementos na contemporaneidade, tentando compreender eventuais reconfigurações na concepção do espaço, a partir do contributo da literatura e de outras artes.

Palavras-chave: Bucolismo, Contemporaneidade, Cidade, *Locus Amoenus*.

JEL Classification: Z11

As acepções mais recorrentes e consensuais do lexema «paisagem» remetem para a representação artística de um tipo de espaço particular, o espaço campestre. Este, de resto, convoca inevitavelmente um processo de contemplação que parece estar associado a uma experiência de prazer – o que poderá explicar a proliferação de elementos com que a lexicografia identifica o mencionado vocábulo: desde logo, o género, quer no domínio da literatura, quer no contexto da pintura; mas, igualmente, o quadro, o desenho, o trecho. O *Novo Dicionário Compacto da Língua Portuguesa*, de António de Moraes Silva, por exemplo, depois de definir «paisagem», de modo mais lato, como uma «extensão de território que se abrange de um só lance de vista, e que se considera pelo seu valor artístico, pelo seu pitoresco» (Silva, 1994), centra-se sobre o «género de pintura ou de literatura, cujo fim é a representação ou a descrição do campo ou lugares campestres», para considerar ainda o «quadro que representa esses lugares» e finalizar a lista de acepções com o sentido figurado de «aspecto, vista». Se olharmos para outros dicionários, podemos encontrar descritores como «desenho» («sobre um motivo rústico»), como é o caso do *Dicionário da Língua Portuguesa*, de J. Almeida Costa e A. Sampaio e Melo, ou «trecho» (figurando este no *Dicionário Priberam da Língua Portuguesa*). Se considerarmos ainda que estes elementos têm vindo a ser actualizados – num dado momento, num certo contexto, num determinado espaço – em múltiplas obras artísticas concretas e individuais no decurso do tempo, contribuindo para a construção de uma história cultural comum, podemos defender, pelo menos, que existe um alargado (ainda que, possivelmente, relativo) consenso quanto a uma das finalidades da representação da natureza. Mais: não será abusivo depreender que a variedade dos referidos elementos e a multiplicidade das suas concretizações deverá revelar uma aceitação dos textos paisagísticos (no domínio das diversas artes) mais ou menos generalizada, sobretudo no que se refere a aspectos de recepção.

Um bom exemplo que pode ser entendido como ilustração desta tendência do público apreciador do referido tipo de obras artísticas é a conhecida sondagem levada a cabo, no final do século passado, sob os auspícios dos artistas russos Vitaly Komar e Alexander Melamid, para apurar o que os americanos queriam no domínio da arte, e, especificamente, no caso da pintura. Os resultados foram expressos, em primeiro lugar, de forma quantitativa, estatística, e, posteriormente, foram como que traduzidos, embora de modo discutível, na famosa obra pictórica *America's Most Wanted*. Vieram, de qualquer modo, confirmar a preferência por um certo tipo de representação do espaço. Este foi, portanto, corporizado numa interpretação que veio a constituir-se como uma paisagem substancialmente familiar, na sua dominante cor azulada, sinalizando o céu e a água, e incluindo outros elementos porventura esperados, como a presença de vegetação rasteira, árvores, alguns animais e, por fim, pessoas fruindo momentos de lazer neste contexto de uma natureza amena.

Podemos interrogar-nos acerca do motivo pelo qual tal preferência existe e de um modo muito mais generalizado do que talvez pudéssemos imaginar, uma vez que os referidos artistas demonstraram que não eram apenas os habitantes dos Estados Unidos da América que gostavam de paisagens azuis; também pessoas de outros países (como a China, o Quênia, a Islândia, etc.) se exprimiram no mesmo sentido quando interrogadas no contexto da mesma sondagem. Talvez a razão dessa familiaridade ou dessa preferência se relacione com um processo de reconhecimento – o que explicaria também o prazer inerente ao mesmo processo (a lição aristotélica não andaria longe, neste sentido). De algum modo, preferiríamos um certo tipo de representação espacial pelo facto de já termos contactado com outra semelhante. Esta explicação parece assentar, é claro, na ideia segundo a qual o gosto é adquirido à medida que se desenvolve a nossa biblioteca cultural, segundo um percurso de experiência e de leituras.

É um pouco neste sentido, aliás, que a tese de Vitaly Komar aponta, ao propor a nostalgia de algo perdido como a razão, das pessoas entrevistadas na sondagem, para a predilecção manifestada. De facto, sendo-lhe perguntado o que pensava acerca da opção do público pela paisagem azul, o artista responde: «I believe it reflects people's nostalgia about freedom. It's a very simple metaphor, and very deep at the same time: closed space and open space. The concentration of idea of

closed space, I believe, it's prison. And concentration of idea of open space is a landscape – air, no barriers, in other words, vacation, freedom.» (Wypijewski, 1999).

Este juízo parece ter simultaneamente em conta uma visão simbólica da existência e um processo de aprendizagem cultural que parte dessa visão e a incorpora no que se tem verificado ser uma tendência cada vez mais clara na história, à medida que o homem se concentra em espaços urbanos. De facto, ao associar a representação do espaço campestre aos princípios da liberdade e do ócio, Vitaly Komar está, ao mesmo tempo, a contrapor esse ao espaço da aglomeração urbana, da cidade – entendido este como um domínio fechado, caracterizado como «prisão» e sendo-lhe associados as «barreiras» e o trabalho. De resto, desenvolvendo o seu raciocínio, refere ainda o artista: «You know, life reminds me of office. Employees scribble abstract patterns in legal pads during meetings and leave office during lunch. Within greater enslavement we discover small freedom – so we think. But if we examine closer, this freedom turns out to be a new slavery, with its own smaller freedom/slavery, and so on: our choice of lunch, for example (...)» (Wypijewski, 1999).

O espaço citadino é, portanto, de acordo com o ponto de vista de Komar, o da escravatura, opondo-se ao da liberdade que o homem anseia e associa ao campo. Ora, a nostalgia dessa liberdade implica a sua perda, ou, se quisermos recorrer à metáfora mencionada, pressupõe uma espécie de trânsito entre espaços, o qual estaria na origem da valorização da paisagem campestre. Abraçada a cidade, cresceria a nostalgia do campo abandonado e, consequentemente, a preferência por paisagens campestres.

No âmbito da arte, estes aspectos – a oposição entre o campo e a cidade; a passagem de um para o outro; a instauração da natureza segundo um certo número de características reconhecíveis – são, há muito, recorrentes nos textos de carácter bucólico. Poderemos mesmo, com razoável facilidade, identificar a persistência dos referidos elementos na tradição ocidental do bucolismo que diz respeito não apenas à literatura e à pintura, mas a outras artes. De facto, neste sentido, a representação da natureza decorre, em grande medida, da aprendizagem e domínio de um código particular que, através dos objectos artísticos, tem esculpido o gosto e sedimentado as nossas competências de leitura do espaço.

Esta explicação de carácter cultural (à qual será necessário voltar) não é, porém, a única que importa ter em conta. Denis Dutton, numa obra intitulada *Arte e instinto* (cujo subtítulo, na edição original, em língua inglesa, é bastante eloquente: *Beauty, pleasure and human evolution*), defende justamente que as «respostas humanas a paisagens também mostram atavismos» e, referindo-se em concreto às «experiências de Komar e Melamid», afirma: «O tipo de paisagem azul exuberante, que os artistas russos descobriram, encontra-se em todo o mundo porque é uma preferência inata» (Dutton, 2010: 35). Concretizando o seu pensamento, explica ainda que a «atração fundamental por certos tipos de paisagem não é construída socialmente, mas está presente na natureza humana como uma herança do Plistocénico, os cerca de um milhão e meio de anos durante os quais os seres humanos modernos evoluíram» (Dutton, 2010).

O contexto em que o autor veicula esta ideia relaciona-se com o pensamento estético actual, preocupado em estabilizar a compreensão da contemporaneidade depois das feridas abertas, no domínio artístico, pela não-figuratividade e pelas facetas transgressivas do modernismo – e não deixa de ser notória a necessidade de estabelecer um diálogo com Danto, no âmago da sua argumentação. No entanto, o seu pensamento vai muito além da especificidade do discurso filosófico, interessado como está em incorporar a integralidade da experiência humana na conceituação da beleza.

Dutton convoca ainda as investigações levadas a cabo pela psicologia (desde o conhecido trabalho de Jay Appleton, *The Experience of Landscape*, até contributos mais recentes) acerca da «explicação genérica do tipo de paisagem ideal que os seres humanos iriam achar intrinsecamente agradável», para destacar que «esta paisagem tem muito em comum com as savanas e bosques da África Oriental, onde os homínídeos se separaram da linhagem dos chimpanzés e grande parte da evolução humana ocorreu». Quais são, então, as características dessa paisagem, os seus elementos constitutivos? Esquemáticamente, os seguintes:

- espaços abertos de vegetação baixa (ou aparada), intercalados por matas de arbustos e conjuntos de árvores;
- a presença de água directamente à vista, ou a certeza de água por perto ou à distância;
- um caminho aberto, pelo menos numa direcção, para uma posição vantajosa e desimpedida no horizonte;
- evidência de vida animal, incluindo aves; e
- uma diversidade de verdura, incluindo plantas floridas e frutícolas.» (Dutton, 2010: 37).

Na verdade, de acordo com a argumentação de Dutton, as nossas preferências por paisagens como esta – ou seja, a representação de espaços semelhantes aos da savana africana – decorrem de razões muito mais fundas do que as relacionadas com argumentos de carácter cultural. O grau de especificidade que o elenco mencionado revela mostra que as savanas africanas foram «o *habitat* para o qual os homínídeos comedores de carne evoluíram» e isto por razões concretas: elas «possuem mais proteínas por quilómetro quadrado do que qualquer outro tipo de paisagem»; e, por outro lado, «oferecem alimento ao nível do chão», contrastando, assim, com outro tipo de espaços menos favoráveis à sobrevivência.

Poder-se-iam ainda aduzir outros motivos, sustentando mais argumentos, mas estes bastam para sermos obrigados, em último caso, a considerarmos a tese de Denis Dutton como explicação digna de crédito para a preferência pelo referido tipo de paisagem. Aliás, talvez se deva acentuar que ela não se distancia tanto quanto poderia à primeira vista parecer da explicação de carácter histórico-cultural. Mais do que, porventura, consideradas em oposição, ambas as explicações deverão ser tidas em conta e entendidas como propostas diferentes, equacionadas sob ângulos diversos, para perspectivar um mesmo problema.

Se nos ativermos, por exemplo, à questão da universalidade e da intertemporalidade da imagem correspondente à savana africana, ancorada, de acordo com a perspectiva de Dutton, na própria condição humana por via de um atavismo involuntário, por via da genética, não poderemos deixar de pensar na perspectiva oferecida pela mencionada tradição artística do bucolismo. Este, de facto, não tem apenas uma natureza genológica, permeável ao tempo e às condições culturais particulares; o bucolismo tem, igualmente, uma natureza modal (cf., por exemplo, Loughrey, 1984; Bernardes, 1988; Bernardes, 1995;

Alpers, 1996; Gifford, 1999), e, neste sentido, ele define-se por não estar limitado nem no tempo, nem no espaço, nem a um determinado domínio artístico.

Assim, se é certo que a matriz do bucolismo é literária e localizável na Antiguidade greco-latina – sendo os textos fundacionais *Idílios*, de Teócrito, no que respeita à herança grega; *Bucólicas*, de Virgílio, em relação à latina (embora, dos dois, este seja este o texto mais influente na cultura ocidental) –, não é menos verdade que a prática estética bucólica se estendeu a outras artes, até hoje. Podemos encontrar múltiplos e variados exemplos na pintura, na escultura, na música, no cinema, na fotografia, entre outros domínios artísticos. Ou seja, a natureza modal do bucolismo relaciona-se com o que José Augusto Cardoso Bernardes designa como «respostas a expectativas estéticas tidas por básicas» (Bernardes, 1995), ligadas à própria natureza do homem, nomeadamente, à necessidade de equacionar a sua relação com o espaço, com o tempo, consigo próprio, com os outros homens e com Deus.

No que diz respeito ao primeiro destes elementos (a relação do homem com o espaço), importa considerar o modo como, na tradição clássica da bucólica, a representação da paisagem, frequentemente desempenhando uma função de cenário, obedece a conjunto tipificado de características, cujo modelo é possível associar a um *topos* muito comum, genericamente designado por *locus amoenus*.

Ora, os elementos constitutivos dos lugares amenos aproximam-se notoriamente dos que vimos associados à savana africana e, sendo constantes, mantiveram-se mais ou menos inalterados ao longo do tempo. Nesse tipo de *loca* encontramos, frequentemente num clima temperado ou quente, céus luminosos, fontes e sombras frescas, frutos e flores, seixos rolantes, águas em movimento, perfumes, sons agradáveis e deleitosos...

Convoquemos, a título de exemplo, dois fragmentos de obras pertencentes e tempos e autores diferentes. Observemos, em primeiro lugar, um excerto dos *Idílios*, de Teócrito (de acordo com a lição de Maria Helena da Rocha Pereira, na sua *Hélade*):

(...) Com prazer
nos reclinámos nos leitos fofos de junco fresco
e de parras acabadas de cortar.
Por cima das nossas cabeças, agitavam-se
choupos e olmos inúmeros; perto, murmurava
a sagrada água, que corria da gruta das Ninfas.
Nos ramos umbrosos, as negras cigarras
estafavam-se a cantar. Nos densos espinhos
das silvas, ao longe, ouvia-se a rela.
Cantavam cotovias e pintassilgos; gemia a rola;
em redor das fontes voavam as fulvas abelhas.
Tudo tinha o aroma da abundância do verão, da abundância do outono.
Pêras aos nossos pés, maçãs, dos lados, rolavam
inúmeras, fazendo pender até ao chão
os seus ramos carregados de frutos.

Repare-se como, nestes versos do idílio VII, o espaço natural é caracterizado em função do modo como o homem interage com ele, concedendo-se particular destaque ao que deleita os sentidos. Justifica-se, desta forma, de modo quase analítico, o «prazer» experienciado pelos intervenientes, referido no início de trecho. Os sentidos são, de facto, submetidos a numerosos estímulos, através dos quais se vai compondo, à medida que progredimos na leitura, todo o lugar ameno: pelo tacto se estabelece a qualidade dos leitos; a vista deleita-se com a agitação de «choupos e olmos», com os «ramos umbrosos», com as «negras cigarras», com os «densos espinhos das silvas», com os esvoaçar das «fulvas abelhas», com as cores das frutas e com a imagem das árvores carregadas; o ouvido identifica, sequencialmente, a água murmurante, o canto dos insectos e dos pássaros (as cigarras, a rela, as abelhas; as cotovias, os pintassilgos, as rolas); o olfacto, por fim, convoca os aromas fortes dos frutos maduros do Verão e do Outono.

Este harmonioso conjunto de elementos compõe, em suma, um quadro de «abundância» semelhante ao que imagináramos situado num tempo perfeito como o da idade de ouro, quando a natureza oferecia ao homem os seus frutos de modo espontâneo, sem necessidade de esforço humano. Nesse tempo, os homens «(...) Todos os bens / tinham à disposição: para eles, a terra fértil produzia frutos / espontaneamente, muitos e copiosos (...)» (cf. *Trabalhos e Dias*, vv. 116-118; Hesíodo, 2005). Na versão de Ovídio do mito, recorde-se que «a terra, livre de impostos, não tocada pela enxada / nem rasgada pela relha, produzia tudo de modo espontâneo. / Satisfeitos com os alimentos criados sem esforço, / [os povos] colhiam medronhos e morangos silvestres, / pilritos e as amoras pendentes da espinhosa silva / e as bolotas que caíam da frondosa árvore de Júpiter» (cf. *Metamorfoses*, I, 100-105; Ovídio, 2006).

Em qualquer dos casos, é notória a constituição de um espaço mais adequado ao ócio que ao trabalho, no qual o homem se pode deleitar; um espaço simultaneamente ancestral e utópico, tal como a figuração da Ilha dos Amores camoniana (Camões, 2000, IX, 54-56), no segundo exemplo a que aludimos:

Três fermosos outeiros se mostravam,
Erguidos com soberba graciosa,
Que de gramíneo esmalte se adornavam,
Na fermosa Ilha, alegre e deleitosa.
Claras fontes e límpidas manavam
Do cume, que a verdura tem viçosa;
Por entre pedras alvas se deriva
A sonora linfa fugitiva.

Num vale ameno, que os outeiros fende,
Vinhão as claras águas ajuntar-se,
Onde ãa mesa fazem, que se estende
Tão bela quanto pode imaginar-se.
Arvoredo gentil sobre ela pende,
Como que pronto está pera afeitar-se,
Vendo-se no cristal resplandecente,
Que em si o está pintando propriamente.

Mil árvores estão ao céu subindo,
Com pomos odoríferos e belos;
A laranjeira tem no fruto lindo
A cor que tinha Dafne nos cabelos.
Encosta-se no chão, que está caindo,
A cidreira cos pesos amarelos;
(...)

Neste «vale ameno» da ilha «alegre e deleitosa» imaginada por Camões, encontramos, como se pode comprovar, um conjunto de elementos que compõem um espaço muito semelhante ao descrito por Teócrito ou ao representado por Hesíodo e Ovídio. Um espaço que coincide até com as «savanas de alta qualidade», na terminologia de Denis Dutton, no que diz respeito, por exemplo, às árvores. De facto, quer na paisagem camoniana, quer no quadro teocritiano são representadas árvores rasando o chão, como se pode comprovar no final de cada um dos excertos citados. Lê-se, assim, no texto de Teócrito: «Pêras aos nossos pés, maçãs, dos lados, rolavam / inúmeras, fazendo pender até ao chão / os seus ramos carregados de frutos»; em *Os Lusíadas*: «Encosta-se no chão, que está caindo, / A cidreira cos pesos amarelos». Este é um aspecto digno de nota, pois Dutton chama a atenção para a explícita predileção das pessoas por espécies como a «*Acacia tortilis*, uma árvore que se estende por grandes áreas e que ramifica até ao chão», relacionando essa predileção com um aspecto pragmático e fundacional: «Uma árvore à qual se podia subir era um instrumento usado para escapar aos predadores no Plistocénico e este caso de vida ou de morte é revelado, hoje em dia, pelo nosso sentido estético relativamente às árvores» (Dutton, 2010).

Na Antiguidade greco-latina, como no longo tempo posterior entendido como seu herdeiro, não terá sido a ameaça dos predadores a determinar a valorização do espaço campestre, mas a sua representação eufórica não deixou de fazer o seu caminho até aos nossos dias, opondo-se-lhe, como se referiu, o contexto citadino. O homem civilizado, cansado da vida urbana, busca a simplicidade e a autenticidade da vida rural – profundamente idealizada pelo ponto de vista sofisticado do citadino. No entanto, mesmo nesse contexto idealizado, há já sinais de uma complexidade que sugere, se não mesmo antecipa, as tensões de que se fará a contemporaneidade, rasgada a partir das fronteiras românticas.

Importa, assim, que abordemos, ainda que de forma breve, um aspecto já presente na tradição greco-latina do bucolismo – embora de forma não completamente desenvolvida – que nos ajudará a cartografar a contemporaneidade, no que respeita à relação do homem com o espaço: os trajectos de migração. É certo que já na primeira bucólica de Virgílio Melibeu se lamenta por ter de, juntamente com o seu rebanho, abandonar as suas terras. Por outro lado, também poetas como Bernardim Ribeiro se mostraram sensíveis à necessidade de equacionar o campo como lugar dotado de uma desconcertante ambivalência, espaço simultaneamente paradisíaco e disfórico. Porém, só com o dealbar da época moderna e contemporânea ficará patente, em todas as suas consequências, a funda agressividade de uma natureza que foi abandonando a *persona* maternal.

Do ponto de vista da arte, os autores referidos mostram bem como o *locus amoenus* coexiste, embora de forma mitigada, com uma outra versão do espaço, de carácter mais realista e menos idealizada. E se é certo que podemos encontrar outros casos que mostram como o lugar ameno nunca foi só isso – no domínio da pintura, por exemplo, são bem elucidativas algumas obras de Guercino e de Poussin – a verdade é que será a partir da segunda metade do século XIX que o sentido da migração humana se tornará irreversível e gerador de cada vez maiores tensões.

Na obra de Cesário Verde – para referir um dos mais importantes casos, configuradores da contemporaneidade –, a asfixia que marca o sujeito na cidade leva-o a aspirar por outro espaço (Verde, 1992); porém, a sua busca apenas o conduz ou à constatação da impossibilidade de o encontrar (v.g. «O Sentimento dum Ocidental») ou à descoberta de um campo particularmente duro, marcado pelo trabalho e pela morte (como fica patente no longo poema «Nós»).

Importará, por outro lado, recordar a agónica aventura pessoana, em particular o caminho trilhado pelo pendor

especulativo de Caeiro, para interrogar a estabilidade de conceitos como o de natureza. Como confessava o Mestre, «Num dia excessivamente nítido / (...) // Vi que não há Natureza, / Que Natureza não existe, / Que há montes, vales, planícies, / Que há árvores, flores, ervas, / Que há rios e pedras, / Mas que não há um todo a que isso pertença, / Que um conjunto real e verdadeiro / É uma doença das nossas ideias.» (Caeiro, 2001).

Conceituar uma natureza atomizada (ecoando, aliás, a lição de Lucrécio), ou vê-la como um lugar infernal, como acontece em alguma da prosa de Eça de Queirós ou de Fialho de Almeida, conduz-nos à necessidade de equacionar o sentido da busca. Textos como *A Selva*, de Ferreira de Castro, deslocam o mapa do paraíso, ou, dito de outra forma, invertem-no. É nesse sentido que se impõe o êxodo, naquela que parece ser uma nova queda simbólica, uma espécie de nova expulsão do espaço paradisíaco, configurando o homem contemporâneo como um civilizado *homo viator*, vítima das suas próprias contradições e sem destino possível.

Esta forma viva de cartografar o espaço não diz respeito apenas à arte e, em particular, à literatura. Importaria, neste contexto, determo-nos também no domínio ensaístico e reflectir acerca dos importantes contributos que a ecocrítica e, mais recentemente, a geocrítica têm dado, tal como as diversas artes, para compreender a necessidade de reequacionar a capacidade impositiva de constantes como a do *locus amoenus* ou como a oposição cidade/campo no nosso tempo. Não sendo possível, gostaríamos, para terminar, de apontar duas outras visões deste problema: a primeira, oriunda do documentário cinematográfico; a segunda, da domínio da fotografia.

No que respeita à primeira dessas propostas interpretativas do espaço – *Ainda há pastores?*, de Jorge Pelicano –, sublinhe-se o modo como a obra procura retratar o legado da pastorícia na Serra da Estrela. Nela, o paraíso que a câmara constitui perante o nosso olhar é, para Hermínio, provavelmente o último dos pastores, um lugar de trabalho muito duro, de solidão e sofrimento. Por isso, o seu desejo confessado é partir. Para onde? Para a cidade, onde, ao contrário do que sucede em lugares como Casais de Folgosinho, há electricidade, água canalizada, dias de descanso e outros seres humanos.

O espaço campestre é, portanto, nesta, como na proposta de parte substancial da extensa obra de Sebastião Salgado (a segunda das referidas visões do mundo natural), um lugar de desassossego. Trânsito do cidade para a campo? Ou do campo para a cidade? E daí para onde? A este propósito, convoquemos algumas imagens publicadas no volume *Migrations*, de 2000, um livro que «tells the story of humanity on the move» (Salgado, 2000).

Como é referido, «Most migrants leave their homes filled with hope; refugees usually do so out of fear, yet in their different ways all are victims of forces beyond their control: poverty and violence»; na imagem seguinte, é captada uma família, presumivelmente de agricultores, em trânsito, na Albânia («On the road between the border post of Morini and Kukes in Albania, a family waits the return of their tractor, which had left to pull another trailer whose tractor had broken down. Albania. 1999»):

Figura 1: Em trânsito. Albânia, 1999.



O abandono do campo tem consequências muito notórias nas vidas das pessoas, quer para os que partem, quer para os que ficam. Muitas vezes, o êxodo dos homens para as cidades em busca de melhores condições de vida deixa, abandonadas, as crianças e as mulheres a cultivar os campos e a cuidar dos animais.

Figura 2: Pastoreio. Equador, 1998.



A solidão em que mergulham os últimos habitantes do campo, «waiting for husbands and fathers to return once or twice a year with supplies and money» (Salgado, 2000), está, por outro lado, bem patente na última figura.

Figura 3: Actividades agrícolas. Equador, 1998.



Assim, o campo transfigura-se, sob o nosso olhar, num espaço de dor e de sofrimento, muito diferente daquele que a tradição clássica nos deu a ler, através de alguma arte. E se quem opta pela cidade é também submetido a provações – «peasants who leave for the cities do so reluctantly, fully aware of the difficulties awaiting them in the cities» (Salgado, 2000) –, resta a inquietação da busca, por um lado, e a desorientação, por outro. Perdidos numa espécie de labirinto, descobrimo-nos sem mapa, sem «carta de orientação» (Júdice, 2000). Afinal, talvez o sujeito contemporâneo se encontre num lugar semelhante àquele que, no poema com o mesmo título, de Nuno Júdice, desconhece a saída de lugar que já não é nem inferno, nem paraíso, mas onde se encontra fechado:

Estou, no outono, a meio de uma ponte
 cujo arco, incompleto, oculta um centro
 submerso pelas águas que correm sem
 que eu saiba para onde. Da ponte
 não se vê o horizonte; e, a meio da ponte,
 o ruído das águas impede que se ouça
 o vento, os pássaros, e as vozes que indicam
 em qual dos lados fica a saída.

BIBLIOGRAFIA

- Ainda há Pastores?*. (2007). Realização de Jorge Pelicano. 1 DVD (74 min.). Costa do Castelo Filmes. Lisboa.
- Alpers, P. (1996). *What is pastoral?*. The University of Chicago Press. Chicago/London.
- Bernardes, J. A. C. (1988). *O Bucolismo Português. A Écloga do Renascimento e do Maneirismo*. Livraria Almedina. Coimbra.
- Bernardes, J. A. C. (1995). Bucolismo, in Bernardes, J. A. C. et al. (dir.), *Biblos. Enciclopédia Verbo das Literaturas de Língua Portuguesa*. Editorial Verbo. Lisboa / São Paulo.
- Caeiro, A. (2001). *Poesia*. Edição de Fernando Cabral Martins e Richard Zenith. Assírio & Alvim. Lisboa.
- Camões, L. de. (2000). *Os Lusíadas*. Leitura, prefácio, e notas de Álvaro Júlio da Costa Pimpão. Apresentação de Aníbal Pinto de Castro. 4.^a edição, Ministério dos Negócios Estrangeiros. Instituto Camões. Lisboa.
- Costa, J. A. e Melo, A. S. e. [s/d.]. *Dicionário da Língua Portuguesa*. 5.^a edição, Porto Editora. Porto.
- Dicionário Priberam da Língua Portuguesa*. (2008-2013). Consultado em: 30 de Março de 2017, em: <https://www.priberam.pt/dlpo/>.
- Dutton, D. (2010). *Arte e instinto*. Temas e Debates / Círculo de Leitores. S.l..
- Gifford, T. (1999). *Pastoral*. Routledge. London.
- Hélade. Antologia da Cultura Grega*. (1990). Organizada e traduzida do original por Maria Helena da Rocha Pereira. 5.^a edição, Faculdade de Letras da Universidade de Coimbra / Instituto de Estudos Clássicos. Coimbra.
- Hesíodo. (2005). *Teogonia. Trabalhos e Dias*. Prefácio de Maria Helena da Rocha Pereira, introdução, tradução e notas de Ana Elias Pinheiro e de José Ribeiro Ferreira. Imprensa Nacional-Casa da Moeda. Lisboa.
- Júdice, N. (2000). *Poesia Reunida. 1967-2000. Acompanhada do livro inédito Rimas e Contas*. Prefácio de Teresa Almeida. Publicações Dom Quixote. Lisboa.
- Loughrey, B. (ed.). (1984). *The Pastoral Mode*. Macmillan. London and Basingstoke.
- Ovídio. (2006). *Metamorfoses*. Vol. 1. Tradução directa do latim de Domingos Lucas. Nova Vega. Lisboa.
- Salgado, S. (2000). *Migrations. Humanity in transition*. Concept and design by Lélia Wanick Salgado. Aperture Foundation. New York.
- Silva, A. de M. (1994). *Novo Dicionário Compacto da Língua Portuguesa*. Edição compacta do texto fundamental do *Grande Dicionário da Língua Portuguesa*. Segundo a 10.^a Edição Revista, muito aumentada e actualizada conforme as regras do acordo ortográfico luso-brasileiro de 10 de Agosto de 1945, por Augusto Moreno, Cardoso Júnior e José Pedro Machado aliviada de Etimologia, formas verbais e abonações constituindo o maior reportório de vocábulos da língua falada e escrita em Portugal e no Brasil. Vol. IV. 8.^a edição, Editorial Confluência.
- Verde, C. (1992). *Obra Completa de Cesário Verde*. Prefácio, organização e notas de Joel Serrão. 6.^a edição, Livros Horizonte. Lisboa.
- Wypijewski, J. (ed.). (1999), *Painting by Numbers. Komar and Melamid's scientific guide to art*. University of California Press. Berkeley and Los Angeles.

WHY DOES LANGUAGE MATTER? EVIDENCE FROM EU AND MERCOSUR TRADE

Sandra Ribeiro

Universidade Autónoma de Lisboa/OBSERVARE;
Instituto Superior de Contabilidade e Administração de Lisboa (ISCAL)
(sribeiro@autonoma.pt)

Maria João Ferro

Instituto Superior de Contabilidade e Administração de Lisboa (ISCAL);
Centro de Linguística da Universidade Nova de Lisboa (CLUNL)
(mjferro@iscal.ipl.pt)

ABSTRACT

International trade has been increasing not only due to globalization, but also due to the economic integration process of the past century. However, there are still some barriers that hinder international trade and one of those can be the different languages spoken by both trading partners. Therefore, language may influence the choice of an international trading partner, since it can increase or decrease transaction costs. On the other hand, the creation of trading blocs, such as the European Union (EU) and the Southern Common Market (Mercosur), has enabled national economies to profit from regional trade networks. In this paper we look at the relationship between Portuguese exports and the dominant language in the destination country, while also analysing the influence of belonging to these two trading blocs. Taking a closer look at Portuguese data, we conclude that language similarity plays a relevant role in the choice of international trading partners, as does belonging to the EU.

Keywords: International Trade, Language Barriers, Multilingualism, Economics of Language.

JEL Classification: F14

1. INTRODUCTION

International trade has been steadily growing not only due to globalization in general, but also due to the increasing economic integration of the past century. The creation of trading blocs, such as the European Union (EU) and the Southern Common Market (Mercosur), has enabled national economies to profit from regional trade networks. Communicating within a wider market, however, implies facing certain barriers that hinder trade between different countries, and one of these — certainly the biggest one — is language, or better still, the different languages spoken in foreign markets.

Formal relationships between the EU and the Latin American countries that comprise Mercosur date back to the early formation the European Economic Community (EEC) with the Treaty of Rome signed in 1957. As early as that, the Member States of the EEC started to establish and intensify trade and economic relations with Latin American countries, supporting regional Latin American integration processes and entering into cooperation agreements with the regional groups that had formed in the region (Pinto, 2008). In the 1970's some advances were made regarding the relations between the EEC and Latin America. According to Saraiva (2004), that group of European countries was interested in finding and securing new markets for their exports and investment, while simultaneously guaranteeing access to raw materials; Latin-Americans, in turn, were undergoing a process of diversification of foreign partners and wished to find other options besides the United States. However, and as Saraiva stresses, these relationships remained only intentions that were not materialized at the time.

Only three decades later, did the EU formally initiate freed trade negotiations with Mercosur. However, these negotiations that had started in 1995 with the EC-Mercosur Cooperation Agreement¹ with the purpose of promoting free trade, investment, economic cooperation, and political dialogue between the two organizations were suspended in 2004, to be resumed only in 2010.

Foreign trade between the EU and Mercosur countries represents almost as much as foreign trade between the EU and the remaining Latin American countries as a whole. The EU was the first trading partner of Mercosur and is still its main investor. According to data provided by the World Bank, the EU — Mercosur's main trading partner — was responsible for around 19.8% of Mercosur's foreign trade in 2013. However, Mercosur was only the eighth trading partner of the EU in terms of the global market.

Considering the important and undeniable trade relationship between the EU and Mercosur and taking into account language barriers that may hinder international trade, this paper seeks to explore the role of language in international trade, with particular emphasis on the two trading blocs presented above, since Portuguese is an official language in both of them given that Portugal belongs to the EU and Brazil belongs to Mercosur. Our aim is to analyse trade between Portugal and

¹ Full title: 'Inter-regional Framework Cooperation Agreement between the European Community and Its Member States, of the One Part, and the Southern Common Market (MERCOSUR) and Its Member States, of the Other Part'.

Mercosur, and Portugal and the EU, focusing on whether language similarity (the fact that two countries share the same or a very similar language) has a positive influence on the volume of Portuguese exports to those countries. Our study was based on the following three main hypotheses:

H1: Portuguese exports are higher to countries that belong to the EU.

H2: Portuguese exports are higher to countries that belong to Mercosur.

H3: Considering only EU Member States, Portuguese exports are higher to those where language similarity with Portuguese can be identified.

In order to test the above-mentioned hypotheses, we have analysed data regarding trade between Portuguese companies and the 98 main countries to which these companies export. This paper is divided into eight sections. After this introduction, the first section contains a brief overview of language policies in the EU and Mercosur. After that, we offer some comments on the trade relationships that Portugal has with the two trading blocs we are focusing on — the EU and Mercosur. The next section describes what we mean by language similarity and why that is important when it comes to international trade. Following this, we detail the study we have carried out, starting by describing the gravity model of trade, characterizing the variables we used, and ending with a discussion of the results we obtained. At the end of this paper, we offer some final remarks and new avenues of research.

2. LANGUAGE POLICIES IN THE EU AND MERCOSUR

2.1 Language policies in the EU

The EU currently has 24 official and working languages stemming from its language policy that relies on adding the necessary new language(s) whenever a new Member State is accepted. Starting from the first initial group of four official and working languages used in the European Coal and Steel Community and the subsequent European Economic Community (EEC) into which it evolved — Dutch, French, German, and Italian — by the time the Treaty on the European Union was signed in Maastricht in 1992, this group included twelve languages, with the addition of Danish, English, Finnish, Greek, Irish, Portuguese, Spanish, and Swedish. After these languages were added to the group of official and working languages of European institutions, as more countries were accepted into the EU, this number increased, although the EU has less official languages than Member States (28 at the moment) because some of these Member States share common languages — e.g. Austria and Germany share German as their respective sole official language, but German also has the status of official language in Belgium and Luxembourg; these latter two countries also share French as their official language, which is logically the official language of France; and Belgium has a third official language, Dutch, which it shares with the Netherlands. This goes to show that these six countries (Austria, Germany, Belgium, Luxembourg, France, and Netherlands) contribute with only three languages (German, French, and Dutch) for the number of official EU languages.

The EU is openly a multilingual organization and it has been so from the start. In fact, the first Council Regulation (Council Regulation No. 1 of the EEC) determines the languages to be used by the EEC. The preamble to this regulation is unambiguous when it states that ‘each of the four languages in which the Treaty is drafted is recognised as an official language in one or more of the Member States of the Community’. The remaining articles of this regulation grant the citizen’s right to address community institutions in the official language of their country, to receive a reply in that same language, and to have access to community legislation in that language via the *Official Journal of the Community*, which is to be drafted in the official languages of the community (four at the time, as we have seen).

Table 1 below presents an overview of the official EU languages of the current 28 members of the EU, and their respective year of entry.

Table 1. Member countries of the EU by alphabetical order

Country	Official EU language(s)	Year of entry	Country	Official EU language(s)	Year of entry
Austria	German	1995	Italy	Italian	1958
Belgium	Dutch, French, German	1958	Latvia	Latvian	2004
Bulgaria	Bulgarian	2007	Lithuania	Lithuanian	2004
Croatia	Croatian	2013	Luxembourg	French, German	1958
Cyprus	Greek	2008	Malta	Maltese, English	2004
Czech Republic	Czech	2004	Netherlands	Dutch	1958
Denmark	Danish	1973	Poland	Polish	2004
Estonia	Estonian	2004	Portugal	Portuguese	1986
Finland	Finnish, Swedish	1995	Romania	Romanian	2007
France	French	1958	Slovakia	Slovakia	2004

Germany	German	1958	Slovenia	Slovenian	2007
Greece	Greek	1981	Spain	Spanish	1986
Hungary	Hungarian	2004	Sweden	Swedish	1995
Ireland	Irish, English	1973	United Kingdom	English	1973

Source Based on data provided by the EU's official website (Europa.eu). Last update 01/05/2017

The number of official languages of the EU, however, could be much higher, since some of its Member States have more than one official language. Article 8 of Council Regulation No. 1 of the EEC states that 'If a Member State has more than one official language, the language to be used shall, at the request of such State, be governed by the general rules of its law'. This implies that for a language to become an official language of the EU, the Member State has to make such a request. This restriction has left out, for example, Luxembourgish, which has been official in Luxembourg since 1984. Nonetheless, some regional languages, such as Basque, Catalan, and Galician spoken in Spain, and Scottish Gaelic, and Welsh, spoken in the United Kingdom, have attained the status of co-official languages of the EU by request of Spain and the United Kingdom, respectively.

2.2 Language policies in Mercosur

In Latin America, the economic integration process dates back to 1948, when the Economic Commission for Latin America and the Caribbean (ECLAC) was created in order to promote customs union by introducing the concept of regional cooperation. Subsequently, the Latin American Free Trade Association (LAFTA) was created in 1960 with the aim of forming a free trade zone.

According to Floroiu (2014), 'Historically, the creation of the Southern Common Market (Mercosur) began in 1985. This was the moment that Brazil and Argentina began trade negotiations with the aim of forming a regional market'. However, Mercosur was only officially created in 1991, when Argentina, Brazil, Paraguay, and Uruguay — its founding members — signed the Treaty of Asuncion. Venezuela was admitted as an effective member in 2012, but it has since been suspended in 31 December 2016 for failing to meet membership requirements. The accession process of Bolivia started in December 2012. Chile, Colombia, Ecuador, and Peru are associate states. These differ from effective states due to their degree of integration into the bloc and the fact that they have not joined the Common External Tariff (CET), which is what makes Mercosur a customs union. The members of Mercosur have large asymmetries not only in terms of size, but also in economic terms, which necessarily has consequences on international trade. For example, Brazil has 8,515,770 sq km and 205,823,665 inhabitants (2016 est.), while Uruguay, the second smallest country in South America, has 176,215 sq km and 3,351,016 inhabitants (2016, est.). Mercosur is then 'a market of four unevenly matched countries [...], where Brazil represents 71% of the GDP, 71% of the territory and 78.7% of the population' (Hamel, 2004: 118). Although these data are from 2003, Campos (2016: 871) confirms GDP numbers, stating that Brazil holds 'a privileged position as the dominant economy, holding around 71% of the share of Mercosur GDP, while Argentina held 26%, Uruguay 2%, and Paraguay 1%'.

Joining countries whose official languages are Spanish and Portuguese, Mercosur 'is a unique attempt of cultural integration and geolinguistic dynamics in the whole region' (Hamel, 2004: 116). In line with Council Regulation No. 1 of the EEC, Article 17 of the Mercosur Free Trade Agreement, the founding document signed in 1991, establishes that 'The official languages of the common market shall be Spanish and Portuguese, and the official version of its working documents shall be that drafted in the language of the country in which each meeting takes place'. The respect for the member's official language and the promotion of multilingualism within the bloc are therefore at the core of this trade union, reflecting the importance of language not only for identity and cultural reasons, but also in the very specific case of trade dealings. Later on, in 2006, the Ministers of Culture of Mercosur suggested the incorporation of Guaraní as one of the official languages of the bloc, admitting that it is the official language of one of the members of Mercosur (Paraguay amended the status of Guaraní from national language to official language of the country in 1992) and recognizing that it is one of the historical languages of Mercosur. However, most services are only provided in Portuguese and Spanish and not in Guaraní, as is the case of Mercosur's website (<http://www.mercosur.int>) since Guaraní is not considered a working language. Table 2 below presents an overview of the official languages spoken in Mercosur's founding members plus Venezuela and Bolivia.

Table 2. Founding members of Mercosur plus Venezuela and Bolivia

Member	Official language(s)	Area (sq km)	Population (inhabitants)
Argentina	Spanish	2,780,400	43,886,748
Bolivia	Spanish plus 36 indigenous languages (including Guaraní)	1,098,581	10,969,649
Brazil	Portuguese	8,515,770	205,823,665
Paraguay	Spanish and Paraguayan Guaraní	406,752	6,862,812
Uruguay	Spanish	176,215	3,351,016
Venezuela	Spanish	912,050	30,912,302

Source Based on data provided by the CIA World Factbook. Population data estimated for July 2016

As we can gather from the information contained in Table 2 above, Bolivia has a very unique language policy, since Article 5(I) of the Plurinational State of Bolivia's Constitution establishes that:

The official languages of the State are Spanish and all the languages of the rural native indigenous nations and peoples, which are Aymara, Araona, Baure, Bésiro, Canichana, Cavineño, Cayubaba, Chácobo, Chimán, Ese Ejja, Guaraní, Guarasu'we, Guarayu, Itonama, Leco, Machajuyai-kallawaya, Machineri, Maropa, Mojeñotrinitario, Mojeño-ignaciano, Moré, Masetén, Movima, Pacawara, Puquina, Quechua, Sirionó, Tacana, Tapiete, Toromona, Uruchipaya, Weenhayek, Yaminawa, Yuki, Yuracaré and Zamuco.

Article 5(II) further declares that

The Pluri-National Government and the departmental governments must use at least two official languages. One of them must be Spanish, and the other shall be determined taking into account the use, convenience, circumstances, necessities and preferences of the population as a whole or of the territory in question. The other autonomous governments must use the languages characteristic of their territory, and one of them must be Spanish.

This commitment to the protection and promotion of national languages reflects the importance of the linguistic heritage of a country, but it may become ineffective within the scope of a larger organization. Therefore, both the EU and Mercosur, while upholding multilingualism, have decided to incorporate the national official languages of its member states. Nevertheless, the balance of power between the languages that are considered official in both these organizations is uneven — in the EU, English and French are the *de facto* working languages in many instances, while Portuguese has had some difficulties in ascertaining its role in Latin America. Historically, Spanish has enjoyed greater prestige than Portuguese as a cultural, economic, educational, and scientific language in Latin America, while 'Portuguese was considered to be a less important language for international communication in the view of the Hispanic countries' (Hamel, 2004: 118). However in recent years, and particularly through the action of the working group on language policies, a plurilingual education has increasingly been offered to citizens in Mercosur's member countries, promoting Spanish in Brazil and Portuguese in the remaining members of the organization.

3. SOME COMMENTS ON THE TRADE RELATIONSHIPS BETWEEN PORTUGAL AND THE EU AND PORTUGAL AND MERCOSUL

There are many barriers to international trade, and the wider the market where trading possibilities occur, the largest those barriers will be. In this study, we wanted to analyse the physical barriers imposed by the distance that separates two countries that are involved in a trading relationship, as well as the language barriers that result from communication difficulties that arise when the trading partners do not share the same language.

Communication plays a vital role in the establishment of trading relationships — after selecting the destination country and the adequate trading partner, the company will have to communicate effectively with that partner in order to establish and maintain the commercial relationship, while also being able to deal with that partner in case any problem arises and it has to engage in legal procedures if and when that need arises. In all these cases, and in the after-sales process, communication — and consequently language — is essential. Therefore, when both trading partners do not share the same language, a trade barrier will be imposed and it will imply an added cost to be added to the commercial transaction. Conversely, when both partners share the same language, or even a similar language, negotiations between the trading partners will be easier and consequently trade between these partners will increase. Therefore, language similarity contributes to decrease transaction costs, eliminating the need to hire some sort of intermediary. Several authors have stressed the importance of sharing a common language or a similar one to facilitate trade and even when it comes to the selection of foreign trading partners (see, for example Fidrmuc & Fidrmuc, 2016, and Adserà & Pytlíková, 2015).

Portugal's main trading partners have always been European countries (even before Portugal was accepted as a Member State of the EEC) mostly due to the physical proximity between European countries, although the language similarity that Portugal shares with the countries where a Romance language is spoken — such as Spanish, French, and Italian — may also play a part. However, we would like to highlight that when Portugal accessed the EEC in 1986, the market share of some Portuguese products significantly decreased in their traditional markets, such as the United Kingdom, Germany, and France, but European countries were still Portugal's main trading partners due to the increase in the overall volume of Portuguese exports for the set of countries that belonged to that trading bloc at the time. Additionally, it is also important to highlight that before this date, Portugal did not have significant trading relationships with Latin American countries nor was there any significant Portuguese investment in those countries. The exception was understandably Brazil, a country with which Portugal has always maintained close relations mostly due to the former colonial ties that exist between both countries.

In the 1990's Portuguese trade increased greatly, which worked as the main engine of economic growth of the country. Table 3 below shows the evolution of Portuguese trade in the past eleven years, contrasting exports and imports, and showing the balance of trade.

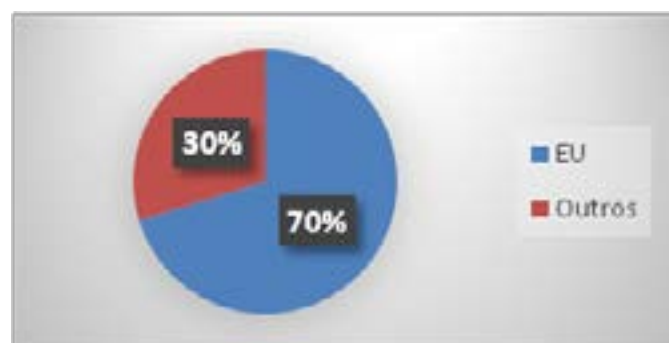
Table 3. Portuguese international trade of goods and services

	1996	2001	2006	2007	2008	2009	2011	2012	2013	2014	2015
Exports	25 063	37 502	49 854	54 896	56 223	47 588	61 595	64 372	68 587	70 747	74 064
Imports	31 729	51 119	63 419	67 796	72 993	59 427	68 048	64 204	65 455	68 781	70 950
Balance of trade	-6 666	-13 617	-13 564	-12 900	-16 770	-11 839	-6 452	169	3 132	1 965	3 114

Source Based on data provided by Statistics Portugal/Pordata.

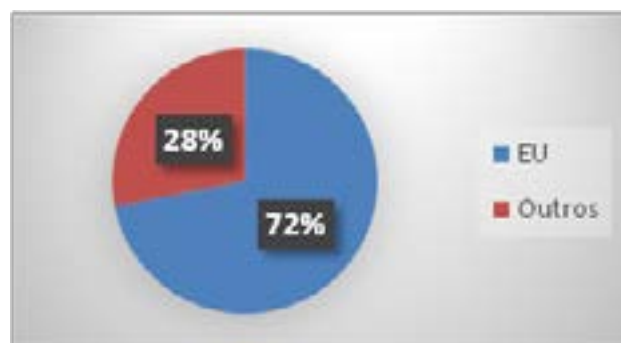
The EU is the world leader in terms of international trade and it is the largest exporter of goods and services as well as the largest importer from over one hundred countries. As we have mentioned above, the EU Member States are Portugal's most important trading partners. As seen on Images 1 and 2 below, the EU represented around 70% of the total Portuguese exports and imports of goods in 2013 (the year of our study).

Image 2. Portuguese exports of goods (2013)



Source Based on data provided by Statistics Portugal/Pordata.

Image 1. Portuguese imports of goods (2013)



Source Based on data provided by Statistics Portugal/Pordata

Given the linguistic similarity, the cultural proximity, and the historical ties that exist between Portugal and Brazil and the other Latin American countries, there have always been important commercial relationships between them. However, the trading relationship between Portugal and Mercosur was enhanced when Portugal became a member of the former EEC, which furthered the exchanges between Portugal (and Spain) and Latin American countries (Pinto, 2008).

Considering the countries that form Mercosur, Brazil has always been the main trading partner of Portugal, not only because both countries share the same language, but also due to all the historical and cultural relationships that have tied them throughout the centuries. In fact, of the 30% of Portuguese exports whose country of destination was not in the EU, around 10% were directed at Mercosur.

4. LANGUAGE SIMILARITY AND BILATERAL TRADE

The importance of language to trade is studied within the field of the 'economics of language', a concept defined in the 1960's by Jacob Marschak (1965). Besides international trade, the economics of language also studies how the language(s) spoken by an individual may influence his/her income, particularly in the context of immigration. We have explored this concept elsewhere (see Ferro & Costa, 2016; Ferro & Ribeiro, 2016), but we would like to highlight the insights that the economics of language can bring to international trade.

Among other relevant concerns, the choice of a foreign trading partner has to take into account how partners are going to communicate with each other. Nowadays, technology has greatly facilitated communication across vast distances with the growing access to e-mail, instant messaging services, and even social media. However, language differences still pose a problem in many respects. Let us take the following example: a Portuguese company wishes to communicate with a foreign trading partner based on a country where Portuguese is not widely spoken. In this case, and having eliminated the possibility of communicating in Portuguese, four other strategies may be employed:

- 1) Each partner may speak his/her language and be understood by the other, who, in turn, will answer in his/her own language — this is called intercommunication and would be, up to a certain point, possible between Portuguese and Spanish speakers; however, it is not a widely used option due not only to cultural aspects tied with the attitude of Spanish speakers towards Portuguese, but also with the different phonological structure of both languages that clearly makes it harder for Spanish-speaking people to understand spoken Portuguese (particularly European Portuguese);
- 2) The trading partners may agree to communicate using one of their respective languages; although English has been gaining momentum as a foreign language in Portugal for the past fifty years, French still is one of the most widely spoken languages in the country (European Commission, 2012) besides belonging to the same language group (Romance language group), and is therefore a viable option for Portuguese companies to communicate with companies based in one of the 29 territories where French is an official language, specifically France, Belgium, and Luxembourg in the EU, but also outside the EU, in territories such as parts of Canada and Switzerland, and in many African nations;

- 3) In the absence of a common shared language the trading partners may use a third language, one that is foreign to both of them but in which they can make themselves understood, which may be a *lingua franca* in their activity sector or in the region where they operate; for a Portuguese company, that language will most probably be English, which is the most widely spoken and learned language in Portugal presently (European Commission, 2012; Eurostat, 2015);
- 4) If none of the above direct communication options is possible, a mediator will have to be engaged, and that may be a language professional (such as a translator or interpreter) or someone who acts in that specific market as an intermediary.

When used to explain international trade gravity models usually include some language variable that may correspond to the official language(s) of the country and/or other widely spoken languages in that country, such as national or regional languages or even widely spread foreign languages. Several studies have already established the relationship between a common language and the volume of trade between two countries (see, for example, Helliwell, 1998; Mélitz, 2008; Egger & Lassmann, 2012; Mélitz & Toubal, 2014).

However, in the absence of a shared common language, even speaking similar languages may act as a facilitator, i.e., when two languages share many common traits (such as Portuguese and Spanish, for example), the speakers of one language will need a lower investment to learn the other language and therefore language policies that promote that may have a positive impact on international trade. Several methods to assess language similarity may be found in the literature, from which we would like to highlight the results of foreign language tests analysed by Chiswick & Miller (2005) in order to create a language similarity table; the Language Barrier Index created by Lohman (2011); Levenshtein's distance proposed by Ispording & Otten (2013); or the division between open circuit languages and direct communication languages as put forward by Mélitz (2008). All these methods to assess language similarity have the same goal of quantifying language similarity so that it can be used in econometric models as a variable aiming at analysing international trade and therefore going beyond the variable that identifies the same official language shared by both countries, which was used initially.

We have created a method to classify language similarity based on language criteria, specifically etymological criteria, based on which we divided languages according to the language family to which they belong. Since our starting point were Portuguese exports to two trading blocs (EU and Mercosur), we only needed three groups based on the language similarity classification we propose and therefore we divided the countries' official languages into three groups: Romance languages, Germanic languages, and Other.

5. THE GRAVITY MODEL OF TRADE

For our analysis we have used the gravity model of trade, which is the most common econometric instrument used to study international trade. This model was created by Tinbergen (1962) and since then it has been employed to analyse bilateral trade. This model starts by considering that exports between two countries are positively related to the size of their economies and negatively related to the distance between them, which is considered one of the most important aspects that indicate the existence of trade barriers.

The basic gravity model correlates the volume of exports between two countries T_{ij} and the economic weight of those two countries as measured by the Gross Domestic Product (GDP) of exporter and importer (GDP_i and GDP_j) and the cost of trade between them, represented by the distance that separates them, D_{ij} (models (1) and (2)), in which i and j indicate the countries. Models (1) and (2) represent the initial model:

$$T_{ij} = f \left[\frac{(GDP_i \cdot GDP_j)}{D_{ij}} \right] \quad (1)$$

$$T_{ij} = \beta_0 (GDP_i)^{\beta_1} (GDP_j)^{\beta_1} D_{ij}^{\beta_2} \cdot e^{\epsilon} \quad (2)$$

The gravity model was first used to analyse international trade in depth, and its theoretical framework was explored by Anderson (1979), Helpman and Krugman (1985), and Kalirajan (1999). The ease of implementation of this model as well as the success it has had in the explanation of trade flows have increased its usage. Therefore, the initial model has been increasingly improved and expanded with several variables that intend to explain bilateral trade. To the initial basic variables considered in the model (GDP and distance) several other variables were added, such as population, GDP *per capita* (Bergstrand, 1990), and the area of the country.

Most of the models that deal with international trade based on gravity models have expanded the scope of the model and explained exports between two countries depending not only on the variables considered in the basic model, but also on a set of binary variables aiming at measuring 'qualitative factors'. These variables are called dummy variables and their aim is to introduce a qualitative factor in the study, assigning 1 when the factor/situation is verified and 0 otherwise.

So that these non-quantitative factors can be considered in the explanation of bilateral trade relations, binary variables were also used with the purpose of representing the characteristics of the county, such as cultural proximity, language (Endoh, 1999; Breuss, & Egger, 1999; Nitsch, 2000; Feenstra, 2002), cultural similarity, belonging to the same trading bloc (Breus & Egger, 1999), whether the countries share their borders, or whether there has been a former colonial relationship (Glick & Rose, 2002), among others.

We would like to highlight that the gravity model equation implies taking the logarithms of its variables, which originates, for example, in its expanded form, a log-log model, such as the following equation:

$$\ln(T_{ij}) = \beta_0 + \beta_1 \ln(GDP_i GDP_j) + \beta_2 \ln D_{ij} + \beta_3 \ln Lang_{ij} + \beta_4 \ln Cont_{ij} + \beta_5 \ln RTA_{ij} + \beta_6 \ln ComCol_{ij} + \varepsilon_{ij} \quad (3)$$

Where i and j represent the countries and the variables are defined as:

T – volume of trade (considering only exports, only imports, or both) between the two countries;

GDP – real GDP;

D – Distance;

$Lang$ – dummy variable that is 1 when i and j share a common language and 0 otherwise;

$Cont$ – dummy variable that is 1 when i and j share a common border and 0 otherwise;

RTA – dummy variable that is 1 when i and j belong to a free trade area and 0 otherwise;

$Comcol$ – dummy variable that is 1 when i and j have had a former colonial relationship and 0 otherwise.

We would also like to stress that the existence of trading blocs has been used in this model for decades, namely considering the effect of the existence of preferential trade agreements. In the 1970's, Aitken (1973) in particular assessed the impact of such preferential trade agreements. Polak (1996) also concluded that countries have a larger bilateral trade volume if they are geographically closer to one another. Nascimento and Júnior (2013) argued that dummy variables might be used to capture more than the simple effect of a trading bloc or a trade agreement and can actually be used to capture a number of factors related to the History of the countries or their policies.

6. METHODOLOGY OF THE PRESENT STUDY

Based on the gravity model and aiming at analysing the volume of Portuguese exports, we have used international trade data for 2014 provided by Statistics Portugal (INE) that correspond to real data for 2013. We have analysed data from the 98 main countries of destination where the trading partners of Portuguese companies are based, considering the countries with which the volume of exports was over 10,000 million euros in 2013.

Since the Ordinary Least Squares (OLS) method is the most widely used econometric technique to perform the estimation of specification coefficients in the gravity model in its log-log form, we chose to use it in the present study. The multiple linear regression of the gravity model has been widely used in the past forty years and has proven to be empirically robust since it has broad explanatory power (Kepaptsoglou, Karlaftis & Tsamboulas, 2010).

Therefore, the explained variable in our model is an economic variable that translates the logarithm of the volume of exports between Portugal and a foreign trading partner.

The impact of all the explanatory variables will be analysed with the global significance test (Test F) and the individual significance test (Test T) always considering a significance level of 5%. We have also obtained the value of the determination coefficient (R^2); however, and since we did not consider any other potentially relevant variable in our analysis to explain the volume of exports of a country (given that our main aim was to analyse the effect of language similarity), we counted on a reduced value for that.

6.1 Characterization of the variables

We used different types of variables in the regressions we performed:

- Economic: such as the volume of exports between Portugal and a foreign trading partner, real GDP, and whether the trading partner belongs to the same trading bloc;
- Linguistic: specifically the existence of 'language similarity' between Portugal and the country to which it exports and the language group to which the official language of the foreign trading partner belongs;
- Geographic: in this case, the distance that separates Portugal from a trading partner.

Data on the volume of exports were obtained through the statistics on international trade published by Statistics Portugal (INE); data regarding real GDP of the different countries were obtained at the official website of the World Bank (www.worldbank.org) characterizing real GDP PPP (purchasing power parity) to prices of 2011 of all the 98 countries included in the study.

We have considered the distance between Portugal and a trading partner in all the models, represented by the kilometres that separate Portugal's capital, Lisbon, from the capital of the trading partner obtained at a language calculator tool (<http://pt.distance.to/>), not only due to the explanatory capacity that such variable is expected to have, but also in order to add to the quality of the analysed relationship. Given that we have used the logarithmic variable, the value estimated for this parameter will represent the elasticity of the volume of exports in relation to an absolute geographical distance. We expect the coefficient of this variable to be negative, since it constitutes a barrier to trade given that the greater the distance between two countries, the larger the barrier to the trading relationship will be.

In order to conclude on the effect of the impact of language similarity between two countries on the volume of exports, we have defined the variable Proxlin, taking into consideration the official language of the destination country, which could be Portuguese, Spanish or English, taking into account only EU Member States. Our aim was to capture a three-pronged effect: with this variable, we can identify (i) the countries that share a common language with Portugal; but we can also

include (ii) those countries that have Spanish as an official language, which reflects the linguistic similarity between the two languages; and (iii) the countries whose official language is English, and thus we are able to capture the effect of the foreign language that is more widely studied and spoken in Portugal.

Thus, the variable $UEProxLing_j$ is a dummy variable that is 1 when country j , a EU Member State, has Portuguese, Spanish or English as an official language and 0 otherwise.

In line with Ferro and Ribeiro (2016), we have considered the dummy variables R_j , G_j and O_j to identify respectively, the Romance language family, the Germanic language family, and Other families. Since we were interested in isolating the two language families that are more relevant to Portuguese foreign trade, taking into consideration the classification of Portuguese but also the language policies of the country regarding the teaching and learning of foreign languages, we classified the remaining languages as belonging to the group Other, thus eliminating the need for a more detailed classification.

Our aim was to analyse whether there is a direct relation between Portuguese exports to a given country and the language group to which the official language of that country belongs. Therefore, variable R_j is 1 when the country has a Romance language as an official language (and 0 otherwise), and G_j when country j has an official Germanic language. In case any of these variables is 1, variable O_j is 0; conversely, the latter is 1 when the country's official language does not belong to any of these language families. However, econometrically, this group cannot be used together with the other two variables, since it would cause multicollinearity given the linear relationship that exists between the three independent variables.

7. RESULTS

Based on these data, we have studied the relationship between the volume of Portuguese exports to its 98 main trading partners worldwide in 2013, considering whether these countries belonged to the EU or Mercosur and the language similarity between the official language of these countries and Portuguese, in order to find evidence to test our initial hypotheses.

We started by analysing regression (4) in order to clarify whether the fact that the trading partner (taking into consideration the 98 countries analysed) belonged to the EU influences the volume of Portuguese exports:

$$\ln(T_{ij}) = \beta_0 + \beta_1 UE + \beta_2 \ln D_{ij} + \varepsilon_{ij} \quad (4)$$

Through the results of the estimation of model (4) (attached as Table 4), we may conclude that, as expected, the fact that the country belongs to the EU has a positive impact on the volume of Portuguese exports and the increased distance has a negative impact on the volume of Portuguese exports, making it decrease by 0.584% for each 1% increase to the number of kilometres. This enabled us to verify H1: Portuguese exports are higher to countries that belong to the EU.

We have amplified the previous model by adding the 'Mercosur' variable, which is 1 when the country belongs to Mercosur and 0 otherwise, and which originated regression (5):

$$\ln(T_{ij}) = \beta_0 + \beta_1 UE + \beta_2 \ln D_{ij} + \beta_3 \text{Mercosur} + \varepsilon_{ij} \quad (5)$$

The results obtained in the regression (attached as Table 5) have allowed us to consolidate the conclusions reached in the previous model, since we can state that when a country belongs to the EU it has a positive impact — even higher than in the previous model — on the volume of exports and therefore we have strengthened H1. We also concluded that the effect of distance has a negative impact on the volume of exports making them decrease even further, now by 0.621% for each 1% increase to the number of kilometres.

The fact that a given country belongs to Mercosur has no explanatory impact on the volume of Portuguese exports and therefore we have rejected H2. This conclusion may, in part, be explained by the fact that the projected free trade agreements between the EU and Mercosur have not been implemented yet. We would like to highlight that the distance between Portugal and the countries that comprise this bloc may function as a barrier to trade; however, the language similarity between these countries might be taken advantage of to promote the volume of trade.

We created a new model (model 6) that intends to conclude on the effect of the impact of language similarity between two countries on the volume of exports (using the Proxling variable) within countries that belong to the EU, and on the effect of real GDP PPP to prices of 2011 for all the 98 countries considered, which originated the following model:

$$\ln(T_{ij}) = \beta_0 + \beta_1 UEProxLing_j + \beta_2 \ln D_{ij} + \beta_3 \ln GDP + \varepsilon_{ij} \quad (6)$$

By analysing the results of this model (attached as Table 6), we conclude that the quality of the models increases with the introduction of the possibility of the country belonging to the EU, together with what we called language similarity. Thus, we strengthen the positive effect of language similarity to Portuguese exports, an effect that increases when the country belongs to the EU. Additionally, GDP also has a positive effect on the volume of exports, which is in accordance with the initial assumptions of the gravity model.

Taking into consideration only the countries that belong to the EU trading bloc, we have organized them according to the language family to which their official language corresponds, in order to study model (7) below. We would like to highlight that in the case of countries (whether EU Member States or not) that have more than one official language, we chose the official language that has a larger number of speakers to use in our model based on data provided by the *CLA World Factbook*.

As referred previously, in line with Ferro and Ribeiro (2016), we considered the dummy variables R_j , G_j and O_j to identify respectively the Romance language family, the Germanic language family, and Other families. Our aim was to analyse whether there is a direct relationship between Portuguese exports to a given country and the language group to which the official language of the country belongs.

$$\ln(T_{ij}) = \beta_0 + \beta_1 R_j + \beta_2 G_j + \beta_3 \ln D_{ij} + \varepsilon_{ij} \quad (7)$$

By analysing the results obtained with this model (attached as Table 7), we concluded that the model is overall explanatory and that all the variables have explanatory power. Additionally, these results allow us to stress some points that seem relevant to us:

- 1) There is a direct relationship between the volume of Portuguese exports and the fact that the destination country has a Romance official language. Since this is also the language group to which Portuguese belongs, this result was expected, given that when two countries share the same language or a very similar one, the language barrier is blurred or even deleted and consequently the transaction costs tend to be lower. Thus, we found evidence for H3 since taking into consideration all the EU Member States the volume of Portuguese exports is higher to countries whose official language is similar to Portuguese.
- 2) Although with a smaller impact than the Romance group, the Germanic language group also has explanatory capacity. This is tied with the fact that one of Portugal's main trading partners is the United Kingdom, whose official language, English, is a Germanic language.
- 3) Although with a smaller explanatory capacity in view of the previous models, distance causes a lower effect on the volume of exports. This situation may be justified by the fact that distance between countries that belong to the EU is not large and therefore its impact is not as significant.

8. FINAL REMARKS

The reasons behind the fact that most Portuguese exports are directed at a EU Member State go well beyond the European economic union and the common market. As we state above, physical proximity and language similarity are two relevant factors. Considering that Portuguese is an official language of both the EU and Mercosur, we posited the hypothesis that the Portuguese language might be an added value for Portuguese countries when selecting a trading partner in the southern hemisphere. On the other hand, Spanish, which is also one of the official languages in both trading blocs, is very similar to Portuguese, since both languages belong to the same language family (Romance languages), which makes communication between speakers of these languages easier. In this scenario, any given native speaker of Portuguese will be able to communicate with speakers from any Mercosur country. Although some work has already been done to foster the dissemination of Portuguese and Spanish throughout all the countries that belong to Mercosur, more should be done in order to promote trading relationships.

We believe that our study contributes to the literature on Portuguese foreign trade, drawing attention to the relationship between Portuguese exports and the language spoken in the country of destination. In order to test the hypotheses identified in the Introduction, we have analysed trade data regarding Portuguese exports to companies based on the 98 main countries to which those exports are targeted. We concluded, as expected, that language is not the only determinant to foreign trade and that although it plays a relevant part in the choice of commercial partners, its relevance is underestimated in the context of Portuguese foreign trade.

In the future, we intend to expand our analysis and include not only the exports of goods, but also imports and services. We believe that our work may be used to inform language policies aiming at promoting stronger relationships between countries that comprise Mercosur, the Community of Portuguese Language Speaking Countries (CPLP), and even African Union (AU) profiting from one of Portugal's greatest assets, the Portuguese language, which is one of the official languages of each of these three institutions.

ACKNOWLEDGEMENTS

This research was partially developed with the support of FCT - Fundação para a Ciência e Tecnologia, as part of the project Centro de Linguística da Universidade Nova de Lisboa - UID/LIN/03213/2013.

REFERENCES

- Adserà, A., & Pytlikova, M. (2015). The role of language in shaping international migration. *The Economic Journal*, 125(586), F49-F81.
- Aitken, N. D. (1973). The Effect of the EEC and EFTA on European Trade: A temporal cross-section analysis. *The American Economic Review*, 63(5), 881-892.
- Anderson, J. E. (1979). A theoretical foundation for the gravity equation. *The American Economic Review*, 69(1), 106-116.

- Bergstrand, J. H. (1990). The Heckscher-Ohlin-Samuelson model, the Linder hypothesis and the determinants of bilateral intra-industry trade. *The Economic Journal*, 100(403), 1216-1229.
- Bolivia (Plurinational State of)'s Constitution of 2009. [26-04-2017]. Available at WWW: <https://www.constituteproject.org/constitution/Bolivia_2009.pdf>
- Breuss, F., & Egger, P. (1999). How reliable are estimations of East-West trade potentials based on cross-section gravity analyses? *Empirica*, 26(2), 81-94.
- Campos, G. L. (2016). From success to failure: Under what conditions did Mercosur integrate? *Journal of Economic Integration*, 31(4), 855-897.
- Chiswick, B. R., & Miller, P. W. (2005). Linguistic distance: A quantitative measure of the distance between English and other languages. *Journal of Multilingual and Multicultural Development*, 26(1), 1-11.
- CIA (2013). The World Factbook 2013-14. Washington, DC: Central Intelligence Agency. [26-04-2016]. Available at WWW: <<https://www.cia.gov/library/publications/the-world-factbook/index.html>>.
- Council Of The European Economic Community (1952). Regulation No 1 determining the languages to be used by the European Economic Community, *Official Journal of the European Communities, series I, volume 1952-1928*, 59.
- Egger, P. H., & Lassmann, A. (2012). The language effect in international trade: A meta-analysis. *Economics Letters*, 116(2), 221-224.
- Endoh, M. (1999). Trade Creation and Trade Diversion in the EEC, the LAFTA and the CMEA: 1960-1994. *Applied Economics*, 31(2), 207-216.
- European Commission (2012) Europeans and their languages. *Special Eurobarometer 386*. Directorate-General for Communication. [29-03-2016]. Available at WWW: < http://ec.europa.eu/public_opinion/archives/ebs/ebs_386_en.pdf >.
- Eurostat (2015). News release, 164/2015. Eurostat Press Office. [25/03/2016]. Available at WWW: < URL: <http://ec.europa.eu/eurostat/documents/2995521/7008563/3-24092015-AP-EN.pdf> >
- Feenstra, R. C. (2002). Border effects and the gravity equation: Consistent methods for estimation. *Scottish Journal of Political Economy*, 49(5), 491-506.
- Ferro, M. J., & Costa, R. (2016). The economic value of language. In O. Gomes & H. F. Martins (Eds.). *Advances in applied business research: The L.A.B.S. Initiative* (pp. 187-216). New York: Nova Publishers.
- Ferro, M. J., & Ribeiro, S. (2016). The role of language in international trade: How does language affect the choice of foreign trading partners? In S. N. de Jesus & P. Pinto (Eds.). *Proceedings of the International Congress on Interdisciplinarity in Social and Human Sciences* (pp. 608-621). Universidade do Algarve, Faro, 5 and 6 May, 2016.
- Fidrmuc, J., & Fidrmuc, J. (2016). Foreign languages and trade: Evidence from a natural experiment. *Empirical Economics*, 50(1), 31-49.
- Florioiu, M. (2014). Mercosul: Latin-American Union. *Public Administration & Regional Studies*, 1(13), 26-33.
- Glick, R., & Rose, A. K. (2002). Does a currency union affect trade? The time-series evidence. *European Economic Review*, 46(6), 1125-1151.
- Hamel, R. E. (2004). Regional blocs as a barrier against English hegemony? The language policy of Mercosur in South America. In J. Maurais & M. A. Morris (Eds.). *Languages in a globalising World* (pp. 111-142). Cambridge: Cambridge University Press.
- Helliwell, J. F. (2000). *How much do national borders matter?* Washington: Brookings Institution.
- Helpman, E., & Krugman, P. R. (1985). *Market structure and foreign trade: Increasing returns, imperfect competition, and the international economy*. Cambridge, MA & London: The MIT Press.
- Isphording, I. E., & Otten, S. (2013). The costs of Babylon: Linguistic distance in applied economics. *Review of International Economics*, 12(2), 354-369.
- Kalirajan, K. (1999). Stochastic varying coefficients gravity model: An application in trade analysis. *Journal of Applied Statistics*, 26(2), 185-193.
- Kepaptsoglou, K., Karlaftis, M. G., & Tsamboulas, D. (2010). The gravity model specification for modeling international trade flows and free trade agreement effects: A 10-year review of empirical studies. *The Open Economics Journal*, 3, 1-13.
- Lohmann, J. (2011). Do language barriers affect trade? *Economics Letters*, 110(2), 159-162.
- Marschak, J. (1965). The Economics of Language. *Behavioral Science*, 10(2), 135-140.
- Méltiz, J. (2008). Language and foreign trade. *European Economic Review*, 52(4), 667-699.
- Méltiz, J., & Toubal, F. (2014). Native language, spoken language, translation and trade. *Journal of International Economics*, 93(2), 351-363.

- Nascimento, F., & Júnior, D. P. (2013). A evolução do modelo gravitacional na economia. *Revista Saber Humano: Revista Científica da Faculdade Antonio Menghetti*, 3(4), 163-175.
- Nitsch, V. (2000). National borders and international trade: Evidence from the European Union. *Canadian Journal of Economics*, 33(4), 1091-1105.
- Pinto, M. S. (2008). Os interesses de Portugal no contexto das relações União Europeia: Mercosul. *Cadernos de Estudos Latino-Americanos*, 4, 111-129.
- Polak, J. J. (1996). Is APEC a natural regional trading bloc? A critique of the 'gravity model of international trade'. *The World Economy*, 19(5), 533-543.
- Saraiva, M. (2004). A União Europeia como ator internacional e os países do Mercosul. *Revista Brasileira Política Internacional*, 46(1), 84-111.
- Southern Common Market (Mercosur) Agreement (1991). [26-04-2017]. Available at WWW: < https://datd.cepal.org/Normativas/MERCOSUR/Ingles/Treaty_of_Asuncion.pdf>.
- Tinbergen, J. (1962). *Shaping the world economy: Suggestions for an international economic policy*. New York: The Twentieth Century Fund.

APPENDICES

Table 4. Results of the estimation of model (4)

Explanatory variables	Ln Exports	
	OLS Coefficient	Standardized coefficient (Beta)
Constant	15,954 (2,014)	-----
UE	0,863 (0,396)	0,24
LnD _{ij}	-0,584 (0,233)	-0,275
F = 12,542		

Table 5. Results of the estimation of model (5)

Explanatory variables	Ln Exports	
	OLS Coefficient	Standardized coefficient (Beta)
Constant	16,224 (2,034)	-----
UE	0,875 (0,396)	0,243
LnD _{ij}	-0,621 (0,237)	-0,292
Mercosur	0,668 (0,697)	0,089
F = 8,661		

Table 6. Results of the estimation of model (6)

Explanatory variables	Ln Exports	
	OLS Coefficient	Standardized coefficient (Beta)
Constant	15,563 (1,702)	-----
UEProxLing	0,634 (0,251)	0,235
LnD _{ij}	-0,788 (0,199)	-0,376
LnPIB	0,078 (0,027)	0,263
F = 12,828		

Table 7. Results of the estimation of model (7)

Explanatory variables	Ln Exports	
	OLS Coefficient	Standardized coefficient (Beta)
Constant	19,873 (5,388)	-----
R _j	2,532 (0,843)	0,565
G _j	1,566 (0,574)	0,425
LnD _{ij}	-1,137* (0,679)	-0,284
F = 10,297		
R ² = 0,553		

Notes: Numbers in parentheses are standard deviations; Significance level 5%; * Significance level 10%.

EQUIDADE E BEM-ESTAR NO USO DE PARAGENS DE AUTOCARRO

Manuela Pires Rosa

Centre for Spatial and Organizational Dynamics, University of Algarve
(mmrosa@ualg.pt)

Fábio Cavaco Gil

Universal Accessibility Consultant
(engenheirofabiogil@gmail.com)

RESUMO

O turismo acessível está promovendo mudanças profundas nos sistemas de transporte, que requerem meios de transporte específicos e ambientes físicos urbanos que integram paragens de autocarros que garantam equidade social, segurança e bem-estar para todos os turistas.

As pessoas com mobilidade reduzida têm necessidades especiais. Em consequência, os espaços edificados, os veículos de transporte, a informação e os serviços devem ter em conta os princípios do *Design* Universal que garantem um “uso equitativo”, “flexível”, “intuitivo”, “perceptível”, “baixo esforço físico”, “tolerável” e espaços “bem dimensionados” para diversos usuários. Estes princípios também consideram outras pessoas com requisitos de acesso, como é o caso dos turistas com *trolleys* ou com carrinhos de bebé.

Uma paragem de autocarro, com atributos de qualidade, necessita de algumas características inovadoras nos abrigos de passageiros, nas áreas de espera, no revestimento dos pavimentos e na rede pedestre. Pretende-se apresentar os atributos de uma paragem de autocarros e listar indicadores de desempenho para avaliar a sua qualidade.

A metodologia de análise e diagnóstico das condições de acessibilidade é aplicada em três paragens de autocarro localizadas na cidade de Faro, Portugal. O diagnóstico permite concluir que a renovação destas interfaces modais deve ser considerada nos processos atuais de regeneração urbana.

Palavras-chave: Turismo Sustentável, Equidade, Ambiente Físico da Paragem de Autocarro.

1. INTRODUÇÃO

A integração das temáticas sobre as necessidades das pessoas com deficiência e o turismo tem vindo a receber crescente atenção institucional, governamental e académica nas duas últimas décadas, na Europa, nas Américas e na Ásia-Pacífico.

Em Portugal, o Instituto Nacional de Reabilitação foi um dos pioneiros na promoção do Turismo Acessível, tendo desenvolvido, a partir de 1997/1998, várias iniciativas que advogavam que a oferta turística se devia adequar às necessidades das pessoas com diferenças sensoriais, intelectuais ou físicas, contribuindo progressivamente para uma oferta de maior qualidade e conforto, que beneficia toda a sociedade (INR, 2010).

A Convenção sobre os Direitos das Pessoas com Deficiência (2008) adotou o modelo social/ecológico do funcionamento humano, assumindo que a incapacidade está intrinsecamente relacionada com a interação entre as características das pessoas e as barreiras comportamentais e/ou ambientais que existem na sociedade e que interferem na sua inclusão e participação.

Esta ênfase nos fatores ambientais determina que o meio edificado, os sistemas de transporte e de comunicação e os serviços têm de ser concebidos considerando o conceito de “equidade social” que está associado a valores de justiça e solidariedade, à igualdade de oportunidades no acesso a bens, serviços e informação e a formas alternativas de comunicação. Este conceito aplica-se à atividade turística.

O conceito de turismo acessível traduz “um processo para permitir que as pessoas com deficiência e os idosos usem de uma forma independente e com equidade e dignidade produtos, serviços e ambientes de turismo” (adaptado de OCA, 1999, p. 4, citado por Darcy, 2006). Mais tarde foi assumido um grupo mais amplo de pessoas que beneficiam das condições de acessibilidade universal, passando a considerar-se, também, as pessoas com carrinhos de bebé (Darcy & Dickson, 2009). Atualmente acrescentam-se os turistas com bagagens pesadas e os que utilizam *trolleys*.

Um conceito subjacente ao turismo acessível é o *design* universal. O *design* universal é definido como “o *design* de produtos e ambientes para serem usáveis por todas as pessoas, num maior número possível, sem a necessidade de *design* adaptado ou especializado (...). O conceito de *design* universal focaliza-se em todas as pessoas, de todas as idades, tamanhos e aptidões” (Center for Universal Design, 1997).

O Centro para Desenho Universal da Universidade do Estado da Carolina desenvolveu sete princípios associados ao “Design Universal” que devem ser atendidos na conceção de produtos e de meios físicos, de forma a criar-se uma sociedade justa:

- Princípio 1: uso equitativo - pode ser utilizado por pessoas com diversas aptidões: providencia o mesmo tipo de meios de uso para todos os usuários (idêntico sempre que possível e equivalente quando não o for);
- Princípio 2: Flexibilidade no uso - pode acomodar-se a um amplo leque de aptidões e preferências individuais;

- Princípio 3: simples e intuitivo - o uso é simples de entender, sem importar a experiência, o conhecimento, a linguagem, nem o nível de concentração do usuário;
- Princípio 4: informação perceptível - comunica a informação necessária ao usuário, não obstante as condições ambientais ou as aptidões sensoriais do usuário;
- Princípio 5: tolerância ao erro - minimiza os riscos e as consequências adversas dos acidentes ou ações não intencionadas;
- Princípio 6: baixo esforço físico - pode ser usado eficientemente, confortavelmente e com um mínimo de esforço físico.
- Princípio 7: dimensão e espaço de alcance e uso - permite um espaço e dimensão adequada para alcance, uso e manipulação sem importar o tamanho, postura ou mobilidade do usuário. (adaptado de Center for Universal Design, 1997).

Estes princípios devem, sistematicamente, ser incorporados na concepção de produtos e de meios físicos, de forma a que a sua utilização seja feita de forma independente e natural. São estes atributos que se pretendem implementar numa sociedade inclusiva.

Advoga-se que o *design* universal é imprescindível para as pessoas com deficiência ou incapacidade, é necessário para idosos e pessoas frágeis e contribui para a comodidade e bem-estar de todos.

De acordo com o Conceito Europeu de Acessibilidade “a acessibilidade é a característica de um meio físico ou de um objeto que permite a interação de todas as pessoas com esse meio físico ou objeto e a utilização destes de uma forma equilibrada, respeitadora e segura” (Aragall & EuCAN members, 2003).

A acessibilidade universal deve ser atendida em toda a cadeia de valor do turismo: gestão de destinos turísticos, informação turística e publicidade (preparação, informação e reserva), ambientes urbanos e arquitetónicos, modos de transporte e estações, alojamento, alimentação e convenções, atividades culturais (museus, teatros, cinemas e outros) e outras atividades e eventos turísticos (World Tourism Organization, 2013).

Neste âmbito, os veículos de transporte coletivo (aéreo, marítimo, fluvial, ferroviário e rodoviário) e as infraestruturas associadas (interfaces modais) devem ser projetados de forma a garantir um uso equitativo por parte das pessoas com deficiência ou incapacidade e das demais pessoas com mobilidade reduzida.

A presente comunicação focaliza-se nas interfaces modais pedestre/autocarro. Em termos de objetivos gerais, pretende-se apresentar as características técnicas urbanísticas de paragens de autocarro acessíveis para todos e listar indicadores de desempenho para avaliar a sua qualidade. Em termos de objetivos específicos pretende-se averiguar se os parâmetros técnicos encontrados foram considerados em três paragens de autocarro estruturantes, localizadas na cidade de Faro.

2. ZONAS DE INTERFACE MODAL

As interfaces modais devem assegurar a todos os pedestres o direito de usar o transporte coletivo de uma forma equitativa tendo em conta os princípios do *design* universal. Do ponto de vista urbanístico as interfaces modais fazem parte integrante da rede pedestre.

Os elementos constituintes de infraestruturas pedonais são: a) espaços reservados exclusivamente a pedestres (passeios e outras zonas pedonais); b) travessias pedonais (atravessamentos da rede viária); c) zonas de interface modal (Seco, Macedo & Costa, 2008).

As interfaces modais constituem, igualmente, um dos elementos fundamentais da rede de transportes e devem garantir acessibilidade dos passageiros aos meios de transporte, sendo então necessário integrar estas no espaço urbano e, consequentemente, na rede pedestre. Tratam-se de “infraestruturas que tem como função promover e facilitar a ligação de utentes entre diferentes modos de transporte, preferencialmente a pé e apoiada ou não por meios mecânicos, podendo integrar espaços destinados a uso terciário e equipamentos de utilização coletiva” (CML, 2012, p. 112).

O tipo de interface modal enquadrado nesta comunicação é o de pedestre-transporte coletivo (autocarro). A uma adequada transferência modal estão associados, normalmente, atributos relacionados com as características das paragens de autocarro, que incluem dimensões adequadas da zona de embarque dos pedestres, uma vez que são estas que permitem efetuar a transição entre a rede pedestre e o veículo e vice-versa.

A implantação de uma interface modal deverá respeitar um conjunto de critérios que garantam eficiência na articulação entre os vários modos de transporte, o fácil acesso pedestre ou a localização em locais de grande atração de utentes.

Presentemente considera-se que as interfaces modais pedestre-transporte coletivo detentoras de qualidade devem ter abrigo.

Um abrigo de transportes públicos deve deter um conjunto de características:

- Existir nas paragens de transporte público sobretudo nas que estão próximas de pontos de interesse da comunidade;
- Possuir um tamanho adequado para utentes de diferentes idades e capacidades;
- Garantir proteção das condições climáticas, do tráfego motorizado e do sol;
- Ser seguro e confortável;
- Poder ser visível na envolvente imediata e pela comunidade;
- Estar livre de obstáculos para pedestres e ciclistas;
- Deter informações atuais sobre o percurso;
- Deter espaço suficiente para alocar assentos para todos os tipos de usuários;
- Possuir o mínimo de mobiliário urbano necessário para permitir o acesso à paragem; e
- Ter estacionamento para permitir transferências multimodais (adaptado de Building Research Establishment, 2012).

Em termos de localização adequada da interface modal na rede de transportes coletivos, em situações em que há uma efetiva procura, considera-se que:

Em princípio a densidade das paragens devem corresponder a um valor de aproximadamente 2 a 3 paragens por quilómetro, sendo tipicamente a sua zona de influência, limitada por uma linha que representa o lugar geométrico dos pontos que distam à paragem de um tempo próximo dos 5 minutos (cerca de 300 metros) (Costa, 2008, p. 9).

Estas zonas devem ser dimensionadas de forma a evitar conflitos, devido essencialmente ao grande número de pedestres que se podem acumular, devendo conceder-se, então, um espaço apropriado para os passageiros aguardarem pelos meios de transporte e permitir a sua entrada e saída de forma fácil e fluida.

Contudo, a acessibilidade à paragem não está somente dependente do dimensionamento da própria paragem, é necessário contabilizar toda a sua envolvente, nomeadamente como se processa o seu acesso e de que forma é estabelecida a ligação desta com as restantes infraestruturas pedonais (passeios e travessias pedonais). O próprio abrigo não deve constituir uma barreira física aos pedestres utilizadores do espaço canal onde está inserido.

Apesar de “cada vez mais existirem mecanismos e sistemas de adaptação na interface entre paragens e transportes coletivos, ainda existem várias barreiras mentais ou psicológicas que atingem principalmente as pessoas com deficiências” (Pindado, 2006, p. 13), pois estas não se sentem seguras em realizar uma viagem em que podem existir quebras na sua continuidade quando estas chegam a um destino.

Assim, as zonas de interface modal devem ser acessíveis de forma a garantir condições de autonomia para todos os pedestres satisfazerem as suas necessidades de deslocação. Para tal ser possível é necessário dotar estes espaços de recursos adequados que permitam o movimento de todos.

Constata-se que esta acessibilidade é por vezes quebrada pelos seguintes obstáculos:

- Falta de espaços de manobra (no abrigo e envolvente) com dimensões apropriadas para as pessoas em cadeiras de rodas;
- Falta de dispositivos mecânicos apropriados para a entrada de uma pessoa em cadeira de rodas nos veículos (plataforma elevatória ou rampa com pequena inclinação);
- Incapacidade de as pessoas pequenas ou frágeis vencerem os desníveis entre a zona de espera e a entrada do veículo;
- Falta de piso tátil que forneça a orientação dos pedestres cegos ou amblíopes;
- Falta de informação dos percursos.

O motorista do meio de transporte só deve iniciar a marcha depois das pessoas com mobilidade reduzida estarem acomodadas, para não haver risco de derrube.

As pessoas em cadeiras de rodas que se encontrem na faixa de rodagem e que se dirigem ao passeio onde se encontra a paragem de autocarros, devem ter acesso a estas, através de um rebaixamento de lancil, com pavimento adjacente rampeado a 8% e pavimento tátil para perceção pelos cegos e amblíopes. As inclinações suaves de rampeamentos estão previstas no regime jurídico nacional sobre acessibilidade (Decreto-Lei n.º 163/2006 de 8 de Agosto).

De forma a evitar conflitos de congestionamento, decorrentes da paragem dos autocarros comprometer a fluidez do tráfego motorizado, os abrigos devem ser colocados a uma distância das esquinas superior a 15 metros (SEHAB, 2003).

3. CARACTERÍSTICAS GEOMÉTRICAS DAS PARAGENS DE AUTOCARROS

3.1 Zona de espera e abrigo das paragens

Os abrigos são uma parte importante do acesso aos transportes públicos e tem como principal função desempenhar um papel de segurança ou proteção aos passageiros. Podem fornecer outro tipo de serviços como informações relativas aos itinerários, publicidade, entre outros.

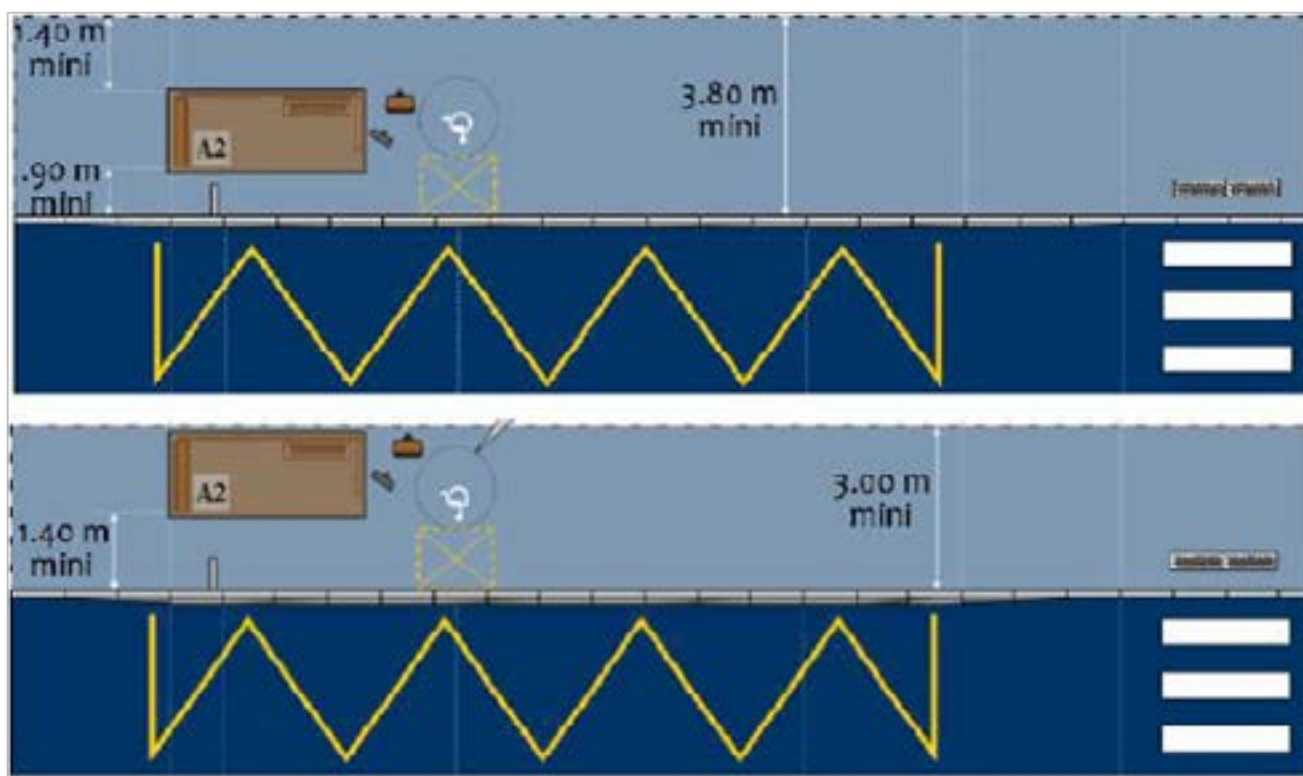
A forma de identificar as paragens é conseguida por meio de um poste constituído por uma placa no topo do abrigo ou um postalete. Estes elementos devem-se destacar do restante mobiliário urbano, de modo a haver perceção fácil da sua presença. As placas devem conferir uma legibilidade adequada devendo ser colocadas a uma altura livre de 2,40 metros (DL n.º 163/2006).

O abrigo deve localizar-se distanciado da linha de edificação em 1,20 a 1,50 metros, larguras livres de obstáculos que os passeios devem possuir (medidas assumidas no DL n.º 163/2006).

Como boa prática, a largura livre de obstáculos deve localizar-se sempre na retaguarda dos abrigos das paragens, de forma a não gerar conflitos entre os pedestres que circulam e os que se encontram na zona de espera. Neste caso, a largura livre de obstáculos disposta na dianteira do abrigo deve ser superior a 0,90 metros. Porém, nos casos em que o passeio é mais estreito pode a largura livre de obstáculos estar disposta na dianteira do abrigo sendo necessário garantir um mínimo de 1,40 metros de largura a esta (Arrête du 15 janvier, 2007).

Em ambas as situações os passeios deverão possuir largura suficiente para permitir a implantação adequada dos abrigos: para os casos em que o abrigo não se localiza junto às fachadas dos edifícios o passeio deve garantir uma largura mínima de 3,80 metros. Para as situações em que o abrigo se situa junto ao edifício, o passeio deve possuir no mínimo uma largura de 3 metros (Direction de la voirie Ville de Caen, 2013) (Figura 1).

Figura 1. Implantação de paragens com abrigos



Fonte: Direction de la voirie Ville de Caen (2013, p. 65)

A plataforma de espera ou zona de espera, espaço destinado aos passageiros quando estes aguardam pela chegada do autocarro, deve possuir uma dimensão adequada devido à elevada ocupação por utentes que se pode gerar neste local. Habitualmente estes espaços não se distinguem do restante passeio, no entanto, devem ser contabilizados na conceção das paragens. Recomenda-se para estas plataformas uma largura mínima de 0,90 metros (Arrête du 15 janvier, 2007).

As dimensões dos abrigos dependem da intensidade de fluxos de utentes que utiliza a paragem de autocarro. Em princípio considera-se 5 m² como área mínima do abrigo, com uma profundidade mínima de 1 metro e a altura deve ser de 2,50 metros (Costa, 2008).

No entanto, para se atender à diversidade humana, normas francesas exigem que os abrigos devem garantir, no seu interior, uma superfície livre que garanta no mínimo 1,50 metros de diâmetro de rotação para as pessoas de cadeiras de rodas e prever a instalação de bancos fixos de descanso para pessoas com mobilidade reduzida (Arrête du 15 janvier, 2007).

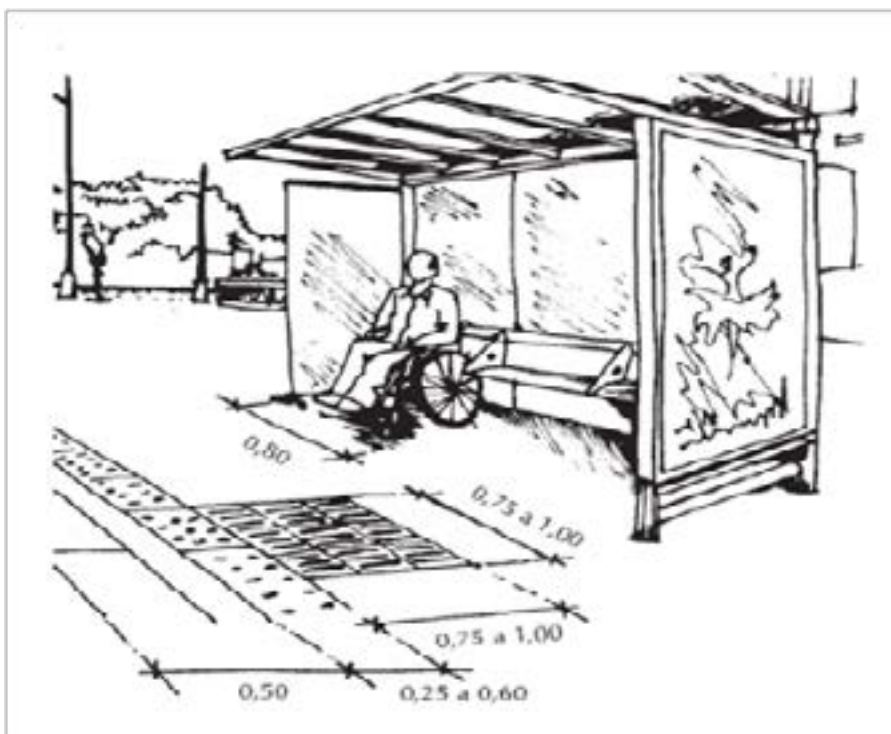
Toda a informação (linhas, paragens, horários) localizada no interior do abrigo deve ser colocada a uma altura inferior a 1,40 metros, para ser acessível a utentes com baixa capacidade visual e deve ser dotada de informação Braille, ou formas de comunicação áudio, permitindo uma maior abrangência de disseminação da informação (Teles & Silva, 2010).

Os revestimentos dos pavimentos devem ter superfícies estáveis, duráveis, firmes e contínuas, não devendo possuir juntas com uma profundidade superior a 0,005 m (DL n.º 163/2006).

Para orientação dos cegos, a paragem deve conter uma faixa de aproximação ao longo de toda a zona de paragem do autocarro, em pavimento tátil de alerta, com largura compreendida entre 0,25 metros a 0,60 metros, localizando-se a uma distância da extremidade do passeio num mínimo de 0,50 metros (ABNT NBR 9050, 2004).

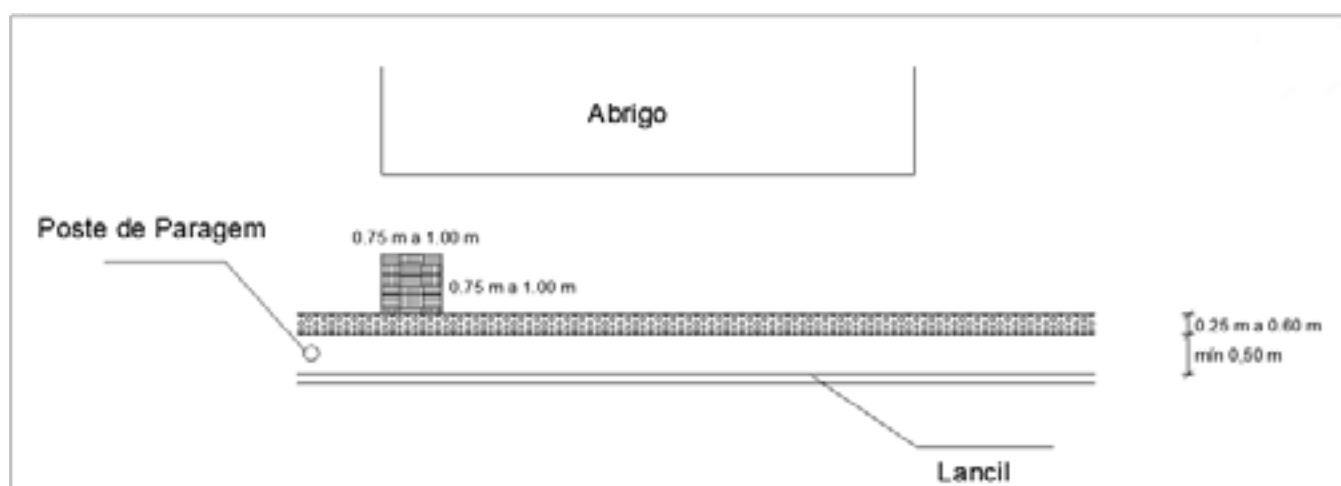
Junto ao poste e ao pavimento tátil de alerta, deverá ser implementada sinalização tátil direcional para sinalizar aos cegos da localização do local de embarque, de dimensões entre 0,75 metros a 1 metro (ABNT NBR 9050, 2004) (Figuras 2 e 3).

Figura 2. Exemplo de pavimento tátil em paragem de autocarro



Fonte: SMPED (n. d., p. 116)

Figura 3. Pormenor de pavimento tátil numa paragem de autocarro



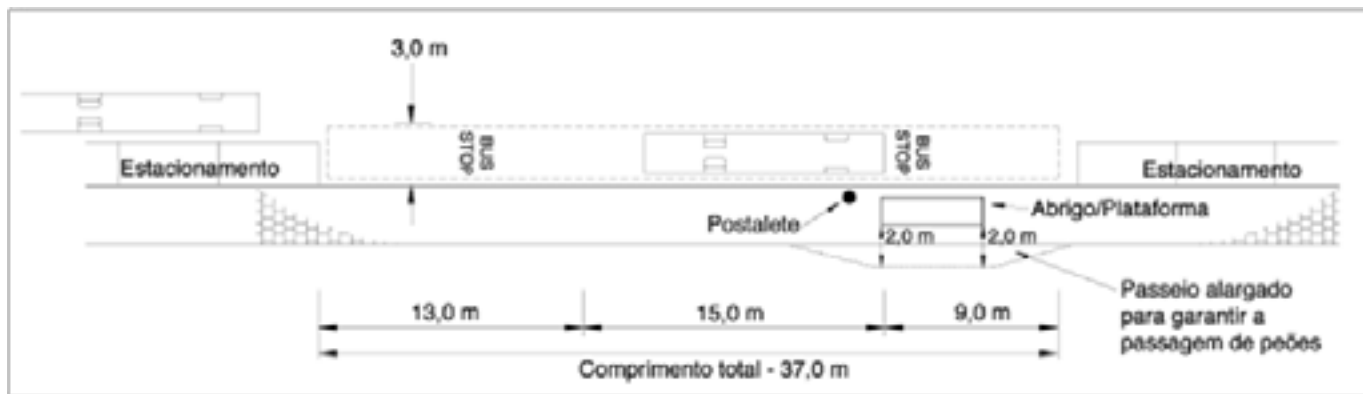
Fonte: adaptado de ABNT NBR 9050 (2004, p. 37)

3.2 Atributos da faixa de rodagem

Quanto à zona de paragem do autocarro na faixa de rodagem, a sua demarcação adequada pode permitir que os motoristas consigam gerir de forma mais eficiente o tempo de paragem, garantido maior segurança aos pedestres, utentes do meio de transporte.

Costa (2008) apresenta uma solução tipo relativamente à paragem de autocarros onde são especificadas as dimensões necessárias que os autocarros necessitam para estacionar, convenientemente, nos locais de embarque e desembarque de pedestres. O comprimento total destas zonas é igual a 37 metros permitindo assim o estacionamento de dois autocarros em simultâneo, a sua largura deve ter o valor de 3 metros, sendo que nesta área não é permitido qualquer estacionamento ().

Figura 4. Esquema da zona de paragem de autocarros na faixa de rodagem

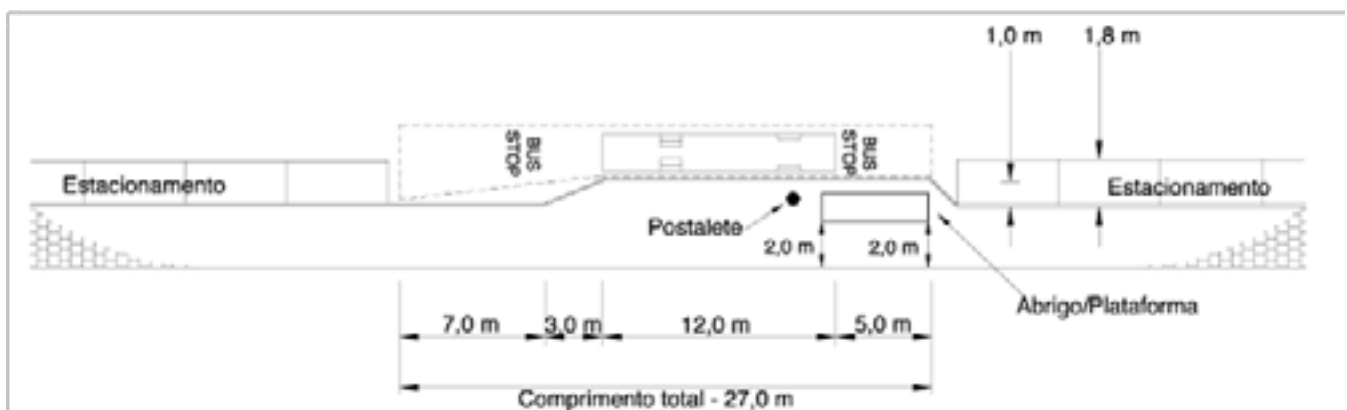


Fonte: Costa (2008, p. 12)

Para locais em que a velocidade de projeto é de 50 km/h, para facilitar a fluidez de tráfego, Costa (2008) propõe que seja criada uma baía específica com 2,75 metros de largura e um comprimento total de 27 metros.

Quando não existe facilidade de acesso da plataforma ao veículo, pode-se proceder ao alargamento do passeio na direção da faixa de rodagem, de cerca de 1 a 2 metros, devendo manter-se um espaço para circulação dos pedestres, na retaguarda, no mínimo de 2 metros (Figura 5). O comprimento total da zona de paragem do autocarro deverá ter um mínimo de 9 metros.

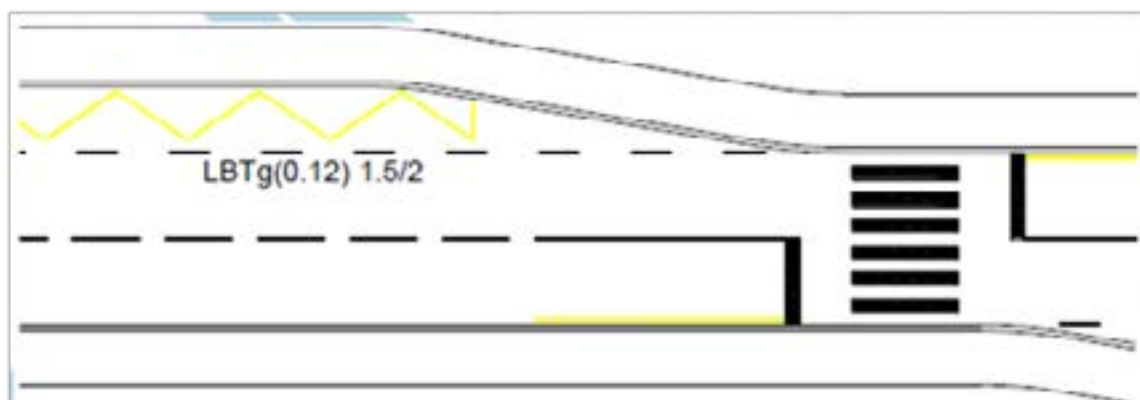
Figura 5 - Paragem de autocarro com alargamento do passeio



Fonte: Costa (2008, p. 13)

A zona de paragem deverá ser assinalada através de marcação horizontal, sob a forma de linhas em ziguezague de marca M14 com larguras e comprimentos específicos (Roque, n. d.) (Figura 6). A marcação pode ser efetuada na própria faixa de rodagem ou nas baías e deve possuir uma extensão mínima de 15 metros (CERTU, 2006).

Figura 6 - Marcação horizontal em ziguezague



Fonte: Roque (n. d, p. 24)

4. METODOLOGIA DE ANÁLISE E DIAGNÓSTICO DA QUALIDADE DAS PARAGENS DE AUTOCARRO

Tendo em consideração a metodologia de análise e diagnóstico da qualidade das paragens de autocarro desenvolvida anteriormente, no âmbito de uma dissertação de mestrado em Engenharia Civil (Gil, 2014) apresenta-se um conjunto de parâmetros/indicadores que permitem avaliar, adequadamente, as características urbanísticas de paragens de autocarro existentes, tendo-se acrescentado indicadores relativos a sinalização tátil. Assume-se que os veículos possuem uma plataforma elevatória para utilização por parte de uma pessoa em cadeira de rodas ou têm piso rebaixado o que permite a utilização de uma rampa suave para garantir autonomia e segurança por parte das pessoas com deficiência (Figura 7).

A análise destes indicadores visa entender as dificuldades que os utentes com mobilidade reduzida têm na utilização destas interfaces modais e as condições de comodidade para todo o cidadão.

Este método permite que se faça um diagnóstico dos problemas e norteia a apresentação de soluções para proceder à reabilitação das paragens de autocarro.

Figura 7 – Exemplos de autocarros acessíveis



<http://www.cmc.pr.gov.br>



<http://www.caterresdefrance.fr/fr/71/accessibilite-des-arrets-de-bus/>

Para o efeito foram elaboradas listas de parâmetros/indicadores referentes às características de uma paragem de autocarro detentora de padrões de qualidade, o que inclui aspetos de inclusão social. Os indicadores foram selecionados com base nas disposições técnicas, normalizadas ou recomendadas, descritas anteriormente. Estes indicadores também poderão ser utilizados no processo de monitorização e avaliação das paragens de autocarro, após a sua requalificação.

Foi desenvolvida uma tabela de análise técnica (Tabela 1), que permite a avaliação da conformidade dos vários indicadores a serem observados, sendo classificados com as opções “Conforme”, “Não conforme” e “Não aplicável” (N/a), em função da infraestrutura em análise. A tabela contém ainda a localização e a designação das interfaces modais.

Tabela 1. Lista de indicadores para avaliação da qualidade das interfaces modais

Rua Interface n.º								
Interfaces modais (pedestre/ autocarro)	Características nos abrigos e sua localização	Indicadores		Valores recomendados	Existe (S/N)	Valor medido	Conforme Não conforme Não aplicável	Obs.
		I1	Largura livre de obstáculos nos passeios - na retaguarda dos abrigos (DL n.º 163/2006 art.º 1.2.1)	$\geq 1,50$ m (recomenda-se passeio alargado para garantir segurança aos pedestres na retaguarda do abrigo - ≥ 2 m -)				
		I2	Pavimento estável, durável, firme e contínuo na zona de paragem (DL n.º 163/2006 art.º 4.7.1)					
		I3	Largura da plataforma de espera (Arrête du 15 janvier, 2007)	$\geq 0,90$ m				
		I4	Altura dos abrigos nas paragens (Costa, 2008)	2,50 m				
		I5	Profundidade do abrigo (Costa, 2008)	≥ 1 m				
		I6	Largura dos espaços destinados a pessoas de cadeira de rodas (Arrête du 15 janvier, 2007)	$\geq 1,50$ m				
		I7	Iluminação no interior do abrigo (ABNT NBR 9050, 2004)					
		I8	Altura da informação (linhas, paragens, horários) (Teles & Silva, 2010)	$\leq 1,40$ m				
	Marcação horizontal	I9	Marcação ziguezague M14 (Roque, n.d a)					
	Sinalização rodoviária	I10	Altura livre da sinalização vertical (postalete) (DL n.º 163/2006 art.º 4.5.1)	$\geq 2,40$ m				
	Sinalização tátil	I11	Pavimentos táteis de alerta limítrofes ao lancil (ABNT NBR 9050, 2004)					
		I12	Pavimentos táteis direcionais na zona de embarque (ABNT NBR 9050, 2004)					

Fonte: adaptado de Gil (2014)

5. ESTUDO DE CASO: PARAGENS DE AUTOCARRO NA CIDADE DE FARO

A cidade de Faro localiza-se no litoral sul de Portugal Continental, é capital de distrito e sede do município de Faro. Em 2011, apresentava uma população de 44119 habitantes e um índice de envelhecimento de 120,8 % (INE, 2012). O centro histórico constitui uma importante centralidade com potencial comercial e turístico.

Esta cidade de serviços detém um aeroporto que desempenha um papel determinante no desenvolvimento económico da região ao servir os principais polos de turismo do Sul de Portugal e também de Espanha. Em 2016 passaram pelo Aeroporto de Faro 7,6 milhões de passageiros (dados da ANA/VINCI Airports).

O aeroporto de Faro é servido por transportes coletivos rodoviários (autocarros) que estabelecem a ligação com a cidade de Faro.

É objeto do presente estudo, a análise de três paragens de autocarros que constituem pontos estratégicos numa ótica de turismo acessível (Figura 7). As interfaces modais IM 1 e 2, da linha 16 (serve o percurso Aeroporto – Terminal Rodoviário de Faro), encontram-se próximas à Estação de Caminho de Ferro, respetivamente a 50 m (Rua Coelho Ventura) e a 120 m (Rua Francisco Barreto). A interface modal IM 3, limítrofe ao Terminal Rodoviário de Faro, está localizada na Avenida da República no sentido noroeste-sudeste, serve percursos para Olhão e Albufeira, cidades do interesse turístico.

Estas paragens permitem a transferência de passageiros para o comboio e para outras redes de transportes coletivos rodoviários e *vice-versa*. Por estarem localizadas no centro histórico de Faro também são importantes no atual contexto de Turismo Acessível.

Figura 7 – Paragens de autocarro estruturantes com função intermodal na cidade de Faro

Interface modal n.º 1 (IM1)

Rua Coelho Ventura



Interface modal n.º 2 (IM2)

Rua Francisco Barreto



Interface modal n.º 3 (IM3)

Avenida da República



Fotos: Manuela Rosa (25 abril 2017)

A análise da interface modal n.º 1 permitiu verificar que não é dotada de abrigo, a sinalização vertical de informação dos números de linha é visível, mas encontra-se a 2,12 m do pavimento, constituindo uma barreira física em altura. Não há informação sobre horários. O pavimento em calçada não é adequado pois encontra-se degradado e polido. A largura do passeio é de 1,75 m, valor que é considerado adequado para zona de espera. No entanto, a viabilização do embarque através de uma rampa suave de um veículo de piso rebaixado ou de um que disponha plataforma elevatória está dependente da dimensão destes mecanismos. A zona de espera detém espaço suficiente para ser utilizado por uma pessoa em cadeiras de rodas. Não dispõe de sinalização tátil. Na faixa de rodagem existe marcação em ziguezague.

A análise da interface modal n.º 2 permitiu verificar que não é dotada de abrigo, a sinalização vertical de informação dos números de linha é visível, mas encontra-se a 2,12 m do pavimento, constituindo uma barreira física em altura. Não há informação sobre horários. O pavimento em calçada não é adequado pois encontra-se degradado e polido. A largura do passeio é de 1,50 m, valor que é considerado adequado para zona de espera. No entanto, a viabilização do embarque através de uma rampa suave de um veículo de piso rebaixado ou de um que disponha plataforma elevatória está dependente da dimensão destes mecanismos. A. Não dispõe de sinalização tátil. Na faixa de rodagem existe marcação em ziguezague.

A análise da interface modal n.º 3 permitiu concluir que é dotada de abrigo e que a sinalização vertical de informação de paragem de autocarro está bem visível, mas não garante uma altura livre de obstáculos mínima, pois encontra-se a 2,12 m de altura. O abrigo não constitui uma barreira urbanística ao garantir, na sua retaguarda um espaço amplo (superior a 2 m) e na sua dianteira 1,15 m e, portanto, a dimensão da zona de embarque é adequada. A altura do abrigo de 2,30 é considerada pequena, a profundidade de 1,30 é adequada, no entanto, não dispõe de espaço suficiente para usabilidade por parte de uma pessoa em cadeiras de rodas, pois detém somente um espaço de 1,12 m entre o banco e o painel lateral. Há informação sobre horários, localizada a uma altura adequada. Não existe iluminação no interior do abrigo, mas encontra-se bem iluminado devido à presença de luminárias públicas. O pavimento em calçada não se apresenta contínuo (apresenta juntas com largura superior a 0,005 m) e encontra-se polido. Não dispõe de sinalização tátil. Na faixa de rodagem existe marcação em ziguezague.

Efetuada a análise e diagnóstico, apresentam-se tabelas síntese (Tabela 2) que representam de forma abreviada, a avaliação dos diferentes indicadores aplicados na avaliação da qualidade das interfaces modais objeto de estudo.

As interfaces modais não se encontram com a qualidade desejável revelando a necessidade de intervir neste domínio.

Tabela 2. Síntese de avaliação da qualidade das interfaces modais objeto de estudo

IM1		Interfaces modais		
		IM2	IM3	
Indicadores de Avaliação	I1 - Largura livre de obstáculos nos passeios - na retaguarda dos abrigos	N. A.	N. A.	
	I2 - Pavimento estável, durável, firme e contínuo na zona de paragem			
	I3 - Largura da plataforma de espera			
	I4 - Altura dos abrigos nas paragens	N. A.	N. A.	
	I5 - Profundidade do abrigo	N. A.	N. A.	
	I6 - Largura dos espaços destinados a pessoas de cadeira de rodas			
	I7 - Iluminação no interior do abrigo	N. A.	N. A.	
	I8 - Altura da informação (linhas, paragens, horários)	N. A.	N. A.	
	I9 - Marcação ziguezague M14			
	I10 - Altura livre da sinalização vertical (postaleta)			
	I11 - Pavimentos táteis de alerta limítrofes ao lancil			
	I12 - Pavimentos táteis direcionais na zona de embarque			

LEGENDA:



Conforme



Não conforme

N. A. - Não aplicável

Fonte: elaboração própria

6. CONSIDERAÇÕES FINAIS

Em todo o mundo, os sistemas tradicionais de transportes públicos urbanos são, geralmente, concebidos para uma população saudável e raramente têm em conta as necessidades das pessoas com deficiência (Zhou *et al.*, 2012).

No presente estudo, a análise das características urbanísticas de um dos elementos do sistema de transportes coletivos rodoviários – as paragens de autocarro – permite concluir que não se garante, na sua utilização, equidade para as pessoas com mobilidade reduzida e bem-estar para os restantes cidadãos. Este diagnóstico permite aos decisores políticos e técnicos priorizar intervenções nos processos de reabilitação urbana.

Na União Europeia, a Directiva 2001/85/CE determina que os veículos dos transportes rodoviários tenham rampas de acesso ou piso rebaixado para viabilizar o acesso das pessoas com mobilidade reduzida. No entanto, para além destes requisitos relacionados com o veículo, as paragens de autocarro devem deter características urbanísticas para garantir o acesso ao veículo.

Nesse sentido é exigível um maior rigor no dimensionamento destas zonas de transferência modal, assumindo-se características geométricas adequadas nas zonas de embarque, que garantam maior comodidade, segurança e acesso aos meios de transportes.

O presente estudo considerou veículos coletivos detentores de plataformas elevatórias ou de rampas. Tem-se constatado que a extensão destas rampas não é apropriada pois não asseguram inclinações suaves para garantir autonomia e segurança para uma pessoa em cadeira de rodas. Para a sua usabilidade, é fundamental considerar paragens de autocarro sobre-elevadas em relação ao passeio onde se integram, conforme recomenda o projeto COST 322 (COST, 1995).

Por outro lado, na última década tem-se aumentado a perceção de que a acessibilidade nas paragens de autocarros vai para além de aspetos urbanísticos (Transport for London, 2006), relaciona-se com outras dimensões, nomeadamente, serviços de informação fornecida aos passageiros (informação escrita e sonora), sistemas inteligentes de orientação para cegos, bilheteiras e outros equipamentos instalados no local (ex. pisos táteis), design de bancos e de abrigos.

A consideração de interfaces modais de grande qualidade pode potenciar uma maior utilização dos transportes coletivos, contribuindo para uma sociedade mais inclusiva e para uma mobilidade mais sustentável, aspetos essenciais num contexto de Turismo Acessível e Sustentável.

REFERÊNCIAS

- ABNT NBR 9050. (2004). *Acessibilidade a edificações, mobiliário, espaços e equipamentos urbanos* (2º ed.). Rio de Janeiro: Associação Brasileira de Normas Técnicas (ABNT).
- Aragall, F. & EuCAN members. (2003). *European concept for accessibility: technical assistance manual*. Luxemburgo: EuCAN – European Concept for Accessibility Network.
- Arrête du 15 janvier. (2007). *Ministère des Transports, de L'équipement, du Tourisme et de la Mer*. France: Journal Officiel de la République Française.

- Building Research Establishment. (2012). *BREEAM Communities: Technical manual*, BREEAM - Building Research Establishment Environmental Assessment Method, Watford, UK: BRE Global Limited.
- Center for Universal Design. (1997): The principles of universal design, Version 2.0. Raleigh: North Carolina State University - The Center for Universal Design. USA. By Connell, B. R, Jones, M., Mace, R., Mueller, J., Mullick, A., Ostroff, E., Sanford, J., Steinfeld, E., Story, M. & Vanderheiden, G. Obtido em 30 de janeiro de 2017 em http://www.ncsu.edu/ncsu/design/cud/pubs_p/docs/udffile/chap_3.pdf.
- CERTU. (2006). *Accessibilité de la Voirie et des Espaces Publics: Éléments pour l'élaboration d'un diagnostic dans les petites communes*. Nantes: Centre d'Études sur les réseaux, les transportes, l'urbanisme et les constructions publiques (CERTU). Obtido em 30 de janeiro de 2017 em <http://www.certu.fr>
- CML. (2012). *Regulamento do Plano Diretor Municipal de Lisboa*. Câmara Municipal de Lisboa (CM-Lisboa). Obtido em 10 de outubro de 2016 em http://www.cm-lisboa.pt/fileadmin/VIVER/Urbanismo/urbanismo/planeamento/pdm/AF_REGULAMENTO_PDM_Lx.pdf
- COST (1995). *Low Floor Buses COST 322*, Report EUR 16707 EN, Directorate-General for Transport, European Commission, Luxembourg.
- Costa, A. (2008). *Manual de Planeamento da Acessibilidades e da Gestão Viária: Transportes Públicos* (Vol. XIII). Porto: Comissão de Coordenação e Desenvolvimento Regional do Norte (CCDR-N), Ministério do Ambiente e do Ordenamento do Território.
- Darcy, S. (2006). *Setting a Research Agenda for Accessible Tourism*. Gold Coast: Cooperative Research Centre for Sustainable Tourism.
- Darcy, S., & Dickson, T. (2009). A Whole-of-Life Approach to Tourism: The Case for Accessible Tourism Experiences. *Journal of Hospitality and Tourism Management*, 16(1), 32-44.
- Decreto-Lei n.º. 163/2006 de 8 de Agosto. (2006). *Diário da República n.º. 152/2006 - I Série*. Ministério do Trabalho e da Solidariedade Social. fls. 5670 a 5689.
- Direction de la voirie VILLE DE CAEN . (2013). *Guide Technique de L'accessibilité des Espaces Publics de la Ville de Caen*. Caen, France: Direction de la voirie VILLE DE CAEN. Obtido em 2 de Janeiro de 2014, de <http://www.caen.fr/>
- Directiva 2001/85/CE do Parlamento Europeu e do Conselho. 20 de novembro de 2001.
- Gil, F. (2014). Plano de Acessibilidade e Mobilidade Pedestre – O caso da Cidade de Faro. Dissertação de Mestrado em Engenharia Civil, Universidade de Évora.
- INE. (2012). *Censos 2011. Resultados definitivos*. Lisboa: Instituto Nacional de Estatística.
- INR. (2010). Turismo Acessível em Portugal lei, oportunidades económicas, informação. *Colecção informar*, n.º 7, Instituto Nacional para a Reabilitação, I.P.
- OCA. (1999). *Access Guidelines* (3rd ed.). Sydney: Olympic Co-ordination Authority.
- Pindado, P. (2006). *La Accesibilidad del Transporte en Autobús: Diagnóstico y soluciones*, Colección Documentos Serie Documentos Técnicos n.º. 21001. Madrid: IMSERSO.
- Roque, C. (n.d). *Marcas Rodoviárias: Características Dimensionais Critérios de Utilização e Colocação (Disposições Normativas)*. Lisboa: Instituto Nacional de Infraestruturas Rodoviárias (INIR). Obtido em 19 de setembro de 2016 em <http://www.inir.pt/>
- Seco, A., Macedo, J., & Costa, A. (2008). *Manual de Planeamento da Acessibilidades e da Gestão Viária: Os Pedestres* (Vol. VIII). Porto: Comissão de Coordenação e Desenvolvimento Regional do Norte (CCDR-N), Ministério do Ambiente e do Ordenamento do Território.
- SEHAB. (2003). *Guia para a mobilidade acessível em vias públicas*. (Única, Ed.) São Paulo: Prefeitura Municipal de São Paulo.
- SMPED. (n.d). Vias públicas. Em SMPED, *Acessibilidade: Mobilidade na cidade de São Paulo* (pp. 79-122). São Paulo: Secretaria Municipal da Pessoa com Deficiência e Mobilidade Reduzida. Obtido em 24 de janeiro de 2017, de http://www.prefeitura.sp.gov.br/cidade/secretarias/upload/pessoa_com_deficiencia/parte2.pdf
- Teles, P., & Silva, P. (2010). *Manual de Orientações Técnicas em matéria de Acessibilidade e Mobilidade no Âmbito dos Planos Local e Municipal de Portimão*. Portimão: Instituto de Cidades e Vilas com Mobilidade.
- Transport for London. (2006). *Accessible bus stop design guidance*. London: Mayor of London.
- World Tourism Organization. (2013). *Recommendations on Accesible Tourism*, UNWTO, Madrid.
- Zhou, H., Hou, K., Zuo, D. & Li, J. (2012). Intelligent Urban Public Transportation for Accessibility Dedicated to People with Disabilities. *Sensors* 2012, 12, 10678-10692.

THE SOCIAL AND SPATIAL STRUCTURES IN MANAGEMENT SITUATIONS

Thiago Duarte Pimentel
Universidade Federal de Juiz de Fora
(thiago.pimentel@ich.ufjf.br)

ABSTRACT

Starting from the assumption that ontic structures of reality, space and time, have implications over epistemological, theoretical, methodological and practical domains, in this paper I make a discussion about the concepts of social space and management situation, trying to outline their consequences over the framework of strategic and social management. A theoretical review on the space theme in social theory, as well in these of strategic and social management was made seeking to highlight the emergence of space emerges as relevant dimension in management situations, Then I analyze the forms of relationship, and modulation of space utilization by different social, organizational and institutional actors in a given context. Specifically, we present a “catalogue” of spatial categories in social theory and how they link – or can be linked – with the strategic and/or social management. We hope that the identification of the forms of strategic use of space allows enhance productive relations, while the social ones can contribute to collective and democratic insertion of actors in the sphere of public action.

Keywords: Ontology, Space, Management Situations, Social Management, Strategic Management.

1. INTRODUCTION

Space is an important factor of production that must be taken into account when formulating and implementing strategies, since it can potentiate or restrict the possibilities of action, according to how it is used, organized and managed, by a single actor or a set of social, organizational and institutional actors. Nevertheless, it is rarely considered as a variable of action pertaining to a management problem (Raulet-Croset, 2008) or as a useful analytical framework category to the understanding of the management phenomena to the point of deserving a due prominence. It is only recently that space and territory have become objects of interest to the social sciences, in general, and in the management sciences, in particular (Lauriol, Perret & Tannery, 2008), - and, let us say, still more recently yet in the case of not developed countries.

If, on the one hand, space can be used strategically, as has already been well noticed by space economy studies (cf. Capello & Nijkamp, 2004), on the other hand, its implications for a social perspective still need to be further elaborated (Zieleniec, 2007). This is because more than one production factor, space can be considered as a platform that allows the inclusion (or exclusion) of a set of actors, whether in the sphere of individual or collective action since it selectively imposes synchronic or diachronic conditioning, of co-presence or alternation, to the other entities of the reality that maintain contact with him.

Thus, in the same way as it performs selective constraints on entities, human or material ones, which imposes consequences in terms of possibilities of use - strategic or not - the spatial structure may tend to promote a more democratic participation; is delegated by the representative of the public power, is appropriated by the users themselves when they perform their symbolic bricolages in their daily actions, depending on the framework resulting from the space-time structure on collective action.

In this sense, having as a background the proposal of a research agenda alluding to space in social theory defended by (Pimentel, 2008; 2009; 2012; 2014), this work aims to explore the relationship between the ontic dimension of reality through the space-time structure and the different forms of management, strategic and social, starting from the axiomatic understanding of management in terms of management situations (Girin, 1990; Fabbri, Gallais & Schmitt, 2010) and the analysis of the concept of space in social theory.

Specifically, it is intended to carry out a discussion about the concepts of space and management situation, and its consequences in the field of strategic management and social management, presenting a “catalog” of spatial categories in social theory and how they are linked - or can be linked - with strategic or social management. By “management situation”, we mean those that revolve around spatially situated problems and which, by their nature, affect a large number of actors belonging to different social / institutional groups, who are inscribed and positioned on the (and the) space where the problem unfolds (Girin, 1990c).

This study is based on premises of critical realism, which considers reality as structured, stratified and external to the individuals and to the knowledge that they may have of it. In this conception things - what exists in reality - have their own structures that give them causal powers (or capacities), that is, of exerting tendencies on other things of reality. Among so many other things in reality, space and time structures are crucial in the sense that their causal powers affect all other structures known to man. Yet - or precisely because of this - they become trivialized and disregarded as sources of systematic studies (Bhaskar, 2008; Pimentel 2012).

Thus, we assume the premise that the ontic structures of reality, space and time, have repercussions on the epistemological, theoretical, methodological and practical domains of this reality. We start from the assumption that the effects of constraints of the spatial structure on the other entities act selectively on such entities, depending on how they are in contact and

interact. Specifically, it is assumed that the way in which space is used (or not used), organized and managed by different social, organizational and institutional actors, constitutes an important element for management, which can either enhance productive relations or contribute to better and more democratic insertion of these actors in the collective sphere of public action. However, there are spatial and temporal constraints that are beyond the capabilities or possibilities of human intervention, whether absolutely or relatively in a given context or time. [In these cases, there is the possibility of temporary and selective suspension of the effects of the spatial structure on one or another structure of the reality, what is called in physics the space deformation].

The central argument defended here is that such structures present constraints to human (individual or collective or social) action, and that in each of these modalities, for example, different forms of spatiality and temporality are presented / expressed in relation to the structural characteristics of agents and forms of their relationship with those structures of reality. From the practical point of view, in the sphere of management sciences, human action (that occurs in the context of collective action) occurs in management situations, characterized by the imperious flow of successive transformations in space. In these situations, there is the tendency framework resulting from the prior structuring of reality and its spatial linkage (or fixation) on the other things (entities) of reality, thus becoming the spatial structure, a factor of constraint of these other entities and their casual powers.

This essay is organized as follows: it initially makes a quick introduction or presentation of the discussion about the ontic dimension of reality, as a focus on the space-time structure. Next, I approach the question of space from the point of view of the literature existing in social theory, making a thematic, although not exhaustive, rigorous cut according to the main exponents that approached the question, from different levels of social analysis. In a third moment, I present the traditional thinking of strategic management and its interface with space from the discussion of the space economy (vision as a resource). Subsequently, the literature on social management and its interface with space are reviewed, evidencing its discussion as a means and possibility of action.

2. SPACE AND TIME IN SOCIAL THEORY

2.1 Simmel's Interactive Analysis and the Idea of Intermediate Space

According to Simmel (2009 [1908]) people can not be near or far from each other without the space lending their form for this, and more than those processes that one wants to attribute to the time can occur out of time. So, whatever the type of experience and its form of manifestation, it must make reference of some type and explain in some way how causal structures and mechanisms occur space-temporally. In this sense, it is important to emphasize that space itself and time act as generative structures with causal, passive or active effects on the other structures.

Espaço e tempo são conceitos (camadas) muito estratificados que podem ser usados formalmente, como Lefebvre faz, para definir diferentes modalidades de espaço (físico, social, psicológico) ou empregado metaforicamente para modelar a relatividade epistêmica no espaço-tempo na realidade física. Neste caso, o caráter irreversível dos processos causais pode prover um realismo ontológico análogo, que é em parte homeomórfico [homeomorph], considerando que a causalidade (ou sua ausência) é o critério mais geral para atribuição da realidade das coisas (Bhaskar, 2008, p. 239).

Among the most frequent degenerations of the causal human impulse is the cessation of formal conditions, without which certain events can not occur to maintain their positive and productive motives. The typical example is the power of time - a language that always defrauds the action of researching the real motives for the mitigation or cooling of feeling, reason for mental healing processes or habits firmly established (Simmel, 2009[1908], p. 544). The significance of space is no different.

When an aesthetic theory declares it the essential task of the plastic arts to make space perceptible for us, it misunderstands that our interest holds only for the particular shapes of things, but not space in general or spatiality, which constitutes only their *conditio sine qua non*, and neither its special essence nor its generating factor (Simmel, 2009[1908], p. 543 – italics in the original).

Simmel (2009[1908], p. 544) considers that “That space is in general only an activity of the psyche, only the human way of binding unbounded sensory affections into integrated outlooks, is specifically reflected in the need of psychological functions for the individual historical forms of space.”. In spite of this, the emphasis on spatial importance is not unwarranted. This is because, according to the author, the social interaction between human beings is - whatever else it is - also experienced (experienced) as a spatial perception.

Detailing his analysis of spatial interaction, individuals and social interaction, he adds:

If a number of persons inside certain spatial boundaries live isolated from one another, then each of them simply fills their own immediate space with their substance and their activity, and between this space and the space right next to them is unfilled space; practically stated: nothing. In the moment in which two of these enter into social interaction, the space between them appears filled and enlivened. Of course this only rests on the double meaning of betweenness: that a relationship *between* two elements, which though only one, is in the one and in the other immanently an occurring movement or modification *between* them, in the sense of spatial intervention. Whatever

errors this ambiguity might otherwise lead to, it is nevertheless of deep significance in this sociological matter. The betweenness as a merely functional reciprocity, whose content continues in each of its personal bearers, is also actually realized here as a claim of the space existing between these two; it always takes place actually *between* both points of space, with regard to which one and the other has a place of theirs designated for it, filled by each alone. (Simmel, 2009[1908], p. 545 – italics in the original).

Thus, the analysis of space-mediated social interaction must take into account not only the space itself, with its material referents that constrain human action, but the intermediate space, the intersection, of human interaction, that space that belongs to none of individuals exclusively, but also does not exist (is nothing) without the animation of the parties involved. It is a space that emerges as a symbolic or affective space that will originate the imagined community of Benedict Anderson (cf. Vandenberghe, 2010g), but also that presents a root (it is rooted) in the physical space (cf. Simmel, 2009[1908]). In this regard, Simmel (2009[1908]) will speak of the differentiation between the emergence of social groups intrinsically linked to space, such as the State (whose physical space necessary for its conception is the territory) and those that do not require a specific connection to physical space (but only abstractly refer to it), as is the case of the church and its dispersion to various similar spaces.

Simmel seems to link this differentiation to a polarity between spaces dominated by scientific or economic logic (that is, rationalization) and those dominated by religion or affectivity (i.e. symbolic), polarization that occurs by virtue of properties relative to form and function of space. Thus, if the form seems to be more relevant in the first case, in which the connection to the physical space is more pressing, the function seems to stand out in the second, in which the dispersion occurs by similar spaces.

Suggestively, a following passage summarizes the influence of space on the sociological dimension of human association, which seems to emerge stimulated by the situation of spatial proximity, given since antiquity by the common reference elements that put individuals in a situation of co-presence, of ‘intermediation’.

the ‘natural commons,’ i.e. the union of habitations under the common protection of rampart and ditch; the city magistracy, by which the community became a legal person; the church association of inhabitants in parishes. These are three wholly different themes that proceed to a combination of one and the same collection of persons within one and the same piece of terrain. (Simmel, 2009[1908], p. 544).

Whatever the ambiguity error that the spatial analysis related to sociological analysis may lead us to, yet the spatial dimension is a matter full of sociological significance. According Simmel (2009[1908]), Kant defines space as the possibility of being together, which makes it something for individuals to fill. Therefore, the association in the various types of interaction between individuals brings different possibilities of being together, some of which are perceived in such a way that the form of the space in which they typically occur justifies their emphasis on the spatial dimension.

In order to penetrate the forms of association in general and the spatial circumstances of the association process, in particular, Simmel (2009[1908], p. 545-587) presents five central features of space: (1) the exclusiveness of space; (2) the irreducibility of space; (3) the shape of space and its influence on its contents; (4) the outer relation of space, as a material structure, over other phenomena manifested through an ideal or social reality; and (5) the configuration of space and its influence on the social structures (social reality) of humanity. The exclusivity of space derives from the conception of existence of only a single universal space, of which all individual spaces are portions; then each portion of space has a kind of oneness for which it is difficult to have an analogy.

The quality or property of detachment refers to the fixation of an object at a single point in the space that can not be reduced to another single point. Such points can only be approximated, so there is a separation or distance between them. This quality of space vitally affects the patterns of social interaction and is manifested by the way space is divided (and also divides, that is, it impels us to make that separation), for our practical use, in portions that operate as units (as cause and effect) and are surrounded by boundaries.

[...]It is rarely made clear how wondrously now the extensity of space accommodates the intensity of the sociological relationships, how the continuity of space, precisely because it contains subjectively no absolute boundary of any kind, simply allows then such a subjectivity to prevail throughout. As far as nature is concerned, every boundary placement is arbitrary, even in the case of an insular situation, because indeed in principle even the sea can be ‘taken possession of.’ Precisely on account of this lack of spatial prejudice in nature, the sharpness, in spite of its prevailing unconditionality, of the physical boundary once it is fixed makes the power of social association and its necessity, originating internally, especially vivid. For that reason the consciousness of being inside borders is also perhaps not the strongest with regard to the so-called natural boundaries (mountains, rivers, seas, deserts), but rather precisely solely with political borders, which lie simply on a geometrical line between neighbors. And in fact precisely because here dislocations, expansions, migrations, mergers are more obvious, because the structure at its edge hits upon vital, psychologically functional borders from which not only passive oppositions but very active repulsions come. [...]The boundary is not a spatial fact with sociological effects, but a sociological reality that is formed spatially. (Simmel, 2009[1908], p. 449; 551).

The proper configuration assumed by space influences the specific patterns of interaction and the social formations derived from them. This relationship between form and content, in which both influence each other, is made possible or

restricted certain options of space use or making some more convenient and others more difficult or even impossible in a given context.

The outer relation of space, as a material structure, over degrees of contiguity or distance, is transformed into the vitality of sociological patterns of interaction. This psychosocial influence (of the vitality of patterns of interaction) is offered by space simply through the occupied position of proximity or perceived distance between people who are in some kind of relationship with one another.

The capacity for managing spatial tension in an association under common conditions of feeling and interests is dependent on the amount of available potential for abstraction. The more primitive the consciousness is, the less it is able to imagine the solidarity of the spatially separated or the lack of solidarity of the spatially near. (Simmel, 2009[1908], p. 566).

The spatial configuration within the structure of humanity, which is distributed in space, of which the elements described above (limits and distance, permanence and neighborhood) are like extensions. The basic sociological formations, derived from the essential characteristics of relationship with space, and its constraints, are evidenced, according to Simmel, by nomadism and sedentarism. While the first focuses on mobility (via migration) and uses the strategy of pilgrimage and the feeling of 'prehistoric' communism as the main strategy for maintaining group cohesion, the second focuses on the 'shelter' (by fixation) and uses as main strategy of standardization of the culture the objective symbols, in order to provide an awareness that everything would be the same in each point of the same group, even being in different places (Simmel, 2009[1908], p. 593).

2.2 Henri Lefebvre's (sócio)spatial dialectical theory

Lefebvre's vision, marked by an influence of Marxist criticism, especially emphasizes the question of the production of space. In his analysis, Lefebvre (1999) distinguishes between nature as a naively given context and what can be termed the "second nature," the transformed and socially realized spatiality that emerges from the application of deliberate work. It is this second nature that becomes the subject and geographic object of materialist historical analysis, of a materialist interpretation of spatiality.

O espaço não é um objeto científico afastado da ideologia e da política, sempre foi político e estratégico. Se o espaço tem uma aparência de neutralidade e indiferença em relação a seus conteúdos e, desse modo, parece ser "puramente" formal, a epítome da abstração racional, é precisamente por ter sido ocupado e usado, e por já ter sido foco de processos passados cujos vestígios nem sempre são evidentes na paisagem. O espaço foi formado e moldado a partir de elementos históricos e naturais, mas esse foi um processo político. O espaço é político e ideológico. É um produto literalmente repleto de ideologias (Lefebvre, 1999, p. 101).

Assuming, then, that space - and its organization, ordering and reorganization - is a social product, that is, that emerges from a set of social practices and with which it maintains close relations of continuity and discontinuity, the central issue that is outlined is not that it is a segregated and autonomous structure, but rather the relation of interdependence of this category to a wider social context. In this sense, what becomes relevant is the interaction of social space (i.e., constructed space) and organized and other structures, according to a particular mode of production. Space and its political organization express social relations, although they also react against them (Lefebvre, 1999).

In this way, it is observed that there is a possibility of understanding space from a socio-spatial dialectic, functioning in a structure of the economic base, in contrast with the current materialist formulation, which regards the organization of spatial relations only as a cultural expression restricted to scope of the superstructure. Because Lefebvre provides a critique of earlier currents, Soja insists that the 'materialist interpretation of spatiality' can not be assimilated by any of these traditions, and must be resumed from the Lefebvrian point of reference.

Gomes-da-Silva and Wetzel (2006), based on the three different dimensions of space production analysis proposed by Lefebvre (1991) - spatial practices, which refer to the perception of individuals about the dynamics of space production, as regards flows, transfers and physical interactions; the representations of space, which correspond to the representations and significations of space, elaborated through signs and the representational space, which involves the relation as the individual ascribes meaning to his experience - elaborate an analytical picture about social relations in the space potentially useful for The socio-spatial analysis in organizations.

2.3 The ideas of field and position in the analysis of Pierre Bourdieu

In spite of their intellectual rigor in the composition and accurate selection and cross-referencing of a wide variety of concepts and references of different philosophical traditions and social thought, several commentators hold in common that the Bourdieusian framework is relatively "simple", constituting a structuring nucleus of three, or perhaps four, concepts: field, capital, habitus and symbolic violence, around which secondary categories gravitate, whose function is to specify and give greater acuity, increasing the explanatory potential of its theoretical system (Jenkins 2006[1992]; Thiry-Cherques, 2006; Vandenberghe, 1999; 2009; 2010b).

The social universe - or the theory of social fields, as it is termed by many who recognize the field as the determining aspect of their work - is constructed by fields, microcosms, or spaces of objective relations, each with its own logic, which can not be reduced to that of other fields. The social field can be seen in a simplified way as a system of relations between

positions (which is the objective face of the field, the place in the social hierarchy that each agent occupies in the field), dispositions (which are the subjective face of the field, given by the habitus and the agents' propensity to act according to what has been internalized) and positions (which refer to a position in which those positions are expressed and whose principle lies in the structure and functioning of the field) (Vandenberghe, 2010b).

According to Vandenberghe (2010b), the field theory is the concrete realization of relational thinking in a particular sphere of action. It arises from the attempt to overcome the opposition between subjectivism and objectivism by means of a supplementary vertical relation that mediates the system of subjective dispositions - of individuals and collectivities - and objective positions in the social space (Thiry-Cherques, 2006).

From the outset, the field conception was linked to a highly conflictual view of the world, as a permanent battle for power, prestige and all kinds of capital (Vandenberghe, 2010b), being a space of objective relations between individuals and institutions that compete for the domination of a specific framework (Thiry-Cherques, 2006). The metaphor of the field is invoked in the sense of a social arena within which struggles and maneuvers occur to gain access to specific resources (Jenkins, 2006[1992]). It refers to a field of forces - as well as in physics - given by a preexisting, constraining structure - due to the limited existence of resources and the physical (and social) space where the agents involved are located, to engage them in social struggles, according to their relative positions in the field. With a view to have or increasing access to resources (or capital) in the field, which will culminate in the conservation or transformation of its initial structure (Bourdieu, 1996, p. 50).

From the perspective of Bourdieu's genetic structuralism, one must recognize that the central *focus* of research lies in the analysis of objective structures, but not in a fixed and stagnant way, as in Strauss's classical structuralism, but rather by linking the analysis of structures to the system of relations, which is space-temporally located. His analysis studies the field as the product of a genesis, that is, the incorporation of preexisting structures. Thus the structure of the field designates an exteriority (which is not the field) and an interiority (the institutions and agents that exist and subsist by difference). It is given by the relations of force between agents and institutions that fight for hegemony within the field, that is, the monopoly of authority that bestows the power to dictate rules (Thiry-Cherques, 2006).

Because of their objective analysis of established structural relations, Bourdieu assumes that, fields can be analyzed independently of the characteristic of their occupants, that is, as a system of objective relations. However, social fields are not fixed structures, structured spaces of positions at a given moment (Jenkins, 2006[1992]). On the contrary, they are products of the history of their positions and dispositions that reproduce them. "Our position in a field designates how we consume not only things, but also education, politics, the arts. It also determines how we produce and accumulate them." (Bourdieu, 1984, p. 210).

According to Bourdieu and Wacquant (2005), the fields result from the processes of social differentiation, the way of being and (re)knowing the world, embedded in a process of constant evolution of society that causes new fields to emerge in a process of continuous differentiation. In this way, every field is a historical product and therefore has a distinct *nomos* (set of laws governing it). What determines the existence of a field and demarcates its limits are the specific interests, the economic and psychological investments made by the different agents, endowed with a specific habitus convergent with that field, and the institutions therein inserted and that aim for a return, in the different forms of *capital*, related to the dominant capital in that field.

It goes without saying that every game presupposes rules and, in this sense, the agents of the field, tacitly or explicitly, share a *doxa* of the field (Bourdieu; Wacquant, 2005). Although each field creates - or rather institutionalizes - its own object and its principle of understanding, social fields are not self-evident and need to be defined as such, which requires observation and analytical delimitation of the researcher on a specific segment of the social world.

The social fields have universal properties and their own characteristics, which does not prevent Bourdieu from advocating structural homology between fields. All fields have: a) *habitus*, of the class and subclass in which the agent is positioned, which is at the same time a predisposition to act according to what he assimilated throughout his learning process; b) a structure, which refers to the "objective" system of relationships between agents, identified in the social space; c) *doxa*, or consensual opinion (substitutes the Marxist concept of ideology), and refers to what all the agents are in agreement, and is therefore opposed to the scientific, and contemplates everything that is admitted as "being anyway"; and d) the *nomos*, which refers to the specific laws (and rationalities?) that govern it (Thiry-Cherques, 2006).

3. THE SPACE DIMENSION

3.1 The Space Implications for Strategies

In *Space and territory on the strategy research agenda*, Lauriol, Perret and Tannery (2008) elaborate a historical retrospective on the development and incorporation of studies on the spatial dimension in the field of economics and administration, during the last century, emphasizing for this three great moments: (1) the location of activities or space as a variable of the organizational design, (2) strategic management of space and distances, and (3) territory as a space organization model.

The fact that a special issue of the journal *Advances in Strategic Management* (2003) being devoted to "Geography and Strategy" is a sign of the importance given to the spatial question in strategy. In this issue, Sorenson and Baum (2003) propose a division of the work into two categories: those that approach the location strategy from a "place", considering for this the superior performances obtained due to the location of the business activity in a given region, that would concentrate a set of characteristics and attributes peculiar to the territory. Because these attributes are fixed on the place - and therefore not mobile - they would provide that location with an advantage and favor a dynamic of agglomeration in their surroundings. Thus, companies would seek to incorporate the externalities of this space as a competitive advantage.

The other set of works would be those that approach the question of location from a question of “space”, considering the spatial distribution of firms within an industry, as well as the distribution of assets and resources within the firms themselves. These two issues have implications for the organization of relations between industries. This superior performance is supposedly attributed to its location, either by (1) location of activities or space as a variable of organizational design; (2) strategic management of space and distances; or (3) by the territory as a modality of space organization. Each of these (or specific moments) represents a way of seeing and dealing with the spatial dimension within the administration, and also proposes a set of specific elements and practices for the management of the same - based on certain valued elements / attributes in space).

3.2 The Situated Action and the Space as a Central Reference to Social Management

What is considered today as social management goes back to practices of workers’ association for the organization of production and consumption and also self-help, begun in the middle of the nineteenth century, approximately between the 1830s and 1850s (Lechat, 2002). However, these initiatives did not cease to exist, they simply had their role reduced or overshadowed by the robbery of the scene by the role of capitalist enterprises at first, then by the state afterwards. For Lechat (2002), after the Second World War, the non-monetary (domestic and reciprocity) economy had been marginalized by the expansion of the market and the nationalization of the most dynamic associative initiatives. But this scenario changed from the second half of the 70’s of the twentieth century. A new crisis of the capitalist system brought with it consequences, unemployment and the closure of companies and created a dramatic picture for the working class. In the 1970s and 1980s a wave of initiatives emerged, for example through worker cooperatives, to save or create jobs through self-managed enterprises.

It is important to emphasize that in social management, in addition to being applied to self-managed productive and consumer systems such as cooperatives, associations and mutual societies, it has also gained space when applied in larger systems. Not just of local character, such as cooperative networks, popular banks and whole communities. The logic of social management has increasingly applied to broader social systems, linking not specifically to the type of enterprise, but rather to the way in which it is managed (with a logic of development). And so, it has come very close to what could be considered as public policies, but carried out in a self-organized and self-managed manner.

From the theoretical point of view, and because it is a concept under construction, the notion of social management is still not consensual among the authors. Despite the different approaches, some principles can be identified as characteristic and defining social management. For França Filho (2008), social management is considered at two levels: (1) as a problematic of society and (2) as a specific modality of management. As for the problematic of society, the term refers to the management of the demands and needs of the social. The social, in this sense, suggests the idea of social policy, referring to the very idea of public management. In this sense, the purpose must be collective and must overlap with the individual.

As a specific modality of management, social management would be a way of subordinating the instrumental logics of economic calculation to other logics: social, political, cultural or ecological (França Filho, 2003). In this way, the use of the term social management is aligned with an attempt to counterbalance the excesses of individualistic logic based on instrumental rationality. Social management, it should be noted, would not seek to erase or replace the economic aspect, but rather to rebalance the system by incorporating and valuing other aspects, such as cultural, ecological and social.

França Filho (2003) considers social management as the mode of management of civil society organizations, of the non-state public sphere, distinct from both the private and state-run modes of management, since both are based on the instrumental rationality that guides utilitarian calculation of the consequences. In social management there is, in a different way, the development of forms of management that are based on substantive rationality, that is, in which social values, forms of solidarity and spontaneity and social ties are placed above the instrumental procedures of calculation. Thus, the objectives are, above all, non-economic, and these seem to be means to achieve social ends (political, cultural, ecological).

Another prominent contemporary author in the Brazilian context on the subject is Tenório (2008), whose central concern is the construction of an own thinking about social management, that is based essentially on the notion of public sphere and that can be applied to any type of organization and in any context. The author added to the discussion of the term social management the concept of deliberative citizenship and the notion of participation. This need for increased participation in the concept refers to the emphasis that is made primordial when it is meant that social management should be practiced as an intersubjective, dialogic process, where everyone has the right to speech without coercion. And this process must occur in a given social space, in the public sphere.

Tenório (2008a, p. 54) understands social management as the “deliberative decision-making process that seeks to meet the needs of a specific society, region, territory or specific social system.” According to Tenório (2008a), the concept of social management has been the object of study and practice much more associated to the management of social policies, nongovernmental organizations (NGOs), the fight against poverty and even environmental, than to the discussion and possibility of a democratic, participatory management, both in the formulation of public policies and in those relations of a productive character.

Trying to further detail the concept, Tenório (2008a, p. 40) argues that social management is:

[a] dialogical managerial process where the decision-making authority is shared among the participants in the action (action that can occur in any kind of social system - public, private or nongovernmental organizations). The adjective social qualifying the noun management will be understood as the privileged space of social relations where everyone has the right to speak, without any type of coercion.

Fischer (2002) discusses the concept of social management as a management of social development, since for the author it is about the transition between past models and new forms committed to local development utopias. Gondim, Fischer and Melo (2006) emphasize the importance of articulation of leadership, effectiveness and social efficiency in discussing how this development should be carried out. Social management would then be about social mediations carried out by individuals (managers) and their organizations. For the authors, multiple forms of power are exercised at different scales, in the complex construction of development programs and actions that occur in territorial and virtual spaces. Thus, the challenge that demands the competence of the social manager is to reconcile the diverse interests (Gondim, Fischer & Melo, 2006). In summary, these authors understand as social management: “a relational act capable of directing and regulating processes through the wide mobilization of actors in decision making, resulting in intra and interorganizational partnerships, valuing decentralized and participatory structures, the balance between instrumental rationality and substantive rationality, in order to at last achieve a collectively planned, viable and sustainable good in the medium and long term” (Gondim, Fischer & Melo, 2006, p. 4).

Faced with so many approaches to the concept of social management Pimentel and Pimentel (2010) selected nine categories of analysis, namely: (1). objective; (2) value; (3) rationality; (4) protagonist; (5) communication; (6) decision-making process; (7) operation; (8) sphere of action; and (9) autonomy / power. The aim of the authors was to identify points of conceptual encounter and disagreement among theorists. From the analysis undertaken, the authors synthesize the discussion listing seven principles or theoretical foundations of social management:

P1: Social management has as objective the collective interest of public character;

P2: The value orientation of social management is the well-understood public interest;

P3: Social management must subordinate instrumental logic to a deliberative decision-making process, based on substantive rationality;

P4: Social management has as its protagonist the organized civil society, but it involves all the social, organizational and institutional actors of a given public space;

P5: Social management is a participatory, dialogical, consensual process;

P6: Social management is materialized by the collective deliberation reached by the possible consensus generated by the free argumentation;

P7: Intersectoral partnerships and networks, both practical and knowledge, in forming a public sphere, are ways of thinking and operationalizing social management.

Quadro 1. Tipos de gestão e suas características

Categorias de Análise	Gestão Estratégica	Gestão Pública	Gestão Social
Objetivo	Lucro	Interesse Público	Interesse Coletivo de Conflito Público
Valor	Competição	Normativo	Cooperação Intra e Interorganizacional
Racionalidade	Instrumental	Burocrática	Substantiva/comunicativa
Protagonistas	Mercado	Estado	Sociedade Civil Organizada
Comunicação	Monológica, vertical, com restrição ao direito de fala	Monológica/Dialogica, vertical com algumas horizontalidades, em tese sem restrição à fala	Dialogica, com pouca ou nenhuma restrição ao direito de fala
Processo decisório	Centralizado/ top down	Centralizado com possibilidade de participação (bottom up)	Descentralizado, emergente e participativo/surge como construção coletiva
Operacionalização	Estratégica, com foco em indicadores financeiros	Estratégica, com foco em indicadores sociais	Social, com foco em indicadores qualitativos e quantitativos
Esfera de atuação	Privada	Pública Estatal	Pública Social (França Filho) x qualquer esfera (Tenório; Dowbor)
Autonomia e poder	Há diferentes graus de coerção e submissão entre os atores envolvidos	Há coerção normativa entre os atores envolvidos	Não há coerção, todos têm iguais condições de participação (Tenório) x As relações de poder restringem a capacidade de cada um se posicionar no debate (Fischer et al; Gondim, Fischer e Melo)

Fonte: Pimentel e Pimentel (2010, p. 9-10).

The categories of sphere and *autonomy / power* analysis presented conceptual differences and were therefore considered as limitations of the field. With regard to the sphere of action of social management, França Filho (2008) it would be the non-state public sphere, more precisely, social management would belong to civil society organizations. For the other authors analyzed, however, it can occur in any type of social system, depending on the degree of participation, dialogue and deliberation involved.

Another point of divergence concerns rational consensus. Tenório considers that the space of social management is

the space of social relations where everyone has the right to speak without coercion. On the other hand, authors like Godim, Fischer and Melo (2006) recognize and include the dimension of power in their analyzes of social management, considering this space in a more plural, complex and difficult way of working, since one must try to take into account the often antagonistic interests of the various stakeholders.

4. WHAT CATEGORIES OF SPATIAL ANALYSIS? WHAT KIND OF MANAGEMENT?

The table 2 summarizes a set of spatial categories from 3 questions: (1) the levels of social reality analysis: micro, even and macro; (2) the polarities of a triesthetic relationship marked by shape, content and intersection; and (3) the general properties or tendencies emanating from its ontic structure, fixation, embodiment (incorporation for the constitution of corporeal objects), and twisting.

Table 2: Catalog of spatial categories

Scales / Levels Polarities	Micro	Meso	Macro
Shape	1) The exclusivity of space	Space practices	Position
	(2) The irreducibility of space		
	(3) Constraints of the form of space on its contents		
Content	(4) The outer relation of space, as a material structure, on the other phenomena manifested through an ideal or social reality	The representations of space	Capitals
In between	(5) The configuration of space and its influence on social structures (social reality) of humanity, via overflowing	Representational space	Field / System
Propeties	(1) Its property of fixation (“frame”) of other things (objects or substances) of / in reality and its consequent effect of framing; (2) <i>embodiment</i> , derived from the space-time dimension (absolute in human life) (3) The deformation of the space-time structure (alteration of the behavior of space according to the properties of artefactual reality objects): torsion and tensioning (stretching or compression) and, consequently, altering the effects of its properties on other entities;		

Note: color – implications of spatial structure predominantly for strategic management. color – implications of spatial structure predominantly for social management.

Both – sobreposition.

Source: proper elaboration

While the forms of strategic management seem to privilege the elements of spatial analysis related mainly to the form of the spatial structure, the forms of social management tend to privilege the elements related to its content. The topics of spatial analysis from the point of view of strategic management focus, for example, (1) the location of activities or space as a variable of organizational design, (2) the strategic management of space and distances, and (3) the territory as a form of space organization. In all these cases the key variable relates to the exclusivity of space in the case of organizational design; with the irreducibility (and contiguity) of space, in the case of the management of space and distances; and with the form of space and its influence on its contents, in the case of the territory as a modality of space organization.

On the other hand, what can be perceived in the case of social management is a double insertion of the spatial dimension, or a sphere (understood as locus) of social management practices or a metonymy of the social group to which it covers. In the first sense, the type of space varies and what is at stake is the form of (types of practices) occurring anywhere (space), including apparently non-deliberative, in terms of citizenship, as is the case of private companies. In the second sense, a kind of communitarianism is demanded, where the attachment to a specific territory is necessary. In both cases the question of space as a reference in terms of content seems to overlap the logic of the functioning aspects of its form.

Recovering the analysis of social interaction mediated by space made by Simmel (2009[1908]), this author presents an important argument for our analysis here concerning the differentiation between the emergence of social groups intrinsically linked to space, such as the State (whose physical element necessary to its conception is the territory) and those that do not require a link specific to the physical space (but only abstractly refer to it), as is the case of the church, in the same way, when analyzing social management, initially tends to analyze it to a position of attachment to space, such as the state, being this space dominated by the logic of affectivity. However, this analysis is not so simple, since the conceptions about the concept of social management vary, thus modifying the possibilities of its relationship with space. If, for example, for França Filho, social management is a form of public management and therefore encompasses or can encompass all the individuals belonging to that sphere, for Tenório what is at stake is the possibility of exercising deliberative citizenship. Thus, if on the one hand we have a linkage to the form, on the other, this does not become important insofar as any form that possesses the content of the deliberative exercise (including in a private enterprise).

But perhaps from the point of view of interactional sociology the question of intermedium, and its overflowing effect, is the main element for thinking about social management and its relation to space, since it is from the constitution of this space of transition between two contiguities that generates the sphere of free public domain.

When we move our analysis to the mesosociological level, we can basically identify a distinction between spatial practices, which operate at the level of how space is used. On the other hand, the representations of space, elaborated by social groups, bring us information about the symbolic elements of space and the content that it allows to link and communicate functioning as a means of culture and communication. Already the representational space informs us specifically with the individual or the social groups perceive their subjective experience in relation to the space in which they are inserted. Thus, while space practices can be associated with a more strategic view of space, because in any circumstance depends on the exclusivist form of appropriation and use of space, in terms of flows and fixed; representations of space and representational space concern symbolic-affective elements and issues - reinforcing the emergence logic of groups bound to space, as pointed out by Simmel - where elements of social management gain strength since there is no exclusivity in terms of sharing such representations, not even in individual trials, since they are culturally shaped.

Finally, on the macro level, while the position that an actor occupies in space is something unique and exclusive (from there to strategies to gain market share, for example), in terms of content, the spatial structure harbors resources that are found unequally dispersed and can be seen as resources or capital. Although they may be individually and exclusively appropriated, their value is external and dialogically defined by the relationship with other agents, which therefore gives us a substantive feature in terms of content. In turn, the very notion of field (or system) can be seen as a space of social relations filled by agents and marked by the distances of the relations that maintain between them.

5. FINAL CONSIDERATIONS

In summary, the objective of this paper is to present a discussion about the concepts of social space and management situation, trying to outline its consequences in the strategic management and social management area. It is believed that we succeeded in this process by identifying, summarizing and to point out how some of the main features and properties of space, as an ontic structure of reality, have refutations about management, as a form of collective action, and particularly about specific forms of management.

In presenting an initial mapping of the ways in which the space category appears in the form of specific concepts in social theory, it was attempted to broaden theoretical knowledge and its implications, with which the space category is managed - albeit sparingly - in management. In addition, by understanding better how the use - conscious or not, tacit or explicit - of this category can have theoretical and practical developments, scholars and managers can from there use more consciously and skillfully the use not only of the theoretical term but also glimpse its practical applications, thus allowing a deepening of theorization about management, both strategic and social.

Particularly in the context of social management, consideration of the space category is still an unresolved issue, as pointed out by Pimentel *et al.* (2010), which helps us to move towards a better delimitation of the notion of "sphere" (or space) of application of social management.

If, on the one hand, this paper brings a potentially original proposition, since the studies on space in the scope of management are still little developed, on the other hand, it is affirmed here the propaedeutic and seminal character of this study, whose virtue may be very, but rather, to stimulate and open a broader debate than to determine the exact contours of the subject. Thus, it is suggested that more studies are necessary, both theoretically and empirically, in order to drop and deepen the debate proposed here.

REFERENCES

- Acrkoyd, S. (2000). Connecting organizations and societies: a realist analysis of structures. In Acrkoyd, S.; Fleetwood, S. *Realist perspectives on management and organizations*. London: Routledge.
- Archer, M. S. (2002). Realism and the problem of agency. *Journal of Critical Realism (incorporating Alethia)*, Vol. 5(1), p.11-20.
- Bhaskar, R. (2008[1993]). *Dialectic: the Pulse of Freedom*. (p.403) New York (USA): Routledge / Taylor & Francis Group.
- Bhaskar, R. R. (1998 [1979]). *The Possibility of Naturalism: a philosophical critique of the contemporary human sciences*. (3rd Edition). Routledge: London/New York.
- Bhaskar, R. R. (1978) On the Possibility of Social Scientific Knowledge and the Limits of Naturalism. *Journal for the Theory of Social Behavior*. 8 (1).
- Brandão, C. (2008). Pactos em Territórios: escalas de abordagem e ações pelo desenvolvimento. *Revista Organizações & Sociedade*. Vol. 15, n. 45, abr/jun. Salvador.
- Brante, T. (2001). Consequências do realismo na construção de teoria sociológica. *Sociologia*, set. 2001, no.36, p.9-38.
- Capello, R.; Nijkamp, P. eds. (2004). *Urban Dynamics and Growth: Advances in Urban Economics*. Elsevier Inc.
- Coase, R.H. (1993). The nature of the firm (1937). In Williamson, O.E.; Winter, S.G. *The nature of the firm: origins, evolution and development*. Oxford: Oxford University Press.
- Elder-Vass, D. (2004). Re-Examining Bhaskar three ontological domains: the lessons from emergence. *Paper presented at LACR Conference*. Cambridge.

- Elder-Vass, D. (2010). *The Causal Power of Social Structures: Emergence, Structure and Agency*. Cambridge: Cambridge University Press.
- Fleetwood, S. (2005). Ontology in organization and management studies: a critical realist perspective. *Organization*. Vol. 12, N. 2)
- Fleetwood, S. (2008). Institutions and social structures. *Journal for the Theory of Social Behaviour*, Vol. 38, n. 3, 2008. p.241-265.
- Fleetwood, S. (2008a). The ontology of things, properties and powers. *Journal of Critical Realism*. (v. 8, n. 3)
- Fleetwood, S. (2008b). Structure, institution, agency, habit and reflexive deliberation. *Journal of Institutional Economics*, Vol. 4, N. 2.
- Friedberg, E. (1993). *Le Pouvoir et la règle: dynamiques de l'action organisée*. (p.404). Paris: Ed. du Seuil.
- Girin, J. (1990). Analyse empirique des situations de gestion: éléments de théorie et de méthode. In : Martinet, A.C. [Dir.] *Epistémologie et sciences de gestion*, Economica.
- Harré, R. (1988). *As Filosofias da ciência*. Lisboa: Edições 70.
- Jessop, B. (2005). Critical Realism and the Strategic-Relational Approach. *New Formations*, vol.56, s/n, pp.40-53.
- Leloup, F.; Moyart, L.; Pecqueur, B.(2004). *La gouvernance territoriale comme nouveau mode de coordination territoriale?* 4èmes journées de la proximité. Proximité, réseaux et coordination, 17 et 18 Juin 2004.
- Marshall, A.(1985). *Princípios de Economia*: tradao introdutório. (2ª ed., Vol. I, Cap. VIII – XII, pp. 211 – 271. Abril Cultural.
- Mendez, A.; Mercier, D. (2006). Compétences-cles de territoires: le rôle des relations interorganisationnelles. *Revue Française de Gestion*, n° 164, p.253-275.
- Pimentel, T. D.; Pimentel, M. P. C.; Pereira, J. R.; Brito, M. J. De. (2010). Gestão Social: perspectivas, princípios e (de) limitações. In: Ferreira, M. A. M.; Emmendoerfer, M. L.; Gava, R. (Org.). *Administração Pública, Gestão Social e Economia Solidária: avanços e desafios*. 1ªed.Viçosa (MG): Editora da Universidade Federal de Viçosa, v. 1, p. 145-166.
- Pimentel, T. D. (2014). O Espaço em Situações de Gestão: entre a gestão estratégica e a gestão social. *Administração Pública e Gestão Social*, v. 6, p. 141-150.
- Porter, M. (1998). Clusters and the new economics of competition. *Harvard Business Review*, Nov./Dec.
- Santos Silva, J. A. dos. (2004). *Turismo, Crescimento e Desenvolvimento: uma análise urbano-regional baseada em cluster*. Tese (Doutorado) em Ciências da Comunicação. Escola de Comunicações e Artes, Universidade de São Paulo, USP.
- Simmel, G. (2009[1908]). Space and the Spatial Ordering Of Society. (Chapter 09, pp. 543 – 620). In: Simmel, G. *Sociology: inquiries into the construction of social forms*. Volume 2. Leiden (Netherlands) / Boston (USA), 715p.
- Vandenberghe, F. (2007) *Une ontologie realiste pour La sociologie: système, morphogenèse et collectifs*. *Social Science Information*, 46 (3), pp.487-542.
- Vandenberghe, F. (2007a). Avatars of the Collective. A Realist Theory of Collective Subjectivities. *Sociological Theory*, 25 (4), pp. 295-324.
- Vandenberghe, F. (2010) *Teoria Social Realista: um diálogo franco-britânico*. Belo Horizonte (MG): Editora UFMG/ Rio de Janeiro (RJ): IUPERJ.
- Vandenberghe, F. (2010g) Uma ontologia realista para a sociologia: morfogenese da sociedade e estruturação das subjetividades coletivas. In: Vandenberghe, Frédéric. *Teoria Social Realista: um diálogo franco-britânico*. Belo Horizonte (MG): Editora UFMG/ Rio de Janeiro (RJ): IUPERJ., pp.183-256.
- Vandenberghe, F. *O esgotamento do novo movimento teórico e a era dos epígonos*. In: Invenção do Contemporâneo, 2009, Campinas. CPFL. Palestra publicada em vídeo em: 09/10/2009 às 22:45:05. Disponível em: <http://www.cpfcultura.com.br/site/2009/11/30/integra-o-esgotamento-do-%E2%80%9Cnovo-movimento-teorico%E2%80%9D-e-a-era-de-epigonos-frederic-vandenberghe/>. Acesso em: 25 agosto 2011.

SOCIOLOGY OF TOURISM EDUCATION IN ARGENTINA: AN ANALYSIS OF THE EDUCATIONAL OFFER AND RESEARCH STRUCTURES IN TOURISM

Thiago Duarte Pimentel
Universidade Federal de Juiz de Fora
(thiago.pimentel@ich.ufjf.br)

Mariana Pereira Chaves Pimentel
Universidade Federal de Juiz de Fora
(marianachaves82@yahoo.com.br)

Fabíola Cristina Costa de Carvalho
Universidad Autónoma de Sinaloa
(fabiolacarvalho.tur@hotmail.com)

ABSTRACT

This article analyses the educational offer in tourism (EOT) in Argentina, as well as the formal structures of research in tourism (FSRT), that are associated to the country's higher education institutions (HEI). The aim is to correlate the teaching and production of knowledge in tourism. A review was carried out on the sociology of education applied to tourism. The research was based on a survey of all the tourism programs in the country among the higher education institutions. It was identified 177 observations composing the educational offer, divided into categories like initial education (technical and undergraduate) and post-graduation education (specialization, MBA, master, doctorate). The EOT is linked to 61 HEI in the country (46.92% of the total of HEIs), that are linked to departments in 155 cases. Additionally, we have identified that 38 OET have a specific focus or emphasis, e.g. MBA in hospitality. The EOT core is formed by the thematic areas like "General tourism" and "Economy and management". Connected to the HEI's were found 9 FSRT, and 8 Regular Academic Journals specialized in tourism. As conclusion, there is a strong asymmetry between EOT and FSRT, apart from the internal discrepancies in the EOT, as the preponderance of Initial Education programs (82.38% of the total). The absence of a more pluralistic EOT, especially in the cross-sectional areas (as in social sciences), explain the difficulty to constitute FSRT, which tend to (or should give) feedback the system, generating more qualification and specificity the academic field of tourism.

Keywords: Sociology of Education, Tourism, Education Offer, Argentina.

1. INTRODUCTION

This article analyses the educational offer in tourism (EOT) in Argentina, as well as the formal structures of research in tourism (FSRT), that are linked to the country's higher education institutions (HEI). The aim is to correlate the teaching and production of knowledge in tourism from the standpoint of the sociology of education applied to tourism.

A panoramic retrospective of the sociology of education allows to identify three perspectives of analysis of the educational field (Young, 2000). The first, the functionalist version, highlights the search for establishing regularities, providing cognitive training and taking care of educational planning, as a technical tool. The second, the empiricist perspective, is concerned with assessments, measurements, comparisons, indexes, examinations, and skills development, so fashionable in the conduct of public policy today. And a third perspective, the critical one, accompanied the development of social tensions and demands, as well as the arising social relations.

This new sociology understands the school (in its different types of educational establishments) in a different way, criticizes the objectives, the curriculum, the teaching methods, and the barriers between the ways of knowing. In view of these approaches, it is questioned how tourism education has been discussed, what are the current issues, and what new issues are needed, taking the Argentine case for analysis. In particular, we will seek, from a paradigm distinct from the three approaches mentioned: the critical realism.

This philosophy for science specifically develops a deeper account, rooted in an intransitive (ontic) and transitive (epistemic) dimension of reality, simultaneously and inseparably, but necessarily in this way, that is, the ontological dimension is, ultimately, the basis upon which our cognitive capacity derives from the world. It follows that the task of science is to seek to identify and discover the *modus operandi* of the causal powers (or tendencies) inherent in the intrinsic structure of each object (material, ideal, social or artificial) of reality. So reality is not understood in a *monoplanar sense*, but rather this in a stratified one, from which each class of objects emerges, which, in turn, circumscribes general properties (of that level) specific to it, as well as a specific conjuncture and the mechanisms necessary for its activation.

As we start from this paradigmatic perspective, we want to emphasize that our focus is not specifically on any of the aforementioned approaches, but instead we will observe elements of the different approaches (such as "functions" derived from the intrinsic properties of each object, "empirical elements" as the morphological manifestation of that object and

“critics” such as the teleological discussion about the social role and the possibilities of change and emancipation provided by this type of social structure (“school”, educational system or more specifically the educational subsystem of tourism circumscribed in a given space-time reality - national, regional and local).

Thus, with regard to the question that guides this study: *what is the current state of the national subsystem of higher education in tourism and the constraints derived from its current structure?* – we are led to make a morphological analysis of the national subsystem of higher education in tourism (general objective) and the constraints generated by this structure. Specifically, this paper aims to: 1. To track the historical evolution of the broader educational system, in which the subsystem in question is inserted; 2. To identify the main structuring elements (components) of the subsystem on screen - a) educational offer, in its different levels, types and thematic areas, b) geographical and institutional location of this offer, c) existence of own scientific production and diffusion structures; 3. To analyse the characteristics of the structure of this system, its inherent constraints and the trends derived from this particular configuration (and the causal and contextual mechanisms that trigger the reproduction or transformation of this structure).

2. LITERATURE REVIEW

2.1 Sociology of Education

Throughout the twentieth century many theorists focused on the field of education and broadened the field of studies and research in the sociology of education. Hence, there are several approaches, including the positivist, Marxist, structuralism, critical, and postmodern currents (Gohn, 2012).

The Sociology of Education began in France, around 1870, to study the role of official educational institutions, the role of the teaching group, the strength of tradition, and educational changes (Gohn, 2012). Émile Durkheim, one of the founders of sociology and sociology of education, constructs his reflection showing the socializing nature of the school, as a privileged institution for the insertion of the modern individual in the public space. In proposing sociology in the field of education, Durkheim (2002) argued that education meant the same as socialization and aimed to form the social being.

According to this perspective, later, Norbert Elias (1993) will contribute to the debate when addressing the formation of the human being and elaborate several arguments for a theory of the process of civilization. This process takes place through social relations of interdependence between people, is neither homogeneous nor rectilinear, but is a long, slow process that may have advances, but also setbacks. From this perspective, one can ask what advances have been made in tourism education, and what obstacles or setbacks have plagued this educational area.

Weber, who attributes to the State a role of agent of rationalization of society and mediation of conflicts between social groups, understands education as a provider of symbolic codes through school-socialization processes. On behalf of Weber, education is a way of preparing for social life, but it contributes to maintaining a situation of domination of one group over others. Thus, education contributes to privileged social classes and to social stratification (Silva, 2008).

Going back to Weber's aspects of cultural goods, Pierre Bourdieu (1998) relates them to the theory of power and forms of domination, as well as to the formation of cultural capital in individuals' lives, and also articulates them with Durkheim within a vision of reproduction of the social order. In the field of sociology of education, Bourdieu will be from 1970 onwards one of the most influential theorists in the analysis of the educational system, in several parts of the world.

Also the Marxist current influenced the sociology of education. Karl Marx placed education in the field of social relations, within a society divided into social classes, acting in the maintenance of class domination. In the Marxist approach, after 1950, Louis Althusser had a great influence on studies of school systems, relating ideology and education to a structural view. The school is analysed as one of the main ideological apparatuses of the state, spreading ideologies of acceptance of existing forms of domination, mere reproducer of a social order given by the place that the individuals occupy in the system of production (Althusser, 1985). It would be derived from this, for example, the question of what are the objectives of the States in relation to education in tourism, how they structure the supply and, thus, what can be expected from the training in tourism available in the countries.

Habermas, in the tradition of the Frankfurtian school, takes up the question of the role of education in contemporary society from two themes: the formation of individuals' identities and their capacity to act. Affirms that identities are formed in social relations. They depend on the interactions of individuals as having physical, affective, sexual, cultural, ethnic, etc. characteristics. The construction of these identities depends on learning processes of norms and values and the capacity of reflection of the individuals in the life in society. Hence, reflective processes are fundamental, and Habermas advocates that the school curriculum must attend to this point, failing to prioritize the knowledge legitimized by custom and tradition, stimulating the knowledge generated through reflexive processes, where there is dialogue based on free argumentation (Habermas, 1987).

In short, the sociology of education as established by the cited works and others revolves around the role of Education in the production and reproduction of society. This great theme, in turn, unfolds in the themes of the role of ideology in this process, the nature of the capitalist state and its central participation in the institutionalization and continuation of an educational system that maintains a close relationship with the demands of capitalist production, of the decisive contribution of the organization of the distribution of scholarly knowledge in the process of constructing educational inequalities, of the close relationship between the processes of cultural reproduction and social reproduction, of the school's contribution to the reproduction of the social division of labour. Historically, sociology of education gains new subjects, such as the participation of the educational community, school culture, democratic management, violence and inclusion (school, social, racial, gender, digital).

2.2 Sociology of Tourism Education

The evolution of tourism led to the development of a matrix of research topics to understand and explain the various aspects related to this phenomenon (Airey and Tribe, 2005; Tribe, 2010; Jimenez, 2012; Campodónico & Chalar, 2014).

In order to develop the basic competences necessary for work in the hospitality, hotel management and other tourist business areas, tourism higher education began in technical / vocational schools (Butler, 1999; Morgan, 2004; Inui, Wheeler & Lankford, 2006). On the other hand, the creation of the chair of tourism in the University of Rome, in 1925, is a framework of the theoretical studies of the tourism (Barretto, 1995). Also, according to Barretto (1995) the first institute dedicated to the study of tourism was established in the School of Economics of Berlin in 1929. In Latin America the high educational offer in tourism began in Brazil in 1971, at Anhembi Morumbi University (Dencker, 2006).

According to Busby (2001) and also Inui, Wheeler and Lankford (2006), two approaches are highlighted in the debate on the academic offer in tourism: the vocational, business oriented, and academic oriented towards investigation. Still, Belhassen and Caton (2011) point out that in tourism studies the vocational curriculum has been highlighted in relation to educational orientation based on the social sciences with characteristics in the critical production of tourism knowledge.

In this context, Tribe (1997) argued that tourism knowledge is organized between extradisciplinary disciplines, interdisciplinary disciplines and established disciplines. According to him, the extradisciplinary disciplines would be those that refer, for example, to customer service; the aspect of interdisciplinarity that corresponds to environmental studies, marketing, etc.; while the established disciplines would be those traditional and basic, such as economics, anthropology, among others.

These elements, in different combinations, are basis for the formation of the educational offer in tourism. On this subject, Airey (2008: 44) argues that:

The offer of tourism programs continues to be strongly oriented from the professional to the business [...] However, if it is to become a truly independent area of study, its knowledge base must go beyond extradisciplinary. The risks to tourism education go in two directions: the first is that it is closely connected with professional practice and, therefore, offer little more than a reflection on the world of work. The second is to turn his back on his connections with industry, putting at risk one of his main *raison d'être*.

By observing overseas tourism careers, it is evident that the development of research takes place in developed countries such as North America, since according to Hudson (2005), these receive great support in tourism education, which Promotes the development of research on this topic. However, comparing North America with Latin America, Leal and Padilha (2008) show that the latter is in the early stages of tourism studies. Still, this first stage is not limited to the lack of research on the subject, which, little by little, manages to obtain its space, through journals such as *Studies and Perspectives in Tourism* (Argentina); *Tourism: Vision and Action* (Brazil), among others; but also applies to the skills of the workforce.

Another factor of institutionalization and maturity of the degree of production of knowledge in tourism is the existence of formal structures dedicated to research on the subject (Pimentel, 2016a, b), which converts maturity of the field as an area of study in its own 40 years (Airey, 2015). In general, knowledge is produced in universities, research centers or other organizations responsible for perpetuating the discovery of new techniques, innovative strategies and making comparisons of theory with practice. Research fosters epistemological and methodological curiosity, which leads to a critical stance on its research object, and hence the motivation to interfere with reality (Freire, 1996). In order to increase knowledge in the field of tourism, joint work between research structures, universities and the government sphere is essential.

Tribe (2002) proposes that industry and society should be included in tourism programs. On the other hand, “tourism education should provide a learning experience for students that will enable them to work dynamically, sustainably and effectively, in line with the rapid evolution of the sector” (Liburd and Hjalager, 2010: 13). In the knowledge society, epistemological and sociocultural discrimination generates meaning, in a way that affects the nature of knowledge in education (Petrova, Smokotin, Kornienko, Ershova & Kachalov, 2015). Therefore, there is a clear need for new ways of providing and expanding the capacity to build knowledge, through education related to the tourism industry (Airey, 2008).

The integration of research structures can be a way of generating data, relevant information and new technologies for the tourism industry, which contributes to the development of the sector in several countries, not only in the economic sense, but also in terms of integrated strategies for human development and democratic participation on interventions in tourist destinations. In this sense, the academic sub-field of tourism (that destined to deal with the production of tourist knowledge) becomes a key axis in the process of institutionalization and legitimation of the tourism field as a whole.

3. METHODOLOGY

This research is based on a quantitative-qualitative methodology. Firstly, was carried out a survey of all the tourism programs in the country among the higher education institutions of Argentina. The universe was constituted by all 130 Higher Education Institutions (HEIs) registered in the Ministry of Education of Argentina website¹. The data was collected between June and July 2015, and revised in October 2015.

To demarcate the sample, the website of the 130 existing IES previously identified was accessed, with the objective of verifying if those institutions had an Educational Offer in Tourism (EOT). The sample, which was the basis for the collection

¹ Argentina (2015). Buscador de títulos oficiales por el Ministerio de Educación de la Nación. Accessed in 13th of April 2015, in the website <http://titulosoficiales.siu.edu.ar/>. The complete list of the universities found, according to data from the Ministry of Education of this country, can be accessed on Pimentel (2016a).

of empirical research, was based on the procedure developed by Pimentel and De Paula (2014)² which was constituted by two parts: the first refers to a matrix based on the central categories of research for the positioning of HEIs in the tourism field; the second was a classification matrix to codify the textual information (qualitative), compiled from the websites, in quantitative variables.

In the first part of the protocol, the categories used were:

- 1) The identification of EOT in its different levels of undergraduate and postgraduate³;
- 2) The classification of EOT in thematic areas and study emphases⁴;
- 3) The identification of the institutional position of the EOT;
- 4) The identification of Formal Structures of Research in Tourism (FSRT) connected to HEIs with EOT and its thematic areas;
- 5) The identification of existence of scientific publications related to HEIs and their thematic areas.

In the second part of the protocol, attention has been devoted to the thematic classification of the work axes in tourism, which was based on a broad review of the international literature, which generated Table 1.

Table 1 - Thematic areas for ad hoc grouping and classification of research data

Area	Area Description
1) Human and Social Sciences	Anthropology, sociology, applied sciences, education and studies on the impact of tourism relations on humanity.
2) Economics & Management	Administration, business management, production, strategic management, organizational development, marketing.
3) Entertainment & Leisure	Leisure and entertainment activities, free time, therapeutic recreation, recreation in parks.
4) Health Sciences	Quality of life, aging issues and sports activities related to tourism.
5) Events	Production of small, medium and large events that take place in any area.
6) Gastronomy	Management and organization of restaurants, A & B (food and beverage), gastronomic space, hotels and gastronomy, enotourism.
7) Hospitality	Hospitality in vacation and business. Hotel branch, hotel market strategies.
8) Patrimony	Assessment of culture, protection of cultural property – tangible and intangible. Any relationship between tourism and culture that generates recognition and appreciation of cultural elements.
9) Tourism Planning	Process of tourism planning, development of plans and projects, their execution, elaboration of sectoral plans (for the segments, companies and tourist attractions) and public policy of tourism.
10) Alternative tourism and environment	Environmental protection, environmental impacts, sustainability, tourism management with emphasis on the environment and environment; protected areas (parks, reserves, etc.) and their management, local development and local community, community-based tourism, adventure tourism, rural tourism.
11) Tourist Service	General services and tour guides.
12) Travel and tourism	Tourism agencies, sales and tourism
13) Transports	Touristic transport in general – trains, ferries, etc.
14) International tourism	International tourism, global tourism
15) General Tourism	Courses or programs that do not clearly state a thematic area.
16) Other	What could not fit into the previous categories (Innovation, casinos, e-tourism, TICs and tourism, etc.)

Source: adapted from Pimentel (2016a)

In this phase for the quantitative analysis procedure the data collected were classified, ordered and coded according to the technique of Content Analysis (Bardin, 1977), according to the protocol developed by Pimentel and De Paula (2014).

In addition, the focus was to identify the existence of the Formal Structures of Research in Tourism (FSRT)⁵ – that is, formal, collective, permanent and institutionalized structures – connected to HEIs, and therefore that represent continuous structures. Temporary, informal and generally individual projects or actions, carried out spontaneously or voluntarily by a researcher, and which does not necessarily find support, as a programmed and formal IES initiative were disregarded in this study.

As restriction of the study, it should be mentioned that, because all the data have been collected through secondary

² This research presents part of the data of a comparative research - between the countries: Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Cuba, Egypt, Ecuador, Spain, the United States, France, Greece, Italy, Japan, Mexico, New Zealand, Paraguay, Portugal, United Kingdom, Uruguay, Venezuela -, carried out in the period from 2013 to 2015, on the effects of the characteristics of the Educational Offer in Tourism in the vocational training of touristologists, linked to the impact of Existence of Formal Structures of Research in Tourism and of Scientific Journal and linked to HEIs (cf. Pimentel, 2016a). For further information, see Pimentel, T. D. y De Paula, S. C. (2014). Desenvolvimento de um protocolo de avaliação do desempenho de recursos humanos em instituições de ensino superior/IES: notas para a gestão acadêmica a partir do caso do Curso de Turismo/UFJF - Brasil. Revista Gestão Universitária na América Latina - GUAL, 7, 243-265.

³ In the EOT we have included all sort of programs, for example: undergraduate, bachelor, graduate, MBAs, master and PhD (for further information, see Pimentel y De Paula, 2014; Pimentel, 2016a).

⁴ Thematic areas are designed by Pimentel and De Paula, 2014: Social Sciences, Economics and Management, Education, Entertainment/Leisure, Sports, Events, Gastronomy, Geography, Hospitality, Cultural Heritage, Tourism Planning, Natural Resources (Environment), Tourism Service, General Tourism and Others.

⁵ For the purposes of this research, which is to identify perennial and institutionalized structures, we take as synonyms the expressions - nuclei, groups, observatories or research centers - designated by the name, in general, of Formal Structures of Tourism Research (FSRT) (Pimentel, 2016a).

sources, that is, the websites of HEIs, it has been assumed that the existing incomplete or outdated information, which is the responsibility of the IES, does not invalidate the research.

4. RESULTS

The data were systematized and presented in the sections: mapping of HEIs; educational offer in Tourism; institutional position of the educational offer; formal research structures and scientific journals.

4.1 Mapping of Higher Education Institutions in Argentina and the educational offer in tourism

The objective of this category was to identify and relate the existing higher education institutions of Argentina with the institutions that offer some type of training in tourism, in order to delimit the sample used in the empirical research, which was stratified in the other categories, evidencing, at the end the profile of the educational offer in tourism in the country.

In Argentina, 130 Higher Education Institutions (HEIs) were identified – 105 universities and 25 non-universities⁶. Regarding to the nature of these institutions 66 (50.77%) were public and 64 (49.23%) were private institutions. It was identified a sample of 61 (46.92%) HEIs that offer some kind of education training in tourism⁷, that represents an overall offer of 177 cases. Particularly, 59 (96.72%) of these HEIs are Universities while 2 (3.27%) are Non-Universities (Table 1).

In the sample of 61 IES (46.92% of HEIs in this country), 59 (96.72%) compose the University category and 2 (3.27%) are Non-Universities (institutions named as a centre and a school). Moreover, the sample of institutions with educational offer in tourism is composed of 31 (50.81%) HEIs of public nature, while 46 (75.40%) are institutions of private nature. Considering the total educational offer, the sample is distributed in 77 (43.50%) observations related to HEI of a public nature and 100 (56.49%) cases related to HEIs of a private nature (figure 1).

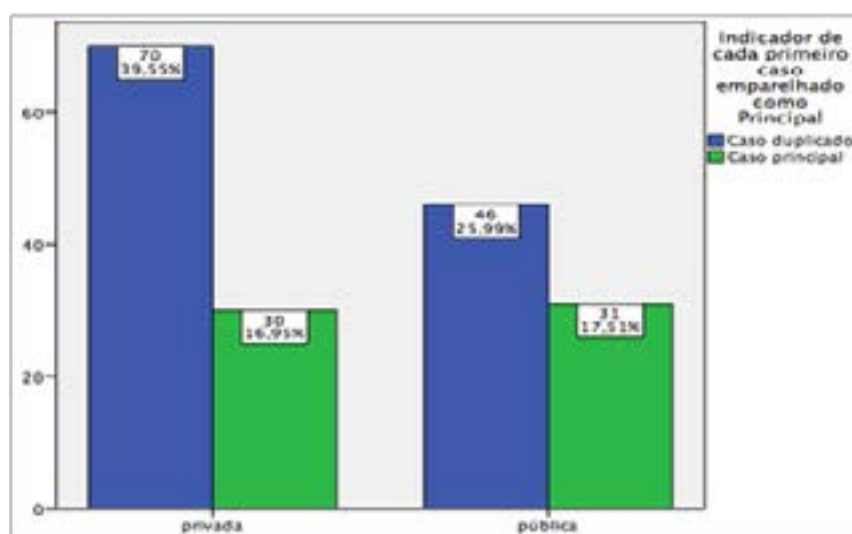
Table 1 - Type of Institution of Higher Education with Educational Offer in Tourism * Indicator of each first case paired as Principal – Cross tabulation

Count		Indicator of each first case paired as Main		Total
		Duplicate case	Main case	
Type of Institution of Higher Education with Educational Offer in Tourism	Centre	10	1	11
	School	5	1	6
	University	101	59	160
Total		116	61	177

N=177

Source: own elaboration based on the data of the investigation

Figure 1 - Nature of the institution of higher education with education offer in tourism



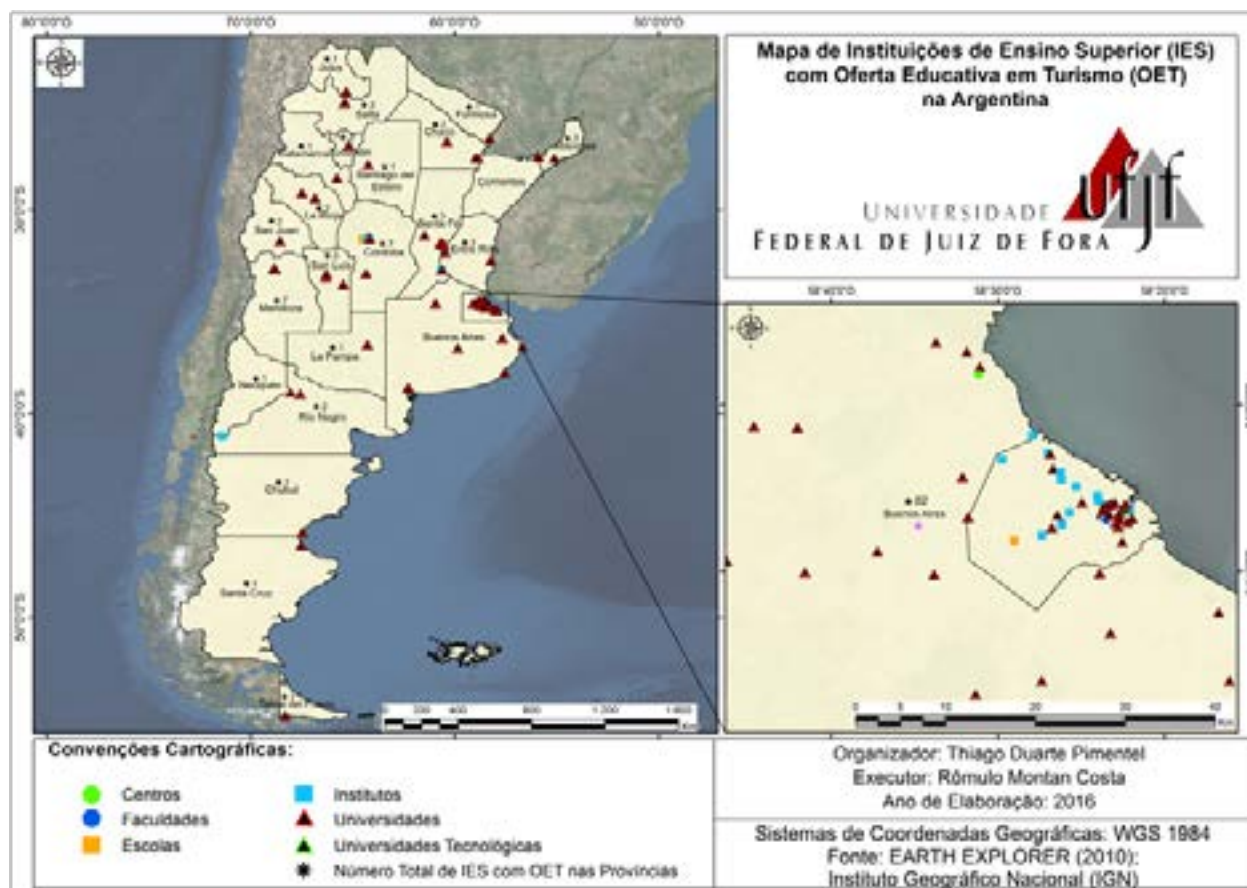
Source: own elaboration based on the data of the investigation.

⁶ Due to the assumption that universities concentrate the majority of research and knowledge production, in general, and in tourism, in particular, this analytical category was prioritized, where universities have assumed centrality in research, in relation to other types of higher education institutions (HEI). However, it is not excluded that other types of HEI, which were also considered (see Table 01), since in a future context of the research the residues of this category can be exploited, including the contribution to deepen the results of this study.

⁷ Due to the extensive nature of the survey, we also identify and discriminate in this research, as exhaustively and meticulously as possible, the courses offered according to the level (strictu et latu sensu) and the modality (eg, technical, bachelors, specialization, masters and PhD).

4.1.1 Spatial Distribution of the Educational Offer in Tourism

It is noteworthy that the HEIs are unequally distributed throughout the Argentinian territory, most of them concentrated in the central region of the country, extending through an extensive strip that cuts from the east west, from the province of Buenos Aires - where it is most concentrated, with about half of all universities - to the east, through the provinces of Entre Rios, Santa Fe, Cordoba, La Rioja, San Luis, Mendoza and San Juan, in the west of the country, on the border with Chile. It is important to emphasize that as the distance from the 30° parallel, that is, outside the aforementioned range, both to the north and the south of the country there is a diffusion of the HEIs, which seems to follow the population distribution of the country.



Specifically, it is possible to identify three areas of concentration, respectively according to the density of its concentration: 1) one in the capital, Buenos Aires, and its metropolitan region; 2) in the central region of the country, between Córdoba, Santa Fe and San Luis; and 3) in the Cordillera de los Andes region (mid-west to north), from Mendoza to Jujuy.

4.2 Characteristics of the Educational Offer in Tourism in Argentina

4.2.1 The institutional position of the tourism educational offer

In this category, it was identified what type of organizational structure of the HEI - an institute, faculty, school or department - is connected the educational offer in tourism. The objective is to verify if there is a relationship, direct or indirect, of this association to a thematic area and the type/emphasis of the educational training offered.

Thus, according to the distribution in thematic areas, it was observed that of the 177 observations, the connection to a specific unit of their organizational structure is evidenced in 155 cases (87.57%) – 9.6% no-university type of IES and 90.4% in university type of IES. The areas of Economics and Management (31.07%), Human & Social Sciences (18.08%), General Tourism (12.99%) concentrates the thematic areas of the organization structure. On the other hand, 14.12% of the observations do not have a thematic area of the organization structure (table 2).

Table 2 - Type of IES_aggregated * Thematic area of the organizational link aggregate – Cross tabulation

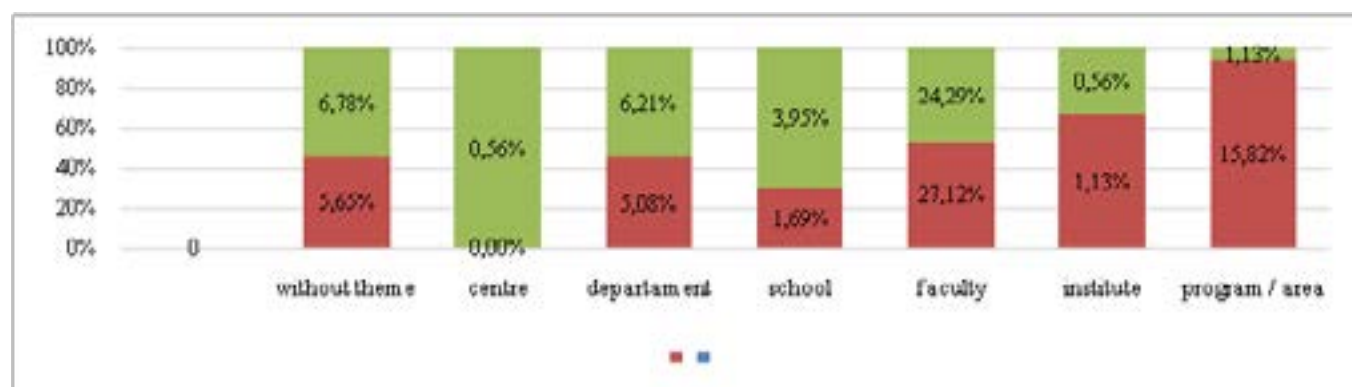
Count				
		Type of IES_aggregate *		Total
		Non-university	University	
Thematic area of the organizational link aggregate	No theme	0,00%	14,12%	14,12%
	Health Sciences	0,00%	1,69%	1,69%
	Human & Social sciences	1,69%	16,38%	18,08%
	Economy & management	0,56%	30,51%	31,07%
	Gastronomy	2,26%	0,00%	2,26%
	Hospitality	3,95%	2,26%	6,21%
	Environment	0,00%	5,65%	5,65%
	Tourism planning	0,00%	5,65%	5,65%
	General tourism	1,13%	11,86%	12,99%
	Others	0,00%	2,26%	2,26%
Total		9,60%	90,40%	100,00%

N=177

* Data converted to percentages from the original data.

Source: own elaboration based on the data of the investigation

Considering the nature of the Institution of Higher Education the cases that compose the sample are characterized by balanced distribution among the Organizational Structure that is linked to the Educational Offer in Tourism (Figure 2).

Figure 2 - Nature of the Institution of Higher Education with Educational Offer in Tourism * Type of Organizational Structure that is linked to the Educational Offer in Tourism Cross tabulation

Source: own elaboration based on the data of the investigation

Next to the characterization of HEIs are presented the data referring to the characteristics of the *Educational Offer in Tourism – EOT*, that was classified by its levels and modalities.

In the level of the EOT (technical (vocational) + undergraduate) has been identified the existence of 155 cases, which represents 87.57% of the total offer, 146 (82.48%) in face-to-face modality and 9 (5.08%) in online modality, 72 (40.67%) in the IES-type university, 6 (3.38%) in non-university institution.

In the category master courses, 6 (3.38% of the total offer in the country) cases were identified, 5 of them are of presencial attendance and 1 online, all offered in university-type HEI.

Regarding the level of specialization, 8 (4.51%) cases were identified, 6 (3.38%) in presencial mode and 2 (1.12%) in online mode, 7 (3.95%) in university-type HEIs, 1 (0.56%) in non-university institution. At the MBA level, 1 (0.56%) case was observed, in face-to-face mode and in university-type HEI.

In addition, in the category of complementary training, 7 (3.95%) cases were registered - representing 3.95% of the sample cases - all in face-to-face; 2 (1.12%) in IES of the university type and 5 (2.82%) non-university.

In table 3 is presented the data according the type of IES in relation to the level of training, both considering aggregated variables.

Table 3 - Type of IES_aggregate * Level of trainingaggregate: technical (vocational) + undergraduate, specialization + MBA, master's, doctorate and extension activities – Cross tabulation

Count		Level of training_aggregate: technical (vocational) + undergraduate, specialization + MBA, master's, doctorate and extension activities				Total
		specialization + MBA	extension activities	technical (vocational) + undergraduate	master	
Type of IES_aggregate	non-university	1	5	11	0	17
	University	8	2	144	6	160
Total		9	7	155	6	177

N=177

Source: own elaboration based on the data of the investigation

Finally, the characterization of the EOT of Argentina is presented in relation to the thematic areas of the study programs identified in the set of 177 cases (table 4).

Table 4 – Level of training aggregate: technical (vocational) + undergraduate, specialization + MBA, master's, doctorate and extension activities * Main subject area of the educational offer in tourism Cross tabulation

Count		Level of training_aggregate: technical (vocational) + undergraduate, specialization + MBA, master's, doctorate and extension activities				Total
		specialization + MBA	extension activities	technical (vocational) + undergraduate	master	
The main thematic area of the educational offer in tourism	Events	0,00%	0,00%	2,82%	0,00%	2,82%
	Health Sciences	0,00%	0,00%	0,56%	0,00%	0,56%
	Others	0,00%	0,56%	0,00%	0,00%	0,56%
	Economy & management	1,69%	0,56%	19,77%	1,69%	23,73%
	Gastronomy	0,00%	0,00%	2,26%	0,00%	2,26%
	Tourist services	0,00%	2,26%	6,78%	0,00%	9,04%
	Hospitality	0,56%	0,00%	11,30%	0,00%	11,86%
	Patrimony	0,00%	0,56%	0,00%	0,00%	0,56%
	Tourist planning	0,56%	0,00%	2,82%	1,13%	4,52%
	General tourism	0,00%	0,00%	37,85%	0,00%	37,85%
	Alternative tourism	2,26%	0,00%	2,26%	0,56%	5,08%
	Travel and tourism	0,00%	0,00%	1,13%	0,00%	1,13%
Total		5,08%	3,95%	87,57%	3,39%	100,00%

N=177

* Data converted to percentages from the original data.

Source: own elaboration based on the data of the investigation

In the 155 cases identified at technical (vocational) + undergraduate level (that represents 87,57% of the sample), 37.85% cases were notorious in the General Tourism area, 19.77% in Economics & Management, 11.3% in Hospitality, 6.78% in Tourism Services, 2.82% in Events, 2.82% in Tourism Planning, 2.26% in Gastronomy, 2.26% in Alternative Tourism, 1.13% in Travel and Tourism and 0.56% in Health Sciences.

Amongst the 9 cases of EOT of specialization + MBA level, 2.26% are in Alternative Tourism, 1.69% were identified in Economics & Management, 0.56% in Hospitality and 0.56% in Tourism Planning. In the 7 cases of EOT in extension activities 2.26% were in Tourism Services, 0.56% in Economy & Management, 0.56% in Patrimony and 0.56% in other subjects.

In the 6 EOT cases of master courses level, 1.69% were in Economics & Management, 1.13% in tourism planning and 0.56% in Alternative Tourism.

4.2.2 Thematic Areas of the emphasis of the EOT

After identifying the number of institutions of higher education that have educational offer in tourism in Argentina, the total supply - in the different levels and modalities - and the institutional position relation that they have in their HEIs, was then verified if the education offer has specific characteristics or emphasis. For example, if a bachelor's degree in tourism management has a general approach or if it has some specific orientation, as in the case of a bachelor's degree in management of natural spaces. This characterization is based on the possibility of correlating the offer to the thematic fields and their specialties, that have an impact on tourism training.

The predominant emphasis of the EOT is Hospitality (11.3%), followed by Economy & management (2.3%) and Gastronomy (1.1%). On the other hand, in 78.5% of the observations do not have any emphasis; while in 5.8% emphasis are combined into at least two areas (table 5).

Table 5 - Aggregated emphases

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Economy & management	4	2,3	2,3	2,3
	Hospitality	20	11,3	11,3	13,6
	Gastronomy	2	1,1	1,1	14,7
	Tourism services	1	,6	,6	15,3
	Health Sciences	1	,6	,6	15,8
	Tourist transport*	1	,6	,6	16,4
	hosp+gast*	1	,6	,6	16,9
	Other combination*	6	3,4	3,4	20,3
	gast+serv*	1	,6	,6	20,9
	hosp+MA*	1	,6	,6	21,5
	Without emphasis	139	78,5	78,5	100,0
	Total	177	100,0	100,0	

N=177

*Combinations with just one case were not aggregated so as to be possible comparison with other countries.

Source: own elaboration based on the data of the investigation

4.3 Existence of a Formal Structure Dedicated to Research in Tourism

Starting from questions about: 1) HEIs offering tourism courses are only dedicated to teaching; or 2) if they produce some kind of knowledge (research) in tourism and, in this case, if they produce research, this is institutionalized / formalized in the university; it was sought to raise the existence of research structures, in an institutional way in the institutions (HEI), assuming as premise the fact that this would denote a more advanced stage in terms of collaboration (networks among researchers internal to the HEI itself or between national HEIs and even foreign) and the production of scientific research, as the role of the institution on the national scene and its own recognition by the other actors in the field.

Thus, within this category, we sought to identify: a) which are the thematic areas of the research structures and which thematic areas of the courses offered; and b) if there is any relation between the production of knowledge in tourism and its dissemination through teaching, in the institution itself.

It was possible to identify the existence of 9 Formal Structures of Research in Tourism, with varied themes, which were concentrated in only 6 universities of the group of the 61 institutions analysed with some educational offer in tourism. According to our classification - described in the methodology - from these research structures 5 of them have as central theme the focus in the area of "Economy and Management", 2 has as its central axis the theme of "Tourism Planning" and 2 with the theme of General Tourism (table 6).

Table 6 - Distribution of Research Structures, by associated universities and thematic area

Thematic area	Institution	Name of the FSRT	Type (research center, group, committee ...)	Quantity / Thematic area
Economics and Management	Universidad Nacional de General San Martín	Centro de Investigación y Desarrollo del Turismo (CIDE-Tur-EEyN)	Research Center	5 (55.55%)
	Universidad Nacional de la Patagonia San Juan Bosco	Observatorio de Economía y Administración del Turismo (OBSECATUR – GETACE)	Observatory	
	Universidad de la Cuenca del Plata	Observatorio Económico y Social	Observatory	
	Universidad Nacional de Lanús	Observatorio Turístico de Argentina (Observatur)	Observatory	
	Universidade de Comahue	Centro de Estudio del Conocimiento e Innovación Empresarial Turístico (CECIET)	Research Center	
Tourism Plannig	Universidad Nacional de Lanús	Centro Internacional de Estudios sobre Turismo y Desarrollo (CIETyD)	Research Center	2 (22.22%)
	Universidad Nacional del Comahue	Centro de Estudios para la Planificación y el Desarrollo Turístico Sustentable – CEPLADES	Research Center	
General Tourism	Universidad Nacional de Mar del Plata	Centro de Investigaciones Turísticas	Research Center	2 (22.22%)
	Universidad Nacional de la Plata	Instituto de Investigaciones en Turismo	Research Institute	
TOTAL	9 RESEARCH STRUCTURES			

N=9

Source: own elaboration based on the data of the investigation

It was also identified el *Consejo de Decanos y Directores de Unidades Académicas relacionadas con la Enseñanza del Turismo (CONDET)* as a non-profit association of 14 Nacional Universities (Public management Institutions)⁸. In addition, it was identified the Center for Research and Tourist Studies (Centro de Investigaciones y Estudios Turísticos - CIET), which publishes the Journal *Estudios y Perspectivas en Turismo* and makes agreements with some HEIs, as the *Universidad Nacional de General San Martín*. Finally, mention is made of the Tourism Documentation Center of the Government of the City of Buenos Aires (Centro de Documentación Turística del Gobierno de la Ciudad de Buenos Aires), which present statistical surveys on tourism in Argentina.

In the scope of the private sector, it was found the OEA.TUR (Observatorio Económico de Agencias de Viajes de República Argentina), linked to the Argentine Federation of Associations of Travel and Tourism Companies (Federación Argentina de Asociaciones de Empresas de Viajes y Turismo – FAEVIT), which presents data on the economy of national tourism.

Therefore, the total research structures in the country counts 13 entities, the latter four are not listed in table 6 because they are not set in a HEI (methodological scope adopted as a research procedure).

4.4 Existence of Scientific Journal Publication in Tourism by IES

In the sample of the 61 Institutions of Higher Education that offer tourism courses and other entities were identified 8 periodicals (table 7). According to the methodology adopted in the research, the reports on the tourism economy published by OEA.TUR, as well as the reports of the Tourism Statistics published by the Federal Government of Argentina, and publications of CONDET, have not been counted.

Likewise, the Scientific Publication *Estudios y Perspectivas en Turismo*, published by the Center for Research and Tourist Studies (Centro de Investigaciones y Estudios Turísticos - CIET), that is not directly linked to an HEI, has not been accounted as tourism journals.

Linked to 2 (two) institutions of higher education investigated were identified interdisciplinary journals, with the acceptance of topics related to tourism. These journals were again not counted, because tourism is not the central theme of their scope. The publications are:

- 1) Revista Tiempo de Gestión (Multidisciplinary Journal of the *Facultad de Ciencia y la Gestión* of the Universidad Autónoma de Entre Ríos);
- 2) Revista FACES (Multidisciplinary Journal of the *Facultad de Ciencias Económicas y Sociales* of the *Universidad Nacional de Mar del Plata*).

⁸ Namely: 1) Universidad Nacional de la Patagonia San Juan Bosco; 2) Universidad Nacional de La Plata; 3) Universidad Nacional de Lanús; 4) Universidad Nacional de Mar del Plata; 5) Universidad Nacional de Misiones; 6) Universidad Nacional de Quilmes; 7) Universidad Nacional de Río Negro; 8) Universidad Nacional de San Juan; 9) Universidad Nacional de San Luis; 10) Universidad Nacional de San Martín; 11) Universidad Nacional del Centro de la Provincia de Buenos Aires; 12) Universidad Nacional del Comahue; 14) Universidad Nacional del Sur.

Table 7 - Distribution of the scientific journals of tourism of HEIs with Educational Offer in Tourism by the university, type and thematic area

Thematic area	Institution	Name of the journal	Type (journal ...)	Quantity / Subject Area	ISSN
Economics and Management	Universidad Nacional del Comahue	Anuario de Estudios en Turismo	Statistical Report	2 (40%)	1850-1206
	Universidad Nacional de la Plata	Notas en Turismo y Economía	Scientific Journal		1853-1504
Hospitality	Universidad de Palermo	International Journal of Safety and Security in Tourism/Hospitality (IJSSTH)	Scientific Journal	1 (20%)	2250-5105
General Tourism	Universidad Nacional del Comahue	Revista Eletrónica CECIET (Centro de Estudios del Conocimiento e Innovación Empresarial Turístico)	Scientific Journal	3 (60%)	1852-4583
	Universidad Nacional del Comahue / Condet	Realidad, Tendencias y Desafíos en Turismo	Scientific Journal		1666-1206
	Universidad Nacional de Mar del Plata	Revista APORTES Y TRANSFERENCIAS. Tiempo Libre, Turismo y Recreación	Scientific Journal		0329-2045/ 1669-8479
TOTAL	5 SCIENTIFIC JOURNALS				

N=5

Source: own elaboration based on the data of the investigation

5. DISCUSSION AND CONCLUSION

In synthesis, it was identified 177 observations composing the educational offer, divided into categories like initial education (technical and undergraduate) and post-graduation education (specialization, MBA, master, doctorate). The EOT is linked to 61 HEI in the country (46.92% of the total of HEIs), that are linked to departments in 155 cases. Additionally, we have identified that 38 cases of EOT have a specific focus or emphasis, e.g. MBA in hospitality. The EOT core is formed by the thematic areas like “General tourism” and “Economy and management”. Connected to the HEI's were found 9 FSRT, and 8 Regular Academic Journals specialized in tourism.

In Argentina 61 IES delimit the academic sub-field of tourism. This structure predominates in the provision of HEIs of a private nature (75.4%) in terms of the total EOT. Education offer is massively concentrated at the undergraduate level (81.35%) which confirms the work of the area of education and training in tourism (Airey & Tribe, 2005). Moreover, it is concentrated in the thematic area of general tourism (37.85%). On the other hand, 78.5% of all observations concerning the EOT do not have an emphasis. Bound to the Institutions of Higher Education were found 9 Research Structures, and to these Structures 8 Regular Academic Journals with publications on the subjects related to the tourism. The distribution on predominant thematic areas is reproduced in the main theme of the research structures and the existing journals.

In general, the private institutions, that offer of higher education in tourism turns to the formation of the operational and managerial levels of the tourism industry, while in the public institutions, there is a greater thematic heterogeneity and emphases in the courses, referring to the areas of Economy and management, Social Sciences, General Tourism and Hospitality. In this way, the hypothesis is confirmed that the diversity of approaches of the tourism allows the growth of a heterogeneous educational offer, that can not be linked to the general objectives of the policies of education in tourism, and to be guided by other formative profiles, with scientific objectives, practical or functional.

In summary, it was observed that higher education in tourism, in general, has specific objectives, intends to train workforce at the operational and managerial levels, guarantee a certain qualification aiming at the employability of professionals, and the quality of this sector of the economy to ensure international competitiveness, as well as fewer incidents, such as the training of teachers and public servants. Thus, the analysis of the installed educational offer allows to verify that its intention is to contribute to the objectives of tourism policies, linked to the development of tourism as a sector of the economy.

However, their contribution seems less determinant for the production of new knowledge, skills and techniques in tourism, reproducing the skills required by the tourist market, and thus compromises the feedback of the educational process, that is, it compromises the quality of the tourism research and teaching, and thus the very development of tourism in this country.

As conclusion, there is a strong asymmetry between EOT and FSRT, apart from the internal discrepancies in the EOT, as the preponderance of Initial Education programs (82.38% of the total). The absence of a more pluralistic EOT, especially in the cross-sectional areas (as in social sciences), explain the difficulty to constitute FSRT, which tend to (or should give) feedback the system, generating more qualification and specificity the academic field of tourism.

In general, the agents that make up the academic sub-field of tourism are placed in a dynamic process of interaction in the IES space. However, the agents involved in HEIs have the possibility to develop different activities - teaching (in teaching activities), extension (in projects that have the objective of directly impacting society, such as the provision of services

information or leisure activities) and research. Thus, future studies could be placed in the interaction between the production of knowledge made by the formal structures of research in tourism and how it impacts the society.

ACKNOWLEDGMENTS

Conselho Nacional de Pesquisa Científica e Tecnológica (CNPq) and Universidade Federal de Juiz de Fora (UFJF) by the grants and financial support.

REFERENCES

- Airey, D. (2008a). *Tourism education: Life begins at 40*. School of Management, University of Surrey. Recuperado de <<http://eprints.surrey.ac.uk/cgi/viewcontent.cgi?article=1039&context=tourism>> en 18 de Octubre, 2015.
- Airey, D. (2008b). Crescimento e desenvolvimento, En *Educação Internacional em Turismo* (Org) Airey, D. y Tribe, J. São Paulo: SENAC.
- Airey, D. y Johnson, S. (1998). *The profile of Tourism Studies Degree Courses in the UK: 97/98*. Guideline (7). London: National Liaison Group for Higher Education, NGL.
- Airey, D. y Tribe, J. (2005). *An International Handbook of Tourism Education*. Oxford: Elsevier.
- Airey, D. y Tribe, J. (2008) *Educação Internacional em Turismo*. São Paulo: Editora SENAC.
- Airey, David (2016). Tourism Education: past, present and future, *The Business of Tourism*, n 17, pp. 9-12.
- Airey, David (2015). 40 years of tourism studies – a remarkable story. pp. 6-15. <<http://dx.doi.org/10.1080/02508281.2015.1007633>>.
- Ayikoru, M., Tribe, J., Airey, D. (2009). Reading Tourism Education: neoliberalism Unveiled. *Annals of Tourism Research*, v. 36, n. 2, pp. 191-221.
- Bardin, L. (1977) *Análise do conteúdo*. Lisboa: Edições 70.
- Barretto, M. (1995) *Manual de Iniciação ao Estudo do Turismo*. Campinas: Papirus. (Coleção Turismo).
- Belhassen, Y. & Caton, K. (2011) On the need for critical pedagogy in tourism education. *Tourism Management*, 32, 1389-1396.
- Bourdieu, P. (1998). *Escritos de educação*. Petrópolis: Vozes.
- Burneo, P., & Guerrero, E. (2016). Propuesta de un Modelo Educativo para la Formación del Talento Humano en Turismo en América Latina. *Revista Latino-Americana de Turismologia/RELAT*, Juiz de Fora (Brasil), 1(2), 30-41. Recuperado de <<https://rlaturismologia.ufjf.emnuvens.com.br/rlaturismologia/article/view/51/21>>
- Buckley, W. (1970). *A sociologia e a moderna teoria dos sistemas*. São Paulo: Editora Cultrix.
- Burne, S. M. A.; Rodríguez, L. A. A.; Hermoso, F. J. R. (2016). Turismo e Investigación. *Revista Latino Americana de Turismologia/RELAT*, Universidade Federal de Juiz de Fora (Brasil), 2(2), 18-24.
- Busby, G. (2001) Vocationalism in Higher Level Tourism Courses: the British perspective. *Journal of Further and Higher Education*, 25(1), 29-43.
- Butler, R. W. (1999) Understanding Tourism. En Jackson, E. L. y Burton, T. L. (Eds.), *Leisure Studies: prospects or the twenty-first century*. State College, PA: Venture. pp. 97-116
- Chalar, L., & Campodonico, R. (2014). Matriz Científica En Turismo; Una Propuesta Integradora. *Anais Brasileiros de Estudos Turísticos - ABET*, Juiz de Fora (Brasil), 4(3), 9-17. Recuperado de <<https://abet.ufjf.emnuvens.com.br/abet/article/view/2864/2197>>.
- Dencker, A. F. M. (2006) Estado e Educação no Brasil: o caso do ensino de Turismo. En: *Anais do Intercom 2006 – XXIX Congresso Brasileiro de Ciências da Comunicação*, Brasília.
- Hoerner, J-M. y Sicart, C. S. (2001). *La science du tourisme: précis franco-anglais de tourismologie*. (Edition bilingue, collection «Homo Turisticus»). Paris: Balzac Press.
- Hudson, S. (2005) Chapter 16. International Tourism Education. North America. En Airey, D. y Tribe, J. *An International Handbook of Tourism Education*. University of Surrey, U.K.
- Hudson, S. (2008) América do Norte, em Educação Internacional En *Educação Internacional em Turismo* (Org) Airey, D. y Tribe, J. São Paulo: SENAC.
- Inui, Y., Wheeler, D. y Lankford, S. (2006) Rethinking Tourism Education: What Should Schools Teach? *Journal of Hospitality, Leisure, Sport and Tourism Education*. 5(2), 25-35. [DOI:10.3794/johlste.52.122]
- Jafari, J. (2005a). La científicación del turismo. En: *Contribuciones a la Economía*, julio. Texto completo en <http://www.eumed.net/ce/>

- Jafari, J. (2005b). El turismo como disciplina científica. *Política y Sociedad*, Norteamérica, 42, sep. Recuperado de <<http://revistas.ucm.es/index.php/POSO/article/view/24139>> en 14 jul. 2016.
- Jafari, J. (1988). The Tourist System: Sociocultural Models for Theoretical and Practical Applications. *Loisir et Société / Society and Leisure*, 11(1).
- Jiménez, C. N. (2012). La triada turística: tres elementos sustentables para la construcción del conocimiento turístico. *Anais Brasileiros de Estudos Turísticos - ABET*, Juiz de Fora (Brasil), 2(2), 13-19. Recuperado de <<https://abet.ufjf.emnuvens.com.br/abet/article/view/2158/1544>>.
- Leal, S. y Padilha, M. A. (2005) Chapert 9. International Tourism Education. Brazil and Latin America. In: Airey, D. y Tribe, J. *An International Handbook of Tourism Education*. University of Surrey, U.K. pp. 123-131.
- Leal, S. y Padilha, M. A. (2008). Brasil e América Latina, En *Educação Internacional em Turismo* (Org) Airey, D. y Tribe, J. São Paulo: SENAC.
- Liburd, J., y Hjalager, A. M. (2010). Changing approaches towards open education, innovation and research in tourism. *Journal of Hospitality and Tourism Management*, 17, 12-20.
- Morgan, M. (2004) From Production Line to Drama School: Higher Education for the Future of tourism. *International Journal of Contemporary Hospitality Management*, 16(2), 91-99.
- Petrova, G. I., Smokotin, V. M., Kornienko, A. A., Ershova, I. A., y Kachalov, N. A. (2015). Knowledge management as a strategy for the administration of education in the Research University. *Procedia - Social and Behavioral Sciences*, 166, 451-455.
- Pimentel, T. D. (2016a). *Mapeamento dos Centros de Pesquisa e da Oferta Educacional de Cursos de Turismo no Brasil e no Exterior: notas preliminares para delimitação do campo turístico mundial*. Informe de Investigación. Conselho Nacional de Desenvolvimento Científico e Tecnológico/CNPq e Pró-reitoria de Pesquisa da Universidade Federal de Juiz de Fora/PROPESQ-UFJF, Minas Gerais (MG), Brasil.
- Pimentel, T. (2016b). Distribución de la Oferta Educativa (OET) y de las Estructuras Formales de Investigación en Turismo (EFIT) en México. *Revista Latino-Americana de Turismologia/RELAT*, Juiz de Fora (Brasil), 2(2), 25-48. Recuperado de <<https://rlaturismologia.ufjf.emnuvens.com.br/rlaturismologia/article/view/68/45>>.
- Pimentel, T. D. y De Paula, S. C. (2014). Desenvolvimento de um protocolo de avaliação do desempenho de recursos humanos em instituições de ensino superior/IES: notas para a gestão acadêmica a partir do caso do Curso de Turismo/UFJF - Brasil. *Revista Gestão Universitária na América Latina - GUAL*, 7, 243-265.
- Tribe, J. (1997) The Indiscipline of Tourism, em *Annals of Tourism Research*, 24 (3), pp. 638-657.
- Tribe, J. (2002). The philosophic practitioner. *Annals of Tourism Research*, 29(2), 338-357.
- Tribe, J. (2005). Overview of Research. En Airey, D.; Tribe, J. (Eds.), *An international handbook of tourism education* Oxford: Elsevier. pp. 26-43.
- Tribe, J. (2008a). Turismo conhecimento e currículo, En *Educação Internacional em Turismo* (Org) Airey, D. y Tribe, J. São Paulo: SENAC.
- Tribe, J. (2008b). Panorama da pesquisa sobre educação, em Turismo, En *Educação Internacional em Turismo* (Org) Airey, D. y Tribe, J. São Paulo: SENAC.
- Tribe, J. (2010). Tribes, territories and networks in the tourism academy. *Annals of Tourism Research*, 37(1), 7-33.
- Weber, M. (1978 [1968]). *Economy and Society*. Berkeley: University of California Press.

PARALLEL SESSION II

RÉGIMEN DE RESPONSABILIDAD EN LA CONTRATACIÓN DE VIAJES VINCULADOS

Alfredo Batuecas Caletrío
 Universidad de Salamanca
 (batu@usal.es)

RESUMEN

Finalmente, después de un largo tiempo de espera, se ha aprobado la nueva directiva relativa a los viajes combinados y a los servicios de viaje vinculados.

Una de las principales novedades que introduce la Directiva es la relativa a la regulación de los llamados “viajes vinculados”, hasta hace poco tiempo denominados “paquetes dinámicos de turismo”. Este trabajo se centra en analizar una cuestión muy concreta de la contratación de este tipo de viajes, cual es el régimen de responsabilidad aplicable a su contratación. Antes de abordar la cuestión del régimen de responsabilidad se presenta como necesario estudiar los sujetos que participan en la contratación de este tipo de viajes.

Palabras Clave: Directiva de Viajes Combinados, Viajes Vinculados, Sujetos, Régimen Jurídico de Responsabilidad.

1. INTRODUCCIÓN

El Diario Oficial de la Unión Europea publicó el 11 de noviembre de 2015 la Directiva (UE) 2015/2302 del Parlamento Europeo y del Consejo de 25 de noviembre de 2015 relativa a los viajes combinados y a los servicios de viaje vinculados (en adelante, DVC)¹.

La necesidad de esta nueva DVC se justificaba en la propia realidad existente en torno a la contratación de servicios turísticos y en las respuestas que demandaba este mercado en particular. Así, por ejemplo, resultado de la incorporación de las nuevas tecnologías a los canales de venta de servicios turísticos, de unos años a esta parte se han extendido a gran velocidad nuevas formas de contratar este tipo de servicios². Estas nuevas formas de contratación constituían antes de la aprobación de la Directiva constituían una laguna legal en el Derecho comunitario y en los ordenamientos jurídicos de los diferentes Estados miembros. En este sentido, frente a la contratación de servicios turísticos sueltos y viajes combinados, modalidades éstas de contratación de servicios turísticos extendidas y generalizadas en los últimos décadas, de unos años a esta parte se han implantado nuevas modalidades de contratación, como la consistente en que el propio viajero contrataba dos o más servicios de viaje para el mismo viaje o vacación (p. ej. vuelo + hotel), de tal modo que cada servicio de viaje encontraba justificación en el resto de los contratados. El surgimiento de estos nuevos canales de contratación de servicios turísticos son muestra de un mercado turístico que ha convergido hacia un mayor dinamismo, consecuencia directa de que cada vez sean más los viajeros que contratan personalmente los servicios turísticos a través de la página web del empresario que los presta (a diferencia de lo que ocurría hasta hace poco tiempo donde la mayoría de los viajeros se servía de agencias de viajes para realizar la contratación)³. Es por ello que uno de los objetos que se propone alcanzar la Directiva sea adaptar el alcance de la protección para tener en cuenta esta evolución, junto con aumentar la transparencia y la seguridad jurídica de los viajeros y empresarios⁴.

Dicho lo anterior, la incorporación de las nuevas tecnologías a los procesos de contratación de servicios turísticos no ha sido la única causa que ha motivado la aprobación de esta Directiva, sino que han confluído otras de distinta naturaleza a la tecnológica, como la de lograr una mayor protección financiera para los viajeros frente a las declaraciones de insolvencia de algunas compañías aéreas (y que suponía para aquellos que no pudieran llevar a cabo su viaje), situación ésta que se ha conocido en diversos países miembros de la Unión Europea en los últimos años.

¹ Directiva (UE) 2015/2302 del Parlamento Europeo y del Consejo, de 25 de noviembre de 2015, relativa a los viajes combinados y a los servicios de viaje vinculados, por la que se modifican el Reglamento (CE) n° 2006/2004 y la Directiva 2011/83/UE del Parlamento Europeo y del Consejo y por la que se deroga la Directiva 90/314/CEE del Consejo. El plazo máximo de transposición es el 1 de enero de 2018.

² Las nuevas tecnologías ofrecen indudables ventajas, tanto a los empresarios que ofertan servicios turísticos, como a los viajeros que los contratan. Entre las ventajas que ofrecen para los empresarios pueden citarse la reducción de costes que supone la operativa a través de las mismas, el acceso a un mayor número de destinatarios de forma rápida, la flexibilización de precios y poder comercializar productos en forma de “ofertas de última hora”, como vuelos o reservas de habitación de hotel. Por su parte, entre las ventajas que ofrece para el viajero destacan poder acceder a una mayor cantidad de información en tiempo real y comparar precios, personalizar los productos a la medida de sus necesidades, obtener precios más ventajosos y hacer la contratación más cómoda. Frente a lo anterior urge apuntar que la implantación de las nuevas tecnologías no ha estado exenta de obstáculos, como el que representa salvar la desconfianza que (aún hoy, aunque en menor medida) todavía despierta en un buen número de personas y su coste para los empresarios (advirtiéndose que exige la adquisición de equipos informáticos y la formación del personal en su uso). Aún con estos inconvenientes, los resultados finales muestran que la figura del info-shopper (persona que utiliza Internet únicamente para informarse, pero no para contratar) se está viendo sustituido por el viajero que, además de utilizar Internet para informarse, contrata los servicios turísticos a través de Internet.

³ Los dos factores que, en nuestra opinión, han contribuido en mayor medida a que el mercado turístico se haya vuelto más dinámico han sido la comercialización de estos servicios a través de Internet y la aparición de compañías aéreas de bajo coste que han ofrecido productos a precios más asequibles. Sobre la incidencia que ha ejercido Internet en la comercialización de servicios turísticos véase Paniza Fullana, A. “Nuevas tecnologías aplicadas al turismo y sus consecuencias jurídicas: los paquetes dinámicos”, en Paquetes dinámicos de turismo: problemas y soluciones jurídicas desde una perspectiva internacional (Dir. Paniza Fullana). Madrid: Ed. Dykinson, 2014, pp. 13 y ss. y RIBEIRO CAFÉ, A. “Paquetes dinámicos y la transposición de la Directiva de servicios en Portugal (desde el punto de vista de los empresarios de turismo)”, en Paquetes dinámicos de turismo: problemas y soluciones jurídicas desde una perspectiva internacional (Dir. Paniza Fullana). Madrid: Ed. Dykinson, 2014, p. 93. De este último trabajo destaca la visión que ofrece el autor sobre el estado de la cuestión en Portugal.

⁴ Vid. Considerando n° 1 de la DVC.

Existiendo necesidad, como se indica, de esta nueva Directiva, y habiendo cumplido el legislador comunitario con la labor de elaborarla y aprobarla, algunas cuestiones finalmente contenidas en el nuevo régimen jurídico aplicable a la contratación de servicios turísticos están siendo contestadas desde un principio por parte de la doctrina, como la de que se haya dejado libertad a los Estados miembros para decidir si el régimen de responsabilidad en la contratación de viajes combinados debe ser solidario entre el organizador del viaje y la agencia de viajes que finalmente lo vende o debe recaer exclusivamente en el organizador del viaje⁵; la de la regulación jurídica otorgada a los viajes vinculados o la de que el régimen jurídico que en ella se contiene no haya eliminado algunas ambigüedades, ni haya superado lagunas existentes en la normativa anterior.

En la nueva DVC se parte de la idea de que en los últimos tiempos se ha consolidado una nueva forma de contratar servicios turísticos, conocida como “viajes vinculados”, consistente en la contratación de al menos dos o más tipos diferentes de servicios de viaje para el mismo viaje o vacación, celebrando contratos distintos con cada uno de los prestadores de servicios de viaje, si un empresario facilita: a) con ocasión de una única visita o contacto con su punto de venta, la selección y pago por separado de cada servicio de viaje por parte de los viajeros, o b) de manera específica, la contratación con otro empresario de como mínimo un servicio de viaje adicional siempre que se celebre un contrato con ese otro empresario a más tardar 24 horas después de la confirmación de la reserva del primer servicio (art. 3.5 DVC). De este modo, se estará ante un viaje vinculado cada que el viajero contrate en una agencia de viajes un billete de tren y una habitación de hotel o cuando habiendo reservado una habitación de hotel, y sin que hayan transcurrido 24 horas desde que se hizo la reserva, el viajero contrata por mediación del hotel un vehículo con alguna de las compañías que presta este servicio.

La combinación de servicios turísticos que se realiza en el viaje vinculado y el modo de combinarlos es distinto del que acontece en el viaje combinado, ya que en el viaje combinado la labor del empresario se limita a “*facilitar la contratación* de servicios turísticos”, lo que justifica que el régimen jurídico de aquél sea distinto del de este último⁶. Es por esta razón que en el Considerando noveno de la DVC se indica que “en aras de la transparencia, los viajes combinados deben distinguirse de los servicios de viaje vinculados, en los que los empresarios facilitan de manera presencial o en línea a los viajeros la contratación de servicios de viaje, llevándoles a celebrar contratos con distintos prestadores de servicios de viaje, inclusive mediante procesos de reserva conectados, que no presentan las características de los viajes combinados y a los que no sería apropiado imponer todas las obligaciones exigibles a estos últimos”.

Aunque, conforme al estado actual de la regulación, nada impide que un viaje vinculado pueda contratarse de modo tradicional, esto es, personándose el viajero en una agencia de viajes y contratando los diferentes servicios de viaje a través de la misma (o, como se acaba de exponer en el ejemplo anterior, que a través de un hotel —u otro empresario— se adquiera un servicio diferente al que presta), sin embargo la realidad dicta que la mayoría de los viajes vinculados se contratan electrónicamente, siendo su ejemplo tipo el de la contratación a través de una compañía aérea de un billete de avión y una reserva hotelera o el alquiler de un vehículo. La incorporación de las nuevas tecnologías en la contratación de servicios turísticos está propiciando lo que algunos expertos denominan “desintermediación” del sector o, lo que es lo mismo, la desaparición de las agencias de viaje intermediarias entre el turista y el proveedor del servicio⁷.

Siendo conscientes de la existencia (justificada) de críticas a la Directiva de viajes combinados, en este trabajo abordaremos la que consideramos una de las novedades más significativas que ofrece esta nueva norma, que es la relativa al régimen jurídico de responsabilidad en la contratación de viajes vinculados que en ella se contiene. A nuestro modo de ver, este régimen jurídico constituye una importante novedad por un doble motivo: por una parte, por su aprobación en sí misma considerada, ya que nada había antes que él sobre este materia; por otra parte, por las soluciones concretas que ofrece, aunque no carentes de dudas, eso sí, como se verá inmediatamente después.

2. SUJETOS QUE PARTICIPAN EN LA CONTRATACIÓN DEL VIAJE VINCULADO

2.1 El viajero

A diferencia de la Directiva 90/314/CEE, en la que se utilizó el término “consumidor”, en la nueva Directiva a la persona que contrata el viaje vinculado se le denomina “viajero”, lo que, ya de inicio, viene a constituir una notable diferencia entre uno y otro texto legal⁸.

Atendiendo a ello, estará protegido por la Directiva, en primer lugar, todo particular que contrate un servicio de viaje, entendiendo por tal cualquier persona que, ajena a una actividad profesional o empresarial, realice la contratación. De este modo, queda amparado por la Directiva el supuesto más común de contratación de servicios turísticos que acontece en la práctica, que es el del viajero que une a su consideración la de consumidor y que contrata los servicios turísticos para un viaje

⁵ Reproduciéndose con ello en esta nueva Directiva los mismos errores que ya se advirtieron en la antigua Directiva 90/314/CEE del Consejo, de 13 de junio de 1990, relativa a los viajes combinados, las vacaciones combinadas y los circuitos combinados (DO L 158, de 23 de junio de 1990, p. 59). Esta Directiva dejó un amplio margen de apreciación a los Estados miembros para su transposición, razón por la cual han subsistido divergencias significativas entre las distintas legislaciones. La fragmentación jurídica se ha traducido en mayores costes para las empresas y obstáculos para los empresarios que desarrollado actividades transfronterizas, limitando de este modo las opciones de los consumidores. Según se expone en el Considerando sexto de la DVC, “Las disparidades entre las normas de protección de los viajeros en los distintos Estados miembros son un factor disuasorio para que los viajeros de un Estado miembro contraten viajes combinados y servicios de viaje vinculados en otro Estado miembro y, del mismo modo, un factor disuasorio para que los organizadores y los minoristas de un Estado miembro vendan tales servicios en otro Estado miembro”.

⁶ Los viajes vinculados deben distinguirse de los viajes que los viajeros reservan de manera autónoma, a menudo en diferentes momentos, aunque se destinen a un mismo viaje o vacación. Deben distinguirse, asimismo, de sitios web a los que se accede mediante un enlace cuya finalidad no es la celebración de un contrato con el viajero, y de los enlaces a través de los cuales simplemente se informa a los viajeros sobre otros servicios de viaje de modo general, por ejemplo cuando un hotel o el organizador de un acontecimiento incluye en su sitio web una lista de todos los empresarios que ofrecen servicios de transporte a su establecimiento con independencia de cualquier reserva, o si se utilizan “cookies” o metadatos para insertar publicidad en sitios web. En los viajes vinculados el empresario “facilitador” del mismo ayuda a contratar servicios de viaje distintos con prestadores de servicios individuales, lo que exige cierta labor de organización en la contratación. Esta labor de facilitación suele basarse en una relación comercial remunerada entre el empresario que facilita la contratación y el empresario prestador del servicio.

⁷ Vid. PÉREZ PÉREZ, M.; MARTÍNEZ SÁNCHEZ, A.; ABELLA GARCÉS, S. “El sector turístico y el comercio electrónico”, en Boletín Económico de ICE, n° 2733, pp. 34 y ss.

⁸ Directiva 90/314/CE del Consejo, de 13 de junio de 1990, relativa a los viajes combinados, las vacaciones combinadas y los circuitos combinados (DO L 158 DE 23.6.1990, p. 59). Con respecto a los sujetos que participan en la contratación de un “paquete dinámico de turismo” vid. (Ferrer Tapia, 2014).

de ocio. Es natural que esto sea así, al ser la contratación de servicios turísticos realizada por consumidores las más frecuente en la práctica.

Junto a lo anterior, el uso intencionado del término “viajero” extiende la protección de la Directiva a otros supuestos distintos del consumidor, permitiendo que reciban protección igualmente los representantes de pequeñas empresas o profesionales que, por motivos relacionados con su negocio o profesión, realicen la contratación de servicios turísticos a través de los mismos canales de reserva que los consumidores. Hemos de entender esto en el sentido de que para el legislador comunitario este tipo de profesionales merecen un nivel de protección similar al de los consumidores, si la reserva del viaje la han realizado a través de los mismos canales que los consumidores. El profesional al que protege la Directiva es el de la pequeña empresa, no así a los de las empresas u organizaciones que contratan los servicios de viaje en el marco de un convenio general celebrado entre su empresa u organización y un empresario para múltiples fórmulas de viaje y para un tiempo específico. Ello es así porque quienes contratan bajo este tipo de fórmulas de viaje no requieren el mismo nivel de protección que los consumidores, si se atiende al alto poder negociador que tienen las empresas u organizaciones que acuerdan este tipo de convenios generales. En orden a ello, la Directiva resultará de aplicación a los viajeros de negocios, incluidos los que ejercen profesiones liberales o trabajadores autónomos, en la medida en que no organicen sus viajes sobre la base de un convenio general suscrito por su empresa.

2.2 El empresario “facilitador”

La segunda persona que interviene en la contratación del viaje vinculado es el empresario que facilita al viajero poder contratar dos o más servicios turísticos para el mismo viaje o vacación, el que permite (o da a conocer) al viajero la posibilidad de poder hacerlo. La Directiva se refiere repetidamente a él como empresario “facilitador” del viaje vinculado, para distinguirlo del prestador final del servicio, y su intervención se limita a facilitar esa contratación con los prestadores de los servicios turísticos, que será, como se verá más adelante, con quienes finalmente contrate el viajero⁹. En la práctica, en la mayoría de las ocasiones, estos empresarios serán compañías aéreas y agencias de viaje y, en menor medida, hoteles, compañías dedicadas al alquiler de vehículos u otros empresarios de distinta naturaleza (como los que ofrecen espectáculos).

Como ya se ha apuntado, su labor consiste en facilitar con ocasión de una única visita o contacto con su punto de venta la selección y pago por separado de dos o más servicios de viaje por parte de los viajeros; o, de manera específica, la contratación con otro empresario de como mínimo un servicio de viaje adicional, siempre que se celebre un contrato con ese otro empresario a más tardar 24 horas después de la confirmación de la reserva del primer servicio de viaje.

Lo que diferencia a esta clase de empresarios de otros que también pueden aparecer cuando se contratan servicios turísticos (por ejemplo, portales web que simplemente ofrecen información o metabuscadores) es que ellos han desplegado una labor organizativa que permite la contratación. Esta labor se ve, en el caso de las agencias de viajes, en que contratan en nombre del viajero y le entrega los contratos y, en los casos en los que la contratación se realiza a través de la página web de algún empresario, en que no se limita a ofrecer información, sino que permite contratar (no es lo mismo que la página web de un hotel ofrezca información sobre compañías de alquiler de vehículos a que permita su contratación). En este sentido, cuando la contratación del servicio turístico se realice por medios electrónicos, el viajero deberá poner especial atención en diferenciar al empresario que efectivamente presta servicios turísticos de esos otros operadores como son los mencionados portales web o metabuscadores que, actuando también en el ámbito del sector turístico, sin embargo, su función es diferente a la prestación de servicios turísticos y a los que, por lo tanto, no les resulta de aplicación el régimen jurídico de la Directiva¹⁰.

La labor que desempeña el empresario facilitador de la contratación de los servicios turísticos obedece a una relación comercial remunerada (basada, por ejemplo, en el volumen de ventas o en el número de “clics”) con los prestadores finales de los servicios de viaje.

Nada impide que este empresario sea, además, prestador de alguno de los servicios turísticos contratados (que es lo que ocurre, por ejemplo, cada vez que se adquiere un billete de avión y se reserva de una habitación de hotel a través de la página web de la compañía aérea). La concurrencia en el empresario del desempeño de estas dos funciones (facilitador del viaje vinculado y prestador de alguno de los servicios turísticos) impone que deba observar una especial diligencia de información hacia el viajero, a fin de evitar que éste pueda incurrir en errores en la contratación. Esta diligencia de información todavía será mayor cuando la contratación se realice electrónicamente, ya que, en estos casos, el empresario no desempeña dos funciones, sino tres (facilitador del viaje vinculado, prestador de servicio turístico y prestador de servicios de la sociedad de la información). Una contratación transparente que permita al viajero tener claro en todo momento con quién está contratando exigirá que el empresario proporcione correctamente la información requerida por el artículo 10 LSSI, que evite técnicas como el enmarcado de contenidos ajenos dentro de páginas web propias y que tenga accesibles las condiciones de uso de sus páginas web (y que son distintas en sí mismas de las condiciones generales de contratación aplicables a los servicios que

⁹ Vid. art. 3.5., 3.7, 19.1, 19.2, 19.3 o 23.1 DVC.

¹⁰ La denominación de “portal de viajes” está muy extendida en la actualidad, casi desnaturalizada, aplicándose por defecto a cualquier página en la que se ofrecen servicios relacionados con el turismo, desde su contratación directa a la mera búsqueda de ofertas.

Sobre este tipo de operadores vid. BENITO ROSER, M. T. “La agencia de viajes virtual”, en Turismo y comercio electrónico. La promoción y contratación on line de servicios turísticos. Granada: Ed. Comares, 2001, pp. 125-151; FERRER TAPIA, ob. cit., pp. 40 y ss.; y TUR FAÚNDEZ, M. N. “Portales y guías on line”, en Turismo y comercio electrónico. La promoción y contratación on line de servicios turísticos. Granada: Ed. Comares, 2001, pp. 165-170.

Por su parte, los metabuscadores son comparadores de precios y representan una evolución en el concepto del habitual “buscador” incluido en portales o en las páginas de las agencias de viaje, para constituirse en un modelo de negocio diferenciado. Suponen la aplicación al ámbito turístico de una herramienta de búsqueda de información en otros motores de búsqueda y en las propias bases de datos de agencias de viaje y proveedores, de manera que, conforme a los criterios establecidos por el usuario, le presentan un listado de resultados que puede ser objeto de diferentes ordenaciones, siendo la más popular la que tiene por criterio el precio (de ahí que en muchas ocasiones se presenten como “comparadores de precios”). Lo relevante es que el objeto principal de su actividad es dicha labor de búsqueda y presentación, remitiendo luego al usuario a las páginas de los proveedores de cada servicio para su concreta contratación.

Los metabuscadores o comparadores, por lo tanto, no prestan propiamente servicios turísticos; de hecho, y si funcionan únicamente como tales, ni siquiera son auténticos intermediarios desde el punto de vista jurídico (como pueden serlo las agencias o las centrales de reservas), aunque sí puedan serlo desde el punto de vista tecnológico (en cuanto proveedores de enlaces, cuya actividad quedaría sujeta a la LSSI —incluida la responsabilidad por los posibles ilícitos realizados por terceros a cuyas páginas remitan sus resultados—, art. 17 LSSI).

se adquirieran en cada caso)¹¹.

2.3 El prestador del servicio

El último de los sujetos que interviene en la contratación de viajes vinculados es el empresario prestador del servicio turístico. El prestador del servicio es la contraparte del viajero en la contratación y es deseo claro del legislador que el viajero sea informado sobre este extremo, al imponer expresamente en el artículo 19.2.a DVC al empresario facilitador del viaje vinculado una obligación de informar al viajero acerca de que cada prestador de servicios es el único responsable de la correcta prestación contractual de su servicio. Si la contratación de viajes vinculados se realiza por medio de una agencia de viajes, son empresarios que prestan servicios de viaje, por ejemplo, las compañías aéreas cuyo billete de avión se ha adquirido, los hoteles cuya habitación se ha reservado o las compañías de alquiler de vehículos cuyo automóvil se ha alquilado.

A semejanza de lo que se ha expuesto anteriormente para empresario facilitador del viaje vinculado, cuando la contratación con el prestador del servicio turístico se realice electrónicamente, además de prestador de servicios turísticos este empresario será prestador de servicios de la sociedad de la información, por lo que le resultará de aplicación lo allí mantenido referido al cumplimiento de los deberes de información que impone la LSSI y conductas propias de buenas prácticas comerciales.

Con la opción elegida por el legislador europeo de hacer responsable del incumplimiento del servicio turístico únicamente al prestador del mismo se despejan todas las dudas que pudieran existir relativas a si la responsabilidad por esta causa debía ser solidaria entre el empresario que presta el servicio y el que facilitó la contratación, descartando tal posibilidad.

3. RÉGIMEN DE RESPONSABILIDAD

Como ya se dijo al inicio del trabajo, el régimen de responsabilidad aplicable a la contratación de viajes vinculados es una de las cuestiones que ha motivado la elaboración de esta nueva Directiva, especialmente la responsabilidad que deriva de la insolvencia de las compañías aéreas cuando han sido ellas las que han facilitado la contratación del viaje vinculado.

El debate más importante que han generado los viajes vinculados en los últimos años ha girado en torno a si el régimen de responsabilidad que le resultara de aplicación debía ser igual al que el TRLGDCU contempla para los viajes combinados o si, en orden a la diferente naturaleza de esta clase de viajes con respecto a los combinados, los viajes vinculados debían quedar sujetos un régimen de responsabilidad diferente. Como podrá comprobarse inmediatamente, la nueva Directiva pone fin al debate, al mismo tiempo que llena el vacío normativo existente hasta ahora, al facilitar un nuevo régimen jurídico que evita ambigüedades.

El régimen de responsabilidad de los viajes vinculados se concentra en los artículo 19 y 21 DVC, distinguiéndose entre la responsabilidad que deriva del incumplimiento de alguna de las prestaciones que componen el viaje vinculado, la que se origina por la insolvencia del empresario que facilitó la contratación del viaje vinculado (ambas recogidas en el art. 19) y la proveniente de un error en la reserva (art. 21).

Con respecto a la responsabilidad que deriva del incumplimiento de alguna de las prestaciones que conforman el viaje vinculado, ésta se recoge en el artículo 19.2.a DVC, haciendo único responsable de los incumplimientos al prestador encargado de prestar el servicio (“...el empresario que facilita viajes vinculados...facilitará de forma clara, comprensible y destacada... que cada prestador de servicios será el único responsable de la correcta prestación contractual de su servicio”). Así, por ejemplo, si el viajero contrata un viaje vinculado a través de una agencia de viajes o de la página web de una compañía aérea consistente en la adquisición de un billete de avión y el alquiler de un vehículo y, llegado el día, la compañía de alquiler de vehículos no le facilita ninguno, el viajero deberá ejercitar la acción de responsabilidad nacida del incumplimiento contractual contra la compañía de alquiler de vehículos (y no frente a la agencia de viajes o la compañía aérea que le hayan facilitado vincular los servicios). Y, viceversa, ante un incumplimiento del viajero, el prestador del servicio turístico no podrá dirigirse frente al empresario que facilitó la contratación exigiéndole responsabilidad, sino que dicha responsabilidad únicamente podrá ser exigida al viajero.

Con una norma como ésta, la Directiva evita que se reproduzcan para los viajes vinculados los mismos debates (y se generen las mismas inseguridades jurídicas) que con la antigua Directiva se propiciaron para los viajes combinados ante el incumplimiento de algún servicio de viaje, a raíz de que en el marco de la anterior Directiva se dejara libertad a los estados miembros para que establecieran el régimen de responsabilidad que mejor se adaptaba a su Ordenamiento jurídico, y que terminó ocasionando que, mientras que para unos países la responsabilidad fuera solidaria entre el organizador del viaje y el minorista, para otros fuera exclusiva del organizador. Además de ello, al hacer responsable del incumplimiento al prestador del servicio, la Directiva se está posicionando indirectamente con respecto al tema de la naturaleza jurídica de los viajes vinculados y la relación que guardan con los viajes combinados, concediéndole un trato diferente a uno y otro.

Aunque en la Directiva no se contemplan causas de exoneración de responsabilidad para el prestador, éste no deberá responder cuando la causa del incumplimiento sea imputable al viajero, ni cuando el incumplimiento, como en cualquier otro ámbito del Derecho, sea debido a caso fortuito (art. 1105 CC).

La solución que impone la Directiva exonera de responsabilidad a los empresarios que facilitan la contratación de los viajes vinculados, salvo en aquellos supuestos en los que, además de facilitar la contratación del viaje vinculado, presten alguno servicio de viaje de los contratados y sea ése el servicio que se ha incumplido, ya que si ello acontece responderán como prestadores del servicio.

El segundo gran ámbito de responsabilidad que aborda la Directiva es la que deriva del incumplimiento de la prestación de

¹¹ Las buenas prácticas imponen igualmente que el empresario desarrolle políticas de privacidad, de tratamiento de datos personales y de envíos de comunicaciones comerciales correctas, cuestiones éstas exceden el ámbito del presente estudio.

alguno de los servicios de viaje contratados pero a consecuencia de la insolvencia del empresario que facilita la contratación del viaje vinculado (art. 19.2.b).

En el párrafo 1 del artículo 19 se señala que el empresario que facilite servicios de viaje vinculados deberá constituir una garantía para el reembolso de todos los pagos que reciban de los viajeros, en la medida en que un servicio de viaje que forme parte de un viaje vinculado no se ejecute como consecuencia de su insolvencia (la del empresario). Si dicho empresario es, además, responsable del transporte del viajero, la garantía cubrirá también la repatriación de estos.

Aunque, en principio, pueda pensarse que el supuesto aquí recogido está dirigido al caso de la compañía aérea que, a consecuencia de incurrir en insolvencia, impide que se preste alguno de los servicios turísticos contratados para el viaje vinculado (supuesto éste que, como venimos diciendo, ha ejercido una gran influencia en la elaboración de la nueva Directiva de viajes combinados), el alcance de la Directiva es mucho mayor y llega a cualquier empresario que oferta viajes vinculados (sea o no una compañía aérea). El artículo regula el supuesto en que un servicio de los contratados en el viaje vinculado (transporte aéreo, reserva hotelera o alquiler de vehículo) no puede prestarse a consecuencia de la insolvencia del empresario que facilitó la contratación del viaje vinculado, habiendo sido ya pagado al empresario que deviene insolvente. La causa que origina la no prestación del servicio deberá ser la insolvencia del empresario que facilita la contratación del viaje vinculado y en la práctica la negativa a ejecutar el servicio vendrá dada porque el prestador del servicio alegará no haber recibido el pago del servicio de parte del empresario a través del cual se contrató el viaje vinculado. Cuando ello ocurra, el viajero podrá recuperar las cantidades entregadas al empresario mediante la ejecución de una garantía que se le obliga a constituir a éste último como requisito previo al inicio de la actividad de comercialización de viajes vinculados.

Si bien la redacción del artículo no es clara y el término “empresario” con el que finaliza la primera frase del párrafo pudiera hacer dudar si alude a aquél que facilita la contratación del viaje vinculado o al prestador final del servicio, en nuestra opinión debe entenderse referida al primero de ellos. En este sentido, una redacción menos dudosa que la vigente “Los Estados miembros velarán por que los empresarios que faciliten servicios de viaje vinculados constituyan una garantía para el reembolso de todos los pagos que reciban de los viajeros, en la medida en que un servicio de viaje que forme parte de unos servicios de viaje vinculados no se ejecute como consecuencia de la insolvencia del empresario” hubiera sido “Los Estados miembros velarán por que los empresarios que faciliten servicios de viaje vinculados constituyan una garantía para el reembolso de todos los pagos que reciban de los viajeros, en la medida en que un servicio de viaje que forme parte de unos servicios de viaje vinculados no se ejecute como consecuencia de su insolvencia”.

Varios son las razones que nos llevan a pensar de esta manera: en primer lugar, el Considerando 43 DVC, en el que se establece que los empresarios que faciliten servicios de viaje vinculados están obligados a prestar protección frente a la insolvencia para la devolución de los pagos que perciban de los viajeros y, en la medida en que sean responsables del transporte de pasajeros, para la repatriación de estos. En segundo lugar, la versión inglesa de la Directiva, en la que se dice literalmente “of their insolvency”. Y, en tercer lugar, los trabajos preparatorios y debates surgidos durante la tramitación de la norma en los que se especifica que “...el objetivo es garantizar que, al comprar un servicio de viajes conexo, el viajero esté protegido en caso de insolvencia del operador que lo facilita”. Una interpretación distinta a ésta, además, sería contraria al texto de la norma, ya que en el articulado de la Directiva el legislador utiliza comúnmente el término “empresario” para referirse a aquél que facilita la contratación y “prestador del servicio” a quien efectivamente presta los servicios. Esta interpretación, por último, guarda coherencia con lo estipulado para el viaje combinado, en el que la insolvencia está referida al organizador del viaje, y no a los prestadores de los servicios. Debe tenerse en cuenta al interpretar este artículo que el supuesto que principalmente quiere cubrir el legislador comunitario con el precepto, recordemos una vez más, es el del viajero que, a causa de la insolvencia de la compañía aérea de la que ha adquirido un billete de avión, no puede disfrutar de los servicios de viaje contratados (por ejemplo, una reserva hotelera). Lógicamente, tal y como está redactado, no se limitará únicamente a aquellos casos en los que el facilitador del viaje vinculado sea una compañía aérea, sino que resultará de aplicación a todos los facilitadores de los viajes vinculados, sean compañías aéreas, hoteles, compañías de alquiler de vehículos u otros.

Debe entenderse que la garantía cubre al viajero exclusivamente frente a la insolvencia del empresario facilitador de la contratación y no de la insolvencia de los prestadores finales de los servicios de viaje, al haber cambiado la redacción en este punto con respecto a documentos preparatorios y haberse eliminado la mención a los proveedores de los servicios.

La Directiva exige la constitución de una garantía a todo empresario que ofrezca viajes vinculados, con independencia de la clase de empresario de que se trate (agencia de viaje, compañía aérea, hotel, etc.) y, por lo tanto, con independencia también de que el empresario opere en el mercado con el título de agencia o no, atendiendo de este modo a una vieja reivindicación que venían haciendo pública las agencias de viaje. En tal sentido, las agencias de viaje han venido denunciando durante los últimos años un ejercicio de competencia desleal por parte de las compañías aéreas que comercializaban lo que estos años pasados se han venido denominando “paquetes dinámicos de turismo”, fundamentando su protesta en que las compañías aéreas estaban comercializando este tipo de productos sin tener licencia de agencia de viajes (las agencias de viaje son las únicas que pueden comercializar viajes combinados) y sin haber constituido previamente la garantía a la que sí están obligados ellas.

Aunque la Directiva no especifica qué clase de garantía es la que deben prestar los empresarios, lo más razonable es que ésta se constituya por medio de un seguro obligatorio o de un aval bancario, en correspondencia con lo que ocurre para los viajes combinados. Estimamos que, cuando la garantía deba cubrir también la repatriación de los viajeros, no será necesario el otorgamiento de dos garantías diferentes por parte del empresario, una que cubra de la insolvencia y otra de la repatriación de los viajeros, sino que bastará con una única que cubra los dos riesgos.

Por aplicación del artículo 17.2 DVC, al que se remite el artículo 19, la garantía deberá cubrir los costes que sean previsibles de manera razonable, alcanzando los importes de los pagos realizados por los viajeros o en su nombre en relación con viajes vinculados, teniendo en cuenta la duración del período comprendido entre los pagos y la terminación de los viajes vinculados, así como el coste estimado de las repatriaciones en caso de insolvencia del organizador.

Además, el modo en que se hará efectiva esta garantía (se “activará”, dice la Directiva) varía según que se recurra a ella para cubrir la repatriación de los viajeros o el reembolso de pagos efectuados. Atendiendo al tenor literal del párrafo cuarto del artículo 17 (y por contraposición a lo que se indica en el párrafo quinto, en el que se exige expresamente a la previa solicitud del viajero), en caso de repatriación la garantía se hará efectiva de modo automático, esto es, sin necesidad de un previo requerimiento o solicitud por parte del viajero. En este caso, además, la repatriación será gratuita para el viajero y, si fuera necesario, el alojamiento previo a la repatriación también (hasta tres días). A diferencia de lo anterior, y como se señala en el párrafo quinto del mismo artículo 17, la garantía cubrirá el reembolso de los pagos sólo si previamente así lo solicita el viajero, sin demora indebida.

Conviene recordar nuevamente que resultado de que el artículo 148.18 CE atribuya a las Comunidades Autónomas la competencia de “promoción y ordenación del turismo en su ámbito territorial”, los Estatutos de Autonomía de un buen número de Comunidades Autónomas han asumido tal competencia, regulando distintos aspectos de la actividad turística y tomando igualmente tareas de control, inspección y sanción. Es por ello que en lo relativo a la comercialización de los viajes vinculados serán las Comunidades Autónomas las competentes para perseguir, desde el punto de vista administrativo, las conductas contrarias a la normativa turística, dentro de las cuales debe incluirse el no otorgamiento de la garantía que exige la comercialización de viajes vinculados o cualquier otra que atente contra los derechos de los consumidores, sean éstos reconocidos en su propia normativa o en la estatal de referencia (p. ej., el TRLGDCU).

De esta manera, cuando la comercialización de los viajes vinculados se produzca a través de Internet, esté dirigida a consumidores situados en su territorio, y dado que los contratos electrónicos, ex artículo 29 LSSI, se presumen celebrados en el lugar de residencia habitual del consumidor, cualquier Comunidad Autónoma podrá imponer sanciones, si bien la identificación y calificación de las infracciones en los oportunos expedientes deberán referirse exclusivamente a las tipificadas en su propia normativa, así como cuantificar las sanciones sólo en función de los criterios que afecten a los consumidores de su territorio.

El último ámbito de responsabilidad es el proveniente de un error en la reserva, regulado en el artículo 21 DVC. Según dicho artículo, el empresario será responsable de los daños y perjuicios que se ocasionen al viajero y que sean debidos errores en el sistema de reservas acaecidos por defectos técnicos que le sean atribuibles al empresario. El ejemplo típico será aquél en el que el viajero se presenta en la recepción del hotel y le comunican que no existe ninguna habitación reservada a su nombre, o en el mostrador de la compañía aérea y su billete no es válido.

Bajo nuestro punto de vista, aunque el legislador comunitario no hubiera dedicado un artículo a regular esta cuestión, el empresario respondería igualmente de los daños y perjuicios que su ejecución defectuosa le ocasionara al viajero, en virtud de la relación de mandato que, como ya se ha apuntado, le vincula al viajero (art. 1718.1 CC). Por aplicación del artículo 1726 CC, el empresario responderá no solamente del dolo sino también de la culpa, sabiendo que el mero retraso en el cumplimiento del mandato por parte del empresario no origina por sí mismo responsabilidad, sino por los daños que el retraso efectivamente le produzca al viajero y siempre que el empresario haya actuado con culpa transgrediendo sus deberes de conducta.

Eso sí, el empresario no será responsable de los errores en la reserva cuando dichos errores sean atribuibles al viajero, que es lo que ocurriría, por ejemplo, si el viajero introduce datos erróneos en la reserva de hotel que está realizando a través de la página web de una aerolínea y dan como resultado la reserva de una habitación distinta a la deseada. De igual modo, tampoco lo sería cuando los errores se deban a circunstancias inevitables y extraordinarias.

BIBLIOGRAFÍA

- Álvarez Caperochipi, J. A.: “Comentario al artículo 1726”, en *Jurisprudencia civil comentada* (Dir. Pasquau Liaño), T. II. Granada: Editorial Comares, 2000.
- Aparicio Vaquero, J.p. y Batuecas Caletro, A. “Régimen de responsabilidad en la prestación de servicios turísticos contratados como paquetes dinámicos de turismo”, en *Paquetes dinámicos: problemas y soluciones jurídicas desde una perspectiva internacional* (Dir. Paniza Fullana). Madrid: Ed. Dykinson, 2014.
- Aurioles Martín, A. *Introducción al Derecho Turístico. Derecho privado del Turismo*. Madrid: Editorial Tecnos, 2005.
- Benito Roser, M. T.: “La agencia de viajes virtual”, en *Turismo y comercio electrónico. La promoción y contratación “on line” de servicios turísticos*, Granada: Ed. Comares, 2001.
- Camacho De Los Ríos, F. J. y Espigares Huete, J. C. “Un apunte sobre el derecho de desistimiento y protección de los consumidores en los contratos turísticos: el caso de los contratos de viajes combinados”, en *Aspectos jurídico-mercantiles del turismo*, (Coord. Aurioles Martín), Barcelona: Editorial Atelier, 2003.
- Cavanillas Múgica, S., en AA.VV., *Turismo y comercio electrónico. La promoción y contratación on line de servicios turísticos*. Granada: Editorial Comares, Colección: Derecho de la Sociedad de la Información, 2001.
- “Nuevas formas de promoción y contratación de servicios turísticos en Internet”, en *Nuevas fórmulas de comercialización on line de servicios turísticos: subsunción en los tipos legales y distribución de responsabilidad* (Dir. Paniza Fullana). Granada: Ed. Comares, 2013.
- “El Real Decreto Legislativo 1/2007, por el que se aprueba el Texto Refundido de la Ley General para la Defensa de los Consumidores y Usuarios y otras leyes complementarias”, en *Aranzadi Civil*, núm. 1/2008.

- De Almeida Vidal, J.C. “La responsabilidad de las empresas turísticas frente a la problemática de los paquetes dinámicos: el caso de Portugal”, en *Paquetes dinámicos de turismo: problemas y soluciones jurídicas desde una perspectiva internacional* (Dir. Paniza Fullana). Madrid: Ed. Dykinson, 2014.
- De La Haza Díaz, P.: *El contrato de viaje combinado. La responsabilidad de las agencias de viaje*. Madrid: Editorial Marcial Pons, 1997.
- Feliu Álvarez de Sotomayor, S. “Determinación de la ley aplicable a los contratos internacionales de paquetes dinámicos”, en *Paquetes dinámicos de turismo: problemas y soluciones jurídicas desde una perspectiva internacional* (Dir. Paniza Fullana). Madrid: Ed. Dykinson, 2014.
- Ferrer Tapia, B. *El contrato de transporte aéreo de pasajeros: sujetos, estatuto y responsabilidad*. Madrid: Ed. Dykinson, 2013.
- “Aspectos subjetivos de los paquetes dinámicos. La situación del consumidor”, en *Paquetes dinámicos de turismo: problemas y soluciones jurídicas desde una perspectiva internacional* (Dir. Paniza Fullana). Madrid: Ed. Dykinson, 2014.
- García Rubio, M^a P.: *La responsabilidad contractual de las agencias de viaje*. Madrid: Ed. Montecorvo, 1999.
- García Vicente, J. R.: “La contratación con consumidores”, en Bercovitz Rodríguez-Cano (Director): *Tratado de Contratos*, t. IV. Valencia: Editorial Tirant lo Blanch, 2009.
- Gómez Calle, E. *El contrato de viaje combinado*. Madrid: Editorial Civitas, 1998.
- “Comentarios al Libro IV. Viajes combinados (arts. 150 a 165)”, en *Comentarios a las normas de protección de los consumidores* (Dir. Cámara Lapuente). Madrid: Editorial Colex, 2011.
- “En torno a una posible revisión del régimen del viaje combinado”, en *La revisión de las normas europeas y nacionales de protección de los consumidores. Más allá de la Directiva sobre derechos de los consumidores y del instrumento opcional sobre un Derecho europeo de la compraventa de octubre de 2011* (Dir. Cámara Lapuente). Pamplona: Editorial Thomson Reuters, 2012.
- González Fernández, M^a. B.: “¿Nueva regulación de los viajes combinados?”. En *Revista de Derecho Mercantil*, n^o 269, 2008.
- Lasarte Álvarez, J. L.: “Contratos turísticos, protección del viajero y Ley 7/1998, de 13 de abril, sobre condiciones generales de la contratación”, en *Derecho y Turismo. I y II Jornadas de Derecho Turístico: Málaga 1998-1999*. Sevilla: Editorial Junta de Andalucía, 1999.
- Márquez Lobillo, P. “El consumidor en la contratación electrónica de servicios turísticos”, en *Revista de Derecho Mercantil*, n^o 282, 2011.
- Martín Osantes, J. M.: “Informe, contenido y modificación de los contratos de servicios turísticos”, *Diario La Ley*, n^o 7315, de 7 de enero de 2010.
- Martínez Espín, P.: “Contrato de viaje combinado (artículo 150 a 165 TRLGDCU)”, en <http://www.uclm.es/centro/cesco/pdf/comentarios/3.pdf>.
- Moralejo Imbernón, N.: “Comentario al artículo 160 TRLGDCU”, en Bercovitz Rodríguez-Cano (Coordinador): *Comentario del Texto refundido de la Ley general para la defensa de los consumidores y usuarios y otras leyes complementarias*, Cizur Menor: Ed. Aranzadi, 2009.
- Orduño Baeza, M^a. T.: “La regulación de los viajes combinados por el TRLGDCU: novedades más significativas en la protección del consumidor turístico”, en *Práctica de Tribunales*, n^o 63, septiembre, 2009.
- Paniza Fullana, A. “Nuevas tecnologías aplicadas al turismo y sus consecuencias jurídicas: los paquetes dinámicos”, en *Paquetes dinámicos de turismo: problemas y soluciones jurídicas desde una perspectiva internacional* (Dir. Paniza Fullana). Madrid: Ed. Dykinson, 2014.
- “La protección del adquirente a distancia de servicios turísticos”, en *Revista de Derecho Privado*, n^o 2 (marzo-abril 2012).
- Pérez Pérez, M.; Martínez Sánchez, A.; Abella Garcés, S.: “El sector turístico y el comercio electrónico”, en *Boletín Económico de ICE*, n^o 2733.
- Ribeiro Café, A. “Paquetes dinámicos y la transposición de la Directiva de servicios en Portugal (desde el punto de vista de los empresarios de turismo)”, en *Paquetes dinámicos de turismo: problemas y soluciones jurídicas desde una perspectiva internacional* (Dir. Paniza Fullana). Madrid: Ed. Dykinson, 2014.
- Soler Valdés-Bango, A.: *El contrato de viaje combinado*. Editorial Aranzadi, Pamplona, 2005.
- Torres Lana, J. A. “La protección del turista en el ámbito jurídico privado”, AA.VV., en *La protección del turista como consumidor*. Valencia: Ed. Tirant lo Blanc, 2003.
- Tur Faúndez, M^a. N. “Portales y guías on line”, en *Turismo y comercio electrónico. La promoción y contratación on line de servicios turísticos*. Granada: Ed. Comares, 2001.

¿QUO VADIS DERECHO TURÍSTICO DE LA UNIÓN EUROPEA? A PROPÓSITO DE LAS COMPETENCIAS NORMATIVAS DE LAS REGIONES DEL ESTADO ESPAÑOL

Humberto Gosálbez Pequeño
Universidad de Córdoba
(ad1gopeh@uco.es)

M^a Teresa Acosta Penco

ABSTRACT

The law of the European Union refers to tourism as a Community matter, but there is no Community Tourism Law; only some rules governing certain parts, matters or sectors close to Tourism: protection of the environment, protection of consumers and users, liberalization of business activity ... In Spain the State legislates these matters, but also the Regions legislate; in fact the Regions, and not the State, are the competent organisms to approve Tourism Laws.

1. INTRODUCCIÓN

El Turismo se ha consolidado como una actividad económica de gran importancia en la Unión Europea (en adelante UE), con repercusiones muy positivas en factores trascendentales para los Estados miembros como el crecimiento económico y el empleo¹. Por otra parte, como bien apunta FERNÁNDEZ DE GATTA SÁNCHEZ (2012, p. 1), también debe destacarse la consideración del turismo como actividad indispensable para la vida personal de los ciudadanos europeos, su cultura y el refuerzo de la imagen de la Unión Europea y sus valores.

Reconocida por las distintas Instituciones de la Unión Europea, por los Estados miembros y por la doctrina en la materia la importancia del turismo en la UE, cabe esperar una consolidada política turística con la correspondiente asunción de competencias por parte de la organización internacional. Sin embargo, a continuación, se expondrá el particular entendimiento de este sector en la Unión Europea y su regulación desde un punto de vista horizontal o transversal frente a la esperada “Política Europea en materia de Turismo”, la cual brilla por su ausencia.

2. LA AUSENCIA DE UNA POLÍTICA EUROPEA EN MATERIA DE TURISMO

2.1 Falta de reconocimiento en del Derecho originario

Tal y como se refleja en el art.1 párr. primero del TUE, el fundamento de las competencias de la Unión Europea reside en la atribución que hacen los Estados miembros a favor de la UE por medio de los Tratados constitutivos con vistas a lograr los objetivos establecidos por aquéllos en dichos Tratados². Por lo tanto, y como explica Mangas Martín (2014, p. 69), “la Unión no tiene competencias propias u originarias”³ sino que derivan de “quienes son titulares [por razón de su soberanía] y las conservan: los Estados miembros”.

Constatada la importancia que tiene el turismo como actividad económica en la Unión Europea llama la atención el hecho de que, desde los Tratados Fundacionales de la UE, no ha habido ninguna referencia explícita a este sector hasta el Tratado de Lisboa, excepto una aislada disposición en el Tratado de Maastricht que analizaremos con posterioridad. Por lo tanto, como señala Villanueva Cuevas (2012, p. 59), en los orígenes de las Comunidades Europeas, las escasas argumentaciones a favor de la existencia de una política europea en el sector turístico las encontramos únicamente en actos de las instituciones como la Resolución del Consejo de 10 de abril de 1984, relativa a la política comunitaria de turismo, o los documentos de la Comisión “Primeras orientaciones para una política comunitaria del Turismo”⁴ y su documento anejo “La Comunidad Europea del Turismo”. Dichos actos tienen como denominador común que utilizaban el art.2 del Tratado de Roma para dotar de un fundamento jurídico a la incipiente “política europea del sector turístico”⁵.

Como se ha señalado, el primer paso para la adopción de una política comunitaria en materia de turismo se intentó dar en la Conferencia Intergubernamental previa al Tratado de Maastricht, sin embargo los resultados defraudaron las expectativas ya que solo en la letra t) del art.3 del Tratado Constitutivo de la Unión Europea (TUE) se reconoció la posibilidad de adoptar

¹ Según Soave (2016) “El turismo contribuye al producto interior bruto (PIB) y al empleo a razón de un 5% y un 5,2%, respectivamente, de la población activa. Si se tienen en cuenta los estrechos vínculos con otros sectores económicos, esta contribución es aún más elevada”.

² Como nos recuerda Salinas de Frías (2015, p.60) fue la Corte Internacional de Justicia la que en 1949, en el dictamen relativo a la reparación de daños sufridos al servicio de las Naciones Unidas, afirmó que está establecido en Derecho Internacional que “el principio base sobre el que actúa una Organización Internacional a la hora de ejercer los poderes o competencias de los que dispone es el llamado principio de atribución de competencias”.

³ De hecho, en los Tratados queda reflejado en tres momentos distintos que toda competencia no atribuida a la Unión en los Tratados constitutivos corresponderá a los Estados miembros: arts. 4.1 y 5.2 TUE y Declaración n°8 aneja a la CIG que adoptó el Tratado de Lisboa.

⁴ DOCE 115/1984, de 30.4.1984, serie C.

⁵ En virtud del Art.2 del Tratado de Roma la Comunidad Europea tenía como misión promover un desarrollo armonioso de las actividades económicas en el conjunto de la Comunidad y una expansión continua y equilibrada de la misma, así como lograr relaciones más estrechas entre los Estados que la integran.

medidas a favor del turismo⁶. El problema fue que se aplazó la transformación de esa “acción comunitaria” a una “política” *strictu sensu* a la siguiente Conferencia Intergubernamental que debía desarrollarse en 1996. Sin embargo ninguna referencia al turismo hubo en el Tratado de Ámsterdam, firmado en octubre de 1997.

Esta falta de mención al turismo en el mencionado Tratado fue premonitory de la no aprobación, por parte del Consejo, en noviembre de 1997 del Primer Programa plurianual a favor del turismo europeo “Philoxenia” (1997-2000) propuesto por la Comisión Europea⁷. Por todo ello deducimos que el Libro Verde de la Comisión sobre “El papel de la Unión Europea en materia de Turismo”⁸, en la que se destacaba la aportación positiva y el valor añadido que podía suponer una política comunitaria en materia turística, no caló en el Consejo, de ahí su postura en el Tratado de Maastricht y el rechazo al Programa Philoxenia.

2.2 Las razones que han motivado la ausencia: el principio de subsidiariedad

Llegados a este punto cabe preguntarse el por qué de la actitud reticente del Consejo, y por ende de los Estados miembros, para reconocer la existencia de una política europea en materia de turismo en el siglo XX. Al respecto debemos mencionar que ya en 1984 la Comisión reconoció que no se debía “ir demasiado lejos en la coordinación de las políticas nacionales [en materia de turismo], puesto que cada una de ellas se adaptaba a las situaciones particulares muy distintas de los Estados miembros, ni intentar resolver los problemas que se resuelven mejor a nivel nacional o incluso regional”⁹. Coincidimos con Villanueva Cuevas (2012, p. 74) en que esta noción primigenia en la actuación comunitaria en el sector turístico “no es más que el reflejo de la aplicación del principio de subsidiariedad a dicho sector, en cuanto que este indica que las decisiones que afecten al ciudadano se deben tomar en el nivel más cercano al mismo”¹⁰.

Como bien señala Fernández de Gatta Sánchez (2012, p. 11), tras el “no” del Consejo al programa Philoxenia y a la inclusión en el Tratado de Ámsterdam, “el Turismo se encontraba a nivel comunitario en una encrucijada que no se despejaría hasta el Tratado de Lisboa”. No obstante, se mantuvieron las esperanzas para su inclusión en los Tratados como política con actuaciones institucionales como el Dictamen del Comité Económico y Social sobre “La política Europea del Turismo”¹¹, la creación por parte de la Comisión en 1998 del Grupo de Alto Nivel sobre el Turismo y el Empleo (Grupo Corsten) y, especialmente, la Comunicación “Incrementar el potencial del Turismo como generador de empleo. Seguimiento de las conclusiones y recomendaciones del Grupo de Alto Nivel sobre Turismo y Empleo”^{12, 13}.

2.3 El intento de cambio llevado a cabo mediante el Tratado de Lisboa

La falta de fundamento jurídico en los Tratados Constitutivos para articular una política común en materia de turismo hasta el Tratado de Lisboa ha generado la necesidad de buscar otros mecanismos para intervenir en dicha materia, lo que ha sido propiciado por el carácter transversal y horizontal del turismo, concepto sobre el cual profundizaremos con posterioridad.

De cualquier modo, a finales del s. XX y principios del s. XXI diversos factores como la ralentización del crecimiento de la UE como destino turístico, el crecimiento demográfico, la introducción del euro o la liberalización de los transportes dieron lugar a un cambio de estrategia respecto al turismo en la Unión Europea. En su Comunicación “Una nueva política turística europea: hacia una mayor colaboración en el turismo europeo”¹⁴, la Comisión articula una política turística nueva, coherente y coordinada gracias a la integración de diferentes medidas relacionadas con el turismo que, de forma aislada, ya tenían precedentes. Nos referimos a medidas legislativas, coordinación de políticas económicas, medidas financieras y determinados aspectos concretos de gestión y fomento.

Todos estos cambios van a verse reflejados en el Tratado de Lisboa, el cual crea la base jurídica para una política europea en materia de turismo en el Título I, artículo 6, letra d) del TFUE y en el Título XXII, artículo 195, del mismo tratado. Antes de entrar en la regulación conviene destacar que fue en el Tratado de Lisboa donde se establece, por vez primera, la clasificación que clarifica los tipos de competencias que podemos encontrar entre los Estados miembros y la Unión Europea: competencias exclusivas¹⁵, competencias compartidas¹⁶ y competencias de apoyo, coordinación y complemento. Fue precisamente en estas últimas, ámbitos donde la acción de la Unión es complementaria de la de los Estados miembros

⁶ El TUE establecía sus objetivos, los cuales debían alcanzarse mediante el establecimiento de un mercado común y de una unión económica y monetaria y mediante la realización de políticas o acciones comunes, entre ellas se incluyeron “medidas en los ámbitos de la energía, de la protección civil y el turismo”.

⁷ Propuesta de Decisión del Consejo sobre primer programa plurianual a favor del turismo europeo “Philoxenia” (1997-2000). COM (96) 168 final 30.4.1996 Bruselas DO C 222 31.7.96, p.9.

⁸ COM (95) final, Bruselas, 4.4.1995.

⁹ “Primeras orientaciones para una política comunitaria del Turismo”. DOCE 115/1984, de 30.4.1984, serie C.

¹⁰ No fue la Comisión la única institución que justificó la ausencia de una política comunitaria del turismo en el principio de subsidiariedad. En 1990, el Comité Económico y Social indicaba en su “Dictamen sobre turismo y desarrollo regional” [DOCE 332/1990, de 31.10.90, serie C, apartado 4º] que “El turismo concierne a las autoridades locales y a las empresas [...] por lo que debe aplicarse el principio de subsidiariedad”. En 1992, el Consejo entendió en su “Decisión de 13 de julio por la que aprobaba un Plan de acciones comunitarias a favor del turismo” [DOCE 421-71992, de 13.08.1992, Serie L] que las medidas que se aplicaran en desarrollo del plan de actuación aprobado debían ajustarse a determinados criterios, “en particular deberán respetar el principio de subsidiariedad”. Por último, en 1995, el Parlamento Europeo solicitó en su “Resolución sobre el Informe de la Comisión concerniente a las acciones comunitarias 2 que afectan al turismo” la inclusión en el Tratado de un título específico referido al turismo “en el respeto al principio de subsidiariedad”.

¹¹ DOCE C 138, 18.05.1999.

¹² COM (2001) 665 final, Bruselas, 13.11.2001.

¹³ Además, el ejecutivo comunitario llevó a cabo medidas como la celebración de un Foro Europeo del Turismo en 2002, la constitución de un Grupo de turismo sostenible en 2004, la creación de “Destinos Europeos de Excelencia” (EDEN) desde 2006, la adopción de una Agenda para la sostenibilidad y la competitividad del turismo europeo en 2007, la constitución de una Cuenta Satélite de Turismo (marco estadístico contable en el sector turístico que mide bienes y servicios). Para más información Vid. Augusto González Alonso (2009).

¹⁴ COM (2006) 134 final, 17 de marzo de 2006.

¹⁵ En las competencias exclusivas solo la Unión podrá legislar y adoptar actos jurídicamente vinculantes, mientras que los Estados miembros solo podrán hacerlo si la Unión los habilita para ello (Art. 2.1 TFUE).

¹⁶ En las competencias compartidas, la UE y los Estados miembros son titulares de las competencias y concurren ambos a regularlas. Sin embargo, los Estados solo ejercen su competencia su la Unión no ha ejercido la suya o ha decidido dejar de ejercerla y solo en la medida en que no lo haya hecho (conocido principio de “campo quemado”). (Art. 2.2 TFUE)

y donde queda excluida la armonización de las disposiciones legislativas y reglamentarias de los Estados miembros, donde encontró encaje el turismo (Art. 6 d) TFUE). Por su parte, el art.195 del TFUE habilita al Parlamento Europeo y al Consejo para que establezcan con arreglo al procedimiento legislativo ordinario, medidas específicas que completen la actuación de los Estados miembros en el sector turístico.

Habiéndose consolidado la base jurídica, de conformidad con la nueva regulación de los Tratados y en línea con lo acordado en la Conferencia de alto nivel y la reunión ministerial informal celebradas en Madrid los días 14 y 15 de abril de 2010, se propuso actuar sobre cuatro ejes de la nueva Política Europea de Turismo: fomentar la competitividad del sector turístico en Europa; promover el desarrollo de un turismo sostenible, responsable y de calidad; consolidar la imagen y la visibilidad de Europa como conjunto de destinos sostenibles y de calidad; y maximizar el potencial de las políticas y los instrumentos financieros de la Unión Europea para el desarrollo del turismo.

3. EL TURISMO COMO POLÍTICA TRANSVERSAL U HORIZONTAL

Pese a todos estos avances hacia la consolidación de una política europea en materia de turismo, no podemos olvidar la concepción primigenia que la UE ha mantenido y continua manteniendo en materia de turismo respecto al principio de subsidiariedad y a las competencias de los Estados miembros sobre la misma. Muestra de ello es que, salvando ciertas actuaciones institucionales, como muestran diversas Comunicaciones de la Comisión¹⁷, no se ha materializado ni se ha llevado a la práctica el art. 195 del TFUE que habilitaba al Parlamento y al Consejo para tomar medidas concretas en materia de turismo. De hecho el Consejo no ha accedido a la petición del Parlamento para crear un programa específico para el turismo en el marco de las perspectivas financieras 2014-2020.

Por todo ello, el turismo es un sector cuyo éxito depende de hacer converger diversas políticas necesarias para superar las dificultades que se plantean en una actividad que se fundamenta en la prestación privada de servicios pero que necesita de recursos, bienes e infraestructuras públicas¹⁸. En definitiva, como afirma Villanueva Cuevas (2012, p. 96) “es necesaria la coordinación del turismo con muy diversas políticas públicas que no son turísticas en su naturaleza pero que afectan y se ven afectadas por la práctica del turismo [...]. Ello pone de relieve, por un lado, la horizontalidad como característica que debe regir la relación del turismo con tales políticas públicas, y por otro lado, la transversalidad que debe identificar el tratamiento conjunto de turismo y de tales políticas públicas [...] sea cual sea el ente público con competencias en esa materia”. Es lo que ha sido definido por el Libro Verde de la Comisión en materia de turismo como “medidas indirectas”¹⁹. Con un carácter ciertamente premonitorio, la Comisión ya destacó en 1984 en la mencionada Comunicación “Política comunitaria de turismo, primeras orientaciones” “el gran número de actividades comunitarias que influyen directa o indirectamente sobre el turismo. De la libre circulación de personas a la libre prestación de servicios turísticos, hasta el desarrollo regional y la protección del medio ambiente, pasando por el transporte de viajeros [...]” y destaca la necesidad de otorgar “una dimensión turística” a las anteriores políticas comunitarias²⁰.

Como conclusión podemos decir que el carácter transversal u horizontal del turismo han caracterizado la intervención de la Unión Europea en esta materia “influyendo de manera determinante en que la misma se ha producido (...) porque ha permitido una intervención sectorial o indirecta en el turismo a través de otras políticas comunitarias con las que este tiene relación que ha sido y es la única manera de articular un marco común a nivel supranacional de aspectos esenciales para la práctica del mismo (...)” (Villanueva Cuevas, 2012, p. 100).

4. LA INFLUENCIA DE LAS COMPETENCIAS DE LA UNIÓN EN MATERIA DE LIBRE CIRCULACIÓN Y MEDIO AMBIENTE EN EL TURISMO

Como hemos podido observar existen numerosas materias, en las que la Unión tiene competencias exclusivas o compartidas, que afectan y se ven afectadas por el turismo. A continuación profundizaremos en dos de ellas que prefiguran

¹⁷ Comunicación de 19 de octubre de 2007 “Agenda para un turismo europeo sostenible y competitivo” [COM (2007) 621]; Comunicación de 30 de junio de 2010 “Europa, primer destino turístico del mundo: un nuevo marco para el turismo europeo” [COM (2010) 352]; Comunicación de 7 de noviembre de 2010 “Aplicación y desarrollo de la política común de visados como estímulo del crecimiento en la UE” [COM (2012) 649] y Comunicación de 20 de febrero de 2014 “Una estrategia europea para un mayor crecimiento y empleo en el turismo costero y marítimo” [COM (2014) 86].

¹⁸ Libro Verde de la Comisión sobre el papel de la Unión en materia de turismo, op.cit., p.15.

¹⁹ Libro Verde de la Comisión, op.cit., p.10.

²⁰ Como muestra de ello a continuación se van a enumerar (sin ánimo exhaustivo) una serie de normas y actuaciones que, siendo aprobadas con fundamento en otras competencias, tienen influencia sobre el turismo:

A) Protección de los consumidores: Directiva 2005/29/CE del Parlamento Europeo y del Consejo de 11 de mayo de 2005 relativa a las prácticas comerciales desleales de las empresas en sus relaciones con los consumidores en el mercado interior; Reglamento (CE) 2006/2004 del Parlamento Europeo y del Consejo de 27 de octubre de 2004 sobre la cooperación entre las autoridades encargadas de la aplicación de la legislación de protección de los consumidores; Directiva 2008/122/CE del Parlamento Europeo y del Consejo de 14 de enero de 2009, relativa a la protección de los consumidores con respecto a determinados aspectos de los contratos de aprovechamiento por turno de los bienes de uso turístico, de adquisición de productos vacacionales de larga duración, de reventa y de intercambio; Reglamento (UE) 1177/2010 del Parlamento Europeo y del Consejo de 24 de noviembre de 2010 sobre los derechos de los pasajeros que viajan por mar y por vías navegables y por el que se modifica el Reglamento (CE) 2006/2004; Reglamento 181/2011 del Parlamento Europeo y del Consejo de 16 de febrero de 2011 sobre los derechos de los viajeros de autobús y autocar y por el que se modifica el Reglamento CE 2006/2004; Directiva 2015/2302/UE del Parlamento Europeo y del Consejo, de 25 de noviembre, relativa a los viajes combinados y a los servicios vinculados.

B) Servicios: Directiva 2006/123/CE del Parlamento Europeo y del Consejo de 12 de diciembre de 2006, relativa a los servicios en el mercado interno, en el marco de la UE. Esta Directiva tiene una gran importancia en lo relativo al ejercicio de la actividad turística ya que la actividad reguladora de la Administración mediante la técnica de la autorización pasa a ser sustituida por la declaración responsable y comunicación previa, según establezca la ordenación turística de cada Comunidad Autónoma. Ello, junto con otras medidas contempladas relativas a la simplificación administrativa, ha contribuido a facilitar los trámites para los empresarios del sector turístico.

C) Medio ambiente: Decisión 2003/287/CE de la Comisión de 14 de abril de 2003, por la que se establecen los criterios ecológicos para la concesión de la etiqueta ecológica comunitaria a los servicios de alojamiento turístico; Directiva 2006/77/CE, de 15 de febrero de 2006 relativa a la gestión de la calidad de las aguas de baño.

D) Desarrollo regional y empleo: En lo que respecta a la contribución que hacen las políticas de desarrollo regional y empleo al turismo en la UE debemos destacar las siguientes fuentes de fondos: Fondo Europeo de Desarrollo Regional (FEDER) para la financiación de proyectos sostenibles vinculados al turismo; Fondo Social Europeo (FSE) para el empleo; Fondo Europeo Agrícola de Desarrollo Rural (FEADER) para la diversificación de la economía rural y Fondo Europeo de Pesca (FEP) para la reconversión hacia el ecoturismo.

una línea de investigación²¹ que se completa con este trabajo.

4.1 La influencia histórica y actual de la libre circulación en el turismo

4.1.1 La progresiva consagración del derecho a la libre circulación en el Derecho de la Unión y su repercusión en el turismo

El principio de libre circulación y residencia se reconoció en 1951 en el Tratado de la CECA y desde 1957 en los Tratados de Roma. Dicho principio se concretó en tres libertades parciales de circulación de naturaleza esencialmente económica: trabajadores, establecimiento y servicios. Por lo tanto, al principio de la construcción europea, solo los agentes económicos se beneficiaban de la libertad de circulación de las personas. Sin embargo, gracias a la jurisprudencia del Tribunal de Justicia de la Unión Europea (TJUE), prácticamente desde los orígenes de la Unión los turistas pudieron disfrutar del principio de libre circulación. En la reveladora STJUE de 31 de enero de 1984 *Luisi y Carbone*, tras algunas consideraciones, el TJUE concluyó (apartado 16) que “la libertad de prestación de servicios comprende la libertad de los destinatarios de servicios a desplazarse a otro Estado miembro con el fin de hacer uso del servicio sin ser obstaculizados por restricciones (...)”²².

Ya en los años 90, a iniciativa española, el Tratado de Maastricht introdujo la nueva categoría de la ciudadanía de la Unión como instrumento para “reforzar la protección de los derechos e intereses nacionales de los estados miembros”²³. En virtud de la ciudadanía de la Unión se reconoció a los particulares, entre otros, el derecho a la libertad de circulación y residencia. Por consiguiente, desde ese momento, el principio de libre circulación se convierte en un derecho de carácter general, eliminándose su naturaleza meramente económica. Este cambio tuvo una importante repercusión respecto a los turistas nacionales de los Estados miembros, ya que su derecho a desplazarse libremente ya no solo se justificaba por una construcción pretoriana del TJUE sino que estaba y está reconocido positivamente. Desde este momento, por lo tanto, los turistas nacionales de algún Estado miembro disfrutaban del principio de libre circulación no como “agentes económicos” sino como “ciudadanos de la Unión”.

Pese al reconocimiento del derecho a la libre circulación en Derecho originario lo cierto es que este no se materializaba en la práctica debido al mantenimiento de las fronteras físicas entre los Estados miembros de la Unión. Por ello, el 14 de junio de 1985 la República Federal de Alemania, Francia, Bélgica, Holanda y Luxemburgo firmaron el Acuerdo de Schengen. Su objetivo inmediato era aligerar los controles en las fronteras comunes con la finalidad de hacer desaparecer las fronteras interiores en el futuro. Tras varias reuniones ministeriales, el Convenio de aplicación del Acuerdo Schengen de 1985 (CAAS) fue suscrito definitivamente, también en Schengen, el 19 de junio de 1990. Todo ello dio lugar a un denso entramado de normas, reglamentaciones, prácticas administrativas y mecanismos operativos denominado “acervo Schengen”.

Debemos puntualizar que el CAAS (Art. 2) dispone que “Las fronteras interiores podrán cruzarse en cualquier lugar sin que se realice control alguno de las personas”. La alusión al concepto “personas” no es baladí ya que, al contrario que el Tratado de Maastricht, está reconociendo el principio de libre circulación a toda persona que se encuentre en los Estados parte del Acuerdo Schengen, independientemente de su nacionalidad, y no únicamente a los “ciudadanos de la Unión”²⁴.

Podemos deducir de todo lo anterior que, en la década de los 90 existían dos regulaciones paralelas en materia de libre circulación que afectaban a los Estados miembros de la Unión Europea, la comunitaria (escasamente desarrollada y materializada) y la derivada de los Acuerdos Schengen (la cual suponía una verdadera puesta en marcha de la eliminación de las fronteras interiores con la consiguiente unión de las exteriores). Con el Tratado de Ámsterdam, en vigor desde mayo de 1999, se pone fin a esta situación mediante una inteligente operación jurídica que incorpora el acervo Schengen a la Unión Europea a través de un Protocolo anejo al Tratado.

Desde el Tratado de Lisboa el derecho a la libre circulación se constituye como competencia compartida entre la Unión y los Estados miembros dentro del Espacio de Libertad, Seguridad y Justicia. Su regulación actual la encontramos, fundamentalmente, en dos normas de derecho derivado: la Directiva 2004/38/CE de 29 de abril de 2004 relativa al derecho de los ciudadanos de la Unión y de los miembros de sus familias a circular y residir libremente por el territorio de los Estados miembros y el Reglamento (UE) 2016/399 de 9 de marzo de 2016 por el que se establece un Código de normas de la Unión para el cruce de las personas por las fronteras (Código de Fronteras Schengen o CFS).

4.1.2 Los límites a la libre circulación en la Unión Europea y su repercusión en el turismo

A) Los límites impuestos por la Directiva 2004/38/CE

El objeto de esta directiva es triple: regula las condiciones de ejercicio del derecho de libre circulación y residencia de los ciudadanos de la UE y de los miembros de sus familias; el derecho de residencia permanente y la restricción de dichos derechos por razones de orden público, seguridad y salud pública. En lo que aquí interesa haremos mención al primer y tercer objeto.

Dado que los desplazamientos con finalidad turística no se producen por un largo periodo de tiempo, la directiva establece explícitamente (art.6) que si la estancia fuese inferior a tres meses el único requisito exigible a los ciudadanos de la Unión es la

²¹ Vid. M^a Teresa Acosta Penco (2016 y 2017)

²² STJUE de 31 de enero de 1984, *G. Luisi y HG. Carbone c. Ministerio del Tesoro*, asuntos acumulados 286/82 y 26/83. La sentencia responde a dos cuestiones prejudiciales que se suscitaron en el marco de procedimientos de impugnación promovidos por dos residentes italianos contra resoluciones del Ministerio del Tesoro por las que les fueron impuestas sanciones pecuniarias por haber adquirido diversas divisas extranjeras, con vistas a su utilización en el extranjero, por un contravalor en liras italianas de importe superior al máximo permitido por la legislación italiana, que en esa época era de 500.000 LIT por año para la exportación de divisas efectuadas por residentes con fines de turismo, de negocios, de estudios y de cuidados médicos.

²³ Artículo B del Tratado de Maastricht, firmado el 7 de febrero de 1992.

²⁴ La consecuencia más importante es que, por ejemplo, un ciudadano estadounidense que se encontrara haciendo turismo en Francia en 1996 podía cruzar la frontera a Alemania sin ningún tipo de control de acuerdo con el acervo Schengen pero no de acuerdo con la normativa comunitaria. Sin embargo, un turista italiano que se encontrara haciendo turismo en Francia en la misma fecha, podía cruzar la frontera a Alemania sin ningún tipo de control amparándose en la normativa derivada de Schengen pero también en la normativa comunitaria, como “ciudadano de la Unión”.

posesión de un documento de identidad o pasaporte válidos²⁵. Los familiares no nacionales comunitarios se beneficiarán del mismo derecho que el ciudadano del que vengan acompañados, pero se les podrá exigir un visado para residencias de breve duración. Por otra parte, la directiva establece una relación de supuestos en los que se puede restringir el derecho de entrada por razones de orden público, seguridad o salud pública. Así pues, en virtud del art. 27, cualquier medida que afecte a la libertad de circulación y de residencia debe respetar el principio de proporcionalidad y basarse exclusivamente en la conducta personal del individuo al que se aplique, de manera que solo estará justificada la expulsión o denegación de entrada cuando dicha conducta represente una amenaza real y suficientemente grave para los intereses fundamentales del Estado²⁶. Por su parte el art. 29, en relación con la salud pública, establece que “Las únicas enfermedades que podrán justificar una medida que limite la libertad de circulación serán las enfermedades con potencial epidémico como se definen en los instrumentos correspondientes de la OMS, así como otras enfermedades infecciosas o parasitarias contagiosas siempre que sean, en el país de acogida, objeto de disposiciones de protección para los nacionales”.

B) Los límites impuestos por el Código de Fronteras Schengen

Como hemos señalado anteriormente, el Espacio Schengen se caracteriza por la ausencia de fronteras interiores entre los Estados firmantes del Acuerdo y el establecimiento de unas fronteras exteriores comunes. Sin embargo, en determinadas ocasiones y bajo unas condiciones específicas, el propio Código de Fronteras Schengen permite el restablecimiento de controles fronterizos entre Estados miembros. Existen dos regímenes: el régimen general de restablecimiento de controles fronterizos por amenaza grave para el orden público o la seguridad interior de un Estado miembro y el régimen específico de restablecimiento de controles fronterizos por circunstancias excepcionales que pongan en peligro el espacio sin fronteras interiores.

El primero de ellos existe desde el Convenio de Aplicación del Acervo Schengen de 1990 y prevé el restablecimiento de controles fronterizos por motivos de seguridad y orden público para casos de acontecimientos previsibles (como la Eurocopa de Fútbol o la Cumbre Europeas e Internacionales celebradas en los Estados miembros) y para casos que requieran una actuación inmediata (como el atentado terrorista de París, que provocó el restablecimiento de controles por parte de Bélgica).

Este régimen comenzó a demostrar sus carencias para hacer frente a las oleadas de inmigrantes provenientes del norte de África desde la primavera de 2011 por lo que, a través del Reglamento (UE) 1051/2013²⁷, se configuró el régimen de restablecimiento de controles en circunstancias excepcionales en virtud del cual “Cuando el informe de evaluación elaborado según las disposiciones del Reglamento (UE) 1053/2013²⁸ muestre graves deficiencias en el control de las fronteras del Estado miembro, la Comisión podrá recomendar mediante actos de ejecución la adaptación por parte del Estado miembro de ciertas medidas específicas (...)”. Cuando las circunstancias persistan, el CFS en su art.29 establece la posibilidad, para los demás Estados miembros, de restablecer sus controles fronterizos internos por un periodo no superior a seis meses, prorrogable hasta en tres ocasiones, siempre que dichas circunstancias representen una amenaza grave (como ha ocurrido en Grecia en 2015)²⁹.

Asimismo, la nueva redacción dada al art.29.1 del CFS por parte del Reglamento (UE) 2016/1324 sobre la Guardia Europea de Fronteras y Costas³⁰, permite también el restablecimiento de controles fronterizos internos como consecuencia del incumplimiento, por parte de un Estado miembro, de la decisión del Consejo a que se refiere el art. 19.1 de este último reglamento³¹.

C) Consecuencias para el turismo de los límites impuestos al principio de libre circulación

El restablecimiento temporal de controles fronterizos supone aumentar la intensidad de los mismos en parte o la totalidad

²⁵ Además, tal y como recalco el TJUE en la Sentencia *Onlane* de 17 de febrero de 2005 “si, pese a no presentar documento de identidad o pasaporte válido, el interesado puede, no obstante acreditar inequívocamente su nacionalidad por otros medios, el Estado miembro de acogida no puede cuestionar su derecho de residencia debido únicamente a que no presentó uno u otro de los medios mencionados”.

²⁶ En este ámbito es de especial importancia la STJUE *Calfa* de 19 de enero de 1999, asunto C- 348/96. En la misma, un tribunal griego planteaba al TJUE (mediante cuestión prejudicial) si la normativa comunitaria en materia de libre circulación (Tratado y Directivas) y el principio de igualdad se oponían a una legislación, como la griega, que obligaba al juez nacional a ordenar la expulsión de por vida de un nacional de otro Estado miembro por razones de orden público y seguridad pública por el mero hecho de que dicho nacional hubiera cometido en el Estado de acogida, en el que se hallaba legalmente como turista, los delitos de adquisición de estupefacientes exclusivamente para su consumo personal, cuando la referida expulsión implicaba la imposibilidad legal de que el interesado volviera al país para ejercer las actividades previstas por el Derecho comunitario. El TJUE determinó que “únicamente puede adoptarse una medida de expulsión contra una nacional comunitaria como la Sra. Calfa si, además de infringir la Ley de estupefacientes, su comportamiento personal crea una amenaza real y suficientemente grave que afecte al interés fundamental de la sociedad” (apartado 25).

²⁷ Reglamento (UE) 1051/2013 del Parlamento Europeo y del Consejo de 22 de octubre de 2013 por el que se modifica el Reglamento (CE) no 562/2006 con el fin de establecer normas comunes relativas al restablecimiento temporal de controles fronterizos en las fronteras interiores en circunstancias excepcionales.

²⁸ Reglamento (UE) No 1053/2013 del Consejo de 7 de octubre de 2013 por el que se establece un mecanismo de evaluación y seguimiento para verificar la aplicación del acervo de Schengen, y se deroga la Decisión del Comité Ejecutivo de 16 de septiembre de 1998 relativa a la creación de una Comisión permanente de evaluación y aplicación de Schengen.

²⁹ Vid. M^a Teresa ACOSTA PENCO (2017)

³⁰ La nueva redacción del art. 29.1 del nuevo CFS queda así: “1. En circunstancias excepcionales que pongan en riesgo el funcionamiento general del espacio sin controles en las fronteras interiores como consecuencia de las deficiencias graves persistentes en los controles de las fronteras exteriores según el artículo 21 del presente Reglamento, o como consecuencia del incumplimiento por parte de un Estado miembro de la Decisión del Consejo a que se refiere el artículo 19, apartado 1, del Reglamento (UE) 2016/1624 del Parlamento Europeo y del Consejo, y en la medida en que dichas circunstancias representen una amenaza grave para el orden público o para la seguridad en el espacio sin controles en las fronteras interiores o en partes del mismo, los Estados miembros podrán restablecer los controles fronterizos interiores con arreglo al apartado 2 del presente artículo por un periodo que no supere los seis meses. Ese periodo podrá prolongarse en tres ocasiones, como máximo, por un periodo de hasta seis meses, en caso de que persistan las circunstancias excepcionales”.

³¹ Art 19 Reglamento (UE) 2016/1624: “1. Cuando el control de las fronteras exteriores se vuelva tan ineficaz que pueda poner en peligro el funcionamiento del espacio Schengen, porque:

a) un Estado miembro no tome las medidas necesarias fijadas en una decisión del consejo de administración, según lo dispuesto en el artículo 13, apartado 8, o
b) un Estado miembro que se enfrente a un reto concreto y desproporcionado en las fronteras exteriores no haya solicitado ayuda suficiente a la Agencia en virtud de los artículos 15, 17 o 18 o bien no está dando los pasos necesarios para adoptar las medidas establecidas en dichos artículos
el Consejo, a propuesta de la Comisión, podrá adoptar sin demora, mediante un acto de ejecución, una decisión en la que se fijen las medidas que deberá adoptar la Agencia al objeto de aminorar dichos riesgos y en la que se exija al Estado miembro implicado que coopere con la Agencia en su aplicación. La Comisión consultará a la Agencia antes de formular su propuesta (...).
10. Si el Estado miembro en cuestión no ejecuta la decisión del Consejo a que se refiere el apartado 1 en el plazo de 30 días y no coopera con la Agencia con arreglo a lo dispuesto en el apartado 8 del presente artículo, la Comisión podrá activar el procedimiento previsto en el art. 29 del Reglamento (UE) 2016/399.

de las fronteras interiores. La intensidad y tipo de controles dependen de la razón que provoque el restablecimiento de los controles fronterizos y el país en el que se produzcan.

Los controles (sistemáticos o aleatorios) pueden efectuarse en automóviles, trenes, ferris, barcos autobuses, puertos y aeropuertos. Los documentos requeridos pueden ir desde el documento nacional de identidad o pasaporte (para ciudadanos de la UE) y el permiso de residencia o el visado (para extracomunitarios). Igualmente se podrán consultar bases de datos para la identificación de personas, inspeccionar los equipajes, comprobar la justificación de la estancia o la suficiencia de medios de subsistencia³².

En conclusión, se pasa de la mera necesidad de portar un documento identificativo a la posibilidad de ser expuesto a un número indeterminado de controles para poder atravesar las fronteras internas de la Unión Europea. Ello sin duda tiene consecuencias importantes en los desplazamientos turísticos y su intensidad durante estos periodos en los que se restablecen los controles fronterizos.

4.2 La influencia de la Política de medio ambiente de la Unión Europea en el turismo. Un estudio jurisprudencial

Como apuntó el *Informe sobre el estado y las tendencias de los tipos de hábitats y las especies regulados por las Directivas de Aves y de Hábitats durante el período 2007-2012*³³ “el desarrollo [en Europa] en particular durante el siglo XX, ha provocado una destrucción a gran escala de la naturaleza. Entre 1900 y mediados de los ochenta, Europa ya había perdido dos terceras partes de sus humedales y casi tres cuartas partes de sus dunas y brezales, debido a una combinación de factores como el cambio de uso de la tierra, la construcción de infraestructuras, la contaminación o la expansión urbanística”. En no pocas ocasiones todos estos factores que provocan un reconocido impacto medioambiental están íntimamente relacionados con el turismo, al menos con el turismo no sostenible.³⁴

4.2.1 Rasgos fundamentales de la Política Medioambiental de la Unión Europea

La política de medio ambiente de la Unión se remonta a la cumbre de Jefes de Estado y de Gobierno celebrada en París en 1972³⁵, en el que los Jefes de Estado y de Gobierno de los Estados miembros de las Comunidades Europeas “reconocieron la necesidad de establecer una política comunitaria en materia de medio ambiente que acompañara la expansión económica [...]” (Ohliger, 2016). Con posterioridad y periódicamente, en cada una de las revisiones de los Tratados se ha ido reforzando el compromiso de la Comunidad con la protección del medio ambiente.

En la actualidad, la regulación del medio ambiente plasmada en el Derecho originario la encontramos en los artículos 11 y 191-193 del TFUE. Un análisis somero de los objetivos y principios en materia de medio ambiente recogidos en el art. 191 TFUE nos da una visión general de la política medioambiental en la UE. Este precepto establece que “La política de la Unión en el ámbito del medio ambiente contribuirá a alcanzar los siguientes objetivos: la conservación, la protección y la mejora de la calidad del medio ambiente; la protección de la salud de las personas; la utilización prudente y racional de los recursos naturales; el fomento de medidas a escala internacional destinadas a hacer frente a los problemas regionales o mundiales del medio ambiente, y en particular la lucha contra el cambio climático”. Por su parte, el apartado segundo de este mismo artículo dispone que “[la política medioambiental de la Unión] se basará en los principios de cautela y de acción preventiva, en el principio de corrección de los atentados al medio ambiente, preferentemente en la fuente misma, y en el principio de quien contamina paga”.

En cuanto al Derecho derivado, debido al objeto del estudio jurisprudencial que se planteará a continuación, debemos hacer especial hincapié en la Directiva 92/43/CEE del Consejo de 21 de mayo de 1992 relativa a la conservación de los hábitats naturales y la flora y la fauna silvestres o Directiva Hábitats. Esta tiene como objetivo global “contribuir a garantizar la biodiversidad mediante la conservación de los hábitats naturales y la fauna y flora silvestres en el territorio europeo de los Estados miembros” (art. 2.1).³⁶

Muñoz Flores (2007, p. 158) apunta que, para cumplir este objetivo global al que hacíamos referencia, la Directiva Hábitats se estructura en dos grandes objetivos más concretos: la creación de la Red Natura 2000 para la conservación de los hábitats naturales (arts. 3 a 11, sobre los que haremos especial hincapié de ahora en adelante) y el establecimiento de un sistema de protección global de especies (arts. 12 a 16 y 22).

La Red Natura 2000, que representa hoy día un 18% aproximadamente del territorio de la UE, está integrada por dos tipos de espacios: las Zonas Especiales de Conservación (ZECs) y las anteriormente creadas por la Directiva Aves³⁷ Zonas de Especial Protección para las Aves (ZEPAs). Centrándonos, por motivos de contenido de este trabajo, en las zonas especiales de conservación (ZECs), su designación se hace en tres etapas. En primer lugar, cada Estado miembro prepara una lista de

³² Consejo de la Unión Europea, Informes sobre la reintroducción de los controles en las fronteras interiores: 16973/11 de 16 de noviembre de 2011; 10491/12 de 31 de mayo de 2012; 6346/13 de 18 de febrero de 2013; 17183/13 de 9 de diciembre de 2013; 10268/1/14 de 28 de mayo de 2014; 10268/14 de 28 de mayo de 2014 y 13818/14 de 24 de octubre de 2014.

³³ Informe de 20 de Mayo de 2015 de la Comisión al Consejo y al Parlamento Europeo: Informe sobre el estado y las tendencias de los tipos de hábitats y las especies regulados por las Directivas de Aves y de Hábitats durante el período 2007-2012 exigido en virtud del artículo 17 de la Directiva de Hábitats y del artículo 12 de la Directiva de Aves. COM [2015] 219 final

³⁴ STJUE de 31 de enero de 1984, *G. Lauij y HG. Carbone c. Ministerio del Tesoro*, asuntos acumulados 286/82 y 26/83. La sentencia responde a dos cuestiones prejudiciales que se suscitaron en el marco de procedimientos de impugnación promovidos por dos residentes italianos contra resoluciones del Ministerio del Tesoro por las que les fueron impuestas sanciones pecuniarias por haber adquirido diversas divisas extranjeras, con vistas a su utilización en el extranjero, por un contravalor en liras italianas de importe superior al máximo permitido por la legislación italiana, que en esa época era de 500.000 LIT por año para la exportación de divisas efectuadas por residentes con fines de turismo, de negocios, de estudios y de cuidados médicos.

³⁵ Celebrado tras la conferencia de las Naciones Unidas sobre el Medio Humano en 1972, conocida como Conferencia de Estocolmo, en la que se abordaron por primera vez temas relacionados con el medio ambiente.

³⁶ Fue traspuesta al ordenamiento español mediante el Real Decreto 1997/1995 de 7 de diciembre, por el cual se establecen medidas para contribuir a garantizar la biodiversidad mediante la protección de los hábitats naturales y de la fauna y flora (BOE núm.310, de 28 de diciembre de 1995).

³⁷ Directiva 2009/147/CE del Parlamento Europeo y del Consejo, de 30 de noviembre de 2009, relativa a la conservación de las aves silvestres que sustituyó a la Directiva 79/409/CEE del Consejo, de 2 de abril de 1979, relativa a la conservación de las aves silvestres. La directiva trata de conservar todas las aves silvestres de la UE estableciendo normas para su protección, gestión y control.

lugares con hábitats naturales y especies de fauna y flora silvestres. En segundo lugar, a partir de esas listas nacionales y de acuerdo con los Estados miembros, la Comisión elabora una lista de Lugares de Importancia Comunitaria (LICs) para cada una de las nueve regiones biogeográficas de la UE³⁸. Por último, en un plazo máximo de seis años tras la selección de un emplazamiento como LIC, el Estado miembro interesado designa el lugar como ZEC.

Coincidimos con Krämer (2012, p. 119 y ss.) en que “el nuevo sistema de la Directiva Hábitat fijó un criterio uniforme [de protección] para todos los Estados miembros”. En relación con este objetivo armonizador conviene destacar la regulación plasmada en el art. 6 de la Directiva. En virtud de su apartado tercero una vez catalogada un área como LIC, las posibilidades de los Estados miembros de autorizar planes, programas o proyectos que pudieran afectar al área seleccionada estaban limitados.

4.2.2 Estudio jurisprudencial: Los recursos contra Irlanda, Italia y Bulgaria

La base del estudio jurisprudencial la constituirán tres sentencias del Tribunal de Justicia de la Unión Europea (en adelante TJUE) en las que se declara el incumplimiento por parte de Italia, Bulgaria e Irlanda de la Directiva Hábitats. En todos estos casos la expansión turística en detrimento del medio ambiente es el origen de las sentencias:

A) El incumplimiento declarado contra Irlanda

En la STJUE de 11 de enero de 2007, *Comisión c. Irlanda*, asunto C-183/05 el Tribunal de Justicia valoró si la República de Irlanda estaba vulnerando el art. 12 de la Directiva Hábitats, el cual obliga a implantar un “sistema de protección rigurosa de las especies animales que figuran en la letra a) del Anexo IV”. En concreto, se refería a las poblaciones de murciélagos que, según la Comisión, estaban siendo afectadas por haber autorizado el proyecto de restauración y renovación del *Lough Rynn Castle Hotel* sin tener en cuenta previamente un Estudio de Impacto Ambiental.

En su fallo el Tribunal de Justicia declaró que la República de Irlanda estaba vulnerando el art.12 de la Directiva Hábitats. En concreto, argumentó el Tribunal (apartado 36 de la sentencia) que “la autorización de un proyecto [Proyecto de renovación y restauración del *Hotel Lough Rynn*] antes de la realización del estudio de impacto ambiental que determina las consecuencias negativas del proyecto para el medio ambiente demuestra que las especies incluidas en el anexo IV, letra a), de la Directiva 92/43 [los murciélagos], así como sus zonas de reproducción y de descanso, están sometidas a perturbaciones y amenazas que la normativa irlandesa no permite evitar. Por lo tanto [...] no puede considerarse que se hayan adoptado todas las medidas para instaurar efectivamente el sistema de protección rigurosa” (apartado 37).

B) El incumplimiento declarado contra Italia

En la STJUE de 10 de junio de 2010, *Comisión c. Italia*, as. C-491/08, el Tribunal de Justicia valoró si la República de Italia había incumplido el art. 6.2 de la Directiva Hábitats en virtud del cual “Los Estados miembros adoptarán las medidas apropiadas para evitar, en las zonas especiales de conservación, el deterioro de los hábitats naturales y de los hábitats de especies, así como las alteraciones que repercutan en las especies que hayan motivado la designación de las zonas, en la medida en que dichas alteraciones puedan tener un efecto apreciable en lo que respecta a los objetivos de la presente Directiva”. Concretamente, por permitir que se construyera un complejo turístico e inmobiliario (*SCI Arena*) en un lugar calificado como LIC (Lugar de Importancia Comunitaria).

En su fallo, el Tribunal declaró el incumplimiento del mencionado art. 6.2 de la Directiva Hábitats “al no haber adoptado (...) medidas apropiadas para evitar el deterioro de los hábitats naturales que han motivado la designación del mencionado lugar de importancia comunitaria”³⁹.

C) El incumplimiento declarado contra Bulgaria

En la STJUE de 14 de enero de 2016, *Comisión c. Bulgaria*, as. C-141/14, el Tribunal de Justicia valoró si la República de Bulgaria había incumplido el mencionado art. 6.2 de la Directiva Hábitats por permitir que se ejecutaran proyectos turísticos (*Thracian Cliffs Golf & Spa Resort*) en una ZEC (Zona Especial de Conservación), autorizados antes de la adhesión de Bulgaria a la Unión Europea.

En su fallo, el Tribunal de Justicia declaró el incumplimiento, por parte de la República de Bulgaria y al igual que Italia, de las obligaciones que se desprenden del art. 6.2 de la Directiva sobre los hábitats, al no haberse opuesto a la ejecución del proyecto *Thracian Cliffs Golf & Spa* en el LIC de Kaliakra. Es importante destacar que el TJUE no declaró el incumplimiento de Bulgaria por la autorización de este proyecto en 2005 (antes de su adhesión a la Unión Europea), ya que no le era aplicable la Directiva Hábitats, sino por no haberse opuesto a su ejecución tras la adhesión y por el consiguiente deterioro del LIC.⁴⁰

³⁸ La región alpina, la región atlántica, la región del Mar Negro, la región boreal, la región continental, la región macaronésica, la región mediterránea, la región panónica y la región estépica.

³⁹ Con tales medidas se refería al tardíamente aprobado “Plan de Gestión de Arenas SCI”, preparado por las autoridades italianas pero no aprobado hasta después de haber finalizado el plazo dado por la Comisión en el dictamen motivado. En dicho Plan se hacía una revisión del proyecto turístico y el complejo inmobiliario, en concreto en relación con el volumen de los edificios previstos. De hecho, las obras serían rediseñadas para que no tuvieran un impacto excesivo en el sistema de hábitats afectados.

⁴⁰ De hecho, el mencionado proyecto turístico incluía la construcción de un campo de golf y de una estación termal, para lo cual Bulgaria expidió licencia de construcción el 22 de diciembre de 2005 (antes de su adhesión a la UE), mientras que la licencia de explotación fue concedida el 6 de abril de 2010 (después de su adhesión a la UE, el 1 de enero de 2007, junto con la República de Rumanía).

5. EL DERECHO ESPAÑOL DEL TURISMO: ¿ORDENAMIENTO ESTATAL Y ORDENAMIENTOS REGIONALES?

5.1 A título introductorio: el sistema constitucional de distribución de las competencias normativas

La Constitución española de 1978 reconoce un Estado descentralizado: el llamado Estado de las Autonomías, un modelo de Estado híbrido entre el modelo del Estado federal y el modelo del Estado regional. Ya en su mismo artículo 2, tras proclamar la Unidad de la Nación española, “reconoce y garantiza el derecho a la autonomía de las regiones y nacionalidades que la integran”. Pero ¿en qué consiste esa autonomía regional o “de las nacionalidades”? La respuesta está en el Título VIII de la Constitución, titulado “De la organización territorial del Estado”.

El punto de partida es el artículo 137⁴¹, porque contiene el reconocimiento constitucional de la autonomía de las organizaciones o entidades territoriales que integran el Estado español: los municipios, las provincias y las regiones o nacionalidades; es decir, la Constitución reconoce que hay intereses locales (municipales y provinciales), intereses regionales e intereses nacionales o generales de España, y también reconoce la autonomía de cada una de esas entidades territoriales para gestionar sus respectivos intereses públicos. Y la autonomía se traduce en la atribución de competencias propias que consistirán en disponer de ciertas funciones públicas sobre algunas materias o asuntos públicos.

Ahora bien, la autonomía local no es la autonomía regional; por eso, el artículo 2 sólo se refiere a la autonomía de las regiones o las nacionalidades, no a la autonomía de municipios y provincias. Ciertamente, la autonomía local es una autonomía menor que la que tienen las regiones y nacionalidades; es una autonomía de gobierno y administrativa, disponiendo así el municipio/provincia de gobierno local autónomo y Administración pública local autónoma con competencias administrativas propias en materias o asuntos de interés municipal/provincial, conforme a lo dispuesto en los artículos 140 y 141 del texto constitucional⁴². En cambio, la autonomía regional es una autonomía, no sólo gubernativa-administrativa, sino también legislativa, por cuanto incluye, no sólo un Gobierno regional autónomo y una Administración pública regional autónoma con competencias administrativas propias en materias o asuntos de interés regional, sino que, además, conforme reconoce el artículo 152.1 de la Constitución, dispone del Poder Legislativo⁴³ en ciertas materias o asuntos de interés regional.

Se comprende que ya la propia Constitución, congruentemente con el cualificado valor constitucional de la autonomía regional (*ex* artículo 2), establezca las materias de competencia exclusiva del Estado y las de competencia exclusiva de las Comunidades Autónomas (CC AA), así como las materias de competencia compartida, encomendando en estas materias ciertas funciones públicas al Estado (la legislativa, por ejemplo) y a las CC AA otras funciones (las ejecutivas o administrativas). Y lo hace en los artículos 148 y 149 de la Constitución. Pero esta distribución de competencias no es tan simple o sencilla como pudiera deducirse de una mera lectura de ambas normas constitucionales⁴⁴; es cierto que en la Constitución española hay dos listas de atribución de competencias: la lista del artículo 148.1, con 22 apartados, se refiere a las materias de competencia autonómica exclusiva (“Las Comunidades Autónomas podrán asumir competencias en las siguientes materias:...”) y la lista del artículo 149.1, que tiene 32 apartados, se refiere a las materias de competencia estatal y de competencia compartida, pese a su desafortunado inicio (“El Estado tiene competencias exclusivas sobre las siguientes materias:...”); pero el artículo 148.1 de la Constitución no enumera las competencias de las Comunidades Autónomas que, de conformidad con lo establecido en el artículo 147.2.d) del texto constitucional, pueden asumir mediante su expresa previsión en sus respectivos Estatutos de Autonomía, sino que únicamente enuncia las competencias que podían asumir las CC AA durante los primeros cinco años. El propio artículo 148.2 dispone que “Transcurridos cinco años, y mediante la reforma de sus Estatutos, las Comunidades Autónomas podrán ampliar sucesivamente sus competencias dentro del marco establecido en el artículo 149”. Por tanto, la lista del artículo 149.1 de la Constitución es la realmente relevante, porque opera como límite para los Estatutos de Autonomía, que son las normas que realizan la efectiva distribución de las competencias para cada CC AA que no estén reservadas al Estado en el artículo 149.1 (principio dispositivo o de voluntariedad).

La complejidad del sistema constitucional de reparto de competencias autonómicas y estatales es aún mayor, porque las “materias” enunciadas en los artículos 148.1 y 149 no siempre están claramente delimitadas⁴⁵ y, en ocasiones, se superponen parcialmente o inciden unas en otras⁴⁶. Además, las dos listas no constituyen listas tasadas de materias, sino que, en parte en virtud de lo dispuesto en el art. 149.3⁴⁷, los Estatutos de Autonomía han establecidos nuevas materias o submaterias,

⁴¹ “El Estado se organiza territorialmente en municipios, en provincias y en las Comunidades Autónomas que se constituyan. Todas estas entidades gozan de autonomía para la gestión de sus respectivos intereses”.

⁴² Art. 140: “La Constitución garantiza la autonomía de los municipios. Estos gozarán de personalidad jurídica plena. Su gobierno y administración corresponde a sus respectivos Ayuntamientos, integrados por los Alcaldes y los Concejales...”. Art. 141: 1. La provincia es una entidad local con personalidad jurídica propia,... 2. El gobierno y la administración autónoma de las provincias estarán encomendados a Diputaciones u otras Corporaciones de carácter representativo...”

⁴³ Art. 152: “1... la organización institucional autonómica se basará en una Asamblea Legislativa elegida por sufragio universal con arreglo a un sistema de representación proporcional que asegure, además, la representación de las diversas zonas del territorio; un Consejo de Gobierno con funciones ejecutivas y administrativas, y un Presidente, elegido por la Asamblea, de entre sus miembros, y nombrado por el Rey, al que corresponde la dirección del Consejo de Gobierno la suprema representación de la respectiva Comunidad y la ordinaria del Estado en aquélla, El Presidente y los miembros del Consejo de Gobierno serán políticamente responsables ante la Asamblea.”

⁴⁴ No se parece al sistema utilizado por las Constituciones de los Estados federales, que realizan el reparto de competencias conforme a tres listas: las competencias del Estado federal o Federación, las competencias de los Estados miembros o federados, las competencias compartidas o mixtas; o, en otros términos, en las Constituciones de los Estados descentralizados, “o bien se enumeran en una sólo lista las competencias propias de la entidad superior (Estado Federal o simplemente Estado), correspondiendo todas las demás a los Estados Federados o Regiones o entidades miembros de la Federación; o bien se enumeran sólo, también en una única lista, las competencias de los Estados federados o entidades miembros de la unidad política superior, correspondiendo todas las demás a ésta o Estado Federal.

⁴⁵ Por ejemplo, la materia de competencia exclusiva estatal llamada “condiciones básicas que garanticen la igualdad de todos los españoles en el ejercicio de los derechos y en el cumplimiento de los deberes constitucionales” (art. 149.1.1a) de la Constitución).

⁴⁶ Por ejemplo, la regulación de las condiciones de los autobuses públicos para garantizar su seguridad: podría ser materia de transportes terrestres (arts. 148.1.5) y 149.1.21) de la Constitución), de industria (materia a la que se refieren los Estatutos de Autonomía), de protección del consumidor y usuario (materia a la que se refieren sólo los Estatutos de Autonomía), de seguridad pública (art. 149.1.29) de la Constitución).

⁴⁷ “Las materias no atribuidas expresamente al Estado por esta Constitución podrán corresponder a las Comunidades Autónomas en virtud de sus respectivos Estatutos” (es la denominada cláusula residual de primer grado). “La competencia sobre las materias que no se hayan asumido por los Estatutos de Autonomía corresponderá al Estado” (es la llamada cláusula residual de segundo grado).

atribuyéndose competencias⁴⁸ que inciden en las competencias atribuidas sobre otras materias. No es de extrañar, por ello, ciertos conflictos competenciales y que sea el Tribunal Constitucional quien esté delimitando las materias y las competencias sobre ellas⁴⁹.

5.2 Las competencias normativas en la materia de turismo

La Constitución ha reconocido el “turismo” como materia de competencia exclusiva de la CC AA, porque, por un lado, la incluye expresamente en el listado del artículo 148.1 (“Las Comunidades Autónomas podrán asumir competencias en las siguientes materias...18º) Promoción y ordenación del turismo en su ámbito territorial”), y, por otro, no dispone competencia alguna del Estado sobre dicha materia al no mencionarse en el artículo 149.1⁵⁰ que, como sabemos, es el precepto atributivo de las competencias estatales, exclusivas o compartidas con la CC AA.

Sin embargo, es significativo que, pese a esa explícita atribución competencial en exclusiva a favor de las CC AA, desde los primeros años del nuevo Estado de las Autonomías, el Tribunal Constitucional ha tenido que intervenir resolviendo conflictos de competencias y, por tanto, emitiendo jurisprudencia constitucional sobre las competencias en turismo y las incidentes o conexas con turismo, desde la pionera STC 125/1984, de 20 de diciembre de 1984⁵¹. Y esto confirma que la delimitación de la materia “turismo” no está suficientemente precisa y garantizada en el texto constitucional, así como tampoco lo están las funciones públicas de “promoción y ordenación”⁵² del turismo, funciones que, por cierto, ya Gallardo Castillo (2001, p. 73) intentaba identificar, respectivamente, con las actividades administrativas de policía (o disciplina) turística y fomento del turismo, aunque la misma legislación autonómica turística de finales de los 90 no se limitaba a esas dos clásicas modalidades de actividad administrativa, como la misma autora reconocía.

Así, pues, ¿qué alcance tiene esta competencia exclusiva autonómica dispuesta en el artículo 149.1.18º de la Constitución? ¿toda la regulación del turismo compete a la CC AA? Es decir, ¿“promoción y ordenación” del turismo incluye toda competencia en turismo?, ¿qué contenido y alcance constitucional tiene la “promoción” y la “ordenación”⁵³? Además, no se olvide el límite de la territorialidad que expresamente se dispone en la norma constitucional⁵⁴.

En todo caso, al amparo del artículo 148.1.18º de la Constitución, los Estatutos de Autonomía han atribuido a las Comunidades Autónomas la competencia exclusiva sobre turismo, especificando lo dispuesto en el citado título competencial constitucionalmente atribuido a las CC AA. Así, por ejemplo, la Ley Orgánica 2/2007, de 19 de marzo, de reforma del Estatuto de Autonomía para Andalucía, “desarrolla” la norma constitucional disponiendo su artículo 71 lo siguiente: “Corresponde a la Comunidad Autónoma la competencia exclusiva en materia de turismo, *que incluye, en todo caso*: la ordenación y la planificación del sector turístico; la regulación y la clasificación de las empresas y establecimientos turísticos y la gestión de la red de establecimientos turísticos de titularidad de la Junta, así como la coordinación con los órganos de administración de Paradores de Turismo de España en los términos que establezca la legislación estatal; la promoción interna y externa que incluye la suscripción de acuerdos con entes extranjeros y la creación de oficinas en el extranjero; la regulación de los derechos y deberes específicos de los usuarios y prestadores de servicios turísticos; la formación sobre turismo y la fijación de los criterios, la regulación de las condiciones y la ejecución y el control de las líneas públicas de ayuda y promoción del turismo”. Amplia concepción, pues, de esa previsión genérica constitucional sobre la “promoción” y la “ordenación” del turismo, porque la ordenación comprende la regulación de la planificación pública, pero también el estatuto jurídico de los usuarios y de las empresas y los establecimiento turísticos, incluyendo sus clases y categorías; y la promoción no se limita al ámbito territorial autonómico, sino que también incluye cierta promoción exterior con “acuerdos con entes extranjeros” y

⁴⁸ Por ejemplo, los Estatutos inventan la materia “protección del consumidor y usuario”, que no está en ninguna de las dos listas de los arts. 148.1 y 149.1 de la Constitución, atribuyéndose todas las competencias sobre esa materia ya que la Constitución, aparentemente, no reservó ninguna al Estado sobre esa “materia” (REBOLLO PUIG, 2011, p. 40 y ss.).

⁴⁹ Por otra parte, es preciso recordar los límites territoriales de las competencias de las CC AA: las competencias autonómicas no sólo están delimitadas por razón de la materia y de la función, sino también por el mismo territorio de la CC AA, como establecen los Estatutos de Autonomía.

⁵⁰ No sólo no se menciona en el art. 149.1, sino que en la Constitución no hay un artículo o precepto que se refiera a la legislación turística. Ahora bien, sí se contienen dos preceptos genéricos, no referidos a la actividad turística, pero que sí la afectan notablemente, condicionando -dado el valor normativo superior del texto constitucional (aunque no tienen los dos preceptos el mismo valor normativo)- tanto a la legislación turística que se apruebe como a la actuación de la Administración pública turística: 1.- El artículo 38 consagra el derecho fundamental a la libertad de empresa; el contenido esencial de este derecho constitucional es: Derecho a la libre iniciativa económica (derecho a la fundación/creación de empresas en esta economía de mercado), tanto a favor de los particulares como de las propias Administraciones Públicas que pueden, por tanto, “convertirse” en empresarios, crear “empresas públicas” (no se instaura una subsidiariedad de la actividad empresarial de la Administración en el art. 128); Derecho al libre ejercicio de las actividades empresariales: poder autoorganizatorio y de funcionamiento de la empresa; Derecho al cese de la actividad empresarial... Pero todos estos derechos inherentes al derecho constitucional de libertad de empresa no son absolutos, tienen límites o matizaciones en atención a la presencia de otros intereses privados y públicos que son afectados y que, en general, no son exclusivo o específicos del sector turístico. Pese a todo ello, no se olvide que la libertad de empresa es un derecho fundamental que goza de la protección constitucional establecida en el art. 53.1; 2.- El artículo 51, referente a la protección general de los derechos de los consumidores y usuarios frente a las empresas: “1. Los poderes públicos garantizarán la defensa de los consumidores y usuarios, protegiendo, mediante procedimientos eficaces, la seguridad, la salud y los legítimos intereses económicos de los mismos...”. Ciertos valores, intereses y derechos de los consumidores (por ejemplo, relevantemente, el derecho a la protección de la salud y seguridad frente a la actividad empresarial) han justificado que sean consagrados, aunque no como un derecho fundamental, sino como un “principio rector” que tiene una protección y un valor jurídico menor; 3.- También está el artículo 43.3, que consagra el derecho al ocio.

⁵¹ Una descripción del objeto del conflicto y del fallo del Tribunal en cada sentencia ha realizado MELGOSA ARCOS (2003, p. 1164-1167).

⁵² BLANQUER CRIADO (2001, p. 287-292) afirma incluso que se trata de un “concepto jurídico indeterminado”.

⁵³ Especialmente crítico con esta atribución competencial autonómica se ha manifestado BLANQUER CRIADO (1999, p. 32-33), por la afectación con las competencias exclusivas del Estado sobre las materias denominadas en el art. 149.1 de la Constitución “legislación civil” (apartado 8º) y “legislación mercantil” (apartado 6º), en la medida en que mediante la legislación autonómica del turismo se publique parcialmente el estatuto jurídico-privado del empresario y el contratante-consumidor del sector turístico: “...La regulación de las relaciones mercantiles sigue siendo competencia estatal; en lo esencial también son competencia estatal las relaciones civiles patrimoniales que no inciden en la familia (por ejemplo las contractuales). No es lo mismo la publicación del Derecho Privado que el desapoderamiento estatal del Derecho Civil y Mercantil. Una cosa es que sea la Comunidad Autónoma quien otorga o deniega las autorizaciones turísticas o quien gestiona el Registro administrativo en el que deben inscribirse quienes desarrollan esta actividad, y otra distinta es regular el estatuto del empresario que de forma habitual y organizada desarrolla esta actividad profesional. So pretexto de la ordenación del turismo, las Comunidades Autónomas han materializado una importante publicación del Derecho Privado mediante simples normas reglamentarias; esa publicación alcanza a dos extremos que con mucho desbordan el limitado alcance del artículo 148.1.18 de la Constitución: la regulación del estatuto del empresario y de las relaciones contractuales con los turistas... El problema no se limita a la regulación del estatuto del empresario (que es el actor o protagonista de la iniciativa privada), sino que se extiende al régimen de los contratos (el principal medio o instrumento jurídico de que se sirven los operadores turísticos). Las Comunidades Autónomas han expandido ilimitadamente las que les corresponden en la ordenación del turismo hasta asumir como propia la competencia de establecer y regular la forma y el contenido de algunos contratos. Algunos y no todos...”

⁵⁴ Como ha recordado MELGOSA ARCOS (2003, p. 1170), “es evidente que todas las Comunidades Autónomas aspiran a promocionar su turismo fuera de su ámbito territorial” y, quizás por ello, el Tribunal Constitucional ha propiciado “una importante relativización del principio de territorialidad en materia de promoción turística”. Y así se reconoce a la CC AA la competencia para promocionar turísticamente su CC AA fuera de su propio territorio y fuera del territorio nacional.

con “la creación de oficinas en el extranjero”.

En términos similares se atribuye esta competencia exclusiva autonómica en la Ley Orgánica 6/2006, de 19 de julio, de reforma del Estatuto de Autonomía de Cataluña (art. 171), así como, aunque algo menos desglosada o especificada, en los más recientes Estatutos de Autonomía (o de segunda generación): Ley Orgánica 5/2007, de 20 de abril, de reforma del Estatuto de Autonomía de Aragón (art. 71.51), Ley Orgánica 1/2007, de 28 de febrero, de reforma del Estatuto de Autonomía de las Illes Balears (art. 30.11),... En cambio, los primeros Estatutos de Autonomía (la mayoría de las CC AA) se caracterizan por la mera reproducción de lo dispuesto en el artículo 148.1.18º de la Constitución; así, la Ley Orgánica 4/1983, de 25 de Febrero, de Estatuto de Autonomía de Castilla y León en su art. 70.1.26.º (“Promoción del turismo y su ordenación en el ámbito de la Comunidad”), la Ley Orgánica 1/1981, de 6 de abril, Estatuto de Autonomía de Galicia en su art. 27.21, etc.

5.3 Las competencias normativas en otras materias conexas o incidentes con el turismo. En especial, los títulos competenciales del Estado más “aflictivos”

El artículo 149.1 de la Constitución atribuye al Estado competencias exclusivas en distintas “materias” que pueden concurrir o incidir en la materia turismo, como ha subrayado la doctrina⁵⁵ y reiterado la jurisprudencia constitucional. Así, el Estado tiene competencias exclusivas en “relaciones internacionales” (apartado 3º)⁵⁶, que afecta a la citada competencia autonómica de promoción del turismo, competencia también afectada por el título competencial estatal del “comercio exterior” (apartado 10º)⁵⁷; la competencia autonómica de planificación y ordenación turística queda influida por el título estatal transversal de “las bases y coordinación de la planificación general de la actividad económica” (apartado 13º), que legitima la intervención estatal al ser el turismo un sector económico de relevancia nacional⁵⁸.

Y también tiene el Estado competencias legislativas compartidas con las CC AA en otras materias conexas o fronterizas, en mayor o menor medida: “sanitaria o de higiene (arts. 148.1.21 y 149.1.7); patrimonio y cultura (arts. 148.1.16 y 17 y 149.1.28); agua y costas (arts. 148.1.10 y 149.1.23); caza y pesca (arts. 148.1.11 y 149.1.19); puertos y aeropuertos (arts. 148.16 y 149.1.20), transportes (arts. 148.1.5 y 149.1.21)”, entre otras” como han destacado Fernández Rodríguez (2013, p. 54) y Jiménez Soto (2016, p. 26)⁵⁹.

5.4 La cooperación orgánica entre CC AA y Estado: la llamada Conferencia Sectorial de Turismo

Dada la difícil delimitación de la materia turismo y otras materias conexas o relacionadas, y dada la mutua interrelación o entrecruzamiento de las competencias en turismo con otras competencias estatales sobre otras materias, no es de extrañar que exista un órgano específico de cooperación llamado Conferencia Sectorial de Turismo, constituida el 29 de noviembre de 1994, y potenciada como todo órgano de cooperación interadministrativa por la reciente Ley 40/2015, de 1 de octubre, de Régimen Jurídico del Sector Público (LRJSP)⁶⁰.

La Conferencia Sectorial está integrada por el Ministro competente en razón de la materia del turismo (actualmente, el Ministro de Energía, Turismo y Agenda Digital, del que depende la Secretaría de Estado de Turismo), y los correspondientes miembros de los Consejos de Gobierno de las Comunidades Autónomas y de las Ciudades de Ceuta y Melilla. Órgano colegiado que preside el Ministro, a quien, por tanto, le compete acordar la convocatoria de las reuniones “al menos una vez al año, o cuando lo soliciten, al menos, la tercera parte de sus miembros” (artículo 149 LRJSP).

El artículo 148 de la LRJSP, tras disponer que “pueden ejercer funciones consultivas, decisorias o de coordinación orientadas a alcanzar acuerdos sobre materias comunes”, añade: “2. En particular, las Conferencias Sectoriales ejercerán, entre otras, las siguientes funciones: a) Ser informadas sobre los anteproyectos de leyes y los proyectos de reglamentos del Gobierno de la Nación o de los Consejos de Gobierno de las Comunidades Autónomas cuando afecten de manera directa al ámbito competencial de las otras Administraciones Públicas o cuando así esté previsto en la normativa sectorial aplicable, bien a través de su pleno o bien a través de la comisión o el grupo de trabajo mandatado al efecto. b) Establecer planes específicos de cooperación entre Comunidades Autónomas en la materia sectorial correspondiente, procurando la supresión de duplicidades, y la consecución de una mejor eficiencia de los servicios públicos. c) Intercambiar información sobre las actuaciones programadas por las distintas Administraciones Públicas, en ejercicio de sus competencias, y que puedan afectar a las otras Administraciones. d) Establecer mecanismos de intercambio de información, especialmente de contenido estadístico. e) Acordar la organización interna de la Conferencia Sectorial y de su método de trabajo. f) Fijar los criterios objetivos que sirvan de base para la distribución territorial de los créditos presupuestarios, así como su distribución al comienzo del ejercicio económico, de acuerdo con lo previsto en la Ley 47/2003, de 26 de noviembre”.

Como órgano de cooperación voluntaria⁶¹ que es, sus acuerdos, que requerirán la previa votación de los miembros de

⁵⁵ RODRÍGUEZ-ARANA (2001, p. 30), GALLARDO CASTILLO (2001, p. 92-93), PÉREZ GUERRA (2014, p. 404-406), SANZ DOMÍNGUEZ (2008, p. 688-691), entre otros.

⁵⁶ Pero el Tribunal Constitucional en su sentencia de 5 de diciembre de 1995, afirma que la dimensión externa de un asunto no puede servir para realizar una interpretación expansiva del artículo 149.1.3 de la Constitución que venga a subsumir en la competencia estatal toda medida dotada de cierta incidencia exterior, por remota que sea, ya que si así fuera se produciría una verdadera reordenación del propio orden constitucional de distribución de competencias entre el Estado y las Comunidades Autónomas.

⁵⁷ La STC de 2 de noviembre de 1984 reconoce la incidencia del turismo: “...la importancia de los ingresos que la actividad turística proporciona a la economía nacional procedentes de la demanda exterior convierten sin duda al turismo en una de las partidas más significativas de la balanza exterior. Por consiguiente, la promoción exterior del turismo adquiere desde esta perspectiva una dimensión que lo sitúa dentro de la competencia estatal del artículo 149.1.10 de la Constitución...”.

⁵⁸ Pero estos títulos competenciales que justifican la intervención estatal en materia de turismo (STC 125/1984, STC 75/1989, de 25 de abril, STC 88/1987, de 2 de junio) no pueden interpretarse de tal manera que vacíen toda competencia autonómica dotada de una cierta dimensión económica, pues ello equivaldría a vaciar casi todo el bloque de competencias asumidas por las Comunidades Autónomas.

⁵⁹ Aparte de estas materias de competencia estatal (exclusiva o compartida con la CC AA), la delimitación de las competencias sobre turismo han de considerar así mismo las competencias exclusivas autonómicas sobre ciertas materias dispuestas en el propio artículo 148.1 de la Constitución: ordenación del territorio y urbanismo (apartado 3º), agricultura y ganadería (apartado 7º), puertos y aeropuertos deportivos (apartado 6º)...

⁶⁰ Véase Sánchez Sáez (2016, p. 424 y ss).

⁶¹ Otra técnica típica de cooperación es el llamado convenio interadministrativo, al que la LRJSP ha prestado un especial atención, como ha explicado Gosálbez Pequeño (2016, p. 265-305).

la Conferencia Sectorial, obligan a los miembros que lo aceptan, no a los que se oponen: “Las decisiones que adopte la Conferencia Sectorial podrán revestir la forma de: a) Acuerdo: supone un compromiso de actuación en el ejercicio de las respectivas competencias. Son de obligado cumplimiento y directamente exigibles de acuerdo con lo previsto en la Ley 29/1998, de 13 de julio, reguladora de la Jurisdicción Contencioso-administrativa, *salvo para quienes hayan votado en contra mientras no decidan suscribirlos con posterioridad...*” (artículo 151)⁶².

BIBLIOGRAFÍA

- Acosta Penco, M.T. (2016). Los nuevos límites a la libre circulación de turistas en la Unión Europea. *International Journal of Scientific Management and Tourism*. 2(3): 41-62
- Acosta Penco, M.T. (2017). Protección del medio ambiente vs. actividad turística en el Derecho de la Unión Europea. Un estudio jurisprudencial. *International Journal of Scientific Management and Tourism*. 3(2): 421-440.
- Acosta Penco, M.T. (2017). Primer caso de restablecimiento de controles fronterizos en circunstancias excepcionales que ponen en peligro el funcionamiento global del espacio Schengen: comentario a la Decisión de ejecución (UE) n° 2016/894 del Consejo, de 12 de mayo de 2016. *Revista General de Derecho Europeo*, 41: 252-273.
- Blanquer Criado, D. (1999), *Derecho del Turismo*, tirant lo blanch, Valencia
- Blanquer Criado, D. (2001), Ordenación o desordenación del turismo, *Documentación administrativa n° 259-260*: 297-314
- Fernández De Gatta Sánchez, D. (2012). El marco estratégico de la política de turismo en la Unión Europea: evolución y régimen vigente. *Revista General de Derecho Europeo*. 28:1-39.
- Fernández Rodríguez, C. (2013), *Derecho administrativo del turismo*, 6ª ed., Marcial Pons, Madrid
- Gallardo Castillo, MªJ. (2001), La distribución constitucional de competencias en materia de turismo y su tratamiento en las Leyes autonómicas: su promoción y ordenación, *Documentación administrativa n° 259-260*: 71-93
- Gonzalez Alonso, A. (2009). Competencias comunitarias, estatales y autonómicas en materia de turismo. *Estudios turísticos*. 180: 67 y 113.
- Gosálbez Pequeño, H. (2016), Los convenios administrativos, en *Innovaciones en el procedimiento administrativo común y el régimen jurídico del sector público*, Francisco López Menudo (dir.), IGO, Sevilla
- Jiménez Soto, I. (2016), *Ordenación de los servicios turísticos: competencias administrativas y unidad de mercado*, en XXI Congreso Italo-español de Profesores de Derecho administrativo, Alicante/Benidorm, 26, 27 y 28 de mayo de 2016
- Krämer, L. (2012). El papel de la Directiva de Hábitats en la protección de la biodiversidad en la Unión Europea en García Ureta, A. (coord.) *La Directiva de Hábitats de la Unión Europea: Balance de 20 años*, Aranzadi, Navarra.
- Mangas Martín, A. y Liñán Noguerras, D.J. (2014). *Instituciones y Derecho de la Unión Europea*. (8ª Edición), Tecnos, Madrid.
- Melgosa Arcos, F. J. (2003), La Constitución española y el turismo, en *La Constitución española en su XXV aniversario*, Balado Y García Regueiro (Dirs.), Ed. C.I.E.P.-I.I.C.P. y Bosch, Madrid.
- Muñoz Flores, J.C. (2007). *Turismo y sostenibilidad en espacios naturales protegidos: la Carta Europea de Turismo Sostenible en la zona volcánica de la Garrotxa y el Plan de Desarrollo Sostenible en Cabo de Gata-Níjar*. (1ª Edición), Universidad de Almería, Almería.
- Ohliger, T. (2016). *Fichas técnicas sobre la Unión Europea: La política de medio ambiente: principios generales y marco básico*. Consultado el 4/01/2017 en: http://www.europarl.europa.eu/atyourservice/es/displayFtu.html?ftuId=FTU_5.4.1.html
- Pérez Guerra, R (2014), La Intervención Administrativa en el Sector Turístico Español: La Política Turística, *Revista Aragonesa de Administración Pública* n° 43-44: 396-413
- Rebollo Puig, M. (2011), La aprobación del Texto Refundido de la Ley General de para la Defensa de los Consumidores y otras Leyes complementarias, en *La defensa de los consumidores y usuarios*, M. Rebollo Puig y M. Izquierdo (Dirs.), Iustel, Madrid.
- Rodríguez-Arana Muñoz, J. (2001), La distribución de competencias en materia de turismo, *Documentación administrativa n° 259-260*: 27-38
- Salinas de Frías, A. (2016) La Unión Europea. En: Alcaide Fernández, J. y Casado Raigón, R. (coords.) *Curso de Derecho de la Unión Europea*, Tecnos, Madrid.
- Sánchez Sáez, A.J. (2016), Las relaciones interadministrativas, *El nuevo régimen jurídico del sector público*, Humberto Gosálbez Pequeño (Dir.), El Consultor de los Ayuntamientos–Wolters Kluwer, Madrid.
- Sanz Domínguez C. (2008), Competencias sobre turismo (Comentario al art. 71), en *Comentarios al Estatuto de Autonomía para Andalucía*, Santiago Muñoz Machado y Manuel Rebollo Puig (Dirs.), Thomson-Civitas, Cizur Menor.

⁶² Ahora bien, “cuando la Administración General del Estado ejerza funciones de coordinación, de acuerdo con el orden constitucional de distribución de competencias del ámbito material respectivo, el Acuerdo que se adopte en la Conferencia Sectorial, y en el que se incluirán los votos particulares que se hayan formulado, será de obligado cumplimiento para todas las Administraciones Públicas integrantes de la Conferencia Sectorial, con independencia del sentido de su voto, siendo exigibles conforme a lo establecido en la Ley 29/1998, de 13 de julio.”

- Soave, P. (2016). *Fichas técnicas sobre la Unión Europea: El Turismo*. Consultado el 21/03/2017 en: http://www.europarl.europa.eu/atyourservice/es/displayFtu.html?ftuId=FTU_5.6.13.html
- Villanueva Cuevas, A. (2012). *La política de la Unión Europea en materia de turismo y sus repercusiones en la legislación turística española*. (1ª Edición), Reus, Madrid.

BIENES COMUNALES Y BIENES COMUNES: VIEJAS Y NUEVAS ESTRATEGIAS PARA UNA GESTIÓN SOSTENIBLE DEL TERRITORIO

Rafael Pizarro Nevado^{1(*)}
Universidad de Córdoba
(rpizarro@uco.es)

ABSTRACT

La gestión sostenible del territorio es un elemento fundamental de la política de desarrollo rural. La Unión Europea se ha centrado en medidas de reasignación de recursos en las zonas rurales, diversificación de las actividades económicas y de fomento de la competitividad de la agricultura. De acuerdo con este enfoque, el desarrollo de nuevas actividades económicas es esencial, incluidas las actividades no agrícolas: prestación de servicios a la silvicultura ya la agricultura, gestión sostenible de la caza, actividades relacionadas con la salud, turismo, etc.

Todas estas actividades dependen de recursos escasos. Como resultado, la gestión sostenible del territorio se convierte en un instrumento de planificación esencial para decidir sobre los usos de la tierra y, por lo tanto, sobre las actividades que se pueden desarrollar. Sin embargo, se ha prestado poca atención a la ordenación del territorio como herramienta para promover la cohesión social a través de la reforma de los sistemas de propiedad y tenencia de la tierra. La teoría de los bienes comunes puede ofrecer nuevas perspectivas sobre la relación entre la ordenación del territorio, la conservación de los recursos naturales y la cohesión social. Recientemente, los estudiosos se han centrado en los bienes comunes restantes y las han descrito como prácticas sostenibles, inclusivas y alternativas de gestión del territorio. Un ejemplo que en la actualidad sigue funcionando son las “hazas de la suerte” de Vejer de la Frontera y de Barbate.

Keywords: Gestión del Territorio, Cohesión Social, Bienes Comunes, Bienes Comunales.

1. LAS TRANSFORMACIONES DEL MEDIO RURAL ESPAÑOL

España ha experimentado profundas transformaciones sociales y económicas a lo largo del siglo XX, fundamentalmente como consecuencia del tránsito desde un modelo económico basado en la explotación agraria a otro donde las actividades industriales, turísticas y los servicios dieron lugar a la concentración de la población en torno a las ciudades, a la transformación de sus periferias, así como a la creación de nuevos equipamientos e infraestructuras. El proceso se aceleró desde principios de los años 1990, periodo en el que se han producido importantes transformaciones territoriales que han afectado especialmente al ámbito urbano, siendo el área mediterránea una de las más afectadas.

Los cambios más profundos en las últimas décadas están relacionados con la creación de paisajes artificiales, por lo general inalterables, tanto en la franja costera como en las zonas interiores para instalar en ella usos residenciales, comerciales, industriales, equipamientos públicos o diferentes infraestructuras². Los procesos de urbanización se han desplegado ampliamente, no sólo como prolongación del casco histórico, sino se han extendido con significativas discontinuidades espaciales, colonizando el espacio rural, dando como resultado la aparición generalizada de una nueva forma urbana claramente diferenciada de la ciudad tradicional compacta (Nel.lo, 2004; Fera, 2011). Según los datos proporcionados por el Instituto Geográfico Nacional (2014) la tasa de transformación fue de alrededor de 26.000 hectáreas anuales (hasta 2005).

La presión del mercado inmobiliario, sobre todo en la franja costera (para fines turísticos) y en las zonas urbanas de rápido crecimiento, ha dado lugar a la retirada de grandes superficies de tierras agrícolas en las inmediaciones de los focos de desarrollo, y en menor medida a las tierras forestales y arbustivas (ecosistemas silvo-pastorales). De hecho, prácticamente el 70% de las nuevas superficies artificiales se desarrollaron sobre suelos agrícolas próximos a los núcleos urbanos y a los centros de producción, que cambiaron su uso para permitir el crecimiento de las ciudades y la construcción de nuevos complejos residenciales.

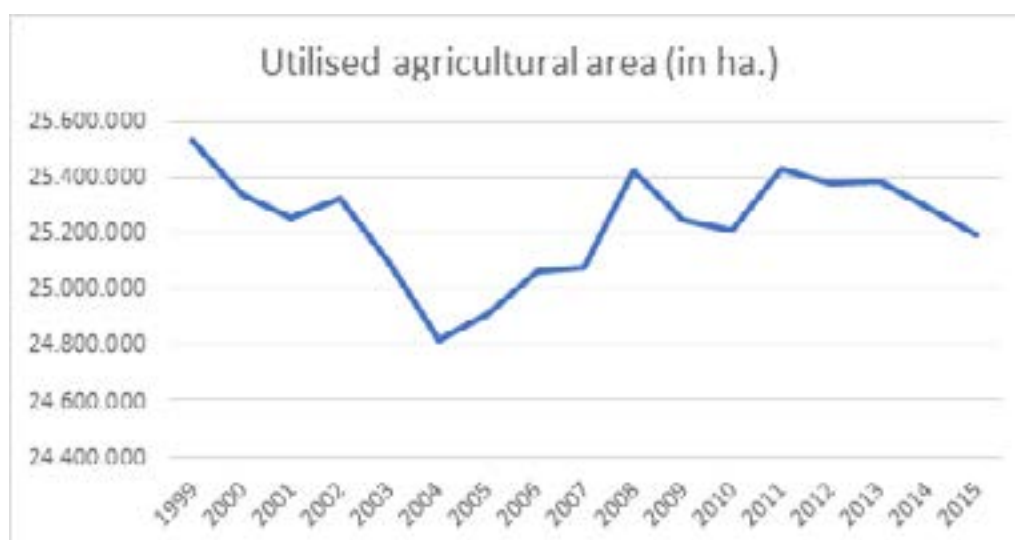
Pero las transformaciones no se explican solo por la presión inmobiliaria, ni afectan únicamente a las zonas próximas a los núcleos urbanos. También las tierras agrícolas del interior han sufrido en España cambios notables.

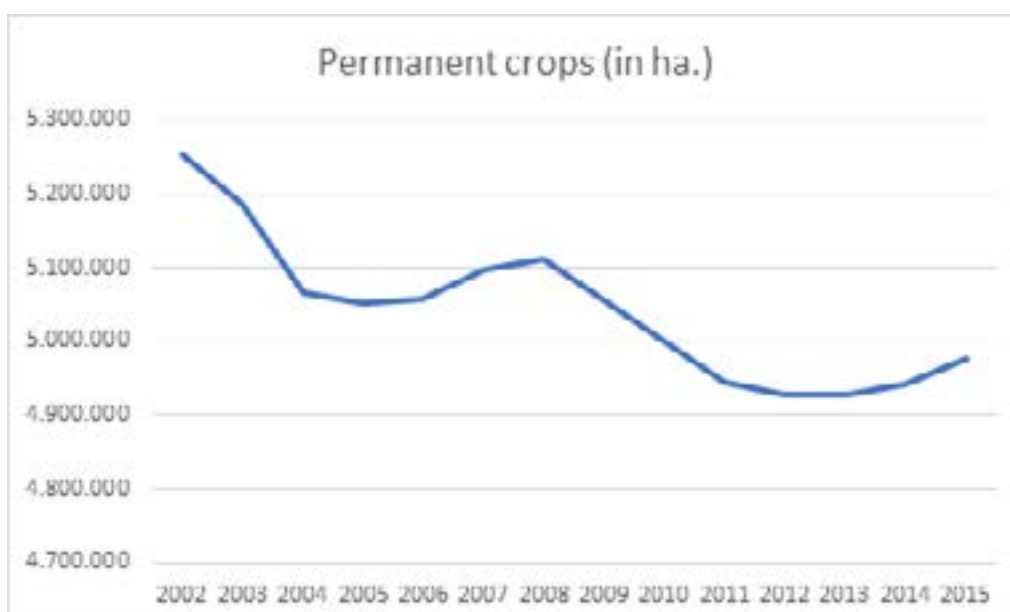
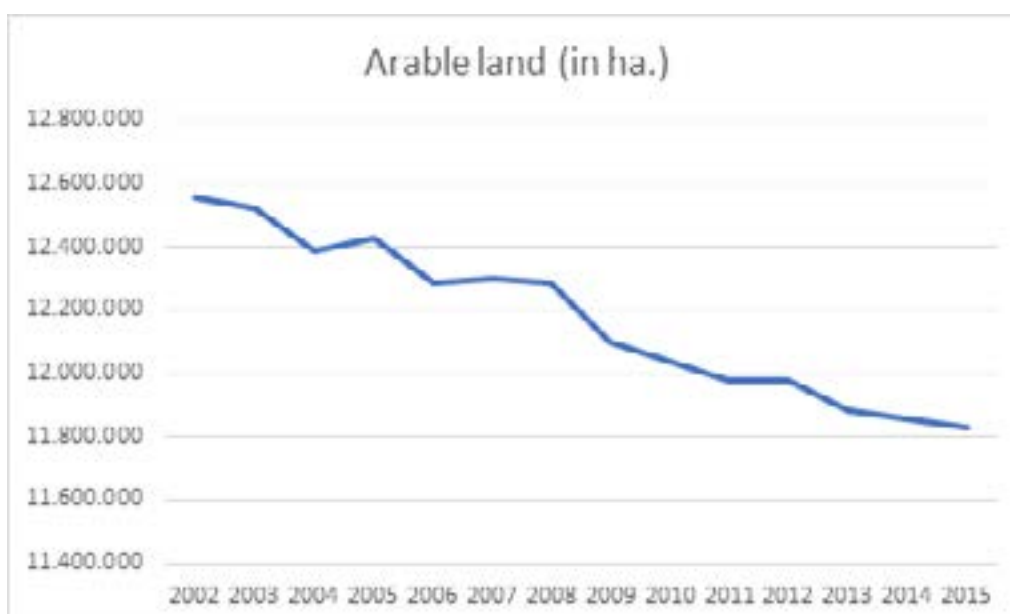
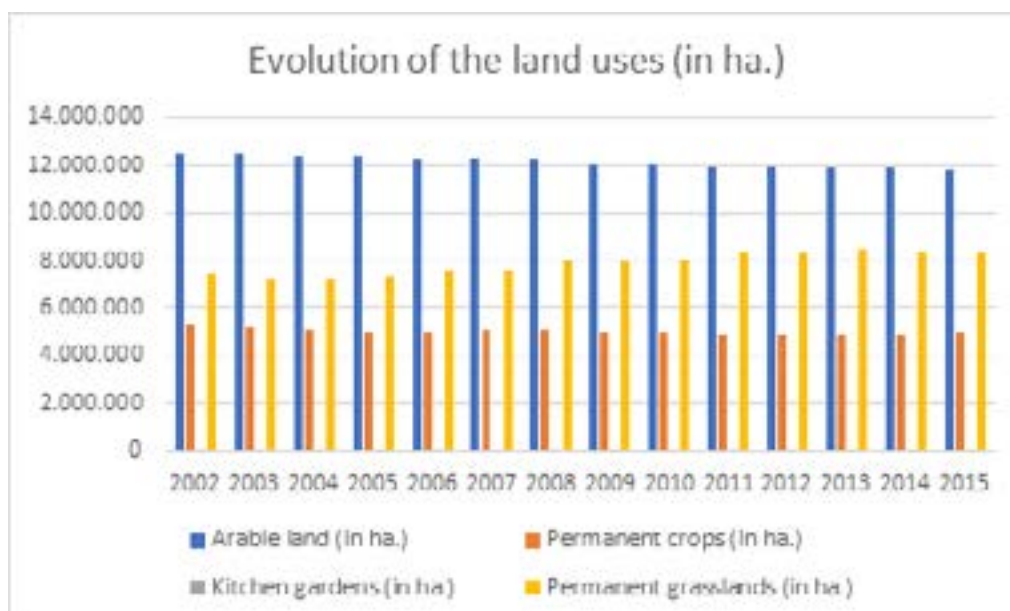
¹ (*) Universidad de Córdoba. Grupo de Investigación de la Junta de Andalucía SEJ-196. Proyecto de Investigación del Ministerio de Economía y Competitividad DER 2015/67685. Sustainable land management network (SULANET) es una Red Jean Monnet. Award reference: 564651-EPP-1-2015-1-SK- EPPJMO-NETWORK.

² Aunque se trata de un proceso que se ha dado de forma generalizada por todo el territorio, resulta especialmente intenso en la costa mediterránea y en el área metropolitana de Madrid. Esta dinámica reciente no se explica tanto por razones demográficas, como por la importancia que, en un contexto de fuerte desarrollo económico, ha tenido el sector de la construcción en la economía española, activado por la creación de nuevos desarrollos urbanos (muchos de ellos dispersos), equipamientos e infraestructuras, así como por la actividad turística.

Year	Arable land (in ha.)	Permanent crops (in ha.)	Kitchen gardens (in ha.)	Permanent grasslands (in ha.)	Utilised agricultural area (in ha.)
1999	18.338.457			7.192.308	25.530.765
2000	18.304.203			7.033.068	25.337.271
2001	18.043.715			7.210.535	25.254.250
2002	12.555.112	5.253.025	106.587	7.407.536	25.322.260
2003	12.522.966	5.186.194	108.009	7.275.102	25.092.271
2004	12.390.556	5.064.502	101.281	7.263.653	24.819.992
2005	12.426.232	5.051.325	100.904	7.329.335	24.907.796
2006	12.287.758	5.055.761	96.891	7.625.432	25.065.842
2007	12.302.373	5.097.682	109.234	7.568.517	25.077.806
2008	12.286.955	5.111.845	103.680	7.922.601	25.425.081
2009	12.100.739	5.054.095	101.792	7.991.101	25.247.727
2010	12.035.808	4.999.130	105.881	8.067.863	25.208.682
2011	11.979.792	4.945.818	107.556	8.396.107	25.429.273
2012	11.975.873	4.928.289	111.191	8.360.026	25.375.379
2013	11.880.005	4.928.364	110.805	8.464.390	25.383.564
2014	11.857.384	4.942.775	112.746	8.380.468	25.293.373
2015	11.830.241	4.976.256	112.515	8.275.928	25.194.940

A pesar de la aparente estabilidad de la superficie destinada a los usos agrícolas, se pueden apreciar cambios importantes en el uso de la tierra. Los datos desagregados incluidos en las series estadísticas desde 2002 muestran que las tierras de cultivo y los cultivos permanentes han disminuido constantemente durante el período considerado, mientras que los pastizales permanentes han aumentado constantemente.







También han aumentado las áreas de cultivos de riego (3.006.400 ha en 1985 y 3.672.800 ha en 2004), a pesar de la escasez de agua y la falta de recursos hidrológicos para fines ambientales. Por otro lado, las tierras de secano han disminuido considerablemente (17.409.000 ha en 1985, 14.285.100 ha en 2004).

Además de cambio de usos, las zonas rurales han sufrido también un notable abandono. Como resultado, los ecosistemas forestales han sufrido pérdidas (incendios forestales, roturación de bosques), dando lugar a importantes intercambios dentro de la cubierta forestal. La erosión del suelo y la desertificación también han contribuido a aumentar las tierras baldías.

Un último dato a tener en cuenta ha sido el incremento de las áreas naturales protegidas, como resultado de las políticas ambientales y de conservación de la naturaleza.

Todos estos procesos merecen una atención integral en el seno de las políticas de desarrollo rural y de ordenación del territorio.

2. LA IMPORTANCIA DE LA GESTIÓN DEL TERRITORIO PARA LA PLANIFICACIÓN DEL DESARROLLO RURAL EN LA UNIÓN EUROPEA (UE). POSIBLES HERRAMIENTAS FUTURAS DE LA UE

2.1 La gestión del territorio como instrumento para alcanzar los objetivos de desarrollo rural

La gestión del territorio es un elemento fundamental en cualquier política de desarrollo rural. Así lo ha entendido también la Unión Europea, como se refleja en los objetivos de la política de desarrollo rural recogidos en el artículo 4 del Reglamento (UE) n° 1305/2013 del Parlamento Europeo y del Consejo, de 17 de diciembre de 2013, relativo a la ayuda al desarrollo rural a través del Fondo Europeo Agrícola de Desarrollo Rural (Feader) y por el que se deroga el Reglamento (CE) n° 1698/2005 del Consejo. El segundo de los objetivos establecidos es “garantizar la gestión sostenible de los recursos naturales y la acción climática” (artículo 4 b), para lo cual en el artículo 5 del mismo Reglamento se establece como una de las prioridades de desarrollo rural de la Unión: “restaurar, preservar y mejorar los ecosistemas relacionados con la agricultura y la silvicultura, centrándose en los siguientes ámbitos:

- 1) restaurar, preservar y reforzar la biodiversidad, incluso en las zonas Natura 2000, y en zonas con limitaciones naturales u otras limitaciones específicas, y la agricultura de alto valor natural, así como el estado de los paisajes europeos;
- 2) mejorar la gestión del agua, incluida la gestión de los fertilizantes y de los plaguicidas;
- 3) prevenir la erosión del suelo y mejorar la gestión del suelo”.

También está relacionado con ello el tercer objetivo, que es “lograr un desarrollo territorial equilibrado de las economías y comunidades rurales, incluida la creación y el mantenimiento del empleo” (artículo 4 c). En relación con este objetivo el artículo 5 incluye entre las de desarrollo rural de la Unión: “Fomentar la inclusión social, la reducción de la pobreza y el desarrollo económico en las zonas rurales, haciendo especial hincapié en:

- 1) facilitar la diversificación, la creación y el desarrollo de pequeñas empresas y la creación de empleo;
- 2) promover el desarrollo local en las zonas rurales [...]”.

De hecho, las políticas de desarrollo rural tienen como objetivo mejorar el nivel de renta y la calidad de vida de la población rural a través de medidas económicas, sociales, culturales o políticas. Estas políticas tienen que asegurar también la provisión de servicios públicos básicos e instalaciones; **y lo que es más importante, deben** favorecer las condiciones económicas y sociales que permitan el desarrollo de proyectos personales y colectivos que garanticen un nivel de vida adecuado para todos.

Para lograr este objetivo, junto a las medidas de fomento de la competitividad de la agricultura (facilitando, por ejemplo, la transferencia de conocimientos y la innovación, la reestructuración y modernización de las explotaciones o promoviendo

la organización de la cadena alimentaria), la UE se ha centrado tradicionalmente en la reasignación de recursos de las zonas rurales, apoyando la diversificación de actividades económicas. La diversificación de las actividades económicas y la reasignación de recursos permiten a la población rural reducir el riesgo de dependencia económica y mejorar la prestación de los servicios solicitados por el cambio de las demandas de los consumidores.

De acuerdo con ese enfoque, los actos jurídicos de la UE asumen que para el desarrollo de las zonas rurales es esencial la creación y el desarrollo de nuevas actividades económicas. Estas nuevas actividades económicas pueden adoptar diferentes formas: podrían ser nuevas explotaciones, pero también tender a la diversificación hacia actividades no agrícolas, incluidas la prestación de servicios a la silvicultura y a la agricultura, la gestión sostenible de los recursos cinegéticos, las actividades relacionadas con la integración social, la salud, el turismo, etc. Ese proceso debe desarrollarse en el marco de una política agrícola más ambiciosa, que tenga por objeto mejorar el desarrollo rural y la eficiencia agrícola al mismo tiempo que garantiza un uso racional del territorio y el reemplazo generacional de los agricultores.

Las actividades agrícolas y no agrícolas realizadas en las zonas rurales dependen de recursos escasos, incluido el suelo, y compiten por ellos. Como resultado, la gestión del territorio se convierte en un instrumento de planificación esencial para decidir sobre los usos posibles del suelo y, por lo tanto, sobre los diferentes tipos de actividades que se pueden desarrollar en cada área en particular.

Existe evidencia de las carencias y fallos en la actual Política Agrícola Común (PAC). De hecho, está en marcha un proceso para su reforma que entrará en vigor a partir del año de 2020. Consideramos que la reforma debería corregir una orientación que parece basada simplemente en principios de competitividad, para tender a la consecución de los objetivos de desarrollo sostenible (ODS) -de los que la Unión Europea es signataria-, que incluyen indicadores de referencia (p.ej. biodiversidad, pobreza, salud, etc.).

2.2 La reforma de los sistemas de propiedad y tenencia de la tierra para lograr objetivos de cohesión social

Pues bien, sorprende que en ese contexto se haya prestado poca atención a la gestión del territorio como herramienta para promover la cohesión social a través de la reforma de los sistemas de propiedad y tenencia de la tierra. Cabe recordar que entre los principales retos que afrontan las zonas rurales de la UE siguen estando alcanzar un nivel de vida equitativo para los agricultores³ y reducir la presión sobre el medio ambiente y los recursos naturales.

La PAC actual, basada en pagos por superficie, distribuye los fondos de manera inequitativa y ha provocado un aumento del precio de la tierra, lo que dificulta la instalación de nuevas explotaciones. En muchos casos es inaccesible para aquellos que quieren incorporarse a la actividad agraria. Por ello la PAC reformada debe incluir medidas -y no solo económicas- que favorezcan ese acceso.

Existe un amplio consenso en torno a la idea de que el acceso seguro a la tierra y a su tenencia son condiciones indispensables para garantizar la equidad social en las zonas rurales. Un acceso seguro y duradero a la tierra y a los recursos naturales anima a los agricultores a desarrollar prácticas sostenibles tanto en actividades agrícolas como no agrícolas. Por las mismas razones, el uso excesivo de tierras, el sobrepastoreo, la sobreexplotación del agua, la deforestación y prácticas similares, que pueden conducir a la degradación de la tierra en las zonas rurales, suelen evitarse cuando se garantiza el acceso a la tierra y a la tenencia de la tierra. La Unión Europea, como parte de su política de cooperación internacional, fomenta activamente la aplicación en los países en desarrollo de las “Directrices voluntarias sobre la gobernanza responsable de la tenencia de la tierra, la pesca y los bosques en el contexto de la seguridad alimentaria nacional”, respaldadas por el Comité de Seguridad Alimentaria Mundial en mayo de 2012.

También en el territorio de la Unión Europea puede jugar un papel importante algunas formas de propiedad de la tierra y los sistemas de tenencia de la tierra como instrumento en la política de desarrollo rural de la UE. Más específicamente, la teoría de los bienes comunes puede ofrecer nuevas perspectivas sobre la relación entre la ordenación del territorio, la conservación de los recursos naturales y la cohesión social.

3. CARACTERIZACIÓN DE LOS BIENES COMUNES REGULADOS

La idea de los bienes comunes ha experimentado en los últimos años un renacimiento gracias a las investigaciones realizadas principalmente desde las ciencias económicas y a su utilización en las creaciones intelectuales y culturales (Ostrom, E., 2000; Dolsak, N. y Ostrom, E., 2003). Se presenta como un sistema de tenencia y uso colectivo bastante complejo, pretendidamente alternativo y no sustitutivo a los de mercado y Estado.

Pero no puede asimilarse los “bienes comunes modernos” o *commons* de naturaleza intangible, con los *commons* tangibles, que también han sido objeto de un renacer en los últimos decenios. A nuestro objeto interesan los segundos; y más concretamente los *commons* regulados, por seguir la terminología de Ostrom⁴ (2000). Basándose en datos empíricos, esta autora demostró su **éxito en diferentes contextos** culturales, por lo que entendemos que pueden ser manejados sosteniblemente y ser un instrumento adecuado para facilitar el acceso a la tierra de las comunidades rurales.

Esto presupone que se configuren como sistemas autoregulados, en los que el acceso, uso y derechos de participación se rigen por reglas que fija la comunidad a través de procesos sociales más o menos complejos que dependen sobre todo de la

³ Basta con ver el nivel de insatisfacción de los propios agricultores y ganaderos, ya que un número significativo de los mismos tiene verdaderos problemas para lograr una renta digna. La renta agrícola sigue siendo significativamente inferior a la renta media de la UE.

⁴ No entrarían en el concepto formulado por Ostrom los llamados *commons* globales no regulados o “recursos de acceso abierto” (Buck, 1998), entre los que se encuentran los fondos marinos, el alta mar, la atmósfera o el espacio ultraterrestre, que caen dentro del ámbito de bienes libres o *res nullius* y escapan a la jurisdicción de los Estados. A pesar de su importancia para la subsistencia del hombre o de su interés económico, no interesan al objeto de este trabajo.

naturaleza del recurso, pero también de la constitución de la comunidad de usuarios y de sus instituciones. En cualquier caso, las decisiones deben ser tomadas colectivamente y debe garantizarse la participación de sus miembros en su modificación.

Insiste Ostrom en que para un funcionamiento adecuado debe existir además un mecanismo de supervisión y control recíproco del cumplimiento de las reglas, de sanciones graduales o proporcionadas contra el incumplimiento y un mecanismo de resolución de conflictos, así como de un reconocimiento exterior del derecho de autoorganizarse.

Esto último se aprecia en el reconocimiento por los ordenamientos jurídicos nacionales de las distintas formas comunitarias de propiedad de la tierra. A continuación se expondrá el caso español. Además, s del Tratado de Funcionamiento de la Unión EuropeaE sí

Muchos tipos de bienes pueden ser tratados como bienes comunes, incluyendo tierras, recursos hídricos, bosques, pastos, caza, pesca y casi cualquier otro recurso natural. Cuanto más valioso sea el bien, social o económicamente, más adecuado podría ser el régimen de propiedad común. La comunidad propietaria cuidaría mejor de los bienes si los considera esenciales para su supervivencia. Es probable que surjan prácticas que supongan una gestión adecuada de los recursos, incluida la retención de agua, la mitigación de la contaminación y la protección de los suelos. Pero, incluso si no se consideran recursos esenciales, también es probable que se implementen prácticas de manejo sostenible, si los miembros de la comunidad se sienten dueños reales de los bienes comunes.

Como ejemplo puede citarse la Mancomunidad del Valle de Broto, entidad administrativa que desde el siglo XIV gobierna el uso forestal y ganadero de este valle⁵, incluido en el Parque Nacional de Ordesa y Monte Perdido. Desde entonces se ha regulado de forma exhaustiva la manera de aprovechar los pastos, las fechas de subida a los prados estivales, la rotación de la explotación entre los diferentes puertos, y esto incluye una extensa superficie del Parque Nacional. Como curiosidad digna de mención hay que señalar que entre sus ordenanzas se regula el aprovechamiento en común de pastos entre los vecinos del valle de Broto con los del valle francés de Barèges, lo que permite a los ganados de este valle oscense subir a los pastos franceses a partir del 25 de julio de cada año.

Este sistema comunal de gobernanza ha ido perfeccionándose durante siglos, dando lugar a una serie de normas de manejo del territorio que aprovechan al máximo su potencial productivo para el uso ganadero de estas zonas duras de alta montaña. Pero a la vez, este sistema de gobernanza local es el responsable de la gestión de una vasta superficie de un área natural protegida, el Parque Nacional de Ordesa y Monte Perdido.

Las mancomunidades forestales del Pirineo son solo un ejemplo de las muchas organizaciones comunales que gestionan miles de hectáreas de territorio y recursos naturales en España, como son los montes de socios, vecinales, sociedades de caza, etc. En realidad, España es el país europeo con mayor riqueza y vitalidad de áreas bajo gobernanza comunal, como ha sido reconocido por el Consorcio ICCA⁶, que la reconoce como consideran *Áreas Conservadas por Comunidades Locales*, una figura de conservación reconocida por el Convenio sobre la Diversidad Biológica como estrategia de conservación basado en instrumentos de gobernanza comunal al margen de los Estados.

Lógicamente las reglas que rigen el uso de bienes comunes varían en cada caso particular, lo que permite su adaptación a las necesidades que impone el entorno y el momento considerados. Pero, en todo caso, esas normas deben ser adoptadas de común acuerdo por los miembros de la comunidad, lo que aumenta su nivel de participación en la protección de los bienes y su uso racional. Además, se han dado pruebas de que las viejas normas que rigen las propiedades comunes se consideran parte del patrimonio común de la comunidad.

4. LOS BIENES COMUNALES EN EL DERECHO ESPAÑOL

Todos los rasgos expuestos se dan en una figura de honda raigambre en el Derecho español, los llamados bienes comunales, que disfrutan de reconocimiento y protección en el ordenamiento jurídico vigente incluso con rango constitucional.

4.1 Relevancia histórica y económica

Al igual que en otros países europeos, las propiedades comunes fueron habituales durante siglos en grandes áreas de España, ya que aseguraban la subsistencia de las comunidades rurales. Por lo general, podrían adoptar la forma de pastizales comunes (por ejemplo, para pastoreo de ganado), campos de cultivo comunes o bosques comunes (por ejemplo, para la recolección de leña). Estos bienes y aprovechamientos comunes pertenecían de forma colectiva a los vecinos de cada pueblo y se consideraban *res extra commercium*, lo que implicaba que no podían ser enajenados. Esencialmente ese régimen de propiedad era el mismo en cada pueblo, aunque las reglas de uso y disfrute de los bienes comunes con frecuencia variaban de un lugar a otro.

A partir del siglo XIX ese patrimonio común sufrió un declive continuado, provocado por una serie de medidas legales y económicas que redujeron las propiedades comunes e incluso las eliminaron en muchos lugares, lo que tuvo como resultado el empobrecimiento y la disminución en el nivel de vida de amplios sectores de sus poblaciones⁷. Para explicar el proceso de privatización o desarticulación de los bienes comunales y sus consecuencias en las sociedades campesinas habría que

⁵ Su origen se remonta a la Junta General del Valle de Broto, creada en el primer tercio del siglo XIII a raíz de un privilegio otorgado por Jaime I en el que, entre otras cosas, se reconocía a los habitantes del valle la posesión de los puertos que tradicionalmente habían formado parte de sus términos y el derecho al libre aprovechamiento de sus pastos.

⁶ El Consorcio (ICCA Consortium, en inglés) es una asociación internacional que se encarga de la promoción y reconocimiento de territorios y áreas conservadas y gestionadas por comunidades locales a nivel mundial (Indigenous peoples' and community conserved territories and áreas, ICCAs). Este consorcio colabora con el Programa de Naciones Unidas para el Medio Ambiente (PNUMA), con organizaciones como la UICN, y con otros organismos dedicados a la investigación y promoción de derechos humanos.

⁷ Se ha señalado como ejemplo extremo de las repercusiones provocada por la privatización de los bienes comunales del municipio de Boada, que en 1900 poseía 4.258 hectáreas de bienes comunales. En un contexto de grave crisis económica, la situación de los vecinos se vio enormemente agravada por la privatización de los bienes comunales y el pueblo entero adoptó la decisión de emigrar -todos unidos y con las autoridades al frente- a Argentina, a cuyo Gobierno solicitaron ayuda para financiar el viaje (Calle Velasco, 2014).

considerar no solo factores financieros, jurídicos o políticos; también jugaron un papel importante las corrientes doctrinales dominantes en la época⁸.

A pesar de todo ello, un cierto número de pueblos mantuvo en todo o en parte sus bienes comunes y algunos de ellos han sobrevivido hasta hoy como una reliquia del pasado. Como es lógico en cada lugar el resultado de la tensión entre la actuación del Estado y los intereses locales fue distinta, dando lugar a situaciones muy variadas según regiones. Posteriormente, ya en el siglo XX la legislación española las ha acogido intentando proporcionarles un régimen de protección adecuado.

4.2 Modalidades de bienes comunes en función de su titularidad y régimen jurídico aplicable

Para su comprensión desde el tratamiento que les proporciona el Derecho conviene recordar que los bienes comunes regulados pueden adoptar formas jurídicas diferentes según el lugar y el momento que se analice, aunque normalmente implican la propiedad colectiva de recursos valiosos que pueden ser utilizados o empleados por una comunidad. Además, con independencia de la forma jurídica que se les asigne, estos bienes quedan sujetos a reglas que persiguen un manejo responsable que garantice el uso colectivo, a pesar de su carácter limitado, y que al mismo tiempo eviten su agotamiento y/o depredación.

En el caso español encontramos básicamente dos modalidades. La comunidad puede poseer directamente la propiedad (cada individuo tiene un interés indiviso en toda la propiedad) o atribuirse su titularidad a un organismo público (por ejemplo, un municipio). Además, su régimen legal generalmente confiere una protección especial a estas propiedades, impidiendo su venta o estableciendo condiciones difíciles para su apropiación por terceros.

4.2.1 Bienes comunales

La más extendida en España es la segunda solución, que es la que en sentido estricto en Derecho español se conocen como bienes comunales. Propiamente son bienes de las entidades locales cuyo aprovechamiento corresponde al común de los vecinos (Nieto García, 1964; Colom Piazuelo, 1994; Bocanegra Sierra, 2008). Por su relevancia histórica y por su abundante presencia en buena parte del territorio nacional tuvieron un reconocimiento específico en la Constitución Española de 1978, que establece que «la ley regulará el régimen jurídico de los bienes de dominio público y de los comunales, inspirándose en los principios de inalienabilidad, imprescriptibilidad e inembargabilidad, así como su desafectación».

Su estatuto ha sido posteriormente desarrollado en la Ley 7/1985, de 2 de abril, Reguladora de las Bases del Régimen Local (LBRL) y por las leyes de las Comunidades Autónomas sobre bienes de las entidades locales. En defecto de la regulación anterior se aplicará supletoriamente los artículos 75, 77 y 78 del Real Decreto Legislativo 781/1986, de 18 de abril, por el que se aprueba el texto refundido de las disposiciones legales vigentes en materia de Régimen Local (TRRL), y los artículos 2, 3, 4, 5 y 94-108 del Real Decreto 1372/1986, de 13 de junio, por el que se aprueba el Reglamento de Bienes de las Entidades Locales (RBEL).

En la actualidad lo característico de los bienes comunales es que el disfrute y aprovechamiento corresponde a los vecinos de un determinado lugar⁹, mientras que la titularidad se atribuye legalmente a la entidad local en que residen. Pero como se ha comentado, esto no siempre ha sido así, ni el tratamiento dado en nuestra legislación ha sido constante¹⁰, lo que permitió a la doctrina jurídica sostener su titularidad compartida entre el municipio y los vecinos (Bocanegra Sierra, 1983) y negar su inclusión en las categorías usuales de bienes públicos, puesto que ni eran bienes patrimoniales ni propiamente bienes de dominio público. Reflejo de esa concepción es la sentencia del Tribunal Constitucional de 2 de febrero de 1981, en la que reconocía la «naturaleza jurídica peculiar» que tienen este tipo de bienes.

Pero la legislación española de final del siglo XX -también la aprobada por las Comunidades Autónomas- ha reforzado su protección configurándolos como un tipo de bienes de dominio público¹¹, consagrando su inalienabilidad, imprescriptibilidad e inembargabilidad, por lo que, consecuentemente, su titularidad se atribuye en exclusiva a un ente local, normalmente el municipio¹².

4.2.2 Montes vecinales en mano común

Junto a los bienes comunales típicos, en los que la titularidad se atribuye al Municipio, existe un tercer género de bienes en los que la titularidad corresponde directamente a los vecinos en su calidad de grupo núcleo social, y no como entidad administrativa. El ejemplo más característico de esto último son los llamados montes vecinales en mano común, que son terrenos forestales de propiedad privada -puesto que no pertenecen al municipio- configurados de acuerdo al modelo de comunidad de propietarios de tipo germánico, sin cuotas de participación y sin posibilidad de disolución, pues se niega a los comuneros la *actio communi dividundo* (Bocanegra Sierra, 1986).

Esta modalidad tiene un régimen jurídico especial, que con carácter general se recoge en la Ley 55/1980, de 11 de

⁸ El prejuicio contra los bienes comunales puede encontrarse incluso en siglos anteriores, puesto que el ideario ilustrado responsabilizó de muchos de los males del campo español, por lo durante la segunda mitad del siglo XVIII propugnaron la desamortización de las tierras de carácter concejil y comunal como una parte esencial de la reforma del sector agrario. Del análisis de todo ello se han ocupado, entre otros muchos, López Astudillo (1992) y el Grupo de Estudios de Historia Rural de la Universidad Complutense de Madrid (1994).

⁹ La sentencia de la Sala Cuarta del Tribunal Supremo de 14 de junio de 1968 (Ponente: Cruz Cuenca) lo considera un derecho real administrativo de goce. En su momento, esta sentencia mereció un comentario de Alejandro Nieto (1969).

¹⁰ En sentido opuesto a lo dispuesto por la Constitución de 1978 la Ley de régimen local de 1955 establecía en su artículo 183 que: «Los bienes municipales se clasifican en bienes de dominio público y patrimoniales... Los patrimoniales son de propios o comunales». Y existe abundante jurisprudencia preconstitucional sobre el carácter patrimonial de los bienes comunales (González Ríos, 2001).

¹¹ La LBRL de 1985 se refiere en el artículo 80 a «los bienes comunales y demás bienes de dominio público» y el artículo 2.3 del RBEL de 1986 dispone: «Tienen la consideración de comunales aquellos bienes que siendo de dominio público, su aprovechamiento corresponde al común de los vecinos». Como ejemplo de ley autonómica puede citarse el artículo 50 de la Ley 5/2010, de 11 de junio, de autonomía local de Andalucía. En su apartado segundo establece que «Los elementos del patrimonio de las entidades locales, en atención al uso o servicio destinado, se clasifican en demaniales y patrimoniales. Los bienes comunales, que son aquellos cuyo aprovechamiento corresponde al común de los vecinos, tienen la consideración de dominio público».

¹² La jurisprudencia acepta pacíficamente esa concepción, como se comprueba en las sentencias del Tribunal Supremo de 31 de diciembre de 1986 (Ponente: Gordillo García, Ar. 1696), de 30 de abril de 1987 (Ponente: García Estarús, Ar. 4768) y 3 de mayo de 1989 (Ponente: González Navarro, Ar. 3641).

noviembre, de montes vecinales en mano común. Por su extensa presencia en Galicia, esa Comunidad Autónoma asumió en su Estatuto competencias sobre ellos y aprobó la Ley 13/1989, de 10 de octubre, de montes vecinales en mano común. En ambos casos se ha configurado con gran similitud al de los bienes comunales típicos, pues también son imprescriptibles, inembargables e inalienables y se atribuye a la Administración potestades de deslinde, si fuera necesario, además del fomento y asesoramiento técnico.

4.3 Aprovechamiento de los bienes comunales

En relación con los bienes comunales en sentido estricto, el ente local goza de una titularidad que le permite ejercer sus potestades para su conservación y rescate, además de una intervención en otros aspectos relevantes (ordenanzas, desafectación); pero su aprovechamiento le corresponde a los vecinos. El aprovechamiento de los bienes comunales se regula en los artículos 75 TRRL y 94 y ss RBEL, que establecen como regla general la explotación colectiva o comunal. Sólo cuando esto sea impracticable, está previsto sucesivamente el aprovechamiento tradicional conforme a la costumbre u ordenanza del lugar, en su defecto la adjudicación de lotes a los vecinos o finalmente la adjudicación mediante precio.

Con un celo excesivo para proteger su carácter común, la legislación vigente establece que el aprovechamiento y disfrute de bienes comunales se efectuará preferentemente en régimen de explotación común o cultivo colectivo (artículo 94.1 RBEL), lo que implica el disfrute general y simultáneo de los bienes por quienes ostenten en cada momento la cualidad de vecino. El artículo 103.1 RBEL dispone que *“el derecho al aprovechamiento y disfrute de los bienes comunales, en cualquiera de sus modalidades, corresponderá simultáneamente a los vecinos sin distinción de sexo, estado civil o edad. Los extranjeros domiciliados en el término municipal gozarán también de estos derechos”*.

Sólo cuando tal disfrute fuere impracticable¹³ se permiten aprovechamientos distintos, según costumbre o reglamentación local, o se procederá a la adjudicación de los aprovechamientos por lotes o suertes (artículo 94.2 RBEL). La adjudicación por lotes o suertes se hará a los vecinos en proporción directa al número de personas que tengan a su cargo e inversa de su situación económica (artículo 97 RBEL).

El temor a la apropiación de estos bienes o de ciertos usos explica la adopción de una regulación tan inflexible, que en muchas ocasiones no podrá responder a los cambios sociales (despoblamiento y el envejecimiento de la población), económicos (tecnificación, necesidades de inversión) y ambientales que ha experimentado el medio rural español, por lo que resulta imprescindible explorar

fórmulas de explotación más adaptadas a la situación del entorno en que cada uno de estos bienes se encuentre enclavado y a las necesidades de su comunidad de base.

No se nos escapa que no será siempre fácil, que no faltarán resistencias. Y no solo de quienes se puedan ver directamente afectados. También tendrá un peso importante una concepción doctrinal que debe evolucionar, como se comprueba en algún pronunciamiento jurisprudencial que, con estricta sujeción a lo dispuesto literalmente por los artículos 75 del TRRL y 94 del RBEL, que impone el orden de posibles aprovechamientos de los bienes comunales, niega la posibilidad de adaptar la prelación de aprovechamientos¹⁴.

Pero hay que recordar que esta regulación estatal tiene que tener mero carácter supletorio de la legislación autonómica en la materia, por lo que es perfectamente posible encontrar vías para que las propias comunidades -respetando sus tradiciones y la conservación del bien- ordenen el uso de sus bienes comunales de acuerdo con las circunstancias que se presenten en cada momento. Esto sería más sencillo si la legislación autonómica contemplase esa posibilidad, flexibilizando el mecanismo previsto en el TRRL, como se hizo en la Ley Foral 6/1990, de 2 de julio, de la Administración Local de Navarra. En su artículo 141 se establece que *“Las Entidades locales velarán por la puesta en producción, mejora y aprovechamiento óptimo de los comunales”*, para a continuación establecer una regulación más adecuada a las características físicas de los distintos bienes (terrenos comunales de cultivo, pastos comunales, montes comunales y otras variedades).

Pero incluso en las Comunidades Autónomas donde no exista una regulación similar, cabe interpretar la regulación estatal, que reproduce la mayor parte de las leyes autonómicas, en relación con el contexto, los antecedentes históricos y legislativos, pero también de acuerdo con la realidad social del tiempo en que han de ser aplicadas, atendiendo fundamentalmente al espíritu y finalidad de aquellas (artículo 3 del Código Civil), permitiendo así alcanzar objetivos de sociales y de sostenibilidad ambiental.

No es esto algo ajeno a la lógica de la legislación vigente, puesto que de la misma se pueden fácilmente deducir que está inspirada en estos principios y contempla que cada forma de aprovechamiento, incluso el aprovechamiento en régimen de explotación común o colectiva, se ajuste *“en su detalle, a las ordenanzas locales o normas consuetudinarias tradicionalmente observadas”* (artículo 95 RBEL). Lógicamente estas modulaciones deben ser adoptadas en un primer momento por la comunidad afectada y solo después reflejadas en la ordenanza que aprueba el órgano administrativo.

Pero es que además encontramos reglas específicas en el TRRL y en el RBEL que reflejan la lógica que hemos expuesto. Existe, por ejemplo, excepciones al derecho de los vecinos al aprovechamiento en condiciones de igualdad en los artículos 75.4 TRRL y 103.2 RBEL contemplan que, en aquellos supuestos en que el disfrute y aprovechamiento de bienes comunales se viniese ordenando *“mediante concesiones periódicas a los vecinos de suertes o cortas de madera, de acuerdo con normas consuetudinarias u ordenanzas locales tradicionalmente observadas”*, el Ayuntamiento puede exigir a los vecinos, *“como condición previa para participar en los aprovechamientos forestales indicados, determinadas condiciones de vinculación y arraigo o de permanencia, según costumbre local, siempre que*

¹³ La norma es pues el régimen de explotación colectiva, sin más excepciones que las previstas en el artículo 94 RBEL en los supuestos en que aquélla fuera impracticable (STS de 25 de octubre de 1988). En consecuencia, no procede el reparto por lotes o suertes, si no se justifica sobradamente lo impracticable del uso colectivo (Dictamen del Consejo de Estado de 19 de octubre de 1989).

¹⁴ En la Sentencia de 3 de mayo de 1989 (Ponente: González Navarro) se explica que estos preceptos imponen que el aprovechamiento y disfrute de estos bienes se realice, en primer lugar, en régimen de explotación común o cultivo colectivo y que solo cuando tal disfrute fuere impracticable regirá la costumbre u ordenanza local. El mismo razonamiento se sigue en la Sentencia de 25 de octubre de 1988, en la que se afirma que la norma es el régimen de explotación colectiva, sin más excepciones que las previstas en el artículo 94 RBEL en los supuestos en que aquélla fuera impracticable. Y es también la posición del Consejo de Estado, que afirma que no procede el reparto por lotes o suertes, si no se justifica sobradamente lo impracticable del uso colectivo (Dictamen del Consejo de Estado de 19 de octubre de 1989).

estas condiciones singulares y la cuantía máxima de las suertes o lotes sean fijadas en ordenanzas especiales”, introduciendo una quiebra del principio de igualdad por razones justificadas;

O en el artículo 106 RBEL admite que parte de los bienes comunales sean acotados para fines específicos, entre los cuales se incluye el auxilio a los vecinos necesitados.

5. “LAS HAZAS DE SUERTE DE VEJER”: UN EJEMPLO EXITOSO DEL ENFOQUE DE BIENES COMUNES EN LA GESTIÓN SOSTENIBLE DEL TERRITORIO

Como se ha indicado, en los últimos tiempos se han realizado estudios sobre los bienes comunes que se conservan y sobre el uso que de los mismos se sigue haciendo. Los resultados permiten concluir que son prácticas sostenibles, inclusivas y alternativas de gestión de la tierra. Entre los bienes comunales que hoy siguen en explotación conforme a prácticas ancestrales podemos señalar “Las Hazas de Suerte de Vejer” (Bernabé Salgueiro, 2012; Tejeiro Salguero, 2008).

Vejer de la Frontera es un pequeño pueblo costero situado en el sur de España, junto al Océano Atlántico (Cabo Trafalgar), con una población de apenas 13.000 habitantes. Esta localización ha estado habitada permanentemente desde el Paleolítico y desde entonces ha estado sucesivamente bajo el dominio de los reyes de Tartessos (Edad del Bronce Atlántico), los griegos, el Imperio Romano, el Imperio Bizantino, los musulmanes y, finalmente, los reyes de la Corona de Castilla. Las actividades agrícolas, la ganadería y la pesca han sido sus industrias más importantes durante siglos, mientras que el turismo no se ha convertido en una actividad económica relevante hasta tiempos más recientes. Como consecuencia de su larga historia y de las continuas actividades agrícolas, Vejer de la Frontera desarrolló técnicas específicas de ordenación de la tierra basadas en la idea de la propiedad común de la tierra.

“Las Hazas de Suerte de Vejer” fueron concedidas en 1288 por el rey Sancho IV. Estaban destinados a ser tierras comunes de propiedad colectiva de los campesinos y libres de cualquier jurisdicción señorial. Este privilegio fue confirmado en 1566 por la Real Chancillería de Granada, cuando el Duque de Medina Sidonia intentó apropiarse de parte de las tierras. La sentencia estableció que los terrenos comunes, que se dividían en 356 parcelas de tierra arable, serían adjudicados por sorteo cada tres años (cada cuatro años, desde 1580). De esa forma los afortunados ganadores obtenían medios de subsistencia para ellos y sus familias durante los siguientes cuatro años. Originalmente, se esperaba que cultivasen el terreno asignado por sí mismos. Sin embargo, desde 1868 se permitió a los ganadores cultivar la parcela asignada o alquilarla a un inquilino (los llamados asentados), que debían pagar una renta.

Las “Hazas de Suerte” tienen una extensión total de 3.489,80 hectáreas, divididas en 232 parcelas de tierra cultivable (partidos), que representan el 14% de las tierras arables totales del pueblo y un 26% de las tierras cultivables realmente cultivadas. Las parcelas son típicamente tiras largas de tierra y su área media es cerca de 12,5 ha. El tamaño y la forma de las parcelas tienen por objeto garantizar una distribución equitativa de los suelos buenos y malos entre todos los lotes. En las mismas se practica una agricultura intensiva con rotación de cultivos de trigo, remolacha azucarera, cebada, sorgo, habas y garbanzos.

En la actualidad, los ganadores sólo tienen derecho a cobrar la renta que deben pagar los asentados. El importe de esa renta varía según la calidad de la parcela adjudicada, fluctuando entre 700 y 1.300 euros anuales. Por otro lado, los asentados del pueblo están incluidos en un registro y se les otorga el derecho de cultivar las tierras de por vida a cambio del pago de esa renta. Esta renta es más baja que la renta que habría que pagar a propietarios privados por tierras de similares características, lo que supone una ventaja importante para los asentados que encuentran así una vía más sencilla para acceder a una explotación agraria.

Las parcelas que cultivan los asentados también se rifan cada cuatro años. Cada año bisiesto se realiza un doble sorteo, que tiene lugar el 22 de diciembre: el primero es un sorteo de rentas entre las familias del pueblo y posteriormente se sortean las parcelas entre los asentados incluidos en el registro. La última rifa tuvo lugar el 22 de diciembre de 2016.

La gestión de las “Hazas de Suerte” se ha regido por leyes consuetudinarias no escritas durante siglos. En 1868, el municipio aprobó un reglamento que regía la asignación y gestión de los campos de la suerte y creó un órgano de supervisión, la “Junta de Hazas”. En la actualidad, el Alcalde preside este órgano, que está compuesto por diecisiete concejales y un número igual de representantes del pueblo, elegidos cada cuatro años. Esta Junta se encarga de la organización del sorteo de rentas y de la rifa de parcelas, así como de la supervisión del registro de familias y del registro de inquilinos. El Reglamento que rige las “Hazas de Suerte de Vejer” también ha evolucionado para adaptarse a las nuevas situaciones sociales. Por ejemplo, en 2000 se introdujo la igualdad de derechos entre hombres y mujeres y entre personas casadas, solteras o divorciadas.

Sobre la base de estas tierras comunes y su gestión peculiar se ha desarrollado una fuerte identidad cultural. Los estudiosos han señalado que los vecinos tienden a ver las “Hazas de Suerte” y esa lotería como parte de su herencia cultural (Muñoz Rodríguez, 2007). No sólo son conscientes de que participan en la gestión colectiva de una propiedad común, sino que también tienen la sensación de ser los propietarios reales y legítimos. Las “Hazas de Suerte de Vejer” se han convertido en una parte esencial de su patrimonio cultural y también de su identidad. De hecho, además de los sorteos, el pueblo lleva a cabo múltiples actividades culturales relacionadas con esta tradición cada año, incluyendo exposiciones y espectáculos callejeros que muestran los orígenes históricos de las “Hazas de Suerte de Vejer” y la lucha que los aldeanos mantuvieron durante años con los Duques de Medina Sidonia para conservar las tierras comunes.

Este enfoque ha implicado plenamente a la población en la protección de estos bienes comunales. No sólo los ganadores del sorteo, sino que todo el vecindario está preocupado por el uso sostenible de las tierras y su protección contra las prácticas agrícolas agresivas que podrían agotar los suelos o causar daños a largo plazo a ellos. Cada vecino tiene una expectativa

legítima de ganar la rifa, lo que significa que todos tienen un verdadero interés en la conservación de las tierras de la suerte. Por todo lo anterior, Vejer de la Frontera ha presentado recientemente una solicitud para que las “Hazas de Suerte de Vejer” sean declaradas patrimonio cultural inmaterial por la UNESCO.

REFERENCES

- Bernabé Salgueiro, A. (2012). Las Hazas de Suerte de Vejer. *Andalucía en la historia*, nº 36: 46-49.
- Bocanegra Sierra, R. (1983). Sobre algunos aspectos de la desafectación de comunales. *Revista de Administración Pública* nº 100-102 (3): 2257-2290.
- Bocanegra Sierra, R. (1986). *Los montes vecinales en mano común. Naturaleza y régimen jurídico*. IEAL. Madrid.
- Bocanegra Sierra, R. (2008). *Bienes comunales y vecinales*. Iustel. Madrid.
- Buck, S. (1998). *The Global Commons: An Introduction*, Island Press. Washington, D.C.
- Calle Velasco, M. de la (2014). *Los bienes comunales de Boada*. Ediciones Universidad de Salamanca. Madrid.
- Colom Piazuelo, E. (1994). *Los bienes comunales en la legislación de régimen local*. Tecnos. Madrid.
- Dolsak, N. y Ostrom, E. (2003). *The Commons in the New Millennium: Challenges and Adaptations*, MIT. Cambridge, Mass.
- Feria, J.M. (2011). Ciudad y territorio: nuevas dinámicas espaciales. En : I. Pujadas *et al.* (eds.). *Población y Espacios urbanos*. Departament de Geografia Humana de la UB y Grupo de Población de la AGE. Barcelona.
- González Ríos, I. (2001). Bienes comunales: naturaleza jurídica y necesidad de una nueva orientación en su régimen de aprovechamiento. *Revista de estudios de la administración local* nº 286-287: 253-280.
- Grupo de Estudios de Historia Rural de la Universidad Complutense (1994). Más allá de la propiedad perfecta. El proceso de privatización de los Montes Públicos Españoles (1859-1920), *Noticiero de Historia Agraria* nº 8: 99-152.
- López Astudillo, A. (1992). Los Montes públicos y las diversas vías de su privatización en el siglo XIX. *Agricultura y Sociedad* nº 65.
- Muñoz Rodríguez, A. (2007). *El Patrimonio Cultural de Vejer de la Frontera*. Grupo de Desarrollo Rural La Janda Litoral. Vejer de la Frontera (Cádiz).
- Nel.lo, O. (2004). ¿Cambio de siglo, cambio de ciclo? Las grandes ciudades españolas en el umbral del s. XXI. *Ciudad y Territorio. Estudios Territoriales* vol. XXXVI, nº 141-142: 523-542.
- Nieto García, A. (1964). *Bienes comunales*. Revista de Derecho Privado. Madrid.
- Nieto García, A. (1969). Bienes comunales: refundición de dominio forestal de suelo y vuelo. *Revista de Administración Pública* nº 60: 125-132.
- Ostrom, E. (2000). *El gobierno de los bienes comunes*. Fondo de Cultura Económica. México.
- Tejeiro Salguero, R. (2008). *Las Hazas de Suerte de Vejer de la Frontera*. Excmo. Ayuntamiento de Vejer de la Frontera.

ANÁLISIS DE LAS POLÍTICAS DE INCLUSIÓN Y ACOGIDA DE INMIGRANTES EN EUROPA

Eva Sotomayor-Morales
Jaén University
(esotoma@ujaen.es)

María Luisa Grande-Gascón
Jaén University
(mlgrande@ujaen.es)

Juana María Morcillo Martínez
Jaén University
(jmmorcil@ujaen.es)

ABSTRACT

Con este trabajo pretendemos realizar un análisis de las políticas de acogida e inclusión de la población inmigrante en Europa, tomando como muestra cuatro países de sur de Europa: España, Francia, Italia y Grecia. Este análisis forma parte del proyecto *“Desarrollo de un marco de competencias y de módulos de formación que promuevan la inclusión de los inmigrantes en Europa”* (Proyecto DIME), financiado en la convocatoria europea Erasmus + (2015-2018)

En primer lugar se describe el fenómeno migratorio en estos países teniendo como referencia el contexto europeo, en el que se incluye el perfil socio-demográfico de la población inmigrante y las dificultades en el acceso a la nacionalidad, la educación y la formación, la vivienda, la atención sanitaria y el empleo.

Posteriormente, se describe la situación de discriminación que sufre la población inmigrante, así como las políticas específicas que se han desarrollado en los diferentes países europeos, al objeto de conseguir su inclusión social y laboral, teniendo en cuenta los diferentes tipos de inmigrantes. Se apunta a que estas iniciativas han tenido un desigual impacto en la integración de las personas inmigrantes quedando muy lejos de la necesaria armonización de las políticas migratorias en el seno de la Unión Europea.

Keywords: International Migration, Government Policy, Government Policy, Provision and Effects of Welfare Programs, Discrimination.

JEL Classification: F22, I28, I38, J71

1. INTRODUCCIÓN

En el contexto global contemporáneo, la multiculturalidad se ha convertido en la seña de identidad de la mayor parte de las sociedades occidentales. La llegada de inmigrantes está teniendo un impacto cada vez mayor en las sociedades de acogida, evidenciando conflictos y contradicciones a todos los niveles. En este sentido, los planteamientos ideológicos que sustentan las democracias occidentales presentan diversas paradojas y las estructuras socio-políticas se encuentran en pleno proceso de transformación. Como señala Zapata-Barrero (2004: 16): “todas las épocas han tenido sus factores de grandes transformaciones sociales, políticas y culturales. Hoy en día este motor tiene un nombre: multiculturalidad e inmigración.”

Los países del centro y norte de Europa a mediados del siglo XX, como consecuencia de la necesidad de mano de obra fomentaron notablemente la llegada de inmigrantes (López y Giol, 2004). En este sentido, puede afirmarse que los flujos migratorios en Europa han sido, y continúan siendo regulados por el mercado de trabajo. En este periodo hubo un desarrollo económico importante en Europa que tuvo como consecuencia la ausencia de trabas para la entrada de inmigrantes, en la mayoría de las ocasiones procedentes de las antiguas colonias europeas de África.

Por el contrario, durante la crisis económica de los años 70, tuvo lugar un aumento importante del desempleo en Europa y, como consecuencia, comenzaron las restricciones a la inmigración, cerrándose las fronteras. Como resultado no deseado de estas limitaciones, los inmigrantes que ya se encontraban en el territorio europeo pasaron de realizar una inmigración oscilatoria de entrada y salida a quedarse permanentemente, evitando volver a sus países de origen, por miedo a no poder volver a entrar en el país de acogida (Aragón, 2003). Ello influyó a que paralelamente se fuera gestando un clima de opinión negativo hacia ellos, creándose en determinados sectores la falsa creencia de que pues las sociedades de acogida los vislumbraban como potenciales competidores por los bienes suministrados desde el Estado de Bienestar, que se percibían escasos.

Sin embargo, la idea de que la cuestión migratoria era un tema de agenda estatal tardó en aparecer entre los europeos. En un primer momento, se pensó que la llegada de los inmigrantes era algo transitorio. Sin embargo, con el tiempo se fue demostrando, por la vía de los hechos, que la inmigración no era una situación coyuntural de carácter eventual, sino que

se estaba convirtiendo en algo estructural: los inmigrantes se quedaban e incluso intentaban traer a sus familiares (Pajares, 2000). Como consecuencia, el tema de la inmigración se incluyó, aunque tardíamente, en los debates políticos. De hecho en el Dictamen 365/2002 del Comité Económico y Social Europeo se reconocía que las políticas de integración en Europa “sufrieron importantes retrasos debido a los supuestos iniciales sobre la temporalidad de las migraciones”

Por ende, aunque el fenómeno de la inmigración es global y está produciendo un fuerte impacto a todos los niveles en las sociedades occidentales, la gestión política de la misma, tal y como señalaba Zapata-Barrero (2000: 8), “se está construyendo”. Es decir, se trata de un fenómeno en cuyo enfoque predomina la confusión tanto a nivel teórico como práctico. Ni siquiera otros países europeos con una tradición migratoria mucho más larga que la española han sido capaces de dar una respuesta satisfactoria que no evidencie conflictos y contradicciones. En el año 2017 la situación descrita por Zapata-Barrero no ha cambiado.

Por otro lado, cabe destacar que la crisis económica de Europa y la llegada al poder en numerosos países europeos de partidos contrarios a la llegada de inmigrantes y, en algunos casos, claramente ultraderechistas, está dificultando el abordaje político del fenómeno migratorio a nivel de la Unión Europea (UE). Del mismo modo, la crisis siria y la llegada de miles de refugiados están tensionando y retrasando la toma de decisiones en el seno de la misma.

Una vez se describe esta situación, en este trabajo se ha realizado un análisis de las políticas de acogida e inclusión de la población inmigrante en Europa, concretamente en cuatro países de la banda mediterránea, como son España, Francia, Italia y Grecia. Este análisis forma parte del proyecto denominado: “Desarrollo de un marco de competencias y de módulos de formación que promuevan la inclusión de los inmigrantes en Europa” (Proyecto DIME), financiado en la convocatoria europea Erasmus + en 2015. En el mismo participan seis socios de estos países, con diferentes enfoques de la migración y con una destacada experiencia en la formación y la inserción de los inmigrantes en sus respectivos países. Las entidades participantes son: Association Internationale de Formation et de Recherche en Instruction Spécialisée, Santé, Social (AIFRISS); Centro Italiano Opere Salesiane Femminili. (CIOSF/FP); Kinonikes Sineteristikes Drastiriotites Efspathon Omadon (KSDEO-EDRA); Universidad de Huelva; Universidad de Jaén; e Institut Supérieur de Formation Permanente (INSUP), que desempeña la coordinación del proyecto.

2. LA UNIÓN EUROPEA: TIERRA DE INMIGRACIÓN

La Unión Europea es uno de los primeros destinos mundiales para la inmigración y el asilo. Su población aumentó en 1,1 millones de personas por los nacimientos que se produjeron (0,2 millones), pero sobre todo por la llegada de inmigrantes (0,9 millones) (en qué año?). En Europa aproximadamente 1 de cada 10 personas viven en países donde no han nacido. En la mayoría de los países de la UE, el número de inmigrantes es superior al número de emigrantes, con la excepción de Bulgaria, Irlanda, Grecia, España, Croacia, Chipre, Polonia, Portugal y Rumanía.

En 2014, 33,5 millones de personas nacidas fuera viven en países de la UE (es decir, el 3,9% de la población total), mientras que 17,9 millones de personas han nacido en un Estado miembro distinto de aquel en el que residen. En 2013, alrededor de 3,4 millones de personas han inmigrado a un país de la UE y 1,4 millones son personas de terceros países. Hay un ligero predominio del número de hombres en relación a las mujeres y en cuanto a la edad son relativamente jóvenes. De hecho en 2013, la edad media de los inmigrantes en la UE es de 28 años, frente a los 42 años de la población total de la UE.

En 2012, los países que recibieron el mayor número de inmigrantes no comunitarios son Alemania, España, Italia, Reino Unido y Francia. De acuerdo con Balleix (2013), en estos países se ubican las tres cuartas partes de los nacionales de terceros países que residen en la UE.

Como se indica en la Tabla 1, en 2015, la presencia de personas nacidas en el extranjero en España, Italia, Francia y Grecia está dentro de la media europea (en torno al 10%). Con un porcentaje que oscila entre el 9,5% y el 12,7%, España (12,7%), Francia (11,9%), Grecia (11,4%) e Italia (9,5%) reciben una proporción de personas nacidas en el extranjero equivalente a sus homólogos europeos, como Alemania (12,6%) y el Reino Unido (13,0%). Sin embargo, algunos países superan el 15%, siendo este el caso de Luxemburgo (32,5%), Austria (15,2%), Chipre (18,8%), Estonia (16,3%) y Letonia (15,3%).

Mientras que en Francia el número de personas nacidas en el extranjero aumentó un 9% entre 2011 y 2015, se estancó en Italia y se redujo en aproximadamente un 5% en España y Grecia. Esta disminución se explica por la magnitud de la crisis económica que afectó a ambos países. En España, entre 2000 y 2011, la proporción de personas nacidas en el extranjero en relación a la población total aumentó del 4,9% al 14,6%, lo que supuso el mayor incremento porcentual entre todos los países de la Organización para la Cooperación y el Desarrollo Económico (OCDE) durante este período (OCDE, 2014).

Si distinguimos entre los nacidos en el extranjero entre los que nacieron en la UE o fuera de la UE, la situación es un poco diferente. En Francia, España y Grecia, la proporción de personas nacidas en otros países de la UE es bastante bajo en comparación con las que están en Austria, Bélgica, Chipre, Irlanda y Luxemburgo. Por el contrario, la proporción de personas nacidas fuera de la UE es bastante alto en Francia (con una fuerte presencia de inmigrantes de África), en Grecia (debido a la presencia de un gran número de albaneses) y España. Italia combina una presencia moderada de inmigrantes nacidos en la UE o fuera de la UE.

Tabla 1: Porcentaje de personas nacidas en el extranjero en 2015 residentes en países de la Unión Europea

	Nacidas en el extranjero	Nacidas en otro país de la UE	Nacidas en un país fuera de la UE
Alemania	12,6	4,9	7,6
Austria	17,2	7,9	9,3
Bélgica	16,1	7,6	8,5
Bulgaria	1,7	0,6	1,1
Chipre	20,9	12,7	8,2
Dinamarca	10,5	3,6	6,9
Eslovaquia	3,3	2,7	0,5
Eslovenia	11,5	3,3	8,2
España	12,7	4,3	8,4
Estonia	14,7	1,0	13,7
Finlandia	5,8	2,1	3,7
Francia	11,9	3,3	8,6
Grecia	11,4	3,2	8,3
Hungría	4,8	3,1	1,7
Irlanda	16,2	9,6	6,6
Italia	9,5	3,0	6,6
Letonia	13,4	1,4	11,9
Lituania	4,7	0,7	4,0
Luxemburgo	44,2	33,0	11,2
Malta	9,9	4,7	5,2
Países Bajos	11,8	3,1	8,7
Polonia	1,6	0,6	1,0
Portugal	8,3	2,2	6,1
República Checa	4,0	1,6	2,4
Rumanía	1,4	0,6	0,8
Reino Unido	13,0	4,8	8,2
Suecia	16,4	5,3	11,1

Fuente: OCDE. Elaboración propia

Por lo tanto, los países de la UE presentan diferencias significativas en los flujos migratorios, y los países participantes en el Proyecto DIME no son una excepción. De hecho, a menudo son el resultado del contexto económico y político de cada país, pero también la migración ha operado de acuerdo con la lógica histórica (pasado colonial), lingüística, o la proximidad geográfica.

A 1 de enero de 2014, la cantidad de personas que residían en un Estado de la UE y que son nacionales de un tercer país era de 19,6 millones, o sea, el 3,9% de la población de la UE frente a 14,3 millones de personas que tenían la nacionalidad de otro Estado miembro. En la mayoría de los países de la UE, el porcentaje de personas nacidas fuera de la UE es superior a la de las personas nacidas en un país de la UE (Tabla 1).

En España, hay una mayor presencia de personas procedentes de los países del Norte de África (fundamentalmente Marruecos), China y Ecuador. Entre las personas extranjeras que proceden de un país de la UE hay un mayor porcentaje de personas de Rumanía, Reino Unido e Italia.

Aunque Francia ha sido durante mucho tiempo el primer país receptor de población inmigrante procedente de Europa, las estadísticas actuales confirman la tendencia, que se inicia en los años 60, a una diversificación de los perfiles de los inmigrantes, tanto de los que proceden de otros países europeos como los de países no europeos. En 2010, los inmigrantes de fuera de la UE representaban casi 2/3 de todos los inmigrantes que vivían en Francia, con una mayor presencia de inmigrantes procedentes de África (43,8%) le siguen los procedentes de Asia (14,3%) y en menor medida de América y Oceanía (5,4%), siendo los argelinos (13,2%) y los marroquíes (12,2%) las comunidades más numerosas. Los procedentes de Portugal, Italia, España y, en menor medida, el Reino Unido son mayoritarios entre los residentes en Francia que han nacido en otros países de la UE (Blum Le Coat y Eberhard, 2014).

En Grecia existe una importante inmigración procedente de Albania y de los países de Europa del Este (búlgaros, rumanos y georgianos y rusos). En 1990, los albaneses representan el 57% de la población inmigrante. Hay que destacar que la situación geográfica de Grecia la sitúa en la confluencia de numerosas rutas migratorias:

- Personas exiliadas que huyen de conflictos bélicos: afganos, kurdos, iraquíes, iraníes, sudaneses, paquistaníes y, más recientemente, los sirios, en ocasiones llegan a Grecia para intentar llegar a otros países de la UE.
- Inmigrantes de África Oriental, Filipinas y el norte de África llegan a través de Turquía.

En la región de Ática se concentra la mayor parte de la población inmigrante, especialmente el centro de Atenas y otras ciudades importantes, como Tesalónica, Patras, Heraklion, o áreas más centradas en el turismo como las islas de Zante y Mykonos.

A principios del siglo XXI, Italia se ha convertido en un importante destino para los migrantes de los países del sur (especialmente de África, Asia y Oriente Medio). También el colapso del régimen soviético ha generado una fuerte afluencia de personas de Europa del Este. Los primeros inmigrantes asentados en Italia fueron de Eritrea debido a su pasado colonial, después los caboverdianos, filipinos y marroquíes se han sumado a estos. Desde 2001 hasta el 2011, los rumanos, albaneses y los marroquíes son las tres principales comunidades extranjeras del país.

El análisis demográfico de la población de la UE muestra que la población extranjera es más joven que la población autóctona, con una mayor proporción de personas en edad de trabajar. En 2013, la edad media de los nacionales fue de 43 años frente a 35 para los extranjeros de países de fuera de la UE. Este fenómeno se observa también en los países del proyecto DIME. De hecho, la edad media de la población española es de 43,2 años frente a los 35 años de los extranjeros. Las edades medias más altas son de los nacionales de países europeos (Reino Unido, Alemania y Francia). Por el contrario, las edades medias más bajas corresponden a personas de terceros países como Marruecos, Pakistán y China. En Grecia, la población extranjera es más joven y con más hijos. Estas diferencias entre extranjeros y nacionales se explican por la edad a la migración (a menudo muy jóvenes), la fertilidad previa a la migración (que implica la presencia de menores) y la antigüedad de la migración (las personas que formaron parte de los flujos migratorios más antiguos han envejecido en el país de acogida, por el contrario, cuando los flujos son recientes este envejecimiento aún no ha sucedido). En Francia, principalmente los nuevos inmigrantes son los que presentan una mayor proporción de jóvenes (44% de los nuevos inmigrantes adultos de 18 a 29 años, 38% de 30 a 39 años y 13% de 40 a 49 años).

De acuerdo con la encuesta realizada por el Ministerio del Interior francés, las principales razones de la inmigración en Europa son de carácter familiar (60%), económica (30%) y humanitarias (10%). Sin embargo, existen diferencias entre los países del proyecto. De hecho, España e Italia se ven fuertemente afectados por una inmigración económica. En Italia, los “inmigrantes económicos” provienen principalmente de la Europa Continental (52,8%), África (20,9%), Asia (18,3%) y en menor medida de América (7,9%). Por el contrario, en Francia y en Grecia hay una importante inmigración familiar. En Grecia, la reunificación familiar afectó a 189.997 personas en 2013 y las razones económicas a 69.875 inmigrantes. En Francia, a los nuevos inmigrantes se les concedió autorización de residencia principalmente por razones familiares (45,5%), le sigue por razones de estudio (30,6%); las razones económicas y humanitarias son invocadas con menor frecuencia (alrededor de un 8,5%). No obstante, conviene distinguir las razones legales para la migración de las motivaciones de los migrantes que son a menudo complejas e involucran múltiples proyectos (profesional, familiar e inseguridad social y política).

Cabe destacar que no se puede realizar un análisis de la migración en los países socios sin tener en cuenta la crisis migratoria que afecta a todos los países europeos en los últimos cuatro años. De hecho, a Europa están llegando, o intentando llegar, un importante número de personas exiliadas víctimas de los conflictos y de las crisis políticas y/o alimentarias procedentes de Oriente Medio y África.

3. POLÍTICAS DE INTEGRACIÓN DE LA POBLACIÓN INMIGRANTE

Un asunto importante cuando se analizan las políticas de inmigración es la repercusión que la inmigración tiene sobre el sistema político democrático de las sociedades de acogida, ya que cuando se formalizaron los Estados, tal y como los conocemos en la actualidad, no se contempló como una posibilidad la presencia de personas procedentes de otras culturas (Zapata-Barrero, 2002). Nadie duda en la actualidad de la existencia de una serie de contradicciones en el seno de dichos sistemas cuando se plantean algunas cuestiones relacionadas con la inmigración en torno a la ciudadanía, a la igualdad de derechos y a la no discriminación, que son las bases sobre las que se asienta el Estado de Derecho. Estos principios están siendo cuestionados por la vía de los hechos con diversas justificaciones.

Una primera noción importante a analizar en este sentido es la de justicia en relación con la inmigración. Ya Walzer en 1993 aborda esta cuestión en su libro “Las esferas de justicia” donde recoge hasta qué punto las sociedades pueden permitir la exclusión de personas con el único criterio de la nacionalidad y duda de que los argumentos que se utilizan para justificar esta exclusión sean justos. Para Walzer todos los inmigrantes tienen el derecho moral a ser tratados iguales que el resto de la población sobre la base de que no es justo que los Estados utilicen a los inmigrantes para mejorar sus economías y que los excluyan de los privilegios de la ciudadanía. Añade, además, que ya desde el primer momento, los Estados deben establecer los criterios que consideren adecuados para regular la entrada a su territorio de inmigrantes, pero una vez dentro, no pueden vivir siempre como extranjeros, sino que el Estado debe posibilitar que se conviertan en ciudadanos.

En este sentido, el hecho de que los inmigrantes estén siendo discriminados, y considerados ciudadanos de segunda categoría con derechos diferentes a los que disfruta la población autóctona, resulta incompatible con el ideal de democracia. No obstante, aunque la mayoría de los países tienen suscrita la Declaración de los Derechos Humanos, donde este principio

de igualdad y no discriminación está consagrado universalmente e incluso explícitamente incluido en la Constitución de cada país, lo cierto es que estos principios están fuertemente restringidos para los inmigrantes.

La puesta en marcha de políticas de integración o acomodación no dará resultados sin el reconocimiento de dichos derechos. La negación de los derechos del inmigrante los sumerge en una situación de exclusión, haciendo difícil su integración y dejándolos en absoluta vulnerabilidad. Esto influye negativamente en sus proyectos de vida, como consecuencia inevitable de la precariedad del trabajo que desarrollan, la incertidumbre sobre su permanencia en el país, la falta de protección social (subsídios, pensiones, desempleo, etc.), etc. Así, viven en una sociedad donde se ha conseguido para la mayoría de los ciudadanos un nivel de protección social importante de la cual ellos no pueden gozar. Aportan la plusvalía de su trabajo y contribuyen, mediante el pago de impuestos, al mantenimiento del Estado, del que obtienen escasos beneficios. El panorama general es entonces altamente contradictorio: se reconoce que a medio plazo sin el aporte de los inmigrantes peligran algunos de los servicios y prestaciones del Estado (la disminución de la natalidad en los países occidentales hace necesaria su aportación como trabajadores y contribuyentes) y sin embargo, se espera que vivan el día a día sin ninguna protección frente a las adversidades que puedan presentárseles (De Lucas, 2002).

Frente a esta discriminación y no-reconocimiento de derechos, las diferentes políticas públicas que se ponen en marcha intentan paliar esta situación arbitrando mecanismos que mejoren las condiciones de vida de la población inmigrante. Lo que no se tiene en cuenta es que si existiera un pleno reconocimiento de sus derechos, esto no sería necesario.

Todo esto tiene además un efecto perverso sobre la opinión pública, ya que legitima de manera institucional el no reconocimiento de los derechos de los inmigrantes. El mensaje que implícitamente se difunde es: “son extranjeros, no son como nosotros y por lo tanto no tienen los mismos derechos.” Como consecuencia, la cobertura de esos derechos se deja en manos de las ONGs o asociaciones o confesiones religiosas, lo cual hace que la problemática pase del campo de los derechos al campo de la caridad y del paternalismo. Si los inmigrantes fueran considerados titulares de derechos, sería el Estado el que tendría la obligación de garantizar su protección o cobertura.

Zapata-Barrero (2004), señala al respecto que en la actualidad existen varias categorías de ciudadanos: los ciudadanos de pleno derecho, los inmigrantes regularizados permanentes, los regularizados temporales y los no regularizados. Cada una de estas categorías tiene reconocidos derechos diferentes. Los inmigrantes irregulares no tienen ningún derecho. Este último grupo, que asciende a millones de personas en toda Europa, se encuentra así en una situación de exclusión y de vulnerabilidad total, y por lo tanto es objeto de múltiples abusos. No tienen derecho a tener derechos, son invisibles para el Estado y están situados en los niveles más bajos de la sociedad.

La política de integración de la población inmigrante en la UE corresponde a cada Estado miembro a pesar de que en los últimos años la UE ha intentado fomentar una armonización de estas políticas. De hecho, hasta el *Tratado de Amsterdam* la inmigración procedente de terceros países no se aborda y no fue hasta la entrada en vigor del *Tratado de Lisboa* cuando se dieron los primeros pasos para estimular y apoyar la acción de los Estados miembros para promover la integración de los nacionales de terceros países que residieran legalmente en su territorio. El *Programa de Tampere* de 1999 instó a los Estados a conceder a los nacionales de terceros países que residen legalmente en su territorio derechos y obligaciones comparables a los ciudadanos de la UE. El programa de La Haya (2004) y de Estocolmo (2009) instaron a una mayor cooperación entre los Estados y el apoyo de la UE a las medidas adoptadas. Algunos de los principios comunes que han sido definidos desde 2004 son: la integración como un proceso en el que se produce una adaptación entre la sociedad de acogida y la población inmigrante, el cumplimiento de los valores fundamentales de la UE, el conocimiento de la lengua, la historia y las instituciones del país de acogida, el acceso a los bienes y servicios públicos en la mismas condiciones que los nacionales, la participación política de los inmigrantes, etc.

A pesar de estas similitudes, las políticas de integración de los inmigrantes en los Estados miembros están condicionadas por la historia, la cultura política y prácticas de las instituciones, siendo diferentes en cada uno de los países del proyecto.

Una primera diferencia radica en la distribución de las competencias sobre inmigración. En Francia, Italia y Grecia, las políticas son coordinadas por el Ministerio del Interior. En España, las competencias están repartidas entre el Ministerio de Interior y el de Empleo y Seguridad Social. En España, Grecia e Italia, son los gobiernos regionales los responsables de la política de integración en colaboración con los municipios. Francia tiene una configuración particular dado su modelo altamente centralizado, a pesar de que existe una política de descentralización adoptada desde 2002 en este área. La política de integración sigue siendo una prerrogativa del Estado a través de sus servicios descentralizados en los departamentos.

La segunda diferencia se observa en el diseño de la acogida de los migrantes en los países de la UE. Por ejemplo, en Francia la integración de los inmigrantes comienza a su llegada al territorio cualquiera que sea la razón de la migración. La recepción a los recién llegados es organizada por la Oficina Francesa de Inmigración e Integración (OFII), dirigida por el Ministerio del Interior, que es responsable de las medidas de apoyo en su proceso de integración. Además, se requiere que los recién llegados firmen un contrato de acogida e integración en el que se comprometen a respetar los valores franceses. El estado ofrece los siguientes servicios: una sesión de información de grupo seguido de un examen médico y una entrevista con un responsable de la OFII para identificar las necesidades en materia de formación, una jornada de formación cívica sobre los valores y principios de la república, un módulo de profundización sobre el acceso al empleo en Francia y a los servicios públicos, una sesión sobre “Derechos y deberes de los padres” y la enseñanza del idioma. En España son en gran medida las autoridades regionales las que gestionan la implementación de programas de acogida e integración.

En la mayoría de los países de la UE, los programas de acogida para los recién llegados procedentes de países de fuera de la UE se han creado a lo largo del tiempo. Estos a menudo consisten en la enseñanza de idiomas, un curso sobre el conocimiento de la sociedad de acogida, así como un seguimiento personalizado. El objetivo es ayudar a los recién llegados a llevar una vida económicamente independiente en la sociedad de acogida y sentar las bases para su integración. En 1998, los Países Bajos fueron los iniciadores de un programa de integración para los recién llegados que sirvieron de ejemplo a otros

países como Alemania y Dinamarca (Michalowski, 2006). Sin embargo, existen diferencias significativas en estos programas en relación con las obligaciones e incentivos, las horas de formación y el nivel a alcanzar.

Por otro lado, a enseñanza de idiomas suele una parte importante de la integración de la población inmigrante en las sociedades de acogida. A menudo es el requisito previo para entrar en el territorio, para obtener un permiso de residencia o adquirir la nacionalidad. Algunos países van más allá y utilizan pruebas para evaluar el nivel de lengua adquirido.

En un informe del Consejo de Europa (2014) se recoge que 22 países de los que participaron en la investigación condicionan la obtención de un permiso de residencia a los conocimientos de la lengua y 14 ofertaban cursos oficiales de idiomas. La participación es obligatoria en cuatro de estos países y opcional en nueve. La duración de los cursos varía de 75 horas a 3.000 horas. Sin embargo, y de acuerdo con el mismo estudio, hay varios modelos de políticas lingüísticas para la atención de adultos migrantes.

Los países del norte de Europa (Alemania, Austria, Liechtenstein, los Países Bajos) requieren un nivel de idioma para conseguir tanto la residencia como la nacionalidad. Por ejemplo, en Alemania, se requiere un nivel B1 y los cursos obligatorios tienen una duración de entre 600 y 900 horas. En los Países Bajos, el nivel A2 es obligatorio para obtener una residencia permanente. Dinamarca ofrece tres cursos gratuitos de acuerdo con el perfil de aprendizaje de 2.000 horas y con una duración de más de 3 años. En Noruega, el número de horas es hasta un máximo de 3.000 horas dirigidas a conseguir los niveles B1 o B2.

En general en los estados socios del proyecto DIME, para obtener un permiso de residencia los inmigrantes adultos deben demostrar su competencia en el idioma del país de acogida (Francia, Grecia e Italia). Sólo en Francia, los recién llegados están obligados a asistir a clases. La situación en España es especial, los inmigrantes no están obligados a demostrar su conocimiento de la lengua pero asistir a clases de español facilita la renovación de determinados permisos de residencia o de trabajo, pero son opcionales. En Grecia e Italia, se requiere el nivel A2 para la residencia. En Grecia, los inmigrantes adultos deben pasar una prueba de idioma y las clases están disponibles para aquellos que deseen obtener la residencia permanente. En Italia, las habilidades lingüísticas tienen que ser certificadas. Tanto Francia, como Bélgica, Luxemburgo y Suiza se sitúan a medio camino entre el modelo de los países europeos del norte y el sur. Los cursos obligatorios están especialmente diseñados para los recién llegados, pero el nivel de idioma requerido es inferior. Por otra parte, el éxito en las pruebas no es una condición para obtener un permiso de residencia, sólo el seguimiento de la formación es obligatorio. En cuanto a la entrada en el país, no hay un nivel requerido y el resultado no tiene ningún impacto en la concesión del visado.

En relación a las condiciones para la obtención de la nacionalidad, el nivel de idioma requerido en Francia es el nivel B1 y en Grecia el A2. En España, a través de una entrevista se evalúa el nivel de idioma para obtener la ciudadanía. En Italia no tienen ningún requisito especial. Los países de Europa del Este tienen pocos requisitos en esta área. El nivel de idioma requerido es poco elevado y son raros los cursos de idiomas que ofrecen.

Además de la enseñanza de idiomas, existe una formación cívica sobre legislación, cultura, historia, valores, etc. en diferentes países europeos. El informe del Consejo de Europa muestra que 18 países establecieron programa de formación para los inmigrantes que desean obtener un permiso de residencia. La participación en estos cursos es en la mayoría de los países opcional. El seguimiento de estos cursos conduce a una serie de derechos y obligaciones. En los Países Bajos, una persona puede recibir una multa si no cumple con sus compromisos. En Dinamarca, si el contrato de integración no se respeta, los migrantes no reciben prestaciones sociales.

España sigue las recomendaciones de la Unión Europea para la formación de los valores de la sociedad, pero no es obligatoria para la emisión de un permiso de residencia y el contenido varían de una comunidad autónoma a otra, participando en la misma las asociaciones y autoridades locales que gestionan muchos de los dispositivos de acogida (Koller, 2007). En España, Grecia e Italia los cursos cívicos se imparten junto con la enseñanza de idiomas como en Austria y el Reino Unido.

3.1 La participación política

El tema del derecho al voto de los residentes extranjeros de larga estancia ha sido objeto de debate en muchos países de la Unión Europea. Si desde el Tratado de Maastricht, todos los ciudadanos de la Unión Europea pueden votar y presentarse en otro Estado miembro para las elecciones europeas y locales, las condiciones de participación política de los extranjeros no comunitarios varían de país a otro. De hecho, algunos permiten que puedan votar en las elecciones locales sin ningún tipo de residencia como en Irlanda desde 1992. Otros, como Suecia, Dinamarca, Holanda, Luxemburgo, Bélgica, Estonia, Eslovenia, Lituania, Hungría, la República Checa y Eslovaquia concedieron el derecho al voto en las elecciones locales a todos los residentes en el territorio que llevarán entre dos y cinco años residiendo en el país. El Reino Unido permite a todos los ciudadanos de la Commonwealth votar en todas las elecciones, incluidas las nacionales. Un total de 15 países de Europa han concedido a los extranjeros el derecho al voto en las elecciones locales. Sin embargo, 12 países se niegan a conceder este derecho, como por ejemplo, Francia.

España, Portugal y la República Checa, permiten a los nacionales de terceros países votar en las elecciones municipales bajo ciertas condiciones de reciprocidad y residencia. En España, los residentes de los siguientes países pueden inscribirse y votar en las elecciones municipales: Bolivia, Cabo Verde, Chile, Colombia, Corea del Sur, Ecuador, Islandia, Noruega, Nueva Zelanda, Paraguay, Perú, Trinidad y Tobago.

En Italia, el Decreto 268/1998 establece la igualdad de derechos y la participación en la vida pública local. En concreto el artículo 9 establece el derecho de los extranjeros no comunitarios al voto para los que tienen concedida una autorización de residencia de larga duración.

Los residentes extranjeros establecidos en Grecia pudieron votar por primera vez en las elecciones municipales de noviembre de 2010, este principio ha sido cuestionado en marzo de 2011 y el Consejo Constitucional ha dictaminado que esta ley es inconstitucional.

3.2 El acceso a la nacionalidad

En 2013, 984.800 personas adquirieron la nacionalidad de un Estado de la Unión Europea, lo que supuso un aumento del 20% en comparación con 2012. Entre ellos, el 89% eran de un tercer país fuera de la UE. Las personas que han obtenido la nacionalidad de un Estado miembro eran personas que mayoritariamente procedían de Marruecos, India, Turquía, Colombia, Albania y Ecuador.

España está entre los países europeos con el mayor número de personas que adquirieron la nacionalidad en 2013 (23% del total de la UE), seguido por el Reino Unido, Alemania, Italia y Francia. Sin embargo, el crecimiento más fuerte en comparación con 2012 se registró en España, Italia, Reino Unido y Grecia.

Los países del proyecto se encuentran entre los países de la UE donde es fácil conseguir la nacionalidad a los inmigrantes de terceros países pero existen diferencias de un país a otro. Los principales receptores de la nacionalidad española en 2013 eran colombianos (17,2%), ecuatorianos (17%) y marroquíes (13,4%). La nacionalidad francesa se le dio principalmente a marroquíes (17,1%), argelinos (13,8%) y turcos (6%). En Grecia, los destinatarios son en su mayoría albaneses (87,7%) y en menor medida rusos (1,3%) y georgianos (1,2%). En cuanto a Italia, los marroquíes son los principales beneficiados (17,1%) seguido por los albaneses (13,6%) y los indios (4,8%).

Estos datos dependen en gran medida de los términos en los que se establece la adquisición de la nacionalidad en vigor. De hecho, no hay reglas únicas en Europa, los Estados miembros tienen sus propios criterios en base a dos filosofías de nacionalidad: *ius soli* y *ius sanguinis*. Algunos países están mezclando estas dos características, como Francia, Alemania o Polonia. Italia, por su parte, hace hincapié en el derecho de sangre.

En la mayoría de los países los procedimientos principales para la obtención de la ciudadanía son dos: la residencia y el matrimonio.

En España y Grecia, se requieren 10 años de residencia en el territorio antes de que puedan obtener la nacionalidad. En España, el periodo de residencia se reduce a 5 años para los que hayan obtenido la condición de refugiado, 2 años para las personas cuya lengua materna es el español, para los filipinos, andorranos y las personas de origen sefardí y 1 año para los nacidos en territorio español o si uno de sus antepasados es de origen español. En todos los casos, los individuos deben haber demostrado buena conducta cívica y suficiente grado de integración en la sociedad. Los apátridas y refugiados en Grecia también se pueden beneficiar de una reducción del tiempo de permanencia de 5 años para adquirir la nacionalidad.

En Francia, se requiere una residencia de 5 años en el territorio para adquirir la nacionalidad francesa. Este período se reduce a 2 años si el solicitante ha completado la educación superior en Francia, si tiene capacidades o talentos excepcionales o si se tiene un nivel superior de integración porque sobresalga en uno de los siguientes ámbitos: civil, científico, económico, cultural o deportivo. El tiempo también se puede reducir si se hizo el servicio militar en el país, o ha prestado servicios excepcionales, u obtuvo el estatuto de refugiado.

En Italia, con la reforma de la normativa que permite la adquisición de la ciudadanía italiana en el año 2015, aprobada por la Cámara de Asuntos Constitucionales, el tiempo de residencia obligatoria en el país pasó de 10 a 8 años. De todos modos, el solicitante debe demostrar su conocimiento de la lengua y la cultura del país.

La nacionalidad también puede adquirirse a través del matrimonio. Los criterios varían considerablemente de un Estado miembro a otro. Mientras que algunos se basan solo en la duración del matrimonio (1 año en España, 2 años en Italia, 10 años de los últimos 12 en Grecia), otros requieren algunas medidas de seguridad adicionales, tales como Francia, que requiere cuatro años de matrimonio y 1 año de residencia.

3.3 El derecho a la salud

A nivel internacional, el acceso a la atención sanitaria es un derecho fundamental para todas las personas, independientemente de su nacionalidad, color, idioma, opinión política, clase social, u origen.

Cada país tiene la obligación de garantizar el derecho a la salud en su territorio. La Unión Europea hizo de la salud un derecho fundamental, aunque a menudo ha estado ausente de sus tratados (Hoyez, 2011). Sin embargo, referencias a la política sanitaria aparecen en el Tratado de Maastricht en 1992 y en el Tratado de Amsterdam en 1997. La Unión Europea se ha fijado como objetivos en materia de protección de la salud, mejorar la salud pública, prevenir enfermedades, promover la investigación e informar a la ciudadanía. En este sentido apoya y complementa las actividades de los Estados miembros en materia de protección social, siendo estos los que diseñan e implementan las políticas sanitarias y la organización de la atención médica en sus respectivos territorios. Las iniciativas de la UE en esta materia son un instrumento de apoyo legislativo y de cooperación para ayudar a desarrollar y armonizar prácticas. A este respecto, en 2002 el Consejo Europeo adoptó tres principios básicos para la reforma de los sistemas de salud: la accesibilidad para toda la ciudadanía, una atención de alta calidad y la sostenibilidad financiera de los sistemas sanitarios a largo plazo. En la práctica esto se traduce en la existencia de sistemas sanitarios diferentes en cada Estado miembro.

En general, en todos los países los extranjeros que están regularizados tienen reconocidos los mismos derechos que los nacionales. De hecho, el sistema de salud (seguridad social y beneficios sociales) se basa fundamentalmente en el principio de residencia. Sin embargo, existen diferencias, en particular entre los cuatro países del proyecto.

En España la Ley Orgánica sobre derechos y libertades de los extranjeros y su integración social especifica los derechos de los inmigrantes independientemente de su estatus migratorio y los que están sujetos a condiciones, entre los que se incluyen los derechos económicos, sociales y culturales. De hecho, los derechos más amplios se otorgan a personas que posean la nacionalidad como el derecho a la salud, el trabajo, la educación, etc. La Ley inicialmente establecía que tenía derecho a la atención sanitaria completa los que estaban regularizados con permiso y contrato de trabajo; sin embargo los que estaban en una situación irregular la tendrían garantizada en estas situaciones: si sufrían una enfermedad grave o accidente que hiciera necesario una atención de urgencia, si eran menores de 18 años y las mujeres embarazadas durante el embarazo, el parto y el

postparto. Y en cualquier caso, todos aquellos que estaban inscritos en el padrón municipal tendrían cobertura sanitaria en el sistema sanitario público.

Esto cambia en el año 2012 con el Real Decreto-Ley 16/2012 de 20 de abril en el que se establece que: los extranjeros no registrados ni autorizados como residentes en España recibirán asistencia sanitaria:

- a) De urgencia por enfermedad grave o accidente, cualquiera que sea su causa, hasta la situación de alta médica.
- b) De asistencia al embarazo, parto y postparto.
- c) Menores de dieciocho años en mismas condiciones que los españoles.

Quedan fuera de la cobertura sanitaria los inmigrantes en situación irregular que no se ajusten a los anteriores supuestos, aunque estén inscritos en el padrón municipal.

En España al estar las competencias en materia de salud transferidas a las comunidades autónomas cada una lo ha regulado de manera diferente. De tal manera que hay comunidades que han continuado prestando atención sanitaria a la población inmigrante con el único requisito de estar inscritos en el padrón, mientras que otras han aplicado literalmente lo que recoge la Ley.

El sistema de salud en Francia se organiza desde 1945 con la creación de la Seguridad Social. En sus inicios, el empleo remunerado era la condición que permitía a las personas el acceso a un seguro de salud, independientemente de su nacionalidad. A partir de los años 90 y como consecuencia de la existencia de desigualdades en el acceso a la asistencia sanitaria se han implementado nuevos servicios como la Asistencia Médica Gratuita y la Asistencia Médica Departamental. Con la creación de la Cobertura Universal de Salud por la ley del 27/07/1999, se extiende el seguro de salud a cualquier persona que viva en Francia, incluidos los extranjeros. Tener trabajo ya no se considera como condición para acceder a la atención sanitaria. En ésta se establecen tres servicios:

- La cobertura por enfermedad básica: permite que los gastos sanitarios puedan ser reembolsados. Las personas sin empleo pueden acceder a él en determinadas condiciones: estar regularizado o tener hecha una solicitud de asilo y estar residiendo en Francia al menos durante tres meses.
- La cobertura por enfermedad complementaria: cubre ciertos gastos, además de la cobertura básica en las mismas condiciones. Uno de los requisitos es no tener más de 716,08 euros de ingresos mensuales.
- La Ayuda Médica del Estado: es un dispositivo que permite que los extranjeros en situación irregular se puedan beneficiar del acceso a la atención sanitaria durante un año, con la condición de tener residencia en Francia durante más de 3 meses y tener ingresos modestos.

En otras palabras, los inmigrantes tienen los mismos derechos desde el punto de vista legal que los nacionales y a los que están en situación irregular se les da asistencia especial con la Ayuda Médica del Estado.

Los sistemas sanitarios italiano y griego proporcionan asistencia sanitaria sin distinción a los extranjeros estén en situación regular o irregular.

En Italia los solicitantes de asilo, los refugiados, los beneficiarios de subsidios de protección y los trabajadores extranjeros gozan de igualdad de trato y de los mismos derechos que los ciudadanos italianos en materia de salud. La inscripción en el Servicio Nacional de Salud es obligatoria y se les proporciona una tarjeta sanitaria con una indicación del médico general y pediatra para los menores, el acceso a la atención ambulatoria y especializada y hospitalización. La atención sanitaria también se concede a las personas en situación de dependencia que residen legalmente en Italia. Para los extranjeros en situación irregular se les presta atención ambulatoria, atención hospitalaria urgente o esencial, incluyendo las intervenciones quirúrgicas, si fueran necesarias. Estos servicios son proporcionados por los servicios públicos y acreditados. Por último, como parte de los servicios prestados a los extranjeros en situación irregular, las siguientes prestaciones están garantizadas:

- La protección social durante el embarazo y la maternidad.
- La protección de la salud de los menores.
- Las vacunaciones.
- Las medidas preventivas internacionales.
- La profilaxis, diagnóstico y tratamiento de enfermedades infecciosas

En Grecia cualquier persona, independientemente de su condición, tiene, en principio, el mismo acceso a los servicios de salud y a un dispositivo dirigido a los extranjeros con problemas. Sin embargo, el acceso a los servicios de salud no significa que haya un uso efectivo por la población inmigrante. De hecho, muchos estudios muestran, sobre todo en Francia, Italia y España, un menor uso de los sistemas de salud por la población inmigrante en comparación con el uso observado entre los nacionales. Las causas suelen ser diversas y están relacionadas con bajos ingresos y la existencia de barreras administrativas, culturales e idiomáticas. En general, los inmigrantes recién llegados son personas con un buen nivel de salud, debido a su edad, y a que suelen emigrar personas con un buen estado de salud. Uno de importante problema que se ha detectado es que debido a su situación socio-económica son más propensos a abandonar la atención sanitaria que necesitan.

3.4 El derecho a la vivienda

El análisis comparativo de las políticas de acogida e integración de los inmigrantes en Europa muestra que pueden acceder a una vivienda social tanto los nacionales como los no nacionales en algunos países de la UE, como Grecia, Finlandia, Suecia, Polonia o los Países Bajos. En Francia, desde 1986, el acceso a la vivienda social está condicionado por la duración de la residencia. En este contexto, extranjeros regularizados y residentes en Francia de forma permanente pueden acceder en las mismas condiciones que los franceses.

La importancia de la vivienda social varía de un país a otro de la UE. En los países del sur (Grecia, España, Chipre, Portugal) y este (Eslovaquia, Lituania, Letonia, Rumania, Bulgaria), la tasa es muy baja, menos del 5% del total de viviendas. Sigue siendo baja, entre el 5% y el 9%, en Italia, Alemania y Bélgica. Francia está en la media, con una tasa de viviendas sociales del 17% muy por detrás de los Países Bajos, que es el país de la UE con la tasa más alta, en concreto un 35%.

Sin embargo, los análisis realizados sobre el tema muestran la desigualdad de acceso a estas viviendas sociales sobre todo en Francia.

Aunque los inmigrantes regularizados teóricamente tienen acceso en las mismas condiciones que los nacionales a una vivienda social, esta igualdad en la práctica no es tal, debido a la escasez de viviendas sociales y los bajos ingresos. Por este motivo la población inmigrante accede a viviendas que están en malas condiciones debido al coste elevado de las mismas (Commission Européenne, 2005).

3.5 El acceso a la educación y a la formación

En la mayoría de los países de la UE, la escolarización es obligatoria y el derecho a la educación y la formación es un principio general, sin distinciones, pero en la práctica, todavía persisten desigualdades. Los estudios estadísticos muestran que los hijos de inmigrantes con mayor frecuencia abandonan la escuela sin conseguir una cualificación, a pesar de la existencia de programas específicos.

En Grecia, hay programas para los hijos de los inmigrantes en los que se incluyen cursos intensivos de idiomas, clases de apoyo, etc. En España, se ha destinado financiación para la integración de los inmigrantes y para el fortalecimiento de los recursos educativos. En Francia, a partir de los años 70, se han desarrollado varios dispositivos en los que se tiene en cuenta las necesidades específicas de la población inmigrante. Su objetivo es facilitar su integración en el sistema escolar y para ello se hace hincapié en el aprendizaje de la lengua francesa. Desde 2012, los menores que han sido escolarizados en su país de origen, se pueden incorporar con “clases puente” para preparar su incorporación a las clases regulares. Se incorporan a clases específicas en la que aprenden los conceptos básicos antes de unirse al curso académico estándar.

En cuanto a la formación continua, aunque por ley los dispositivos están abiertos a los inmigrantes regularizados, algunos estudios muestran que tienen poco acceso a la formación profesional, por ejemplo en Francia en una proporción dos veces menor que los nacionales. Entre 1998 y 2003, el 18% de los inmigrantes han tenido alguna formación frente al 36% de los franceses. Cualquiera que sea el tipo de actividad en la que trabajen, la edad o el sexo, los inmigrantes tienen una tasa de acceso a la formación profesional inferior a los no inmigrantes. En este sentido, no hay que descartar la existencia de otros factores que puedan explicar esta desigualdad en el acceso a la formación profesional, incluyendo la estabilidad en el empleo y el tipo de contrato.

3.6 El acceso al mercado de trabajo

En Europa, las estadísticas son unánimes en cuanto a la situación de los inmigrantes en el mercado laboral. La tasa de desempleo de los inmigrantes es mayor que los nacionales de los países de que se trate. Por el contrario, en Estados Unidos, Nueva Zelanda y Australia, la tasa de desempleo parece estar menos influenciada por el país de nacimiento (OCDE, 2014).

Según el Instituto Nacional de Estadísticas y Estudios Económicos, en Francia 472.000 inmigrantes de entre 15 y 64 años estaban en el paro en el año 2014. Para este grupo de edad, la tasa de desempleo se situó en el 17,4% frente 9,2% para los autóctonos. Hay diferencias significativas en función del país de origen de los inmigrantes. De hecho, la proporción de parados entre los que proceden de países de la UE (9,4%) es similar a la de los no inmigrantes. Por el contrario, los inmigrantes de países que no pertenecen a la Unión Europea se ven particularmente afectados por el paro, en concreto el 20,8% lo está, no existiendo diferencias significativas entre hombres y mujeres.

Este fenómeno se observa también en los otros países del proyecto DIME. Como se indica en la tabla 2, entre 2007 y 2012, las personas extranjeras se ven más afectadas por el desempleo. En 2012, la proporción de extranjeros sin un trabajo es mayor en proporciones significativas: con una diferencia de 12,5 puntos en España, 6,8 puntos en el caso de Francia, 10,3 puntos en Grecia y 3,5 puntos en Italia.

Tabla 2. Tasa de desempleo de inmigrantes y autóctonos. (OCDE, 2014)

	% sobre el total de la población activa			
	Nacidos en el país de residencia		Nacidos en el extranjero	
	2007	2012	2007	2012
España	7,9	22,9	10,3	35,4
Francia	7,4	9,2	13,1	16,0
Grecia	8,4	23,4	8,7	33,7
Italia	6,0	10,4	7,9	13,9
UE-28	6,8	9,9	10,8	15,6

Fuente: OCDE, *Panorama des statistiques de l'OCDE 2014 : Economie, environnement et société*. Elaboración propia

En 2012, la tasa de desempleo de las personas nacidas en el extranjero es particularmente alta en España (35,4%) y Grecia (33,7%) en comparación con la de las personas autóctonas. De manera similar, esta circunstancia se produce en todos los países de la UE (15,6%), incluidos Francia (16%) e Italia (13,9%). En Grecia y España, a los inmigrantes parece haberles afectado la crisis económica de 2008 de manera más acuciada que los autóctonos, cuya situación laboral se ha degradado muy rápidamente. De hecho, en ambos países, la tasa de desempleo de los inmigrantes experimentó un fuerte aumento entre 2007 y 2012 (25 puntos), el aumento ha sido menos significativo en Francia con una diferencia de 3 puntos e Italia con 6 puntos de diferencia.

Esta situación se puede explicar porque la población inmigrante presenta un bajo nivel de cualificación, tiene una presencia masiva en sectores muy afectados por la crisis (construcción, hoteles, restaurantes, etc.) y su situación es más precaria en el mercado laboral (contrato temporal, subempleo, etc.).

En todos los países de la UE, la tasa de empleo aumenta con el nivel de estudio. En otras palabras, tanto las personas que han nacido en su país de residencia como en el extranjero que han estudiado encuentran más fácilmente trabajo y tienen menos probabilidades de estar en paro.

Así mismo se ha observado en la mayoría de los estudios realizados una correlación entre el desempleo de los inmigrantes y la existencia de bajos niveles de cualificación. De acuerdo con un estudio realizado por Lemaitre (2006), los inmigrantes tienen un nivel de educación inferior a los autóctonos. 39% de los inmigrantes han completado la escuela secundaria y el 24% tienen un nivel educativo superior, frente al 48% y 25% para los autóctonos. Esto afecta principalmente a los nacionales de terceros países.

Los inmigrantes de los cuatro países involucrados en el proyecto presentan una escasa cualificación que los excluye del mercado de trabajo. Por ejemplo, en Francia la proporción de personas que han terminado la secundaria o que tienen un título universitario es más baja para los inmigrantes. Estos resultados se confirman también entre los inmigrantes más recientes llegados a Francia, aunque existe una importante heterogeneidad entre ellos en función de su origen. La proporción de nuevos inmigrantes de origen africano sin ninguna cualificación a su llegada es superior en 10 puntos en relación a los inmigrantes de Europa o Asia, y más de 15 puntos comparativamente con los inmigrantes de América y Oceanía.

En 2012, la brecha entre la tasa de empleo de las personas nacidas en el país de residencia que tiene un bajo nivel educativo y las que tienen un nivel más alto es más amplia en España (29 puntos de diferencia), en Francia (30 puntos), en Grecia (26 puntos) y en Italia (31 puntos). Sin embargo, esta diferencia disminuye para las personas nacidas en el extranjero: 20 puntos en España, 21 puntos en Francia, 1 punto en Grecia y 9 puntos en Italia. Esta diferencia más pequeña entre los inmigrantes puede explicarse por el hecho de que tener un alto nivel educativo no garantiza el acceso al empleo de igual manera entre los inmigrantes y los no inmigrantes. Las personas nacidas en el extranjero y que tienen una educación superior tienen más probabilidades de estar desempleados que sus homólogos autóctonos. Por otra parte, en Italia, por ejemplo, el 41,1% de los puestos de trabajo ocupados por extranjeros no se corresponden con sus calificaciones. Los inmigrantes a menudo tienen un nivel de educación más alto que el requerido para su posición.

La situación es más matizada en relación con los bajos niveles de educación. De hecho, en algunos países como Luxemburgo, Grecia e Italia, los extranjeros sin educación tienen una tasa de empleo más alta que los autóctonos que tienen una situación equivalente. El fenómeno se invierte para la mayoría de los países de la UE como Francia, España, Dinamarca, Bélgica y Suecia.

Los beneficiarios de protección internacional también tienen dificultades para lograr la integración, aunque presenten un alto nivel formativo. Los sirios, iraquíes y afganos son las principales nacionalidades de los solicitantes de asilo inicial en 2015. Estas personas tienen dificultades para insertarse en el mercado laboral a pesar de que con frecuencia tienen un alto nivel educativo. Aunque es difícil conocer con exactitud el número de beneficiarios de protección y refugiados que están en una situación de sobre-cualificación en relación con el trabajo que desempeñan, los análisis sobre su perfil sociodemográfico, en particular el nivel educativo, y la actividad laboral realizada previamente, ponen de manifiesto este fenómeno. Por ejemplo, un estudio realizado por la Agencia de Empleo en Austria muestra que los refugiados del Medio Oriente tienen un buen nivel educativo: 61% de ellos tienen educación secundaria, estudios de formación profesional, o estudios universitarios; por nacionalidades el 68% de los sirios, 90% de los iraníes y 73% de los iraquíes tienen este nivel. El estudio también muestra que entre los solicitantes de asilo en busca de trabajo, el porcentaje de personas con educación secundaria y superior es incluso algo mayor que la de los austriacos. Otro estudio realizado por el Centro de Coordinación Francesa de la Red Europea de Migración (REM, 2016)) muestra que en 2014, en Francia, entre los 12.050 refugiados y beneficiarios de protección firmantes del Contrato de Acogida e Integración, la mayoría tenían educación secundaria y una cuarta parte de ellos eran titulados universitarios.

Este nivel de educación no disminuye las dificultades para encontrar un empleo en el país de acogida, de manera similar a lo que sucede con otros tipos de inmigrantes. Los diferentes estudios realizados sobre los puestos de trabajo ocupados por los beneficiarios de protección internacional concluyen que no se corresponden con su nivel de educación, formación o experiencia laboral. Están orientados principalmente hacia ocupaciones que no requieren ningún nivel formativo u otro requisito previo. El desconocimiento del idioma, el problema de la homologación de las calificaciones y la falta de redes sociales son los principales obstáculos para su integración profesional. Más allá del simple reconocimiento de títulos, las limitaciones en la formación profesional existentes en el país de acogida y las restricciones en algunos sectores productivos aumentan sus dificultades de integración y la mejora de su nivel formativo. Todo lo cual sugiere que la escasez de inmigrantes en la formación profesional continua acentúa un problema ya de por sí importante.

Aunque los inmigrantes desempeñan todas las profesiones en el mercado de trabajo europeo, están sobrerrepresentados en ciertos sectores, especialmente donde hay una mayor presencia de trabajos con baja calificación: los trabajadores de servicios, ventas, edificación y construcción, hoteles y restaurantes. Este tipo de trabajos no cualificados constituyen el 19%

de sus puestos de trabajo frente al 8,5% de trabajos ocupados por autóctonos. Por el contrario, tienen una escasa presencia entre los mandos intermedios, líderes y gerentes.

Los estudios llevados a cabo en los países del proyecto confirman la tendencia a la concentración de personas nacidas en el extranjero en los sectores productivos que sufren con mayor intensidad las fluctuaciones cíclicas de la economía.

En España, los inmigrantes tienen más presencia en sectores como la agricultura, el servicio a las personas, la construcción, el comercio y la hostelería. Se trata de sectores donde hay una mayor proporción de trabajo precario, y que además presentan una mayor vulnerabilidad económica. De hecho, el 50% de los trabajadores inmigrantes tienen contratos temporales frente al 25% de los autóctonos.

En Francia, en 2011, había una sobrerrepresentación similar de inmigrantes en la construcción, hoteles y restaurantes. Ellos tienen poca presencia en la administración pública y en el ámbito financiero y de seguros, la educación y la salud. Sin embargo, existen diferencias en función de su país de origen. De hecho, los inmigrantes que proceden de un país de la Unión Europea tienden a ocupar puestos de trabajo más cualificados que los inmigrantes de origen no europeo. Las mujeres inmigrantes, en particular de África y el Magreb, trabajan en el ámbito de los cuidados y del trabajo doméstico, donde existe una mayor proporción de contratos a tiempo parcial.

En Grecia, la transformación de la economía se produjo durante las dos décadas anteriores a la actual crisis económica, lo que llevó a la población autóctona a buscar trabajo en el sector terciario y de servicios y causó una gran demanda de mano de obra especialmente para trabajos técnicos y manuales. Por otra parte, la incorporación de la mujer al mercado de trabajo incrementó la oferta de empleo en el sector de los servicios personales, tareas que tradicionalmente realizaban las mujeres en el ámbito doméstico. Por lo tanto, los hombres inmigrantes trabajaban en la construcción, la agricultura y la industria, mientras que las mujeres ocupaban puestos de trabajo en el ámbito doméstico o en el sector turístico, que ha experimentado un fuerte crecimiento. La reciente crisis ha cambiado la situación y el desempleo está afectando masivamente a los nacionales y más aún a la población inmigrante cuya presencia en el mercado laboral se ha reducido bastante.

En Italia, en 2012 había una importante presencia de inmigrantes en el ámbito de los servicios personales (el 39,3% del total del empleo en este sector), la hostelería (19,2%), la construcción (18%), la agricultura (17,1%), la industria excluida la construcción (10,5%) y el transporte (10,3%). Además, el 35,3% se situaba en trabajos no cualificados (en particular en el servicio doméstico y la hostelería), el 32,6% en trabajos poco cualificados y sólo el 6,1% ocupaban puestos de trabajo cualificados.

En Francia, el 20,7% de los inmigrantes ocupan un empleo a tiempo parcial frente al 17,3% de los no inmigrantes. Las mujeres inmigrantes siguen sufriendo más precariedad en el empleo, de hecho, tienen más contratos a tiempo parcial: 35,9% frente a 8,6% de los hombres, aunque esta diferencia se confirma también para las mujeres no inmigrantes. Los inmigrantes son más propensos a declarar una situación de subempleo, en particular las mujeres procedentes de África. En 2012, entre las mujeres de 15 a 64 años que tienen un trabajo a tiempo parcial, el 16% son africanas frente al 12,3% que presenta el total de las mujeres inmigrantes y el 7,4% de las mujeres nacidas en Francia. La precariedad de los inmigrantes en el empleo también se refleja en la alta tasa de ocupación de puestos con contratos temporales. En 2012, el 15,1% de los trabajadores migrantes de 30 a 54 años tienen un contrato temporal (15,4% para las mujeres y 14,8% para los hombres) frente al 7,2% para los no inmigrantes.

Los inmigrantes tienen más probabilidades de estar en paro que el resto de la población y los trabajos en los que se ubican generalmente son aquellos en los que el dominio del idioma del país de acogida no es esencial, y cuyas habilidades son aprendidas fácilmente. Son trabajos que requieren una baja capacitación, con salarios bajos, que se caracterizan por una alta precariedad y donde predomina el trabajo a tiempo parcial.

4. CONCLUSIONES

En la actualidad, la Unión Europea considera la inmigración como una prioridad a tratar dentro de su agenda, y en los últimos años se han organizado varias cumbres a fin de profundizar en esta cuestión y lograr la creación de una política común en materia de inmigración para todos los Estados miembros. Sin embargo, se ha ocupado comparativamente poco de la integración de los inmigrantes que viven en Europa, preocupándose mayoritariamente por conciliar posiciones comunes en torno al control de fronteras y centrando sus energías en la lucha contra la inmigración ilegal. Esta carencia de políticas de integración de inmigrantes, tanto a escala nacional de cada país miembro como a nivel europeo, ya está mostrando consecuencias negativas y constituye un factor de preocupación a escala internacional.

Esto surge, entre otras cosas, debido a la preocupación de los países receptores que observan cómo el concepto de ciudadanía, que es una de las bases de las democracias occidentales, se encuentra hoy cuestionado como consecuencia de la falta de integración de la población inmigrante. La proliferación de una actitud crítica hacia este concepto resulta inevitable cuando se está produciendo una discriminación hacia un colectivo de personas que son consideradas ciudadanas y sin embargo no tienen los mismos derechos que los habitantes autóctonos. En efecto, la conclusión forzosa de esta situación es la existencia de dos tipos de ciudadanos: unos de primera y otros de segunda; unos con todos los derechos y otros con un recorte importante en los mismos.

No obstante, al no existir una política común en materia de integración de los inmigrantes, cada país de la Unión Europea está regulando de manera diferente el acceso a la nacionalidad, y con ello el acceso a la ciudadanía. Los criterios para concederla son variables, y se basan en el tiempo de residencia, el conocimiento de la lengua, y la suficiencia económica.

En definitiva, aunque existen diferencias significativas, en todos los países europeos la población inmigrante está teniendo dificultades para lograr una efectiva integración. El acceso a la educación y a la formación, a la vivienda, a la atención sanitaria y al trabajo está limitado y presenta barreras importantes. Por ende, la situación de la población inmigrante en la UE ha

empeorado, especialmente en países como Grecia y España, como consecuencia de la crisis económica. Las medidas puestas en marcha por los diferentes países en el ámbito de sus competencias ha sido muy desigual y el impacto de estas medidas también ha sido muy heterogéneo.

Por tanto, en todo caso no existe una armonización de políticas en el seno de la UE, siendo los planteamientos muy dispares y cambiantes en cada país miembro.

BIBLIOGRAFÍA

- Aragón, J. (2003). Las migraciones en la globalización. Un complejo puente entre el norte y el sur del desarrollo. *Gaceta Sindical*. 3: 11-36.
- Balleix, C. (2013). *La politique migratoire de l'Union Européenne*. La documentation française. Paris. ISBN : 978-2-11-009268-7
- Blum Le Coat, J.Y. y Eberhard, M. (2014). Les immigrés en France. La documentation française. Coll, Les Études. 5392-93
- Commission Européenne (2005). *Mesures politiques pour l'accès des immigrés et des minorités ethniques à un logement décent*. Consultado el 14 de abril de 2017, Web de la Comisión Europea: file:///D:/Datos%20de%20Usuario/UJA/Downloads/decenthousing_leaflet_fr.pdf
- Conseil de l'Europe (2014). *Rapport final sur la 3ème enquête du Conseil de l'Europe, Intégration linguistique des migrants adultes: politique et pratique*. OCDE. Strasbourg
- De Lucas, J. (2002). Sobre el papel de los derechos humanos en las políticas de inmigración. La necesidad de otra mirada sobre la inmigración, en tiempos de crisis. En: García, F. J. y Mutiel, C. (eds). *La inmigración en España: contextos y alternativas*. Volumen II. Actas del III Congreso sobre la inmigración en España (Ponencias). Laboratorio de Estudios Interculturales. Universidad de Granada. Granada.
- Hoyez, A.C. (2011). L'accès aux soins des migrants en France et la « culture de l'initiative locale ». Une analyse des contextes locaux à l'épreuve des orientations nationales », *Cybergeog: European Journal of Geography* [En ligne], Espace, Société, Territoire, document 566, mis en ligne le 21 novembre 2011, consulté le 14 avril 2017. URL : <http://cybergeog.revues.org/24796> ; DOI : 10.4000/cybergeog.24796
- Koller, S. (2007). Politiques d'intégration en Espagne. *Études*. 407 (3): 177-186.
- Lemaitre, G. (2006). *Les immigrés et le marché du travail en Europe*. INSEE. Paris.
- López, J. M. y Giol, J. (2004). Un modelo de integración: una decisión pendiente. *Documentación Social*. 132: 35-65.
- Michalowski, I. (2006). Expansion ou disparition des dispositifs pour l'intégration des étrangers en Europe ? *Revue Homme et Migrations*. 1261: 131-142.
- OCDE (2014). *Panorama des statistiques de l'OCDE 2014: Économie, environnement et société*, Éditions OCDE. Consultado el 14 de abril de 2017, Web de la OCDE: <http://dx.doi.org/10.1787/factbook-2014-fr>
- Pajares, M. (2000). Políticas sociales de integración de los inmigrantes. *Documentación Social*. 121: 111-130.
- REM. (2016). *L'intégration des bénéficiaires de la protection internationale sur le marché du travail: politiques et bonnes pratiques*. Réseau Européen des Migrations. Paris. ISBN 978-2-11-151580-2.
- Walzer, M. (1993). *Las esferas de la justicia: una defensa del pluralismo y la igualdad*. Fondo de Cultura Económica. México.
- Zapata-Barrero, R. (2000). Inmigración e innovación política. *Migraciones*. 8: 7-58.
- Zapata-Barrero, R. (2002). *El turno de los inmigrantes. Esferas de justicia y políticas de acomodación*. Ministerio de Trabajo y Asuntos Sociales. Madrid.
- Zapata-Barrero, R. 2004. *Multiculturalidad e inmigración*. Síntesis. Madrid. ISBN: 9788497562218.

PROMOTION OF THE ECONOMY AND SOCIAL DEVELOPMENT IN HONDURAS. INTEGRATED MUNICIPAL MARKETS (MERCOIM): MASTER PLAN AND LOGICAL FRAMEWORK

Antonio Juan Briones-Peñalver
Universidad Politécnica de Cartagena; CIEO, Universidad del Algarve
(aj.briones@upct.es)

Julio Maldonado
Grupo SURCO
(julio.maldonado@gruposurcohn.com)

Candelario Reyes García
Centro Cultural Hibueras, Honduras
(hibueras.cr@gmail.com)

ABSTRACT

Solidary social economy is considered an engine of change and justice. A system of Municipal Integrated Cooperative Markets (MERCOIM), today is considered the most conducive means for the integration of the productive sectors of the rural and urban area, standardizing the means of production and business. This work presents, through a master plan and logical framework, an economic-social and solidarity model that invigorates the territorial development of Honduras. Its objectives are: (1) To generate socio-economic changes favorable to a culture of social justice with equity that contributes to avoiding forced emigration and violence; (2) Generate resources in a cooperative way among the less favored sectors with potential for change in Honduras, allowing the marginalized citizens to escape from social exclusion. The organization chart of the cooperation model established through alliances between a company (MERCOIM), a Foundation for Integral Development and Guarantee of Model Audit (FEDSS) and an active cooperative that is an organization of producers and Traders, coordinated under a productive system and fair trade of its profits. As results are visible human promotion, production and trade in the context of solidarity economy, agile, efficient and effective to promote a better quality of life for citizens, as well as cultural wealth that promotes in people their values, food, Education healthy life with security, self-esteem and belonging to the territory.

Keywords: Social Economy, Cooperative, Development, Entrepreneurship.

JEL Classifications: M13, M12, O47

1. INTRODUCCIÓN

La Economía Social (en adelante ES) la conocemos como la realidad social situada entre la economía pública y la economía capitalista, situándose como alternativa en favor de un desarrollo social, económico y colectivo. En este camino, existe cada vez más un gran reconocimiento institucional de la ES, así como de la articulación de políticas europeas.

En este sentido, existe una gran preocupación y discusión sistemática sobre desarrollo económico de los países pobres y a los habitantes de los países ricos se les recuerda a menudo las condiciones infrahumanas en las que vive gran parte de los pobladores de los países pobres bajo un sistema de economía informal. Estos a su vez, en razón del vertiginoso avance de las tecnologías de la información y comunicación y de los medios de comunicación masiva, se encuentran cada día más expuestos a la influencia de los estilos de vida y las pautas de consumo de los países ricos.

El mercado municipal adquiere gran importancia en el proceso de urbanización del siglo XXI, en cuanto a su capacidad para generar vínculos esenciales entre lo urbano y el mundo rural, para la reducción el hambre, así como para impulsar el empleo y el desarrollo económico tanto a escala local como regional. Los mercados son espacios públicos vitales que permiten el intercambio diario entre compradores y productores locales.

Los mercados públicos –tanto de gestión pública como de gestión privada acumulan un patrimonio cultural e histórico que debemos esforzarnos en conservar, reforzar y ampliar. A diferencia de otras iniciativas comerciales, los mercados públicos no solo son de gestión pública sino que tienen vocación pública. En este sentido, la aspiración de un desarrollo económico equitativo, sostenido y equilibrado con la utilización de Mercados Municipales, se constituye así en uno de los elementos de mayor presión para eliminar desigualdades.

Este trabajo presenta a través de un plan maestro y marco lógico, un modelo económico- social y solidario que dinamiza el desarrollo territorial de Honduras. Los objetivos del mismo son: (1) Generar cambios socioeconómicos favorables a una cultura de justicia social con equidad que contribuya a evitar la emigración forzada y la violencia; (2) Generar recursos de manera cooperativa entre los sectores menos favorecidos con potenciales de cambio en Honduras, que les permita a la

ciudadanía marginada salir de la exclusión social. Se presenta el organigrama del modelo de cooperación que se establece a través de alianzas entre una empresa (MERCIOIM), una Fundación para el Desarrollo Integral y Garante de la Auditoría del Modelo (FEDSS) y una cooperativa en funciones que es una organización de productores y comerciantes, coordinados bajo un sistema productivo y de comercio justo de sus beneficios.

2. MARCO TEÓRICO

Para entender el término de ES hay que remontarse al origen del cooperativismo moderno con la creación de la famosa cooperativa de Rochdale (Inglaterra) donde se formularon los principios cooperativos que más tarde fueron adoptados por toda clase de cooperativas y hoy constituyen el eje vertebrador de la Alianza Cooperativa Internacional (Monzón, 2003) y se convertirán en claves para determinar el concepto de ES (Chaves *et al.*, 2003; Monzón, 2006).

Por su naturaleza, la ES, se sitúa a caballo entre el sector capitalista y el sector público y actualmente son utilizadas numerosas expresiones a la hora de referirse a ella: “tercer sector”, “sector no lucrativo”, “economía alternativa” y “sector voluntario”. Si bien no hay aún una definición clara de ES, este término se ha ido utilizando en los últimos años para definir aquellas empresas y organizaciones privadas que, fundamentadas en los principios de la solidaridad y ayuda a sus asociados, se rigen por prácticas de democracia económica, dando primacía a las personas frente al capital (Juliá, 2004) que por su naturaleza se sitúan a caballo entre el sector capitalista y el sector público.

La ES ha consolidado sectores tradicionales como la agricultura, el trabajo asociado, los servicios, el consumo y las actividades financieras y mutualistas. Monzón (2006) afirma que la Economía Social está formada por empresas y organizaciones situadas fuera del sector público y del sector privado capitalista, con profundas raíces históricas. Chaves, Monzón y Sajardo (2003) afirman que las funciones de las EES, son aquellas relativas a: 1) la producción de servicios vinculados con las necesidades de la sociedad; 2) la redistribución y estabilización; 3) la corrección de los desequilibrios del mercado de trabajo; 4) el pionerismo; 5) la potenciación del desarrollo económico endógeno; 6) el estímulo de la autonomía de los territorios; 7) la contribución al desarrollo sostenible; y, 8) la contribución al fomento de la democracia y el capital social.

La ES es un conjunto vivo, dinámico, muy rico por su diversidad y compuesto tanto por microasociaciones locales y pequeñas cooperativas, como por grandes grupos mutualistas y cooperativos (Saz y Carús, 2008). En definitiva el “movimiento cooperativo” constituye en la actualidad la columna vertebral de la economía social como sector institucional (Mozas y Bernal, 2006). Las diferentes organizaciones que la conforman, en particular las organizaciones del ámbito asociativo, pueden intervenir para impulsar la implicación de diversos agentes y grupos de interés afectados (Muñoz y Briones, 2011).

En el sistema competitivo actual, que está caracterizado por la crisis económica, la turbulencia de los mercados, la desconfianza en los mecanismos de control y la situación cambiante, es importante evaluar el impacto directo de estas vicisitudes en la economía real, la supervivencia de las empresas y de organizaciones representativas de la actividad socioeconómica de los territorios. Entre estas, encontramos a la Entidades de Economía Social (en adelante, EES), las cuales son garantes del desarrollo local de los territorios en Centroamérica y con su creación potencian el desarrollo de los pueblos, el emprendizaje social de muchos negocios y algunas expectativas entre la ciudadanía (Melian y Campos, 2011). Puede decirse que el emprendimiento social es un proceso que incluye un uso innovador de los recursos y en el que se aprovechan las oportunidades para solventar un problema social o catalizar el cambio social necesario para que el problema se reduzca o desaparezca (Mair y Martí, 2006).

Las competencias emprendedoras no solo deben ayudar a los sujetos a desarrollar con éxito una iniciativa empresarial, sino también a cultivar valores y prácticas sociales asentados en principios democráticos. En este sentido compartimos lo que dice Galindo (2006:132), “la adopción de rasgos éticos obliga a adoptar comportamientos emprendedores que beneficiaran a los individuos u organizaciones que lo presentan”. El programa Global Entrepreneurship Monitor (GEM) define el emprendizaje social como “la actividad empresarial que tiene por objetivo hacer frente a los problemas de la sociedad” (Lepoutre *et al.*, 2011).

Así pues, el emprendedor social muestra características como las siguientes (Peredo y Mclean, 2006): a) se enfoca hacia la creación de valor social; b) muestra capacidad para aprovechar las oportunidades y crea una visión; c) es innovador, desde la invención pura hasta la adaptación novedosa de algo, en su creación y distribución de valor social; d) está dispuesto a aceptar un mayor nivel de riesgo en la creación y distribución de valor social; e) suele tener suficiente ingenio como para no dejarse intimidar por la escasez de recursos para la puesta en marcha de su aventura social.

El espíritu emprendedor es una cualidad que poseen las personas que crean oportunidades donde otros no, y que trata de aprovechar esas oportunidades a través de diversas modalidades de organización, sin tener en cuenta a los recursos (Mitchell, 2002).

La política de desarrollo local se ha venido sustentando hasta ahora en los siguientes ejes estratégicos (Tomás, 2008): (1) Fomento de la inversión, tanto interna como externa, y de la creación de empleo. (2) Movilización del potencial de desarrollo endógeno, como garantía de autonomía y sostenibilidad económica del proceso de crecimiento. (3) Difusión de innovaciones y el conocimiento del sistema productivo, como vehículo de competitividad y adaptación al cambio del entorno. (4) Formación, reciclaje del capital humano e inserción laboral, como vehículo de adaptación económica y estabilidad social. (5) Articulación más eficiente del espacio urbano y mejora del atractivo de las ciudades para atraer a las empresas. (6) Creación de coaliciones de desarrollo entre actores privados y públicos e intereses diferentes con el objeto de incrementar la eficacia de las políticas y la gobernabilidad de los procesos de adaptación. (7) Fomento de la internacionalización empresarial para impulsar la base exportadora, las competencias empresariales y la integración de la economía local en la economía global. (8) Desarrollo de las tecnologías de información y de las comunicaciones y su uso por el tejido empresarial y los ciudadanos.

En gran medida, las EES dependen de la capacidad para dotarse de recursos que alcancen ventajas competitivas en términos de calidad, tecnología, innovación y capital humano, con el objetivo permanente de crear empleo, el crecimiento a futuro de sus activos y la diversificación de sus actividades. Por tanto, la ES se está proyectando como una institución necesaria para la estabilidad y sostenibilidad del crecimiento económico, la valorización de la actividad económica al servicio de las necesidades sociales, la distribución más equitativa de la renta, la creación de empleo y riqueza solidaria y la corrección de los desequilibrios en el mercado de trabajo.

3. COOPERACIÓN BASADO EN EMPRENDIZAJE DE MERCADOS MUNICIPALES

Describimos un modelo de cooperación (Marco Lógico 2017-2021) a través de una alianza entre una empresa (MERCOIM), una Fundación para el Desarrollo Integral y Garante de la Auditoría del Modelo (FEDSS) y una cooperativa en funciones que es una organización de productores y comerciantes, coordinados bajo un sistema productivo y de comercio justo de sus beneficios. Este modelo se ha desarrollado en términos políticos a través de la economía social solidaria como motor de cambios y justicia social, con el propósito de aumentar los protagonismos para dinamizar el desarrollo de Honduras y con el resultado de un modelo de Mercados Cooperativos Integrales Municipales con la integración de diversos sectores de población del área rural y urbana, proveyéndoles de medios de producción de negocios y de promoción cultural, educativa, económica dentro de una estrategia social solidaria con familias organizada en 26 municipios de Honduras, dispuestas a superar la exclusión social.

Consideramos que el Modelo de Cooperación implementado servirá para el fomento de la economía social y la imbricación de los siguientes resultados:

- 1) Desarrollará un sistema integral de promoción humana, producción y comercio en el contexto de la economía solidaria, ágil, eficiente y eficaz que impulse hacia el logro de una mejor calidad de vida.
- 2) Impulsará un modelo de crédito y comercio justo que permita usar los recursos más amigables con el proyecto, en concordancia, amigables en inversiones que generen bien común.
- 3) Acrecentará MERCOIM, el sistema de Mercados Cooperativos Integrales Municipales, como el medio más propicio para la integración de los sectores productivos del área rural y urbana, proveyéndoles de medios de producción y de negocios
- 4) Generará un modelo de riqueza cultural que promueva a las personas en sus valores, su salud, alimentación, educación, vida sana con seguridad, les arraigue con sentido de autoestima y de pertenencia.

Mediante la Fundación para la Economía Social Solidaria (FEDSS) y los organismos a ella afiliados, se establece un modelo de proyecto para la vida de las personas con menos oportunidades, basado en la Permacultura y la Economía Social Solidaria como capacidades adquiridas para la generación de un nivel de vida saludable, que asegure la trazabilidad alimentaria y la producción agroecológica como vías de sostenibilidad.

Este proyecto de cooperación tiene los siguientes objetivos que tratan de general un sistema de Producción Cooperativo y de Comercio Justo que permita a las familias pobres producir bienes de empleo y desarrollo de una la línea de distribución equitativa y sana que les permita gozar y compartir bienestar y seguridad.

Tabla 1

MARCO LÓGICO 2017-2021	Objetivos	Indicadores verificables	Medios de Verificación	Supuestos
FIN: La economía social solidaria como motor de cambios y justicia social	Generar cambios socioeconómicos favorables a una cultura de justicia social con equidad que contribuya a evitar la emigración forzada y la violencia.	Puesta en Marcha de MERCOIM: -MERCOIM S.A. (Para la fase constructiva y desarrollo de los Mercados -FEDSS (Fundación para el desarrollo Integral y garante de la auditoría del modelo.	1-Escritura Privada de MERCOIM y su modelo de empresa en funciones 2-Persona Jurídica de la Fundación y su estructura ejecutiva en funciones	Sistema de garantía jurídico administrativo conforme a la legislación hondureña, reúne modelos de participación que garantizan una economía de reparto.
PROPOSITO: Sumar protagonismos dentro del modelo económico social solidario para dinamizar el desarrollo de Honduras.	Generar recursos de manera cooperativa entre los sectores menos favorecidos con potenciales de cambio en Honduras, que les permita salir de la exclusión.	-COOPERATIVA EN FUNCIONES: Organización de base de los y las productoras y comerciantes coordinando el sistema productivo y de comercio justo y generador de beneficios.	3-Persona Jurídica de la Cooperativa, sus organizaciones de base y estructuras funcionando.	Una unidad piramidal que garantiza la participación de base y el goce los beneficios por parte de esa misma base para garantizar el modelo de economía social solidaria.
COMPONENTES				
I- Infraestructura Básica: para Productividad, Industria y Negocios				
II- Educación Empresarial Cooperativa para elevar el nivel cultural de los protagonistas de la acción económica social solidaria.				

III- Formación Cultural de riqueza patrimonial, calidad humana y profesional.

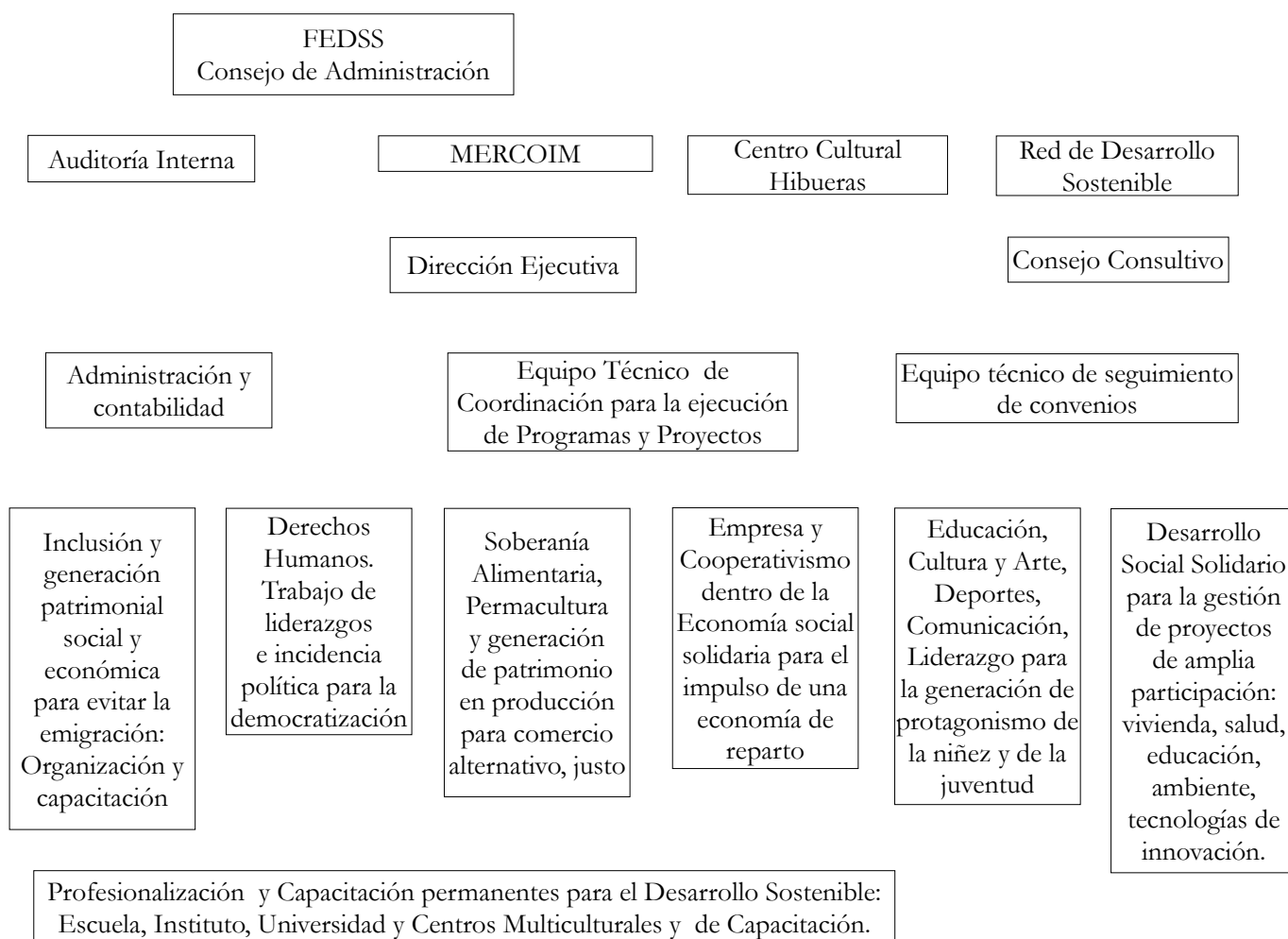
IV- Sistema de seguridad social con Base al desarrollo de los medios de producción y el uso equitativo y solidario del dinero y los recursos alternos que se vaya generando.

Para ello, trata de:

- Desarrollar riqueza cultural asociativa empresarial mediante unidades productivas familiares de alimentación sana y de abasto a los Mercados bajo modelos empresariales de la economía social solidaria denominado MERSOL.
- Establecer sistemas de vivienda sostenible de condominio denominado Eco Barrio conformado por colectivos de vivienda digna combinada con producción hortícola y pecuaria orientada a la generación de productos para los mercados solidarios, que permitan asumir la sostenibilidad.
- Integrar las líneas de producción (MERSOL) al sistema de Mercados Cooperativos Integrales Municipales (MERCOIM) de Comercio Justo Solidario, resguardados por un fidecomiso y el apoyo de financiamiento solidario no reembolsable de fundaciones que se asocien al programa.
- Desarrollar con familias pobres el protagonismo, habilidades técnicas y la cultura propicia para alcanzar capacidad crediticia y productiva que les permita integrarse al sistema de economía formal dentro de un modelo económico social solidario.

Finalmente se configura una estructura organizativa y organigrama de la Fundación para la Economía y Desarrollo Social Solidario que se ilustra en el anexo de esta comunicación.

4. ORGANIGRAMA DE LA FUNDACIÓN PARA LA ECONOMÍA Y EL DESARROLLO SOCIAL SOLIDARIO



La fusión de recursos del Programa MERCOIM (Mercados Cooperativos Integrales Municipales) MERSOL (Sistema de Producción Agroecológica Solidaria) y de la Fundación FEDSS (Fundación para la Economía y el Desarrollo Social Solidario), crea un programa de vivienda y producción agroecológica (Permacultura) de abastecimiento de mercados (MERCOIM) y la generación de unidades productivas y de distribución (MERSOL) que permite a familias pobres adquirir vivienda propia y desarrollo agropecuario permanente en un área de terreno de dos mil quinientos metros cuadrados cuya producción será destinada en un 10% al consumo familiar y el 90% restante al mercado cooperativo, de cuyo importe un 30% será para el pago de su casa y un 60% para su economía familiar.

Este recurso generará unidades de condominio denominadas ECO BARRIO. Barrios ecológicos sostenibles produciendo los recursos para su sostenibilidad. Definidos dentro de un concepto social solidario de calidad de vida con una población meta para los primeros tres años de 750 familias donde se faciliten viviendas, áreas de recreo, sala maternal, sala tecnológica y unidades de producción agropecuaria. Finalmente se crean una serie de productos fruto de la colaboración: (1) Un convenio de actuación interinstitucional coordinado por la Fundación FEDSS para la inversión de recursos de diversas fuentes y el desarrollo del sistema de condominios, Eco Barrios, que permita a las familias pobres tener un acceso asegurado a este modelo productivo y de vivienda; (2) Un Fidecomiso bancario MERSOL que respalde el establecimiento de Eco Barrios y su modelo de Casa Huerto, integradas a un Mercado que asegure la sostenibilidad; (3) Una organización de base cooperativa por municipio que sustente la participación de una base poblacional proactiva y beneficiaria; (4) Un Banco de tierras que permita para establecer el modelo; (5) Un sistema de Mercados donde se comercialice la producción; (6) Una Empresa de Ingeniería que desarrolle los condominios; (7) Dos Ongs y sus programas: Centro Cultural Hibuera y Red de Desarrollo Sostenible.

5. CONCLUSIONES

Los resultados obtenidos en este trabajo ponen de manifiesto la tradicionalmente asumida e importante actividad emprendedora social que realizan las EES, particularmente las sociedades cooperativas y los modelos de cooperación manifiestan capacidad de generar empleo, así como valor añadido a favor del desarrollo de los pueblos y la ciudadanía. Por otro lado, la contribución del trabajo presentado resulta relevante para aquellas comunidades territoriales que aun teniendo una consolidada cultura solidaria, no conocen esta planificación de un proceso cooperativo como una forma de mercado de la economía solidaria. En el caso del emprendedor social al igual que el emprendedor tradicional creará valor económico, sin embargo, la creación de valor social es un eje fundamental y el valor económico es el subproducto del valor social, asumiendo un papel importante de agente de cambio en el sector social

Las áreas donde la economía social florece y se desenvuelve con mayor facilidad son en los servicios de proximidad y los servicios a la comunidad. Como servicios de proximidad se entiende las actividades realizadas anteriormente por la familia en el ámbito doméstico y que ahora son ejecutadas por terceros, pero necesitan de una proximidad y de una relación personal fuerte entre los que las usan y el prestador, tales como: servicios sociales (acogimiento de niños, jóvenes y necesitados de servicios a domicilio, apoyo a los desfavorecidos, tratamiento de ropa); servicios para mejorar la vida de las personas (habitación, seguridad, transportes colectivos, comercio de proximidad, revalorización de los espacios públicos).

El impulso del concepto de MERCOIM- MERSOL, viene a jugar un papel de relevancia en la promoción de la economía social solidaria y su desarrollo en si de una forma inclusiva, sin perder de vista el enfoque consideramos 3 puntos elementales:

- Entrada: Al realizar la elección de los beneficiarios a este concepto de mercados será dirigida a las personas que realmente lo necesitan por lo que utilizamos el Método Delphi, asegurándonos que no se tome este proyecto como una oportunidad inmobiliaria.
- Permanencia: Le llamaríamos permanencia al lograr la sostenibilidad de los empresarios de mercado dentro de esta dinámica comercial, creando sistemas legales y económicos con apoyo tanto del gobierno local como del central, que ellos puedan cumplir, como por ejemplo: Exoneraciones de impuestos o tributos preferenciales, economía de reparto, cooperativismo, economía en volumen y movimiento interno.
- Salida: Asegurarnos que las personas que alcanzan un nivel como trampolín para establecer sistemas de mercados en forma de patrimonio o el comerciante que alcance nivel superior pueda dar oportunidad a un nuevo aspirante que inicie de manera comercial.

Es importante mencionar que dos factores importantes de esto son: (1) El verdadero capitalismo se inicia cuando obtenemos el título de propiedad de algo por eso nuestro concepto incluye la ley de condominios; (2) Para lograr la verdadera transición de la economía informal a la formal, es importante considerar como mínimo para el bienestar social el fondo de retiro de nuestros empresarios de mercado.

La incorporación de MERSOL para lograr el vínculo rural-urbano tiene dos objetivos importantes: Combatir la pobreza rural, ya que la migración de esta población incrementa la pobreza urbana y lograr la vinculación de compra directa aseguramos la trazabilidad alimentaria y evitarnos al intermediario que tanto daño hace al precio de venta al consumidor final. Ahora con la incorporación de MERSOL le damos mayor sostenibilidad a este proceso.

BIBLIOGRAFÍA

- Chaves, R.; Monzón, J.L. y Sajardo, A. (2003). Elementos de Economía Social. Teoría y Realidad. Universidad de Valencia. ISBN: 84-607-9362-1.
- Galindo, P. (2006). Cultura Ético – Emprendedora (E2) y desarrollo de competencias transversales clave para la inserción sociolaboral de los universitarios. *Revista de Educación de la Universidad de Granada*, (19): 129-146.
- Juliá J.F., (2004). La economía social y el cooperativismo, la democracia en la economía. A modo de introducción. *Mediterráneo económico*, (6): 10-14.
- Lepoutre, J., Justo, R., Terjesen, S., Bosma, N.S. (2011). Designing a Global Standardized Methodology for Measuring Social Entrepreneurship Activity: The Global Entrepreneurship Monitor Social Entrepreneurship Study. *Small Business Economics*, forthcoming.

- Mair, J., Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction and delight. *Journal of World Business*, 41 (1), 36-44.
- Melian, A., Campos, V. (2011). Emprendedurismo y economía social como mecanismo de inserción sociolaboral en tiempos de crisis. *REVESCO*, (100): 43-67.
- Mitchell, R.K., Smith, J.B., Seawright, K.W, & Morse, E.A. (2002). Cross-cultural cognitions and the venture creation decision. *Academy of Management Journal*, 43 (5): 974-993.
- Monzón, J.L. (2003). El cooperativismo en la historia de la literatura económica. *CIRIEC-España, revista de Economía Publica, Social y Cooperativa*, (44): 9-32.
- Monzón, J.L. (2006). Economía social y conceptos afines: fronteras borrosas y ambigüedades conceptuales del Tercer sector. *CIRIEC-España, revista de Economía Publica, Social y Cooperativa*, (56): 9-24.
- Mozas, A., Bernal, E. (2006). Desarrollo territorial y economía social. *CIRIEC-España, Revista de Economía Publica, Social y Cooperativa*, (55): 125-140.
- Muñoz, M.C., Briones, A.J. (2011). Good governance in the entities of the social economy. *CIRIEC-España, revista de Economía Publica, Social y Cooperativa*, (3): 171-191.
- Peredo AM., McLean M. (2006). Social entrepreneurship: A critical review of the concept. *Journal of World Business*, (41), 56-65.
- Tomas, J.A. (2008). El desarrollo social sostenible en clave estratégica. *CIRIEC-España, Revista de Economía Publica, Social y Cooperativa*, (61): 73-101.

IMPLEMENTING CONTINUOUS IMPROVEMENT. THE CASE OF CANTABRIA

Lidia Sanchez-Ruiz

Universidad de Cantabria. Departamento de Administración de Empresas. Facultad CCEE y Empresariales
(sanchezrl@unican.es)

Beatriz Blanco

Universidad de Cantabria. Departamento de Administración de Empresas. Facultad CCEE y Empresariales
(blancob@unican.es)

ABSTRACT

The constant changes in the business environment that have taken place during the last decades force companies to adapt and be flexible in order to stay in the market and be competitive. Among the many tools available to achieve this situation, continuous improvement is one of them, a management philosophy that seeks constant improvement of the company. Despite the apparent simplicity of the concept, the implementation is not easy and it is still necessary to develop more research in order to identify the most appropriate path towards the complete implementation of continuous improvement. Therefore, the objective of this work is to analyse the continuous improvement process, namely, to identify the people responsible, the implementation stages and the tools used. We believe that the results obtained can be very useful for those companies that have started or want to start with the implementation of a continuous improvement system.

Keywords: continuous improvement, implementation, stage, tool.

JEL Classification: M10

1. INTRODUCTION

Nowadays companies develop their activity in an extremely competitive environment where constant change is the main characteristic. This situation is the result of a series of phenomena that have happened during the last century, in such a way that the present situation in no way resembles the conditions prevailing in the early twentieth century.

In the last decades, the phenomenon of globalization has caused changes in market conditions. At present, companies faced more dynamic environments characterized by greater competition, a better informed and more demanding customer, a greater importance of service quality and/or product, or a greater awareness of environmental and social issues among other facts.

Therefore, companies need more agile management mechanisms and systems that allow them to adapt and, above all, to be competitive (de Jager *et al.*, 2004; Quesada-Pineda and Madrigal, 2013). Among the different mechanisms available, continuous improvement is considered one of the most important phenomena for companies in the current environment (de Jager *et al.*, 2004; Hamel 2000; Singh and Singh, 2012).

The concept of continuous improvement has been widely studied in the literature. However, there is no unanimous and commonly accepted definition. According to Deming (1982), one of the pioneers in defining it, continuous improvement means steadily improving the production and / or service system.

Despite the apparent simplicity of the idea, the implementation of a continuous improvement system is a complex task in which many companies fail. Therefore, as McLean and Antony (2014) pointed out, more research is needed to analyze the process of implementing continuous improvement.

Therefore, the objective of the present work is to analyze the process of implementing continuous improvement by analysing who was responsible for the implementation, what phases were followed and what tools were used. We believe that the results may be of interest to all those companies that have started the implantation or want to start it.

Once the objective has been described, the rest of the work is organized as follows. Firstly, it includes a theoretical section describing the concept of continuous improvement and the research developed so far on the implementation of initiatives of this type. Subsequently a section that briefly describes the methodology followed for the realization of the study is included. In the following section, the results of the study are collected to finally conclude with a section of conclusions and implications for management.

2. BACKGROUND

2.1 Continuous improvement concept

The continuous improvement concept has its origin in the Japanese expression Kaizen and was initially developed and extended by Masaaki Imai (1989), known as the father of continuous improvement. Since then there have been many research about the concept. For example, one of the most current and synthetic definitions of the concept is the one of

García-Sabater and Marín-García (2009, p. 186), who define continuous improvement as *the planned, organized and systematic process of continuous and incremental change*. For a more detailed analysis of the concept of continuous improvement and its evolution, it is recommended to consult the bibliometric revisions made by Sanchez and Blanco (2014; 2016).

2.2 Continuous improvement implementation initiatives

The method followed by a company when implementing a continuous improvement program will be influenced by the characteristics of the company itself (business objectives, market situation, previous level of development of continuous improvement and other similar techniques, business culture...). Therefore, it could be said that there are as many methods as companies. In fact, even in Japanese organizations, where Kaizen is considered to have originated, there is no uniform pattern or methodology (Brunet and New, 2003, p. 1439), in such a way that in each company the implementation takes place in a different way.

However, the above statement is not conclusive and, throughout the literature, different methodologies have been defined. They pretend to act as “guides” for the implementation of continuous improvement. These “guides” are adapted in each case to the reality of the company and that is where the differences appear. In the work developed by Sanchez (2014), a summary table is included with a total of seven different methodologies. Of these, the best known is the first one, the Deming methodology, widely known as the Deming Cycle or the PDCA Cycle. It is possible that the scarce existence of implementation methodologies is due, in part, to the fact that the Deming methodology is widely accepted and used.

Another aspect analyzed in the field of continuous improvement implementation is the level of development achieved by companies, although, as it was already stated in other studies (Marín-García *et al.*, 2012), this is a field of scarce development that still needs to be further studied. Specifically, only two models were identified in the literature review (Table 1).

Table 1. Continuous improvement evolutionary models

AUTHOR	STAGES
Bessant, Caffyn and Gallagher (2001, p. 73)	1. Level 1: Pre-Continuous Improvement 2. Level 2: Structured Continuous Improvement 3. Level 3: Goal oriented Continuous Improvement 4. Level 4: Proactive Continuous Improvement 5. Level 5: Full Continuous Improvement Capability
Wu and Chen (2006, p. 701)	1. Problem component initiates 2. Problem combines with models and tools 3. Above combines with promotion 4. Problem links to strategy 5. Interaction of the three components 6. Integration of stage 5 to a super system

Source: The authors

Based on the literature review, a survey was designed to learn more about the process of implementing continuous improvement and, therefore, to fulfil to the stated objective.

3. METHOD

In order to achieve the previously stated objective, a survey was carried out. In this survey, besides identifying the main characteristics of the companies, questions that dealt with different aspects related to continuous improvement were included: responsible for the implementation, stages followed during the process and tools used.

The survey took place in the Autonomous Community of Cantabria. The survey was addressed to all companies in the region that had more than 20 employees and practice continuous improvement. In the absence of secondary data on the subject, we proceeded to identify the companies that practiced continuous improvement. Once identified, they were sent the survey in which they were asked about different aspects of continuous improvement. Finally, a total of 109 valid questionnaires were obtained.

For the analysis of the results, the SPSS 18.0 program was used for both the descriptive analyzes and the Chi Square test.

4. RESULTS

4.1 Continuous improvement implementation process

In the first place we proceeded to analyze who had been in charge of implementing continuous improvement in the company. The companies had several response options, as shown in Table 2. In addition, the response was not unique and it was admitted that two or more options were indicated.

According to the results, 56 companies indicated a single option (51.38%), 42 indicated two options (38.53%), 10 indicated three options (9.17%) and one indicated the four options (0.92%). In some cases, we understand that companies, when responding, took into account all the mechanisms they had used throughout the process since, for example, selecting

“a single team” and “improvement teams” is certainly contradictory. One possible explanation is that perhaps it initially used a single computer but over time, as the project progressed, the number of computers increased.

Table 2. Continuous improvement implementation mechanisms

	%
Permanent improvement teams	54.13%
Temporary improvement teams	49.54%
External advisers	43.12%
Single team	12.84%

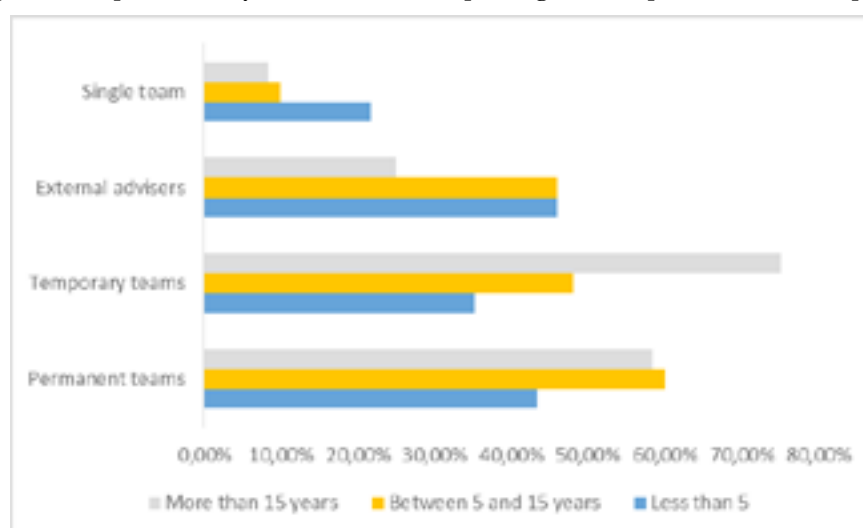
Source: Authors

Table 2 shows that 54.13% of companies used permanent improvement equipment to proceed with the implementation of continuous improvement. Secondly, temporary improvement equipment was used (49.54%); thirdly, external advisers (43.12%) and finally a single team (12.84%).

The obtained results are very interesting. The fact that the permanent teams in which operators are also involved are the most common mechanism is really positive since the success of the initiatives depends to a great extent on the people who participate in it (Sánchez, 2014). In addition, the fact that they are permanent equipment endows the improvement of continuity. There is, however, an important percentage of companies that seek the help of external advisers. This result is not surprising considering that one of the main obstacles encountered by companies is the lack of knowledge and experience (Sánchez, 2014).

From the obtained results, it seemed interesting to analyze if the usage of the different mechanisms varied depending on the level of experience of the companies. Thus, the companies were grouped into three levels: companies with less than 5 years of experience, with experience between 5 and 15 years and with more than 15 years of experience. The results of the comparison are presented in Figure 1.

Figure 1. Comparative analysis of mechanism depending on the experience of the companies



Source: Authors

The comparison of the results allows observing how the presence of external advisers is very important in the first case; important in the second case but behind other mechanisms; and less important in the case of more experienced companies. This result seems coherent and could be interpreted as follows: as the experience of companies increases, they are more independent. However, in the early stages, ignorance and lack of experience make the support of external advisers more necessary.

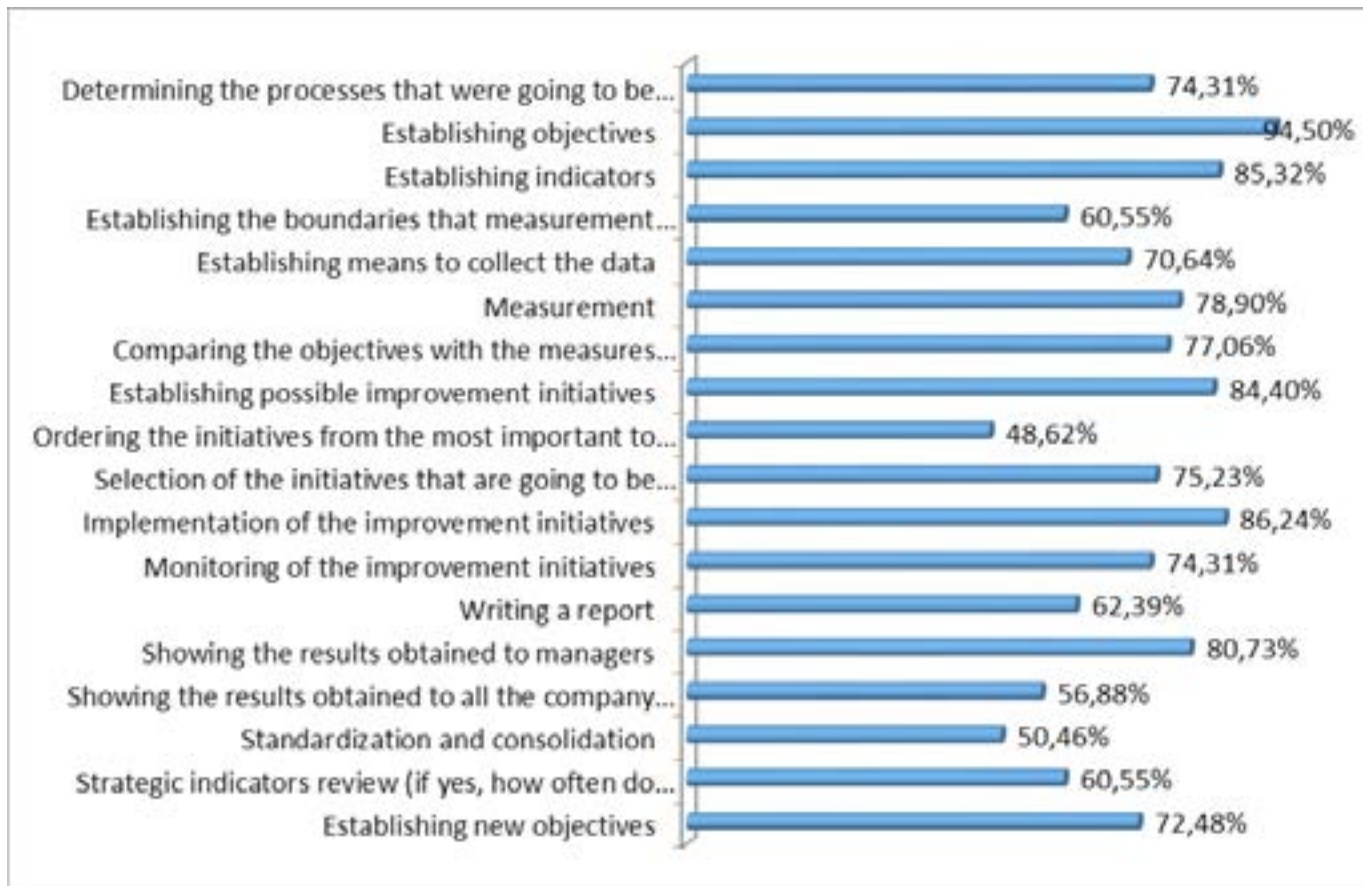
On the other hand, a small percentage of companies affirm that they develop their program of continuous improvement through a single team. The problem with this mechanism is that it does not involve the whole organization. The other two internal mechanisms, both temporary and permanent, allow the participation of a larger number of people and part of the success of continuous improvement lies precisely there.

After analyzing who was responsible for the implementation process, the process itself was analyzed by asking the companies what phases they had followed. Companies had to indicate what steps they had taken from a list of 18 phases that had been selected following an extensive literature review and consultation with experts. Figure 2 shows the percentage of companies that claimed to have gone through each phase.

According to the results, the stages with the highest percentages, that is, those that most companies chose are “Setting objectives”, “taking action for improvement”, “establishing indicators” and “establishing possible Improvements to be made“. These four stages could be the axis of continuous improvement. That is, well-observed, if the companies carry out

these four activities a system of basic continuous improvement could already be implemented. However, it is true that if we want it to last it is necessary to establish control mechanisms that help to verify if the objectives are being achieved and, if not, to correct the course. However, the results show that this is not the common procedure.

Figure 2. Percentage of companies which followed each stage



Source: authors

Thus, among the less valued stages “Prioritization of improvement actions”, “Standardization and consolidation”, “Setting limits for indicators” and “review of indicators” appear. The fact that these phases are little valued is worrisome. To begin with, non-prioritization of activities can cause the company to spend its time and resources on minor improvements, while the truly necessary improvements are not implemented. Second, if no limits are set for indicators, it is difficult to carry out follow-up work given the absence of objective values or an objective range. In addition, if the values of the indicators are not reviewed, the company may be guided by obsolete values. Be aware that the review of the indicators may be upwards or downwards. If the conditions of the company or the environment are negative, the level of demand should not be the same as in times of prosperity. For this reason the revision of indicators, as well as the standardization and consolidation of the same, are key phases that help the company to progress, to surpass itself. It is not a question of setting unattainable goals, but rather of setting goals that are a little more ambitious each time, always adapting them to the environment and to the company.

In any case, based on the results, it is possible to consider whether the companies are actually proposing the continuous improvement formally. For example, it is striking that some companies do not identify the processes that will improve, how will they improve if they do not determine what will be improved? Here there can be several reasons: either the companies do not disaggregate so much their improvement activities, or there is a problem of concept and it is necessary to impart more training in this respect.

4.2 Tools used during the implementation

The implementation continuous improvement of systems is accompanied by the use and/or development of certain tools that facilitate the process. In this section we will analyze, first, which tools are most frequently used and, secondly, we will try to analyze if the use of certain tools is greater or less depending on different characteristics of the companies.

The companies surveyed had to indicate whether or not they used the tools included in the list shown in Table 3. The selection of tools was based on the literature review (tools that had been analyzed and/or mentioned in studies and research) and the opinions of the experts. The list is not exhaustive but it is broad enough to be able to obtain some conclusions that guide more detailed future research.

Table 3. Tools

Team work /Quality circles
Process maps
Statistical process control
Analysis of problem's roots
Brainstorming
Scorecard
Benchmarking
Critical path (PERT)
Costs of quality analysis
Side-by-side comparison; weighted selection; attribute analysis
Critical success factors analysis
Internal auditing
Customer surveys
Company journal to inform people about company issues
Measurement charts
Employees survey
Failure Mode Effect Analysis
Suggestion box
SMED
Poka-Yoke
A3
Spaghetti flow
Just in Time
KANBAN
JIDOKA
Total Productive Maintenance
Production levelling

Source: Authors

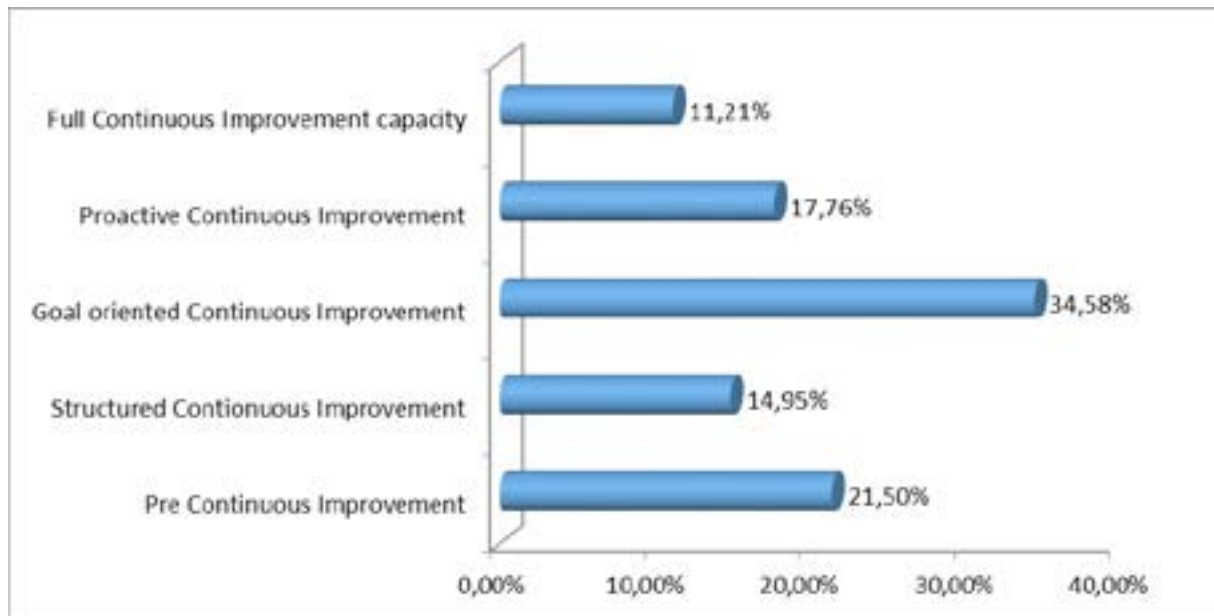
Figure 4 shows the order of the tools according to their percentage of use. Customer surveys, internal audits, the suggestion box and measurement charts are the most commonly used tools. All of them are employed by more than 50% of the companies surveyed in this section. At the other extreme, the least used tools are critical path analysis, Jidoka, peer comparison, weighted selection, attribute analysis, and A3.

In general terms, the tools with the highest level of use are qualitative tools used to collect information (surveys, improvement groups, suggestion boxes) and tools associated with graphical representation (graphs of measurements, process maps ...). On the other hand, tools that are used to a lesser degree are more complex tools (Critical Path Analysis, Jidoka, Level Programming ...).

In addition to the descriptive analysis, we also propose an analysis whose objective is knowing if there is any relationship between the use of the tools and the stage of development of the continuous improvement implementation process in which the company is located. Chi Square test will be used for the analysis of independence since we are working with two categorical variables.

To measure the level of development, among the models discussed in the theoretical section, in this study we decided to follow the model proposed by Bessant *et al.* (2001), for being this author one of the most respected specialists in the subject of continuous improvement (Sanchez and Blanco, 2014) and for the clarity of the model itself. The respondents had to define, according to their perception, in which stage of the 5 raised by the model they considered their company to be in. Figure 3 shows the percentage of companies that are classified in each of the stages.

Figure 3. Percentage of Company in each of Bessant's stages



Source: Authors

In general terms most of the companies are in the initial stages of development. Specifically, 37 companies (34.58%) are in the intermediate stage; 23 companies (21.5%) in the most basic stage and 16 companies (14.95%) in the stage of structured continuous improvement. The upper stages comprise a total of 31 companies, 12 companies in the upper stage (11.21%) and 19 companies (14.95%) in the previous phase.

Table 5 shows the results associated with the Chi Square test. We will say that there are significant differences when the level of significance is less than 0.05. It is observed that the use of many tools is related to the level of development in which the company is (highlighted cases). Among the cases where relationships were identified, two cases can be distinguished. On the one hand, there is a set of tools in which the use is significantly greater in the more advanced stages (improvement groups, process maps, causes analysis, brainstorming, integral scorecard, measurement charts, satisfaction surveys among the employees, failure mode effect analysis, total production maintenance), although it is also practiced among the companies that are in the initial stages. On the other hand, there is a set of tools that are only used in the most advanced stages of the Bessant model (internal audits, customer surveys, SMED, Poka-Yoke, Espaguetti Diagram, Just in Time, Kanban).

Since the companies classified themselves in one or another stage of the Bessant model, the previous analysis has been repeated taking as variable the number of years that has been practicing continuous improvement as a more objective variable. Specifically, companies have been classified into three levels: “beginners” (if they are applying continuous improvement 5 years or less), “professionals” (between 6 and 15 years), and “experts” (over 15 years).

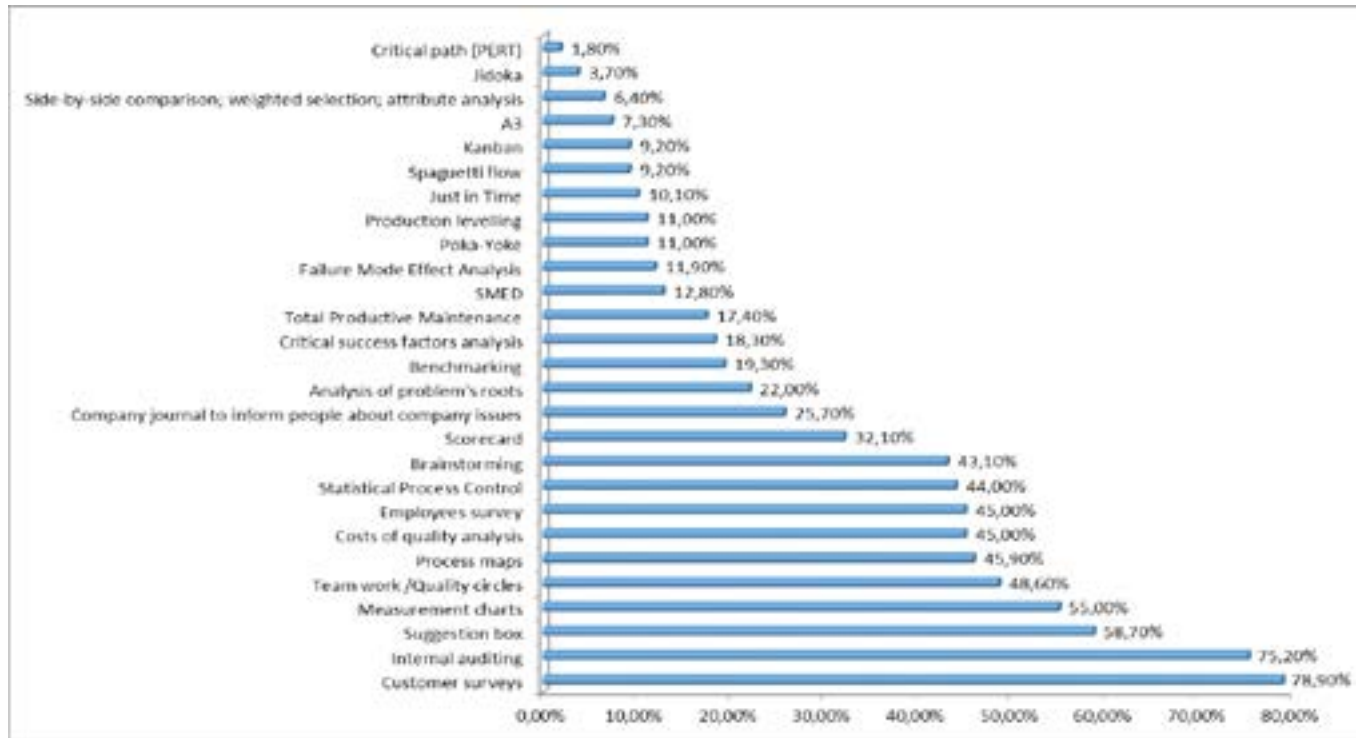
Table 6 shows the results associated with the Chi Square analysis of the variables: tool used and years practicing continuous improvement (level of experience). In this case only relationships were detected in five tools: benchmarking, analysis of critical success factors, failure mode effects analysis, SMED and spaghetti diagram. In all cases, a greater use of the tool has been detected as the level of experience of the company increases, measured by the number of years it has been practicing continuous improvement.

Additionally it seems interesting to know if the use of tools depends on the size of the company. To do this, we perform the analysis of the Chi Square for the variables: use of tools and size of the company. In Table 7 it can be seen that the use of certain tools does depend on the size of the company. In all the cases that have been identified, the larger companies make a greater use of the tools. It could be concluded, therefore, that larger companies make use of a greater number of tools which initially seems logical because the larger enterprise size greater complexity.

To finish this section, we will analyze if the use of tools depends on the type of company in question (manufacturing versus stock, on request, services or mixed). The results are shown in Table 8. It was detected that in a total of 11 tools there is a relationship between the use of the tool and the type of company. Thus, in all cases, the use of the tool is higher in the case of manufacturing or mixed companies than in service companies. This may be due to two reasons: or these tools are truly solely applicable to the manufacturing company, or it is a false belief of service companies. In the latter case, there is a need to train service companies to adapt these tools to their environment. It is true that, since the origin of many tools is related to the manufacturing company, its translation and adaptation to the services sector may not have been produced completely.

In general terms, we can conclude that the use of certain tools depends on the level of experience and the degree of development of the continuous improvement process in which the company is located. In addition, the use of some tools also depends on the characteristics of the company (size or type of company).

Figure 4. Tools listed according to their use



Source: Authors

Table 5. Chi square test: Tools use vs Bessant's stage

Tools	% of companies that use the tools					Statistic Test	
	Pre-Continuous improvement	Structured continuous improvement	Goal oriented continuous improvement	Proactive continuous improvement	Full continuous improvement capacity	Chi Square	Sig.
Team work /Quality circles	21.70%	37.50%	59.50%	63.20%	58.30%	11.246	0.024
Process maps	26.10%	43.80%	43.20%	63.20%	75.00%	10.088	0.039
Statistical process control	30.40%	25.00%	43.20%	63.20%	66.70%	9.406	0.052
Analysis of problem's roots	13.00%	0.00%	21.60%	31.60%	50.00%	12.278	0.015
Brainstorming	21.70%	25.00%	45.90%	68.40%	58.30%	12.649	0.013
Scorecard	17.40%	12.50%	27.00%	57.90%	50.00%	13.311	0.01
Benchmarking	0.00%	0.00%	18.90%	42.10%	50.00%	22.64	0
Critical path (PERT)	8.70%	6.30%	16.20%	15.80%	25.00%	2.74	0.602
Costs of quality analysis	34.80%	25.00%	51.40%	47.40%	58.30%	5.038	0.283
Side-by-side comparison; weighted selection; attribute analysis	0.00%	0.00%	5.40%	10.50%	25.00%	9.988	0.041
Critical success factors analysis	87.00%	6.30%	18.90%	21.10%	41.70%	7.617	0.107
Internal auditing	56.50%	68.80%	78.40%	84.20%	100.00%	9.764	0.045
Customer surveys	60.90%	87.50%	73.00%	94.70%	91.70%	9.876	0.043
Company journal to inform people about company issues	8.70%	12.50%	35.10%	31.60%	41.70%	8.501	0.075
Measurement charts	30.40%	31.30%	54.10%	73.70%	100.00%	21.674	0
Employees survey	26.10%	25.00%	48.60%	57.90%	83.30%	14.44	0.01
Failure Mode Effect Analysis	4.30%	6.30%	2.70%	21.10%	41.70%	17.20	0.00
Suggestion box	39.10%	56.30%	64.90%	63.20%	83.30%	7.42	0.12
SMED	0.00%	0.00%	13.50%	31.60%	25.00%	13.09	0.01
Poka-Yoke	0.00%	0.00%	10.80%	21.10%	33.30%	12.68	0.01

A3	0.00%	6.30%	8.10%	10.50%	16.70%	3.64	0.46
Spaguetti flow	0.00%	6.30%	2.70%	10.50%	41.70%	21.11	0.00
Just in Time	0.00%	0.00%	10.80%	15.80%	33.30%	12.02	0.02
KANBAN	0.00%	0.00%	5.40%	21.10%	33.30%	15.92	0.00
JIDOKA	0.00%	0.00%	2.70%	5.30%	16.70%	7.32	0.12
Total Productive Maintenance	4.30%	6.30%	13.50%	26.30%	58.30%	19.22	0.00
Production levelling	4.30%	0.00%	10.80%	15.80%	25.00%	6.17	0.19

Source: Authors

Table 6. Chi Square Test: Tools use vs. experience

Tools	% of companies that use the tools			Statistic Test	
	Beginner	Professional	Expert	Chi-Square	Sig.
Team work /Quality circles	43.60%	58.00%	25.00%	4.836	0.0890
Process maps	43.60%	48.00%	33.30%	0.867	0.6480
Statistical process control	43.60%	42.00%	50.00%	0.25	0.8820
Analysis of problem's roots	12.80%	22.00%	41.70%	4.72	0.0940
Brainstorming	35.90%	48.00%	33.30%	1.70	0.4270
Scorecard	23.10%	30.00%	41.70%	1.63	0.4430
Benchmarking	5.10%	22.00%	33.30%	7.10	0.0290
Critical path (PERT)	7.70%	14.00%	25.00%	2.56	0.2780
Costs of quality analysis	41.00%	44.00%	58.30%	1.13	0.5700
Side-by-side comparison; weighted selection; attribute analysis	2.60%	6.00%	16.70%	3.27	0.1950
Critical success factors analysis	10.30%	20.00%	41.70%	6.02	0.0490
Internal auditing	76.90%	76.00%	66.70%	0.55	0.760
Customer surveys	69.20%	82.00%	91.70%	3.54	0.170
Company journal to inform people about company issues	15.40%	28.00%	41.70%	3.96	0.138
Measurement charts	48.70%	58.00%	66.70%	1.46	0.482
Employees survey	35.90%	48.00%	50.00%	1.54	0.464
Failure Mode Effect Analysis	7.70%	8.00%	41.70%	11.54	0.003
Suggestion box	53.80%	64.00%	41.70%	2.31	0.315
SMED	7.70%	10.00%	33.30%	6.10	0.047
Poka-Yoke	7.70%	10.00%	25.00%	2.91	0.233
A3	2.60%	8.00%	8.30%	1.30	0.523
Spaguetti flow	5.10%	6.00%	33.30%	10.03	0.007
Just in Time	7.70%	12.00%	16.70%	0.89	0.642
KANBAN	2.60%	40.00%	25.00%	5.84	0.054
JIDOKA	0.00%	6.00%	8.30%	2.76	0.252
Total Productive Maintenance	10.60%	20.00%	33.30%	3.66	0.161
Production levelling	7.70%	10.00%	25.00%	2.91	0.233

Source: Authors

Table 7. Chi Square Test: Tools use vs. Company size

Tools	% of companies that use the tools							Statistic Test	
	20 to 49	50 to 99	100 to 199	200 to 499	500 to 999	1000 to 4999	More than 5000	Chi-Square	Sig.
Team work /Quality circles	32.60%	55.20%	68.80%	61.50%	40.00%	100.00%	48.60%	11.611	0.0710
Process maps	39.50%	31.00%	62.50%	61.50%	80.00%	100.00%	0.00%	11.886	0.0650
Statistical process control	46.80%	31.00%	68.80%	38.50%	40.00%	50.00%	0.00%	7.07	0.3140
Analysis of problem's roots	11.60%	13.80%	25.00%	53.80%	60.00%	50.00%	0.00%	16.99	0.0090
Brainstorming	41.90%	37.90%	43.80%	53.80%	60.00%	50.00%	0.00%	2.34	0.8860
Scorecard	27.90%	24.10%	37.50%	61.50%	20.00%	50.00%	0.00%	7.68	0.2630
Benchmarking	9.30%	13.80%	25.00%	38.50%	40.00%	100.00%	0.00%	16.72	0.0100
Critical path (PERT)	14.00%	13.80%	6.30%	15.40%	40.00%	0.00%	0.00%	4.17	0.6540
Costs of quality analysis	51.20%	34.50%	56.30%	30.80%	80.00%	0.00%	0.00%	8.77	0.1870
Side-by-side comparison; weighted selection; attribute analysis	7.00%	0.00%	0.00%	15.40%	40.00%	0.00%	0.00%	14.43	0.0250
Critical success factors analysis	16.30%	6.90%	31.30%	15.40%	60.00%	50.00%	0.00%	11.87	0.0650
Internal auditing	76.70%	69.00%	81.30%	76.90%	80.00%	100.00%	0.00%	4.75	0.576
Customer surveys	90.70%	65.50%	81.30%	76.90%	60.00%	100.00%	0.00%	12.15	0.059
Company journal to inform people about company issues	14.00%	20.70%	25.00%	53.80%	60.00%	100.00%	0.00%	18.10	0.006
Measurement charts	46.50%	58.60%	56.30%	53.80%	100.00%	100.00%	55.00%	8.37	0.212
Employees survey	37.20%	31.00%	62.50%	61.50%	80.00%	100.00%	45.00%	42.50	0.052
Failure Mode Effect Analysis	9.30%	3.40%	6.30%	23.10%	40.00%	100.00%	0.00%	22.95	0.001
Suggestion box	55.80%	48.30%	68.80%	84.60%	60.00%	50.00%	58.70%	7.20	0.302
SMED	4.70%	10.30%	12.50%	23.10%	60.00%	50.00%	0.00%	16.50	0.011
Poka-Yoke	2.30%	3.40%	12.50%	30.80%	60.00%	50.00%	0.00%	25.70	0.000
A3	7.00%	0.00%	0.00%	23.10%	40.00%	0.00%	0.00%	16.39	0.012
Spaguetti flow	4.70%	3.40%	6.30%	23.10%	60.00%	0.00%	902.00%	21.18	0.002
Just in Time	7.00%	3.40%	12.50%	23.10%	40.00%	0.00%	0.00%	9.66	0.140
KANBAN	2.30%	0.00%	18.80%	15.40%	60.00%	50.00%	0.00%	27.32	0.000
JIDOKA	2.30%	0.00%	0.00%	15.40%	20.00%	0.00%	0.00%	10.87	0.093
Total Productive Maintenance	11.60%	10.30%	25.00%	30.80%	60.00%	0.00%	0.00%	11.19	0.083
Production levelling	7.00%	6.90%	18.80%	15.40%	40.00%	0.00%	0.00%	7.11	0.311

Source: Authors

Table 8. Prueba Chi Cuadrado: Uso de herramientas vs. Tipo de empresa

Tools	% of companies that use the tools				Statistic Test	
	Manufacturing on request	Manufacturing stock	Services	Mix	Chi-Square	Sig.
Team work /Quality circles	66.70%	50.00%	44.60%	33.30%	3.118	0.3740
Process maps	55.60%	35.70%	45.90%	33.30%	1.452	0.6930
Statistical process control	61.10%	42.90%	40.50%	33.30%	2.64	0.4500
Analysis of problem's roots	55.60%	21.40%	13.50%	33.30%	15.14	0.0020
Brainstorming	66.70%	28.60%	39.20%	66.70%	6.42	0.0930
Scorecard	50.00%	28.60%	28.40%	33.30%	3.20	0.3620
Benchmarking	44.40%	14.30%	14.90%	0.00%	9.20	0.0270
Critical path (PERT)	27.80%	7.10%	12.20%	0.00%	4.14	0.2470
Costs of quality analysis	83.30%	57.10%	32.40%	66.70%	16.82	0.0010
Side-by-side comparison; weighted selection; attribute analysis	5.60%	14.30%	5.40%	0.00%	1.80	0.6160
Critical success factors analysis	22.20%	21.40%	14.90%	66.70%	5.54	0.1360
Internal auditing	94.40%	92.90%	67.60%	66.70%	8.35	0.039
Customer surveys	66.70%	71.40%	82.40%	100.00%	3.44	0.328
Company journal to inform people about company issues	27.80%	42.90%	23.00%	0.00%	3.53	0.317
Measurement charts	72.20%	50.00%	51.40%	66.70%	2.86	0.413
Employees survey	44.40%	42.90%	47.30%	0.00%	2.64	0.450
Failure Mode Effect Analysis	33.30%	7.10%	8.10%	0.00%	9.59	0.022
Suggestion box	55.60%	64.30%	60.80%	0.00%	4.65	0.199
SMED	38.90%	28.60%	4.10%	0.00%	19.55	0.000
Poka-Yoke	44.40%	21.40%	1.40%	0.00%	29.51	0.000
A3	11.10%	21.40%	4.10%	0.00%	5.88	0.118
Spaghetti flow	27.80%	14.30%	2.70%	33.30%	13.74	0.003
Just in Time	22.20%	21.40%	5.40%	0.00%	7.03	0.071
KANBAN	33.30%	21.40%	1.40%	0.00%	20.87	0.000
JIDOKA	11.10%	7.10%	1.40%	0.00%	4.54	0.209
Total Productive Maintenance	38.90%	28.60%	10.80%	0.00%	9.85	0.020
Production levelling	33.30%	14.30%	4.10%	33.30%	14.49	0.002

Source: Authors

5. CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Continuous improvement is a management philosophy that has acquired great importance in recent decades as a means to adapt to new market conditions and achieve business excellence. However, previous research has detected the need to develop further research on the implementation of continuous improvement since a large number of companies fail to implement or even try.

Therefore, the objective of the present study is to analyze in greater depth the implementation process identifying those responsible for the implementation, phases and tools used; in order to do so a survey was carried out among companies of different sectors and sizes of the Autonomous Community of Cantabria.

The obtained results show that each company follows its own methods when implementing continuous improvement and it cannot be said that a universal method exists, but that there are variations depending on the characteristics of the companies.

Thus, the responsibility for implementation can fall both in internal managers (permanent and temporary teams) and external advisers (43% of the companies claimed to have used external advice at some point in the implementation). It was also detected that the presence of external advisers was greater in the case of companies with less experience. From the results it can be concluded that companies that want to implement continuous improvement should combine internal and external responsibility, the latter being more useful in the initial stages.

Regarding the analysis of the implementation stages followed, the most remarkable conclusion is the small importance that companies give to the formal follow-up of the improvement activities. While it is true that no meaningful measurements should be made, as this would lead to more time than needed for the collection and analysis of information, it is important to establish indicators and benchmarks to analyze the evolution of Improvement.

Finally, regarding the use of the tools, all the tools included in the analysis are used by the surveyed companies. However, its level of use varies according to several characteristics. To start the more complex tools are only used by larger companies, which possibly explains why being larger also face more complex problems that require more elaborate solutions. On the contrary, the simplest tools, especially the qualitative ones (surveys, graphs of measurements) are of general use. It is also observed that the more complex tools are more frequently used by the most expert companies, that is, those who have been practicing continuous improvement for more years. Additionally, manufacturing companies seem to make use of a greater number of tools, and so do larger companies.

Overall, it can be concluded that the use of certain tools depends on the level of experience and the degree of development of the continuous improvement process in which the company is located. In addition, the use of some tools also depends on the characteristics of the company (size or type of company). These results confirm the conclusions reached in previous studies where it was stated that the selection and use of tools is not automatic, but must be adapted to the characteristics and conditions of each company at all times (Ahmed *et al.*, 1999; Bunney and Dale 1997; Heras *et al.*, 2009).

We consider that the results obtained are very useful for companies. However, we are aware that the study presents a limitation of scope as the study focuses on the Autonomous Community of Cantabria. However, the size of the sample is large enough for the results to be taken into account.

REFERENCES

- Ahmed, P.K. and Loh, A.Y.E., Zairi, M. (1999). Cultures for continuous improvement and learning. *Total Quality Management*. 10(4-5): S426-S434.
- Bessant, J., Caffyn, S. and Gallagher, M. (2001). An evolutionary model of continuous improvement behaviour. *Technovation*. 21(2): 67-77.
- Brunet, A.P. and New, S. 2003. Kaizen in Japan: An empirical study. *International Journal of Operations & Production Management*. 23(11-12): 1426-1446.
- Bunney, H.S. and Dale, B.G. (1997). The implementation of quality management tools and techniques: a study. *The TQM magazine*. 9(3): 183.
- De Jager, B., Minnie, C., de Jager, J., Welgemoed, M., Bessant, J. and Francis, D. (2004). Enabling CI: a case study of implementation. *Journal of Manufacturing Technology Management*. 15(4): 315-324.
- Deming, W.E. (1982). *Out of the crisis*. Center for Advanced Engineering Study, Cambridge, MA.
- García-Sabater, J.J. and Marín-García, J.A. (2009). "Facilitadores y barreras para la sostenibilidad de la mejora continua: Un estudio cualitativo en proveedores del automóvil de la Comunidad Valenciana.". *Intangible Capital*. 5(2): 183-209.
- Hamel, G. 2000. *Leading the Revolution*. Harvard Business School press, Boston.
- Heras, I., Marimon, F. and Casadesús, M. (2009). Impacto competitivo de las herramientas para la gestión de la calidad. *Cuadernos de Economía y Dirección de la Empresa*. 41(Diciembre): 7-35.
- Imai, M. 1989. *Kaizen. La clave de la ventaja competitiva japonesa*. Compañía Editorial Continental, México.
- Marín-García, J.A., Bautista Poveda, Y. and García-Sabater, J.J. (2012). Etapas en la evolución de la mejora continua. ¿Cómo viven las empresas el proceso? Estudio de un caso. *Economía Industrial*. 384: 453-166.
- McLean, R. and Antony, J. (2014). Why CI initiatives fail in manufacturing environments? A systematic review of the evidence. *International Journal of Productivity and Performance Management*. 63(3): 370-376.
- Quesada-Pineda, H.J. and Madrigal, J. (2013). Sustaining CI: A Longitudinal and Regional Study. *International Journal of Engineering Business Management*. 5(43): 1-13.
- Sánchez, L. (2014) Implantación de técnicas de control y mejora continua de procesos de las empresas. (Tesis Doctoral) Director: Beatriz Blanco Rojo. Universidad de Cantabria.
- Sánchez, L. and Blanco, B. (2014). Three decades of continuous improvement. *Total Quality Management and Business Excellence*. 25(9-10): 986-1001.
- Sánchez, L. and Blanco, B. (2016). Análisis de la producción científica hispana en mejora continua: 1990-2011. *Revista Española de Documentación Científica*. 39(1): 116-128.
- Singh, J. and Singh, H. (2012). CI approach: state-of-art review and future implications. *International Journal of Lean Six Sigma*. 3(2): 88-111.
- Wu, C.W. and Chen, C.L. (2006). An integrated structural model toward successful continuous improvement activity. *Technovation*. 26(5-6): 697-707.

COLLECTIVE ACTION AND TOURISM

Thiago Duarte Pimentel
Universidade Federal de Juiz de Fora
(thiago.pimentel@ich.ufjf.br)

Marcela Costa Bifano de Oliveira
Universidade Federal de Juiz de Fora
(marbifano@gmail.com)

Fabiola Cristina Costa de Carvalho
Universidad Autónoma de Sinaloa
(fabiolacarvalho.tur@hotmail.com)

ABSTRACT

This theoretical article aims to discuss the interference of organized collective action in the transformation of the tourist field, as a way of problematizing the social interactions of the actors present in this dynamic. The collective action has a greater weight in relation to the action of individual actors, thus having more power of interference in the decisions of the field, since they have a greater force. For this discussion, we first resort to the theoretical approach of the sociological theory of social fields of Pierre Bourdieu to deal with the social interactions that exist, in what is considered empirically a social field: tourism. We argue that a small group of actors determine the direction of activity according to their private interests, leading to the exclusion of weaker groups. This relationship may be related to the strictly economic emphasis given the activity, afterwards the social, cultural and environmental spheres, keeping some actors in the centrality of the field. In this way, the inclusion of new actors in the scope of collective action is presented as a potential path to rebalance the existing asymmetry of power. It should be emphasized that this relationship is influenced by pre-established social structures and may depend on a causal moment for its actual effectiveness.

Keywords: Organized Collective Action, Bourdieu, Tourism.

1. INTRODUCTION

This theoretical article aims to discuss the interference of organized collective action in the transformation of the tourism field, as a way of problematizing the social interactions of the actors present in this dynamic. The collective action has a greater weight in relation to the individual actor achievements, thus having more power of interference in the decisions of the field, since they have a greater force.

To sustain our proposition, we begin discussing the theoretical approach of the sociological theory of social fields of Pierre Bourdieu, in order to deal with the social interactions that exist in what is empirically considered as a social field: tourism. We argue that, as in other social fields, in tourism there are small groups of actors, in delimited spaces, considering the diverse levels of reality, that determine the direction of activity according to their reserved interests, leading to the exclusion of weaker groups. This relationship may be related to the strictly economic emphasis given to the activity, in face to the social, cultural and environmental spheres; keeping some actors in the centrality of the field. In addition, the agents inserted in a tourism field needs to, directly or not, be aware and deal with the positions of the others actors in the field. In this way, the inclusion of new actors in the scope of collective action is presented as a potential path to rebalance the existing asymmetry of power. It should be emphasized that this relationship is influenced by pre-established social structures and may depend on a causal moment for its actual effectiveness.

Despite very contributions and efforts already made, there is not yet a unified – or even a hegemonic – theory of tourism. A brief review in literature of tourism show that this is a sub theorized area – or putting in Kuhn's words, a pre-paradigmatic area from an epistemological and theoretical point of view. Hence the strong theory borrow from a sociological theory can be useful to provide some parameters of scientific objectivation of tourism. Particularly, the provision of a structured theoretical framework to comprehend, analyze and enlighten tourism on its multiple levels of reality is contributive in the sense that stating a sociological framework to/about tourism field will lead to understand appropriately how, why and in what extent the different agents get together and sustain their relations vis-a-vis to get their objectives and interests.

This subject has practical consequences in tourism knowledge as led to an alternative explanation to the understanding of tourism as a systematic set of activities or as industrial and practical activity – which we argue is a bad understanding that prevent intervene on its functioning, as it is a limited and pre-scientific form to solve problems.

In this scenario to obtain a broader and efficient system of governance to tourist destination it is necessary to observe how the field is structured, who are the actors that act collectively, what positions they take and what are their dispositions to act in some way at each moment in specific contexts, as these aspects can provide a matrix of relations to guide an empirical destination to identify and manage more accurately its constraints and capabilities to develop.

The essays present three parts, including this introduction. In the second part we state our discussion on social theory of Bourdieu. In the subsequent section social field of tourism is observed as a way of explaining collective action in tourism matters.

2. LITERATURE REVIEW

2.1 The Theory of Social Fields by Pierre Bourdieu

Despite the intellectual precision in composition, selection and crossing a wide variety of concepts and influences from different philosophical traditions to create his own social thought, many commentators argue that the *Bourdieuian* system is relatively “simple” (Jenkins 2006; Thiry-Cherques, 2006).

It consists of a structural core of three concepts: field, capital and *habitus*. Maybe it could be added as fourth the concept of symbolic violence. Around these notions gravitates secondary categories, whose function is to specify and provide greater accuracy, increasing the potential explanatory of this theoretical system (Vandenberghe, 1999; 2009; 2010b).

The metaphor of the field is invoked towards a social arena within which struggles and maneuvers on the access to specific resources (Jenkins, 2006). The idea of field was from the beginning associated with a highly conflictual conception of world, in which there is an ongoing battle for power, prestige and all varieties of capital (Vandenberghe, 2010b). In this sense in the field occurs objective relations between individuals and institutions, that compete for domination of particular spaces (Thiry-Cherques, 2006). Moreover in the social universe - or the theory of social fields -, fields have its own logic that cannot be reduced.

In summary, the social field can be seen as a system of relations between **positions** (which is the objective place in the social hierarchy that each agent occupies in the field), **disposition** (which are the subjective side of the field, given by the *habitus* and the propensity of agents to act according to what they have been internalized), and **taken of positions** (referring to a posture in which those positions are expressed and whose principle lies in the structure and functioning of the field) (Vandenberghe, 2010b).

Referring to a field of forces in which a given structure constrains the agents involved, due to limited availability of resources and the space itself (physical and social) where they are located, and lead to engage in social struggles, as their relative positions in the field, in order to have or increase their access to resources (or capital) existing in the field, culminating with the conservation or transformation of its initial structure (Bourdieu, 1996: 50).

Thus, the relations of power, that is, the possibilities of intervening in reality, are related under the amount of economic, social and cultural capital that each agent possesses. The positions of force orient the dispositions (strategies) that the agents (individually or collectively) look for to safeguard or to improve their position and to impose the principle of hierarchizing more favorable for them (Bourdieu, 2001).

From the perspective of Bourdieu’s genetic structuralism is necessary to recognize that the central focus of research is the analysis of objective structures, but not fixed and tighten as the classic Strauss structuralism, then concerning the analysis of structures relations system, which are spatio-temporally located. Therefore, the structure of the field designates an externality (which is not the field) and an interiority (the institutions and agents that exist and persist for difference). His analysis studies the field as the genesis of a product, i.e., the incorporation of pre-existing structures. The structure of the field is given by the power relations between actors and institutions that fight for hegemony within the field, i.e. the monopoly of authority that grants the power to dictate rules (Thiry-Cherques, 2006).

Due to its objective analysis of structural relationships established, what is assumed by Bourdieu, fields can be analyzed regardless of the character of its occupants, i.e., as a system of objective relations. However, the social fields are not fixed structures or structured spaces of positions at a given time (Jenkins, 2006). Rather, they are products of the history of their occupants’ positions and their dispositions that are in course to be reproduced. “Our position in a field designates how things not only consume, but also education, politics, the arts. Also determines the way we produce and accumulate” (Bourdieu, 1984: 210).

According to Bourdieu and Wacquant (2005) fields result from processes of social differentiation, and the way to be (re) experience the world, embedded in a process of constant evolution of society that gives rise to new fields in a continuous process of distinction. Thus, the entire field is historical product and therefore has a distinct *nomos* (set of laws that govern it).

What determines the existence of a field and demarcate its boundaries are the special interests, economic and psychological investments made by different agents, endowed with a specific *habitus* convergent with that field, and institutions embedded in it, and who want a return on different forms of capital related to capital dominant in that field (Thiry-Cherques, 2006).

In addition, every game presupposes rules and, in this sense, the field’s agents tacitly or explicitly share a consensus on the *doxa* of the field (Bourdieu & Wacquant, 2005), that means the consensus opinion (and replaces the Marxist concept of ideology), referring to what about all agents agree, therefore, as opposed to scientific, and includes everything that is accepted as “being like that” (Thiry-Cherques, 2006). Although each field institutionalize its own object and its principle of understanding, social fields are not self-evident and need to be defined as such, which requires observation and analytical delimitation of the researcher on a particular segment of the social world.

All fields have also a framework that refers to the system “goal” of relations between agents identified in the social space (Thiry-Cherques, 2006).

Bourdieu (2008: 131) argues that “the social world is accumulated history, and therefore cannot be reduced to a concatenation of snapshots and mechanical equilibrium in which men play the role of particles interchangeable.” So, to

address this accumulated history of the social world is that it introduces the concept of capital toward cumulative work, both in matter internalized, as well as the accumulation of capital.

His central thesis is that when individuals or social groups assuming capital, privately or exclusively, allow the appropriation of social energy in the form of reified or living labor [objectified]. Thus, the capital stands as a force inherent in objective and subjective structures, and at the same time as a fundamental principle of internal regularities of the social world.

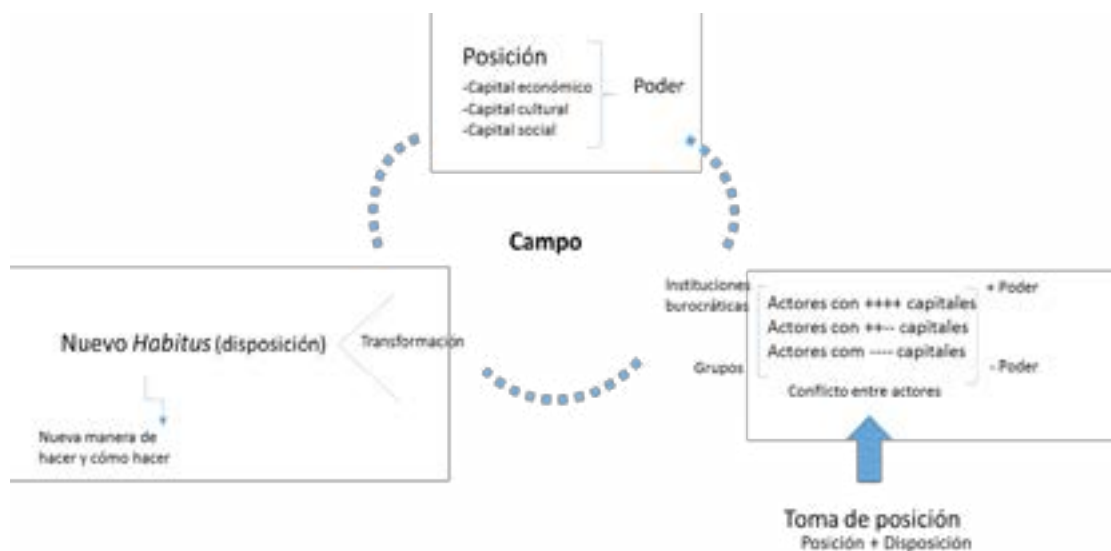
Schematically Bourdieu recognizes three main forms of capital:

- the economic – which refers to relation in which such an economy, material possessions, income, of cash in short, every form of commercial value of assets gifted and capable of being liquidated;
- the cultural – knowledge, skills, information, etc., skillset intellectuals produced and transmitted by his family, school, etc. has 3 ways: (a) been incorporated as a provision in durable body (e.g. way of performing in public); (b) state the goal as asset ownership (e.g. artwork); and (c) institutionalized state (sanctioned institutions, ex. academic titles);
- the social – that refers to set of accesses social, relationship and networking.

These three types of capital is synthesis by the concept of symbolic capital – the set of rituals of recognition, prestige, honor, etc. The relative position in the field is given by the volume of capital (of three) that the agent possesses. As the social structure generated by the distribution of different kinds of capital, any field can be divided into smaller sections, the subfields that behave like fields (Pimentel & Pimentel, 2013).

Otherwise agents can play so much to increase or retain their capital, and position in the field will command the taking of position in the struggles, both to maintain or transform the social space. Thus, in spite of the existence of a structure, transformations can occur from the action of the agent. The most powerful agents tend to struggle to maintain the power and the habitus of the field, not to promote a real change in the needs and gaps in society. Figure 1 synthetizes all the elements proposed by Bourdieu as necessary to composed a field.

Figure 1 - Elements of the field structure and conditions necessary for its reconfiguration



Source: Reproduced from Oliveira (2016: 60)

2.2 Organized Collective Action

In this section we address the formation of collective action in the field as a way of intervention in reality. From an identity and knowledge on the part of the different agents, it is possible an organized action in the direction of the transformations in the dominating relations in the field, demanding, for example, participation and decision in the elaboration of public policies, so that these can reach not only a small group but a large number of agents, which dominates and determines these policies according to their interests.

In the theory of organized collective action (Friedberg, 1993), agents from diverse needs of changing begin with their own actions to interfere in the dominant structures, that is, these agents no longer expect and do not want institutions of power to determine the processes of interaction of society, but are inserted and they struggle to make social transformations. Here the collective agents when organized have a greater capacity of intervention in the field, being able to transform or maintain the prevailing structures.

Tarrow claims that collective action has power as it challenges its opponents, awaken solidarity, gaining meaning in certain groups of the population. Define movements as “*collective challenges posed by people who share common goals and solidarity in an interaction with elites, opponents and authorities*” (Tarrow, 1994: 21, emphasis on original). In addition, this author mentions that protest cycles go beyond the visible actions of a movement, leave as a legacy changes by governments, as well as the expansion of popular participation, culture and ideology, generating changes in the social space.

In addition, the contemporary approaches of this millennium highlight the discussions about collective action and social movements in relation to the new requirements of modernity and the redefinition of the rational subject to incorporate cultural identities (Touraine, Melucci), articulation of the subject with the global and local (Giddens), participatory and

deliberative democracy (Castells & Souza Santos), and the issue of autonomy and emancipation (Castoriades & Adorno) (Gohn, 2007; Alonso, 2009).

However, as the field of discussion about collective action and social movements is very dense, we highlight the Model of Structuring of Collective Action, elaborated by Pimentel (2012a; 2016), that starts from the critical realistic perspective, in particular in the sociology of the organizations. This model begins with the delimitation of a field¹ of social activity, then the attempt is made to discover the “game” that is developed in this field, being possible to identify the real players, rules, objects of the game, as well like the adversaries. It is in this physical and social space in reality where structural constraints are formed and become materialized.

Thus, the Model assumes three major levels of analysis that are important to each other, which are presented in levels of social reality, they are:

The first moment (M1) refers to the spatialisation, given by the situation of co-presence, physical or virtual, that allows individuals to share the same situation or the same context of material reality, being possible to observe the actions and elections. This situation of co-presence is that it establishes the basis for the interaction of the entities.

The second moment (M2), refers to the identification, or better the identity, unifies the individuals in interaction. It establishes the limits of the social group, its ideal and affective bases, its values and the feelings of affiliation and belonging of the individual to this social group. Being able to generate a group, still little structured, that delimits from a common identity, that resembles internally and differentiates externally from the other social groups and individuals. As the process of group growth occurs and it becomes more complex, little by little, with the internal division of labour, in specific roles and positions, the mechanisms of power are introduced.

The third moment (M3), refers to the introduction and stabilization of these mechanisms (of power). In terms of the capacity of organized collective action, it manifests itself in the form of social reality, where collective social subjects possess the capacity to exercise coercion, recognized as being the highly structured “formal organization” being increasingly objectified, externalized and independent of specific actions of an individual or a specific relationship. It is here, from this structured organization, that the causal power of public manifestation in the social area emerges, exercising over other social structures and institutions, with the capacity to mould them since they have resources and legitimacy, having the property to exercise power, Reproduce and transform reality.

3. BOURDIEU THEORY APPLIED TO TOURISM

3.1 Synthesis of critique to external and naturalistic conceptual logic

Following Bourdieu, agents in a tourist field, needs to, directly or not, consider and deal with the positions of the others actors in the field and precisely, the stage of development of the tourist destination must consider the internal path of relationship of the agents in a tourist destination, besides the external one.

This latter has been widely studied over the last 30 years, since the proposal of Tourist Area Life Cycle (Butler, 1980). Meanwhile, a large number of papers has been published, applying the concept (Hovinen, 1982), adding some variable (Butler, 2001), trying to modify or expand it (Garays & Cànoves, 2011), or exploring different contexts of using it (Cole, 2009), even questioning its theoretical basis (Hovinen, 2002).

However, it seems that little has been done in terms of social theorization². The huge majority of the existing studies has a naturalistic, external and positivistic point of view (Kuhn, 1975; Harré, 1988). Even more scarce is the reference to critical theory. Pimentel (2013a, b; 2014) has proposed a *Bourdieusian* interpretation of tourism, displacing the traditional notion of system to a new one called field. In this sense the authors introduced some of the implications of the use of *Bourdieusian* concept of field to governance of Tourist Destinations (TD), and proposed propedeutic theoretical framework to study the action of actions by the categories of agents, individuals or collectives, and capitals (Pimentel, 2015a).

Like every field, as the tourist field emerges it brings with it a proper *doxa*, which means a consensual opinion about what is the field and what are important in it. In this sense, one should ask: what is out of question in tourism? Not to travel?! Or, otherwise: what is the ideology of tourism? To travel (Pimentel, 2015b).

Unlike in the ancient times, where travel was an imperious form to get other (social/collective) things, e.g. land possessions (through the war), specific commodities like spices (through commerce); in modern age, travel becomes individual and finalistic form to obtain a proper and exclusivist form of incorporated knowledge. It is a mix of material and ideal process of transformation by which someone pass or get the experience. And there is no return: the experiences, good or bad, are codified in the individual body. Tourism could see by the idea that travel is one human individual necessity and tourism is a way of knowledge and improve human potentials (Pimentel, 2015b).

As a new way to be (re)experience the world, embedded in a process of constant evolution of society, the tourism emerges in the early modern age, exactly when transportation systems and means to expand human capacities to get contact with the world. So, the tourism field was born as a mix of instrumental technologies with the ancient principle of body incorporation of knowledge.

Tourism is a product of the incorporation of pre-existing structures, it means, the practices social distinction allied to the new configuration of technical means of to exercise it. Therefore, the travel is an object that becomes institutionalized in tourism field. There is no option not to travel. This is the basic value of this field. Its internal logic (or most basic principle

¹ Definition used by French sociology, widely used by Pierre Bourdieu.

² We did a simple search on the following databases: Cambridge Journals; Web of Science/Web of Knowledge; Sage Journals; Scopus; Jstor; Emerald; and no one paper was found in this specific way of producing a proper reading of Bourdieu to tourism. It was found some (little) papers that use some concepts of Bourdieu theory but no one uses this framework as a hole to think the tourism as tourist field.

of functioning) is guarantee the existence and continuous flux of travels among different places and spaces in the world.

In this way, the object of contest becomes (physically) the travel and (symbolic) the meaning of it. More specifically the monopoly of its definition and the legitimate attribution of an implication to it. Then a contest for the legitimacy of defining of tourism is imperative to delimitate what is a travel that promotes a cultural enrichment, and in this way become a sort of cultural capital, and what kind of travel is not expanding someone's knowledge.

Then, what determines the existence of a field and demarcate its boundaries are the special interests, economic and psychological investments made by different agents, endowed with a specific *habitus* convergent with that field, and institutions embedded in it, and who want a return on different forms of capital related to capital dominant in that field.

One of the boundaries of tourism are the special interests in a tourist field. These can be viewed as the economic interest in production, commerce and distribution of tourism. In this case, the investments are mainly made by collective agents in machinery (hotel, planes, agencies), technology (system of information, devices, etc.) and techniques (human knowledge as a proper manner to do something). By the other side, there are psychological investments mostly made by individual agents that are getting knowledge of these proper manners to do. Other type of psychological investment is the commitment and adequate the *nomos* and the rules of the field.

Habitus is class and subclass in which positions the agent, who is a predisposition to act according to what he has assimilated throughout their learning process. Tourist *habitus* could be seen by the interjected value of a need in to expand knowledge by the embodied experience, what means a need to get contact whit new objects, places and people. In one word: disposition do travel.

However, who are the agents, individual and institutional ones? How do they appear in tourism? There are two main kinds of individual agents: tourists, for who is drove all the production process of tourism and for who is to be supposed chancel what *is or not* a touristic attraction (and by extension a tourist destination). The second one is the labor force, who is designated to do the operation of tourism system. By your turn, the institutional agents are the organizations that products and operates tourism system and the institutions that represents and congregates these productive and class organizations (Pimentel, 2015b).

What are their returns? Each one has interests in to get and accumulate different forms of capital. Tourists try to get cultural capital, labor force as well productive organizations want economic capital and class organizations (as well local ones and residents too) aim to obtain social capital. Nevertheless, these finalistic forms of capital needs to be intermediated by the touristic capital, which is the primary form of capital generated in a tourist field (Pimentel, 2015b).

In this context, and following Bourdieu's forms of capital, we argue that tourism is a subtype of capital derivate from the cultural capital form. Once that cultural capital encompasses "knowledge, skills, information, etc.," which can be produced and transmitted to different social groups and (a) been incorporated as a provision in durable body, (b) state the goal as asset ownership or (c) institutionalized; we can sustain that the tourism, by the specific operation of displacement of the individual from its original context (what is namely by travel), produces a provision in durable body which gradually becomes incorporated as a way of being (*habitus*) (Pimentel, 2015b).

The touristic capital that means the accumulated knowledge by doing tourism. It is the condition to be touristic or have touristic interests. This implies capacity of to influence and control touristic flux and touristic production.

It is not our attempt to criticize this perspective, as it has already been done. Butler (2011) himself summarizes some of them. Yet, our effort is to modify the starting point of view from a naturalistic perspective to a critical one (Gale & Botterill, 2005).

In this sense, our ultimately goal is to entry in the "black box" of internal arrangements in a TD. The relationships of power, access to resources and capacity to do things in reality are not equally distributed among all the actors presents in a TD (Bourdieu, 2001). Besides, the circumstances, mechanisms and process that drive a TD to a specific "stage", in the TALC model, reference to human actors in a TD, including the tourists and visitors but not only them. So, the political process that leads a specific conjuncture must to be studied. It does not excludes totally the analyses of a TALC model, which could be, in some sense, integrated with this internal political perspective. However, this will be a task for another paper.

Once that our objective was to develop the *Bourdusian* concept of field to tourism, which has been introduced by Pimentel and Pimentel (2013), we can now move forward to understand the agents' internal relationships in a TD – considered as a field, with unequal distribution of capitals (resources) among the agents and these ones occupy different positions in this scenario, which lead them to exercise, with a unequal capacity, its preferences and interests in a TD. By the other side, due to the proper nature of tourism, hardly only one agent can control all the tourist field. So, it is necessary to make coalitions between the agents. But for understand how are the dominant coalition in a TD and what kind of configuration sustains it, analyzes from an internal perspective is required, that could reveal the political dynamics in a TD (Pimentel, 2015a).

3.2 Propaedeutic Analysis of tourist field

According to Bourdieu a field results from process of social differentiation. In tourism it is given by the access to mobility and travel emblematically occurred since II Industrial Revolution (cf. Hobsbawn, 2009). How is broadly written in tourist literature, this social differentiation emerges with the social practices of noblesse in that era. It was one of the forms by this class could sustain its status, by the investment in itself, in the acquisition of embodied cultural capital that could not be equally acquired by the bourgeoisie.

By your turn, this social practice provokes the emergence of a *nomos* (internal logic), what would lead to ulterior appearance of *habitus*, in the sense that travel is a form of obtain, accumulate and expand symbolic capital. Thus, travel becomes a form to acquire cultural capital.

Even more travel is seen as an exclusive form to acquisition by the embodiment (corporification), which means that only the individual could be retain this experience. This one would be personal and not transferable.

Gradually it becomes necessary to establish the boundaries of travels, the kind of travels and its senses. Travels become an object of contest. Different actors want to retain the monopoly about this social practice, even more they want impose their vision – by definition – about what is a travel and its meaning. This contest would lead us, e.g. in the beginning of XX century – to the attempts in the establishment of a definition of tourism. Note that is not by hazard the definition of tourism exclude laborious practices, because a form of cultural enrichment could not be embodied acquired if the body of a person is tied in a laborious practice.

Then a contest for the legitimacy of defining of tourism is imperative to delimitate what is a travel that promotes a cultural enrichment, and in this way become a sort of cultural capital, and what kind of travel is not expanding someone's knowledge.

As summarizes Bourdieu all the fields have:

- a) *habitus*, which in tourism is seen by the interjected value of a need in to expand knowledge by the embodied experience, what means a need to get contact whit new objects, places and people.
- b) framework, in tourist social practice given by producers, regulatory agencies, intermediaries organizations and people and/or organizations that does not pertain to tourism but furnishes goods and services. Nowadays this framework is well acknowledging by the systems theory perspective.
- c) *doxa*, which refers to a consensual opinion about tourism and travel. The *doxa* on tourism could see by the idea that travel is one human necessity and tourism is a way of knowledge and improve human potentials.
- d) *nomos* where travel is a form to obtain cultural capital.

In this context, and following Bourdieu's forms of capital, we argue that tourism is a subtype of capital derivate from the form of cultural capital. Once that cultural capital encompasses "knowledge, skills, information, etc.," which can be produced and transmitted different social groups and (a) been incorporated as a provision in durable body, (b) state the goal as asset ownership or (c) institutionalized; we can sustain that the tourism, by the specific operation of displacement of the individual from its original context (what is namely by travel), produces a provision in durable body which gradually becomes incorporated as a way of being (*habitus*).

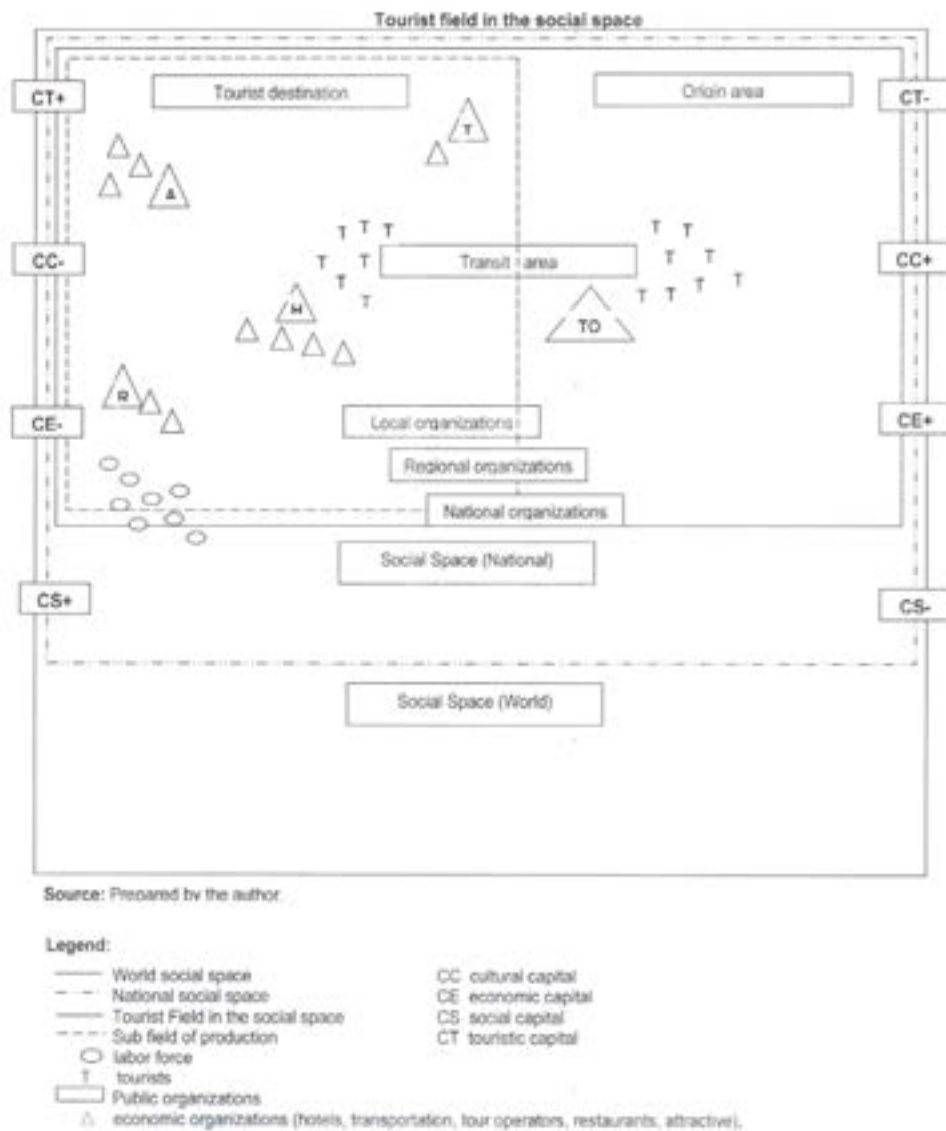
3.3 A Framework of Analysis in Tourist Field

Now we can move forward to a schematic form to analyze a tourist field based on the following *criteria* and their descriptions:

- Positions: objective positions of actual agents. Who are in what place right now? Who are tourists? The tourist trade? Public local organizations? In what place, physical and social, are each of them right now?
- Dispositions: what is the propension of each one of them to engage in a specific course of action?
- Taken of positions: what are exactly the courses of action taken by each one of them in a specific situation?
- Specific situation: collective problem that requires a deliberation. Ex.: to do investments in applied researches to get a TD's information system to monitory and control the TD.
- *Manoeuvres* to access specific resources: what each agent does to access specific resources?
- Monopoly of authority: who has the monopoly of industry travel? Private sector. In world level: huge chain hotels and civil air transportation. In national and intra-regional levels: hotels and tour operators.
- Who dictates the rules of tourist field? In world level: Firms of the tourist trade. In a specific destination.

Trying to summarize this discussion in the limited space of this working paper, we present a scheme of the tourist field, as a proto analyze of the internal distribution of the power in this field and a hypothetical configuration of it (figure 2).

Figure 2 - Visual representation of a tourist field



Source: Pimentel (2015b)

Once identified the tourist field, what are its implications for governance on tourist destinations (TD)? In a simplified way grouping actors by the type of actions they perform on the field, we can see the possibilities of collective action (cf. figure 1).

Table 1 - Relational matrix of possible links between the actors

Actor / relation	None relation	Private sector	Public setor	Civil society	Convergence of actions
Private sector		1			
Public setor	0	2	4		7
Civil society		3	5	6	

Source: prepared by the author

The first possibility is that there is no relationship between the actors (# 0) and tourist activity does not happen at the destination, or be marginally exploited by specific companies from the private sector (e.g., charter bus to tour). This situation is very common in the early stages of developing a tourist destination (Butler, 1980).

At a later stage in which there are already different private companies and organizations operating in the tourist destination (# 1), it is possible to have a link between the private companies that offers, in a more complete and aggregated services that make up the tourism product for example, through partnerships between transportation companies and hosting.

Another possibility is a joint effort between the private and public sector (# 2). In this case, the municipality or public agency responsible for tourism legislation and directs the activity, while the private sector is responsible for providing the services.

In (# 3), instead of siding to the government, the private sector seeks support in civil society to improve the quality of tourism or explore possibilities of action together for the promotion of tourism and local quality of life. Here usually enter awareness raising, information and those left out of formal legislation and regulation on the activity.

Otherwise, tourism can present itself as a vocation yet to be explored and perhaps not even perceived by the private sector. In this case (# 4), partnerships between public agencies occur at different levels of government in order to provide conditions for the exploitation of economic activity (e.g., through provision of public goods, such as creating access roads).

Another common form (# 5) is to observe specific actions of municipalities and public agencies of tourism in order to try to raise awareness and attract the attention of other segments of society, for the development of local tourism. Here the government seeks to engage, rather than other public governmental society participation in order to ensure public benefits for the entire local society.

Although there may be forms of articulation between civil society entities, excluding the public and private sectors. Although it is more difficult, it can happen in the case where the local government is not acting nor for tourism development advanced to justify private offers products. Thus some communities have to develop their own initiatives, seek local social and economic development, often through tourism, due to lack of resources or other opportunities.

Finally, it is worth mentioning a possibility (# 7), the articulation of three distinct groups. This is the ideal scenario but it hardly occurs. It would be the most suitable for the development and management of tourism.

4. CONCLUSION

Once that our objective was to develop the *Bourdeusian* concept of field to tourism, which has been introduced by Pimentel and Pimentel (2013), we can now move forward to understand the agents' internal relationships in a TD. It is argued (1) that agents in a tourism field needs, directly or not, to consider and to deal with the positions of the others actors in the field and (2) that the stage of development of the tourist destination must take into consideration the agents' internal path of relationships in a TD, besides the external one. In addition, we can argue the originality of this proposal, which can be viewed by an opportunity to innovate and provide a theoretical contribution. In the same sense, after proposing a sociological framework to/about tourism field, we are led to understand how, why and in what extent the different actors are put together and sustain their relations *vis-a-vis* to get their objectives and interests.

In a field, there is an unequal distribution of capitals (resources) among the agents and these ones occupy different positions in this scenario, which lead them to application, with an unequal capacity, its preferences and interests in a TD. By the other side, due to the proper nature of tourism, hardly only one agent can control the entire tourist field. Therefore, the agents must do new alliances. Nevertheless, for understand how are the dominant group in a TD and in what kind of configuration sustains it, it requires examinations from an internal perspective, that could reveal the political dynamics in a TD.

So, if the proposal presented here is correct, the contributions of this idea is that we can move forward to enlarge our conception about TD and do not consider this one just as an effect of external forces that drives it, but, in fact, as a conjunction of internal and external forces whose effects leads us to a specifics stages or degrees of development in a TD.

The proposal presented here has consequences on academic and practical order. In other words, one can understand the internal dynamic of the agents which leads them to a faster or slower development of a tourist destination. Moreover, being aware of these constraints and how them occur, scholars could be elaborate mechanisms to precise their intervention in practice actions. At the latter, as one has knowledge about these dynamics and how the agents need to be set up to develop a destination, efforts can be made to conform a broader coalition to reach a successful TD.

In the contrary, one can avoids situations in which there is bad configuration to TD development. Besides, it can be possible make more visible the role of every single player in a TD and the amount of capital which one has, as well its capacity of influence the TD as a hole. So once the distribution of agents and capitals are made, and the rules put in action, the TD become a question of collective action, which, by your turn, will demands a institutionalized system of governance.

This theoretical proposal has direct implications over the practice, for example, to governance of TD, since it moves us from an external approach, mainly represented by the TALC model, to a new one, a sociological and political, that can help us to explain why the TD do not develop just with the incoming of tourists. Moreover, will help to explain why there are different stages with the same touristic flux incoming.

So, if the concept of field to tourism and discuss some implications from it to governance of tourist destinations, we can assert the proposal presented here brings at least two contributions. The first one is theoretical and deals to the framework of Bourdieu and its possibilities on theorizing of tourism. The second one refers to the implications from that theoretical framework. A better understanding of tourism, as a hole, can lead us to produce more accuracy tools and interventions on reality, e.g. on the context of management and governance of TD. Thus, if we are correct and considering the necessity to identify, for effective management of the TD, who are the actors involved directly and indirectly in the tourism field, what are their interests and how they seek to achieve them.

In short, if one wants to obtain a broader and efficient system of governance to tourist destination is necessary to analyze how structured the field is, who are the actors, what are their positions and what are their dispositions to act in some way. These elements will provide an internal matrix of relations to guide an empirical destination to identify and manage more accurately its constraints and capabilities to develop.

BIBLIOGRAPHY

- Alonso, A. (2009). As teorias dos movimentos sociais: um balanço no debate. *Lua Nova*, São Paulo, (76), 49-86.
- Bachelard, G. (2010). *A experiência do espaço na física contemporânea*. Rio de Janeiro: Contraponto.

- Bourdieu, P. (1983). Algumas Propriedades sobre os Campos. En: Ortiz, R. *Questões de sociologia* (pp. 89-94). Rio de Janeiro: Marco Zero.
- Bourdieu, P. (1993). Entrevista a Pierre Bourdieu. La lógica de los campos. *Zona Erógena*, 16, 1-14. Recuperado de: <http://www.educa.ar>.
- Bourdieu, P. (1996). *Razões Práticas: Sobre a teoria da ação*. Campinas, São Paulo: Papirus.
- Bourdieu, P. (1998). The essence of Neoliberalism: Utopia of endless exploitation. 08 de diciembre, *Le Monde Diplomatique*.
- Bourdieu, P. (2001). *Las Estructuras Sociales de la Economía*. 1ª Ed. [1ª Reimp. 2002] Buenos Aires: Ediciones Manantial SRL. 271p.
- Bourdieu, P. (2004). *From the King's House to the Reason of State: A Model of the Genesis of the Bureaucratic Field*. *Constellations*, 11, 16–36., doi: 10.1111/j.1351-0487.2004.00359.
- Bourdieu, P. (2008). Las formas del capital: capital econômico, capital cultural y capital social. Cap.4, pp.131-164. In: Bourdieu, P. *Poder, Derecho y Clases Sociales*. 2 Ed. (Spanish Edition). Desclée de Brouwer. 236p.
- Butler, R. (1980). The Concept of a Tourist Area of Life Cycle of Evolution: Implications for Management of Resources. *Canadian Geographer*, 19 (1): 5-12.
- Cole, S. (2009). A logistic tourism model – Resort Cycles, Globalisation and Chaos, *Annals of Tourism Research*, 36 (4) 689-714.
- Friedberg, E. (1993). Las cuatro dimensiones de la acción organizada. *Gestión y Políticas Públicas*, 2(2), 283-313.
- Gale, T. & Botterill, D. (2005) A realist agenda for tourist studies, or why destination areas really rise and fall in popularity. *Tourist Studies*, August, 5: 151-174.
- Gohn, M. G. (2007). Teoria(s) da ação social na análise dos movimentos sociais. *31 Encontro Anual da AMPOCS*. Caxambú, Minas Gerais, 1-38.
- Harré, R. (1988). *As Filosofias da Ciência*. Lisboa: Edições 70.
- Hovinen, G. (1982) “Visitor cycles: outlook in tourism in Lancaster County” *Annals of Tourism Research*, 9, 565-583.
- Hovinen, G. (2002) “Revisiting the Destination Life Cycle Model”, *Annals of Tourism Research*, 29 (1), 209-230.
- Hovinen, G. (2002) “Revisiting the Destination Life Cycle Model”, *Annals of Tourism Research*, 29 (1), 209-230.
- Jenkins, R. (2006 [1992]). Pierre Bourdieu: key sociologists. New York (USA): Routledge /Taylor & Francis e-Library. (Series: The Open University). 137p.
- Kuhn, T. S. (1962). *The structure of scientific revolutions*. Chicago: University of Chicago.
- Oliveira, M. C. B. (2016). *Acción Colectiva en el Campo Turístico y su influencia en la Agenda de Políticas Públicas en Juiz de Fora/Brasil y Mazatlán/México*. Thesis (Master). Universidad Autónoma de Sinaloa, Culiacán, Sinaloa, México.
- Pimentel, M. P. C. y Pimentel, T. D. (2013). El Turismo y los Entornos Sociales: destinos y retos. *ARENAS - Revista Sinaloense de Ciencias Sociales*, 34, 117-129.
- Pimentel, T. D. (2012). *Space, Identity and Power: outline of a morphogenetic and morfostatic theory to the sociology of organizations*. 2012. 471f. Thesis (Ph.D.) – Institute of Human Sciences, Federal University of Juiz de Fora, Juiz de Fora (MG).
- Pimentel, T. D. (2015a) Tourist Field and the Agents’ Internal Path of Relationship in Tourist Destinations: some implications for governance. *Association Internationale D’Experts Scientifiques Du Tourisme - AIEST Conference*, 2015, Lijiang, China. *Proceedings 65 AIEST Conference*. Dufourstrasse, Switzerland: AIEST, 2015. v. 1. p. 1-9.
- Pimentel, T. D. (2015b). Bourdieu, campo turístico y sus implicaciones para la gestión de los destinos turísticos. En: Gamboa, Silvestre F. & Campaña, Luis M. F. (Org.). *Turismo en el sur de Sinaloa*. 1ed.Mazatlán/Escuinapa (Sinaloa): Ediciones EON, 2015, 1, pp. 244-251.
- Pimentel, T. D. & Pimentel, M.P.C. (2015) Destino Turístico como Construção Coletiva: os atores envolvidos e sua necessidade de articulação. *Revista: Turydes, Revista Turismo y Desarrollo*. 18(8).
- Pimentel, T. D.& Pimentel, M. P. C. (2013). Bourdieu, Tourist Field and its implications for Governance of Tourist Destinations. *Association Internationale D’Experts Scientifiques Du Tourisme - AIEST Conference*, 2013, Izmir, Turkey. *Proceedings 10 AIEST Conference*. Dufourstrasse, Switzerland: AIEST, 2013. v. 1. p. 1-9.
- Tarrow, S. (1994). El nacimiento del movimiento social nacional, 33-117. In: Tarrow, S. *El poder en movimiento: Los movimientos sociales, la acción colectiva y la política*. Madrid: Alianza Universidad.
- Thiry-Cherques, H. R. (2006). Pierre Bourdieu: a teoria na prática. *Revista de Administração Pública - RAP*, Rio de Janeiro (RJ), 40 (1): 27-55, Jan./Fev.

- Vandenberghe, F. (2009). *O esgotamento do novo movimento teórico e a era dos epígonos*. In: Invenção do Contemporâneo, 2009, Campinas. CPFL. Palestra publicada em vídeo em: 09/10/2009 às 22:45:05. Disponível em: <http://www.cpfcultura.com.br/site/2009/11/30/integra-o-esgotamento-do-%E2%80%9Cnovo-movimento-teorico%E2%80%9D-e-a-era-de-epigonos-frederic-vandenberghe/>. Access: 25 ago 2011.
- Vandenberghe, F. (2010). *Teoria Social Realista: um diálogo franco-britânico*. Belo Horizonte: UFMG Press.
- Vandenberghe, F. (2010b). A era dos epígonos: a teoria social pós-bourdieuiana na França. In: Vandenberghe, F. *Teoria Social Realista: um diálogo franco-britânico*. Belo Horizonte (MG): Editora UFMG/ Rio de Janeiro (RJ): IUPERJ, 2010. pp.85-110.

FOOD AND NUTRITIONAL EDUCATION IN SCHOOLS

Bruno Sousa

School of Sciences and Health Technologies, Universidade Lusófona de Humanidades e Tecnologias, Lisboa, Portugal
CBIOS – Research Center for Biosciences and Health Technologies
Health Service of Autonomous Region of Madeira
(bruno.sousa@mail.com)

ABSTRACT

Food is a primary human need, since it depends on his survival and largely his well being, being one of the most important factors in the quality and duration of human life.

During childhood and adolescence, healthy eating is essential for growth and development but also a determinant factor for health in preventing food-related problems.

Of the factors that allow the integration of healthy eating habits, the school plays a key role for the acquisition of knowledge and for development essential attitudes and skills to adoption healthy eating behaviors, being necessary to involve all the school structures, like management bodies, officials, parents and caregivers, teachers, among others, approaching a transdisciplinary and collaborative perspective among the various educational partnerships. The school inserts itself in a context of learning about healthy eating and food education of children and adolescents, complementing the role of the family.

However, food education does not only have this approach to food and nutrition. More complex issues such as the environment, agriculture, consumption, malnutrition, food insecurity and hunger in the world are also related, addressing education for citizenship, developing attitudes of solidarity, commitment to the fight against hunger in the world, and of ecological responsibility.

Keywords: Nutritional Education, Schools, Children's, Adolescents, Interdisciplinarity.

1. INTRODUCTION

Food is a primary human need, since it depends on his survival and largely his well being, being one of the most important factors in the quality and duration of human life.

In order to enjoy good health and be strong physically and mentally, giving maximum performance in our activity, we need to have a healthy diet, assuring the variety, balance and the adjusted quantity of food that should be chosen for its nutritional and hygienic quality, taking always attention to the beneficial culinary manipulations.

During childhood and adolescence, healthy eating is not only essential for growth and development but also a determinant factor for health in preventing food-related problems, not only in the short and medium term, such as anaemia, growth retardation, dental caries, obesity, among others, but also in the long term such as cardiovascular diseases, different forms of cancer, among others. An unbalanced diet can thus lead to serious health problems, which will be reflected not only in childhood, but also in adolescence or later as adults (Corkins *et al.*, 2016).

At these ages, we must bear in mind that children are not endowed with an innate ability to choose foods according to their nutritional value. Eating habits are learned through experience, observation and education. Hence, the binding experiences in childhood and the education that is received in the first years of life until adolescence are determinants (Corkins *et al.*, 2016).

It is therefore necessary from an early age to educate for health and provide the essential conditions for acquiring knowledge and for developing the attitudes and skills essential to the adoption of healthy eating behaviours'.

It is in childhood that the child is developing his senses and diversifying the tastes, and with that forming his own preferences. It is a stage of life dedicated to the acquisition of knowledge, where they develop abilities that favor the learning of healthy eating habits.

If the child is accustomed very early to the various palates and textures of food, it will create a more diverse taste and with positive repercussions on their future choices.

Another great advantage is that good eating habits, when acquired early, tend to persist for a long time, and during childhood are several factors that favor the integration of these habits, so it is essential to bet on the promotion of eating habits at an early age.

It is at these ages that we must bet to intervene and prevent through food and nutrition education.

2. DETERMINANTS OF FOOD CHOICE

When we are going to plan or implement food education, we must necessarily take into account the factors that will determine food choice. First, food choices are influenced by (a) biological predisposition to certain behaviours', such as the taste of the human being at birth for sweet and not liking bitter and sour, hunger / satiety mechanisms; (b) food experience,

since humans have the ability to learn to enjoy food through conditioned association, both physiological and social. The children overcame their fear of new foods (neophobia) through repeated experience of new foods, offered by the family and often reflecting cultural preferences. These two sets of sensory-affective influences strongly contribute to individuals' food preferences (Contento, 2008).

Other determinants are (c) personal factors, not only intrapersonal, but also beliefs, attitudes, knowledge, skills and social norms, as well as interpersonal factors, such as family and social networks. Finally, we have (d) environmental factors, which are essential, since food availability and accessibility, as well as the social environment, cultural practices, material resources, and food marketing, facilitate or hinder to people to be able to act on their beliefs, attitudes and knowledge about healthy eating (Contento, 2008).

3. THE ROLE OF SCHOOL

Of all the agents that allow the integration of healthy eating habits, the school plays a crucial role, inserting itself in a context of learning, where the food education to the children and young people is fundamental, complementing the role of the family, that can not be neglected (Evans *et al.*, 2015; Yip *et al.*, 2016).

The school context plays a very important preventive role. It is a privileged place for health education and represents the main social context where habits and lifestyles are acquired.

It is crucial for the acquisition of knowledge and the development of attitudes and skills essential to the adoption of good eating habits, and it is necessary to involve all school structures, from the management bodies, teachers, employees and parents. This privileges an interdisciplinary approach in which the various educational partners intervene.

At school, this work should not be confined to the classroom or the syllabus content of the subjects, which are important but not sufficient for the success of food education.

Food should have a practical component, seen on a daily basis at school, at home and in the community. There is also a need to match the feeding messages transmitted in the classroom with the food available in this school environment. Only like this, food education will produce its effects centered on a school dedicated to promoting health (Loureiro, 2004).

On the other hand, the school has another central role of the child, since it carries the messages of food education from the school to the family, currently playing a real role as a "family educator".

The school thus becomes a scenario par excellence for learning about healthy eating and in food education for children.

4. THE FOOD AND NUTRITIONAL EDUCATION PROCESS

Food and nutrition education is much more comprehensive than the dissemination of information. When it is exclusively or essentially based on the provision of knowledge it has not been shown to be effective. Food and nutritional education is most effective when it focuses on behaviour / action (rather than simple knowledge), and systematically links theory, research and practice (Contento, 2008; Ray *et al.*, 2016).

In food education it is important that children experiment, that is, to develop practical activities, allowing the manipulation of food. On the other hand, to maintain the interest in learning, one can use with strategy to focus more on the social dimension and the personal life and not so much the nutrients (Loureiro, 2014).

Food education is understood as any combination of educational strategies, accompanied by environmental support, to facilitate the voluntary adoption of food choices and other behaviours' related to food and nutrition conducive to health and well-being (Contento, 2008).

On the other hand, food and nutrition education must be carried out through various locations and involve activities at the individual, community and political levels.

Depending on the purpose for which it is intended, we must have the notion that food and nutrition education can have three components: the motivational one, where the goal is to increase awareness and increase motivation, approaching beliefs, attitudes through effective communication strategies; the aim of which is to facilitate the capacity of people to act through the definition of cognitive self-regulation objectives and competences; and environmental, where educators work with policy makers and others to promote a supportive environment for action (Contento, 2008).

It is important to adapt food and nutrition education to the target population. Know which motivating factors as well as the best forms of learning.

For example, for children, strategies that include exposure to food in a positive social context, using peer and adult reference models, as well as the appropriate use of incentives, are important. For adolescents, behavioural alteration strategies, such as self-assessment, clarification of expectations and values, definition of personal goals, and the capacity for competent choice between alternatives are more convenient (Loureiro, 2004).

In a school environment, it is important not only to invest in the empowerment of students, but also in teachers, staff, parents and other community members to be able to have and transmit healthy behaviours', however, it is also essential to create enabling environments for these choices (Loureiro, 2014; Meiklejohn *et al.*, 2016).

We must not forget that, given the objectives and target population of food and nutrition education, we have to choose the best methodology. For certain situations, the direct method may be useful, in which there is direct contact between the educator and the student, using the spoken word as a means of communication, favouring interaction with the audience, explanation and clarification. Examples include lectures or conferences, and group discussion.

For others, the indirect method may be used, in which there is a space and / or time separation between the educator and the learner, and the spoken word, writing or image as a means of communication is used as a medium Awareness campaigns.

Examples include posters, brochures, the internet, social networks, and videos.

The purpose of food education is to provide the principles that best fit food and nutrition needs; to enable in the school community a reflection on the actions to be undertaken, for all to enjoy a good diet; enable students to participate actively in food education activities; to encourage students to interpret the concept of food and to emphasize its importance, valuing the healthy; and involve family members, essential partners in this educational process and the acquisition of healthy eating habits and promoting an environment of sharing and communication during meals.

Educating for healthy lifestyles through food education in health promotion at school can contribute to improving the global health status of children today and will produce its effects in the future.

Strategies adopted collectively to guide individual and group behaviour should create opportunities for action and remove barriers to healthy eating. Thus, the provision of food at school, whether through school meals in the canteen or in other ways as in school, influence this educational process (Aranceta, 2013), and important to make good food choices.

Reducing difficulties or barriers to accessing desirable food choices is paramount. For example, the greater the perceived barriers, the lower the consumption of fruits and vegetables (Lytle *et al.*, 2003; Ganann *et al.*, 2014).

At school, food services are, for example, a reference point for implementing strategies to encourage the consumption of fruits and vegetables in children and adolescents (Ganann *et al.*, 2014).

School-based food and nutrition education programs should focus on behaviour involving the family, with internal and external intersectoral strategies, always taking into account the needs of children and all school elements. They should influence attitudes, intervening in the school environment, allowing access to healthy foods, and a constant evaluation of the intervention is mandatory (Perez-Rodrigo and Aranceta, 2003).

In food education it is important to have experimentation, such as the manipulation of food itself. Focusing on the social and personal life rather than the nutrients are good strategies to maintain interest in food (Loureiro, 2004).

Approaches involving action, with the participation of students such as school gardens and cooking programs may encourage greater consumption of vegetables and may have a better effect in relation to nutritional education. Providing children with fruits and vegetables in an accessible and free way has been shown to positively affect feeding behaviour (DeCosta *et al.*, 2017).

Capturing the attention of parents and engaging them in healthy eating practices for their children is a way to increase the effectiveness of nutrition education programs (Blitstein *et al.*, 2016).

However, it should not be overlooked that these actions are not enough. At other levels (advertising, marketing, among others) measures should also be taken to promote good eating habits.

Food education is only effective if there is a comprehensive framework, involving continued support not only from all school structures, but also from the rest of the community, which includes, in addition to others, health entities.

In addition to these essential elements in food and nutrition education, there is another very important one: evaluation. When we evaluate our actions it is possible to determine if the objectives have been achieved or if the priorities need to be changed. It also detect elements that need to be modified, and allows to identify ways that activities can be improved. It identifies weaknesses, and makes it possible to test innovative approaches.

5. THE INTERDISCIPLINARITY OF FOOD AND NUTRITIONAL EDUCATION

As mentioned above, of the factors that allow the integration of healthy eating habits, school plays a fundamental role in acquiring knowledge and in developing attitudes and skills at this level. However, it is necessary to involve all school structures, from the management and administration bodies, officials, parents and guardians, teachers, among others, addressing an interdisciplinary and collaborative perspective among the various educational partners, in particular with health professionals (nutritionists, physician, nurses, among others).

On the other hand, it is equally important that this food education not only has an exclusive approach in food and nutrition. It is important to relate to more complex issues such as the environment, agriculture, consumption, malnutrition, food insecurity and hunger in the world, addressing citizenship education, developing attitudes of solidarity, commitment to the fight against hunger in the ecological responsibility, avoiding in this case choices that have a negative impact on the environment.

6. CONCLUSIONS

The importance of food is particularly evident, especially in children and young people as their growth and development depend on balanced nutrition.

For the acquisition of knowledge and attitudes fundamental to an adequate food choice, the school plays a crucial role, complementing the role of the family, being the social context par excellence for a child-centered food education.

However, it is essential that this food education be well planned and structured to achieve the intended effectiveness.

We will have to be able to change behaviours', a task that is not easy, and therefore it is important to choose the best form of communication to achieve our goals. Appealing and dynamic activities, involving the participation of children and young people, are essential elements. However, it is also important to create environmental change that is conducive to change and thus to improve eating behaviours', and it is essential to involve all elements of the educational community as well as the various partners in the communities to achieve efficient food education.

REFERENCES

- Aranceta J (2013). *Nutrición Comunitaria*, 3rd edition, Masson: Barcelona.
- Blitstein JL, Cates SC; Hersey J, Montgomery D, Shelley M, Hradek C, Kosa K, Bell L, Long V, Williams PA, Olson S, Singh A. Adding a Social Marketing Campaign to a School-Based Nutrition Education Program Improves Children's Dietary Intake: A Quasi-Experimental Study. *J Acad Nutr Diet* 2016 Aug; 116(8): 1285-94.
- Contento IR. Nutrition education: linking research, theory, and practice. *Asia Pac J Clin Nutr* 2008; 17(1): 176-9.
- Corkins MR, Daniels SR, de Ferranti SD, Golden NH, Kim JH, Magge SN, Schwarzenberg SJ. Nutrition in Children and Adolescents. *Med Clin North Am*. 2016 Nov; 100(6): 1217-35.
- DeCosta P, MollerP, Frost MB, Olsen A. Changing children's eating behaviour - A review of experimental research. *Appetite* 2017 Mar; 113: 327-57
- Evans CE, Albar SA, Vargas-Garcia EJ, Xu F. School-based interventions to reduce obesity risk in children in high and middle-income countries. *Adv Food Nutr Res* 2015; 76: 29-77.
- Ganann R, Fitzpatrick-Lewis D, Ciliska D, Peirson LJ, Warren RL, Fieldhouse P, Delgado-Noguera MF, Tort S, Hams SP, Martinez-Zapata MJ, Wolfenden L. Enhancing nutritional environments through access to fruit and vegetables in schools and homes among children and youth: a systematic review. *BMC Res Notes* 2014 Jul; 7: 422
- Loureiro I. A importância da educação alimentar: o papel das escolas promotoras de saúde. *Rev Port Saúde Pública* 2004; 22(2): 43-55.
- Lytle LA, Varnell S, Murray DM, Story M, Perry C, Birnbaum AS, Kubik MY. Predicting adolescents' intake of fruit and vegetables. *J Nutr Behav* 2003 Jul-Aug; 35(5): 170-5
- Meiklejohn S, Ryan L, Palermo C. A systematic review of the impact of multi-strategy nutrition education programs on health and nutrition of adolescents. *J Nutr Educ Behav*. 2016 Oct; 48(9): 631-6
- Pérez-Rodrigo C, Aranceta J. Nutrition education in schools: experiences and challenges. *Eur J Clin Nutr* 2003 Sep; 57 Suppl 1: S82-5.
- Ray S, Ball L, Laur C. Nutrition education for public health. *Public Health* 2016; 140: 3-6.
- Yip C, Gates M, Gates A, Hanning RM. Peer-led nutrition education programs for school-aged youth: a systematic review of the literature. *Health Educ Res* 2016 Feb; 31(1): 82-97.

ANALYSIS OF THE VIABILITY A NON-INVASIVE CARDIOLOGIC METHOD OF DIAGNOSIS AND ITS CONTRIBUTION FOR THE PATIENT'S QUALITY OF LIFE

Fabio Villela Parente

Instituto Avançado do Coração e Multiespecialidades
(fvparent@uol.com.br)

Kellen Cristina Ferreira Vitorino

Instituto Avançado do Coração e Multiespecialidades
(kellenvitorino@hotmail.com)

ABSTRACT

Cardiovascular disease represents the leading cause of death in the world and is also the most resource consumer disease of health care among industrialized countries. Therefore, the possibility to associate a non-invasive method of Computerized Angiotomography to the conventional scores can raise the potential of conducts applied to the clinical approach of the patients. The purpose of this study was to analyze the relevance of calcium scores analyzes compared to the conventional Coronary Angiography method (Cardiac Catheterization) in patients at risk of coronary events, taking on account the perspective of quality of life. For this review of literature it was used a qualitative approach with descriptive purposes, based on fundamental analyzes with relevance on focusing the proposed objective. Hence, the achieved results pointed the Computerized Angiotomography as a non-invasive method of diagnosis when compared to the Cardiac Catheterization for no need of hospitalization once it is an elective procedure that relieves the impacts related to the patient's quality of life and of his or her social circle. It was also observed a potential decrease in costs related to the public health, as well as the improvement of the method of diagnosis directed to the search for new medical solutions related to the improvement of the social quality of life, the guaranty of basic rights, such as health, and the viability of social advances in medicine.

Keywords: Cardiac Catheterization, Computerized Angiotomography, Calcium Score, Quality of Life, Coronary Arterial Disease.

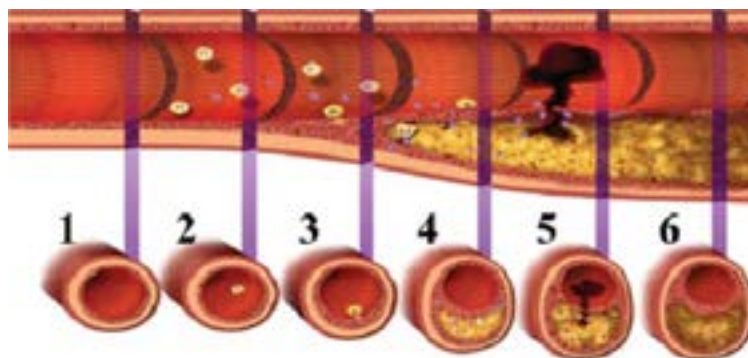
1. INTRODUCTION

Measuring the risk of cardiovascular diseases is important to define prognostic, set goals of treatment and motivate patients to change their life style, once it is a fundamental element for clinical observance of patients without previous manifestation of cardiovascular disease. Szarf (2016) affirms that the Framingham Risk Score (FRS) has been one the most usable model, widely utilized in clinical care, to estimate absolute risk of myocardium infarct and coronary death for 10 years. In the last decades, the society has watched great technological advances in the field of health. The arteriosclerosis is a pathology that can affect the brain arteries, heart, kidney and other human vital organs. When the arteriosclerosis phenomenon occurs in the arteries that supplies the heart (coronary arteries), they can lead to a myocardium infarct.

According to Rocha (2005), the Coronary Arterial Disease (CAD) is the main cause of mortality and it is also the most resource consuming pathology in the health fields of industrialized countries. In 1992, just in the USA, it was responsible for almost one million deaths – twice as much as cancer and ten times more than traffic accident. Besides the important advances in medicine, the CAD is the responsible for more deaths than the others combined causes. It is projected that in 2020, the cardiovascular diseases will be responsible for more than 20 million deaths a year (Rebelo *et al.*, 2007).

Luz (2005) affirms that arteriosclerosis starts when the monocytes cells migrate from the blood stream to the arterial wall, transforming into cells that accumulate fat material. As time passes, these accumulated fatty monocytes lead to thickening, in the form of a plaque, in the arterial inner lining. Each thickening area, known as arteriosclerotic plaque or atheroma, consists of several fatty materials, mainly cholesterol, loose muscular cells and connective tissue cells (Figure 1).

Figure 1 – Evolution of atherosclerosis



Source: <http://www.pedrofarsky.med.br/Colesterol.html&usg>

The arteriosclerotic plaques or atheroma can place in large or medium caliber arteries but, they usually form in ramifications of arteries, supposedly because the frequent turbulence in these areas injures the arterial wall, turning susceptible to the atheroma formation. The arteries affected by arteriosclerosis lose their elasticity and, as the atheromas grow, these arteries grow thinner. As time passes, the atheromas accumulate deposits of calcium, which can turn them fragile and break. So, the blood can penetrate into one of these broke atheromas, expanding their size and thus reducing, still more, the arterial inner size. The broken atheroma can also liberate its inner fat contempt giving rise to formation of a blood clotting (thrombus). The clot can still reduce the inner size of the arteries, obstruct them, or even gain the circulation producing an occlusion (embolism).

According to Meneghelo (2005), the diagnosis of CAD is fundamentally established in a very well done anamnesis cared out by the doctor. Technological resources have been applied since 1970 decade in Brazil. The confirmation can be done even by noninvasive methods or ergometric test, perfusion analyzes by nuclear medicine and stress echocardiographic. More recently, with technological advance the diagnosis of subclinical arteriosclerosis can be executed by the means of coronary computerized tomography and, especially, by analyzes of calcium deposit in these arteries. In contrast, Davidson & Bonow (2007), related in their studies that the cardiac catheterization and coronary cineangiography are recommended anytime it makes it clinically important to define the presence or evaluate the severity of a cardiac lesion. Even by the virtue of this procedure present only 1% of complications and with 0.08% of mortality index, there still exists patients unable to be submitted to this laboratory studies activities with safety. One technology capable for previously detect the CAD é preferable, once the previous diagnosis of disease can contribute with the elements that could guarantee the individual quality of life, providing them with a more efficient treatment, by anticipating the diagnosis, besides representing the access to the quality of health and not submit patients to invasive exams that could increase the risks of medical complications related to these procedures.

This study has as objective analyze the potentialities of the use of computerized angiotomography (CAT) in evaluating calcium scores (CE) related to the conventional coronary cineangiography method of study (cardiac catheterization) in increase quality of life in patients with the risk of coronary events. With the qualitative approach for descriptive purposes, this study used a literature review for fundament necessary analyzes to the execution of the proposal subject.

2. THE CHALLENGE OF NONINVASIVE METHOD

Increasingly, the various guidelines about CAD call attention to the proper stratification of the risk and of the importance of primary prevention measures, with the prescription of drugs that reduce the levels of cholesterol and also Aspirin for high risk patients. Nevertheless, it is still a great challenge to the modern cardiology. The analysis of the traditional risk factors helps to classify the patients in groups, but the rate of events is not uncommon for those considered as low risk (0.5% - 1.0% per year) and neither to the high risk ones (2% per year). The coronary arteries calcification (CAC) is an increased risk marker for the acute events and is present only in CAD, and also can be quantified in a rapid and noninvasive way by the means of CAT with evaluation of CE.

The CAC is defined as a hyperattenuating lesion with the density threshold value over 130 Hounsfield unities (HU), in an area of two or more adjacent pixels (Figure 2).

Figure 2 – Tomographic image of the heart of a diabetic patient with the calcium score 725, presenting various plaques of calcification in the Anterior Descendent Artery (AD) and in the Circumflex Artery (CX)



Source: http://www.scielo.br/scielo.php?script=sci_arttext&pid=SO004-27302007000200019

The product of the total area of calcium per a derivate factor of maximal density is equal to the CE, published by Agatston with his name. Till recently, it is been questioned if the CE represented an independent risk factor for coronary events, that is to say, if there was addition of information related to the traditional risk factors. Published and consistent studies evidence that the evaluation of CE can present data on the stratification of risk and change clinic procedures, in order to benefit patients and their families.

In the study performed by Greenland *et al.* (2005) *apud* Azevedo, Rochitte and Lima (2012) including 1.312 non diabetic patients, CE measures were realized by the method of Agatston with the patients follow up period of 8.5 years. This population of intermediate and high risk was evaluated and the results showed that the CE more than 300 implied in bigger chances of coronary events compared to stratification of risk isolated by FRS, especially in the intermediate risk group (10%-19% of events in 10 years).

Raggi *et al.* (2006) in their study, followed up 10.377 asymptomatic individuals (903 diabetics) for five years with the purpose of verify mortality by all causes. The results pointed that in asymptomatic individuals with diabetes, the mortality increases proportionally to CE. Furthermore, those with no CAC present low risk of events in short term, even being diabetic.

According to Meneghelo (2005), based on these studies and on the guidelines published on the American Heart Association (AHA), the followed information related to the CE are accepted:

- CE negative leads to a low probability of CAD and to events;
- CE positive confirms the presence of CAD;
- High scores of CE mean moderate to high risk of events in 2-5 years;
- The CAC measure is an independent predict of events and add prognostic value related to traditional factors of FRS.

The quantification of CAC can change the clinical practice, mainly in patients with intermediate risk

3. THE INVASIVE METHOD – CARDIAC CATHETERIZATION

According to Feres (2005), Werner Forssman realized for the first time, the cardiac catheterization straight in humans, in 1929. In 1950 Zimmerman *et al.*, were the pioneers in realizing the left cardiac catheterization, facilitating in 1953 the description made by Seldinger of the percutaneous puncture method which started using guidewire to change the catheters.

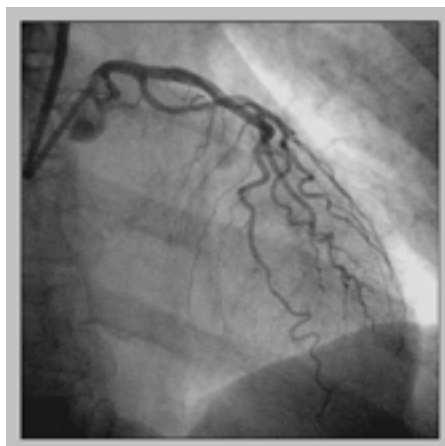
Figure 3 – Diagnostic catheters in cardiology



Source: <http://www.eptca.com/cateter-angiografico.php>

The coronary arteries were visualized in 1945 by Radner by means of injection of radiopaque contrast inside the Ascending Aorta artery. Afterwards, in 1964, Judkins developed pre-casted catheters that would facilitate the coronary catheterization, and also described the percutaneous femoral puncture technic. In clinic procedures for several decades, this exam represents an immeasurable risk discriminator in patients with coronary disease. This method has been passing through advances with the advent of technology, providing the doctors with anatomic images in real time and under low risk of complications (Figure 4).

Figure 4 – Coronary Cineangiography Image, with the injection of contrast to visualize possible coronary lesions



Source: http://web.educastur.princast.es/proyectos/grupotecne/archivoc/investiga/101cateterismo_cardiaco_4.jpg

In addition to other information, such as, collateral circulation, valvopathy, congenital cardiopathies, it also places the extension of CAD as characteristics of the plaques. The demonstration of the coronary arteries angiographically normal is also of great prognostic importance.

According to Davidson (2007), the execution of coronary cineangiography is a procedure relatively safe, but that presents risk of morbidity and mortality. The potential risk is difficult to be analyzed once it can be associated to other comorbid pathologies. The technical advances in this area search for minimize the risk with the use of low osmolarity contrast, smaller size catheters and the professional experience. The death associated to the procedure occurs in 0.08% to 0.75% of patients and can be more elevated among the octogenarians. The risk of myocardium infarction varies from 0.03% to 0.06% and the neurological complications from 0.03% to 0.2%, among other, such as, renal insufficiency, arrhythmia of difficult control, arterial hypertension, angina, aortic valvopathy.

4. FINAL CONSIDERATIONS

The CE is an independent risk marker for coronary events and add prognostic value to the traditional forms of stratify this risk. It can change the clinical procedure, mainly in patients with intermediate risk. The coronary CE correlates with the presence and extension of coronary arteriosclerosis. The absent of CAC, however, exclude the presence of significant stenosis of coronary artery with high predictive value.

Verifying the possible indication of a noninvasive method of diagnosis, such as the CAT, to identify and qualify CE, in detriment to another invasive method, as cardiac catheterization, can represent a relevant cost benefit option to patients, once it doesn't demand hospitalization, use of contrast, minimum financial cost, and above of all, intangible gains to the patients and their families with the reduction of the inconvenience of hospitalization that the cardiac catheterization causes, besides adding quality on the lifestyle of the more interested ones, the patients.

REFERENCES

- Davidson, Charles; Bonow, Robert. Cateterismo cardíaco. In: Braunwald, Eugene (ed). *BRAUNWALD Tratado de doenças cardiovasculares*. Rio de Janeiro: Elsevier, 2007, p. 395-422.
- Feres, Fausto; Ishii, Edmilson; Chaves, Aurea; Centemero, Marinella. Cateterismo cardíaco, Cineangiocoronariografia e Ultra-som Intracoronário. In: Nobre, Fernando; Serrano Jr, Carlos (ed). *Tratado de cardiologia SOCESP*. São Paulo. Manole, 2005, p. 267-278.
- Azevedo, Clerio F; Rochitte, Carlos E; Lima, João A.C. Escore de Cálcio e Angiotomografia Coronariana na Estratificação do Risco Cardiovascular. *Arquivos Brasileiros de Cardiologia*, São Paulo, v. 98, no.6, p. 559-568, 2012. Disponível em: <http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0066-782X2012000600012> Acessado em: 03 de março de 2017.
- Luz, Protásio; Laurindo, Francisco. Inflamação e aterosclerose. In: Nobre, Fernando; Serrano Jr, Carlos (ed). *Tratado de cardiologia SOCESP*. São Paulo. Manole, 2005, p. 369-380.

- Meneghelo, Romeu; Mastrocola, Luiz; Smanio, Paola *et al.* Avaliação laboratorial da doença arterial coronária. In: Nobre, Fernando; Serrano Jr, Carlos (ed). *Tratado de cardiologia SOCESP*. São Paulo. Manole, 2005, p. 571-594.
- Meneghelo, Romeu S. *et al.* Distribuição dos Escores de Cálcio Coronariano Determinados pela Tomografia Ultra-Rápida em 2.253 Homens Brancos Assintomáticos. *Arquivos Brasileiros de Cardiologia*, São Paulo, v. 81, s. VII, p. 27-31, 2003. Disponível em: <<http://www.scielo.br/pdf/abc/v81s7/a03v81s7.pdf>> Acessado em: 03 de março de 2017.
- Rebelo, Fabiana Perreira Vecchio *et al.* Resultado clínico e econômico de um programa de reabilitação cardiopulmonar e metabólica. *Arquivos Brasileiros de Cardiologia*, v. 89, n. 4, p. 321-328, 2007.
- Rocha, Viviane. Biologia Vascular da Aterosclerose e complicações agudas do ateroma. In: Nobre, Fernando; Serrano Jr, Carlos (ed). *Tratado de cardiologia SOCESP*. São Paulo: Manole, 2005, p. 541-554.
- Rochitte, Carlos; Ribeiro, Flávio. Ressonância magnética cardíaca e tomografia. In: Nobre, Fernando; Serrano Jr (ed). *Tratado de Cardiologia SOCESP*. São Paulo: Manole, 2005, p. 689 - 727.
- Szarf, Gilberto. Escore de cálcio: um aliado valioso do médico. *Alliar News Médicos à Frente*, 2016. Disponível em: <http://alliar.com/?noticias=escore-de-calcio-um-aliado-valioso-do-medico>. Acessado em 08/03/2017.
- Sociedade Brasileira de Cardiologia. II Diretriz de Ressonância e Tomografia Cardiovascular da Sociedade Brasileira de Cardiologia. *Arquivos Brasileiros de Cardiologia*, 2014. Disponível em: <http://publicacoes.cardiol.br/2014/diretrizes.asp>. Acessado em 08/03/2017.

ESPACIOS DE APRENDIZAJE DE NUEVA GENERACIÓN EN LA FORMACIÓN PROFESIONAL

Fernando Medina Vidal

Departamento de Economía de la Empresa. Universidad Politécnica de Cartagena
(fernando.medina@murciaeduca.es)

Antonio Juan Briones Peñalver

Departamento de Economía de la Empresa. Universidad Politécnica de Cartagena
(aj.briones@upct.es)

Elena Hernández Gómez

Departamento de Economía de la Empresa. Universidad Politécnica de Cartagena
(elena.hernandez2@murciaeduca.es)

Paula Serdeira Azevedo

Núcleo de Informática. Universidad del Algarve
(pscorreia@ualg.pt)

ABSTRACT

Competence-oriented training for professional achievement is an innovative training proposal aimed at achieving a more effective teaching-learning process in vocational students in the current context. This model encourages teachers to observe student performance and feedback to train students with the ability to learn and adapt to changing situations in their professional life autonomously. This educational model demonstrates the need for new learning spaces capable of adapting to a learning based on professional skills measured through competencies. In order for students to acquire these competences, there is an increasing tendency to go beyond the frontiers of the centers and make use of the innovations made by the whole educational community, educommunication and non-formal education. In this article, the need to change traditional learning spaces has been raised. With this aim, the conceptualization of competences has been started, the implications of the competences in the teaching of the teaching staff have been analyzed, and the characteristics that a learning space should have to achieve a competency-oriented training towards professional achievement and innovation have been determined. This paper presents a model of innovative or new generation learning space in function of its formative purpose obtained from the teaching conceptions in recent learning experiences.

Keywords: Learning Spaces, Competences, Learning, Vocational Education and Training.

JEL Classification: I21, I23, D83, Q55

1. INTRODUCCIÓN

El sistema educativo de la sociedad actual está sujeto a grandes cambios de diversas índole: desplazamiento de los procesos de formación desde los entornos convencionales hasta otros ámbitos; demanda generalizada de que los estudiantes reciban las competencias necesarias para el aprendizaje continuo; comercialización del conocimiento, que genera simultáneamente oportunidades para nuevos mercados y competencias en el sector, etc. (Salinas, 2004).

En la última década, se ha producido un gran apogeo en el uso de las competencias como un nuevo instrumento para gestionar los procesos educativos, los procesos de aprendizaje y la evaluación del alumno (Tobon, Pimienta & García, 2010).

1.1 Conceptualización de las competencias orientadas al logro profesional

El concepto de competencia ha sido ampliamente estudiado por diferentes autores, tanto desde el terreno educativo, como desde el mundo laboral y en las distintas acepciones que configuran el significado total de esta palabra, se integran las capacidades, conocimientos, aptitudes y habilidades en los diferentes contextos para desarrollar acciones que no han sido programadas con anterioridad y que incluyen los distintos saberes como son el saber hacer (Lasnier, 2000; Fernández, 2010), el saber ser y el saber estar (Noriega, Moran & García, 2014).

Existen diferentes definiciones del término competencias que hacen referencia al grado de utilización de conocimientos (Kane, 1992) y a su integración (Stephenson & Yorke, 1998), a las habilidades aprendidas para llevar a cabo una tarea, deber o rol adecuadamente (Roe, 2002), a las aptitudes (Perrenoud, 2004) y a las actitudes (Collins, 2007) que capacitan (Prieto, 2008) para actuar de manera efectiva y eficiente.

Por lo tanto, podemos afirmar que la educación por competencias engloba los conocimientos, habilidades, y destrezas que una persona desarrolla de manera integral para identificar, comprender, transformar y llevar a cabo acciones que les permitan resolver de manera adecuada y éticamente los problemas que se le plantean (Padilla *et al.*, 2015).

Esta educación basada en competencias orientada al logro profesional, debe ser comprendida como aquella enseñanza que posibilita que los estudiantes que se enfrenten a los problemas y las adversidades, que les surjan en su desempeño profesional, son capaces de resolver situaciones concretas, mediante la puesta en juego de los recursos que posee: conocimientos, actitudes y valores (Buzón-García, 2005).

La introducción de nuevos aprendizajes encaminados a la formación por competencias orientada al logro profesional requieren de una serie de variables (energía, creatividad, comunicación y liderazgo) que se expresan a través de la cultura de la escuela y que influirán en el éxito o fracaso de las innovaciones que se proponen (Ortega, Ramírez, Torres, López, Servín, Suárez & Ruiz, 2007).

Esta innovación educativa conlleva una transformación cultural en la manera de gestionar y construir el conocimiento, en las estrategias de enseñanza, en la implicación del profesorado para alcanzar la adquisición de estas competencias, en los espacios de aprendizaje, en las nuevas configuraciones institucionales y en los roles de los profesores y los alumnos (Lugo & Kelly, 2012).

Para difundir la formación por competencias orientada al logro profesional entre los jóvenes se debe desarrollar una educación emprendedora desde los centros escolares y, como señala la Comisión Europea (2008), se debe fomentar el espíritu, la cultura emprendedora y la innovación (Alemany, Álvarez, Planellas & Urbano, 2011).

1.2 Implicaciones de las competencias en la docencia del profesorado

En el marco del Espacio Europeo de Educación Superior (EEES) se considera adecuado utilizar entre los estudiantes métodos de aprendizaje activo, implementados en las diferentes técnicas de aprendizaje colaborativo con el fin de mejorar el nivel de atención e implicación del estudiante, incrementar su motivación y facilitar el nivel de desarrollo de algunas competencias necesarias para su profesión, tal y como se propone en las tres modalidades europeas de crecimiento económico. Dentro de este marco conceptual orientado al logro profesional, el profesorado tiene que flexibilizar su conducta, asumiendo una docencia de partida teórico-práctica profundamente fundamentada y que como tal requiere un considerable adiestramiento en habilidades y estrategias profesionales. Por ello, la transferencia de conocimiento ha de cambiar y se han de proveer estrategias que construyan estructuras cognitivas que habrá que integrar en aprendizajes dinámicos a lo largo de toda la vida (Aguayo *et al.*, 2014).

En este sentido, la práctica formativa hacia la difusión del espíritu emprendedor y la gestión de la innovación como cultura empresarial, sería una de las competencias profesionales que se debería fomentar en el aprendizaje y en la docencia. Esta sería valiosa en el aprendizaje cooperativo, y especialmente el informal intercalando clases teóricas-prácticas, y combinando la observación del desempeño de los alumnos y la retroalimentación para formar estudiantes con la capacidad de aprender y adaptarse a las situaciones cambiantes de su vida profesional de manera autónoma. Este modelo educativo pone de manifiesto la necesidad de nuevos espacios de aprendizaje capaces de adaptarse a un aprendizaje basado en habilidades profesionales medidas a través de las competencias.

2. MÉTODO

Teniendo en cuenta lo expuesto anteriormente, el objetivo principal de este artículo es plantear la necesidad de cambiar los espacios tradicionales de aprendizaje para adaptarse a un aprendizaje basado en la adquisición de habilidades profesionales medidas a través de las competencias.

La metodología utilizada se basa en una revisión bibliográfica de literatura científica y artículos de investigación publicados desde el año 2006 hasta la actualidad. Se han consultado las siguientes bases de datos: Google Scholar, ScienceDirect, Dialnet, Scielo y Scopus.

Las palabras empleadas en la búsqueda fueron «espacios de aprendizaje», «competencias», «aprendizaje» y «formación profesional», así como sus homónimos en inglés «learning spaces», «competences», «learning» y «vocational education and training», teniendo en cuenta los operadores lógicos y las funciones especiales correspondientes de cada base de datos.

En Google Scholar se obtuvieron 2.090 documentos que, tras limitar la búsqueda a artículos publicados desde el año 2010, fueron 86, en ScienceDirect fueron 298, en Dialnet 86, en Scielo 25 y en Scopus 28.

Para proceder a la selección se revisaron los abstracts y, en caso necesario, los artículos completos con el fin de decidir si la información que contenían estaba o no relacionada con el objetivo propuesto.

Posteriormente, también se realizó una búsqueda manual de las referencias bibliográficas de los artículos seleccionados con la finalidad de rescatar otros estudios potencialmente incluíbles para la revisión y artículos anteriores al año 2010 que ayudaron a delimitar el marco teórico. Dichos artículos fueron localizados a través de Google Scholar, y de ScienceDirect.

Finalmente, tras su lectura, análisis y evaluación, se seleccionaron 32 documentos relacionados con los objetivos planteados: artículos que siguiesen criterios de calidad científica en su publicación y que estuviesen disponibles en inglés o español. Tras la lectura crítica de los documentos, se han empleado como criterios de validez los siguientes ítems en los artículos seleccionados: a) revisan un tema claramente definido; b) son adecuados para el objeto de estudio; c) son importantes y pertinentes; d) presentan rigor suficiente; y e) son precisos en sus resultados.

De las revisiones sistemáticas se extrajo información sobre autoría, año, finalidad, fuentes de información, y conclusiones. De los artículos originales se extrajo información sobre autoría, revista en la que estaba publicado y año de publicación, país donde se realizó el estudio, tipo de estudio, sujetos y origen, medida de resultado, y conclusiones.

A posteriori, se analizaron en profundidad los diversos estudios seleccionados y con los resultados de este análisis, se extrajeron las conclusiones.

3. DESARROLLO

El término espacios de aprendizaje es utilizado para describir un campo emergente y complejo donde confluyen diferentes disciplinas, incluida la educación (Boddington & Boys, 2011).

Los espacios de aprendizaje denominados como tradicionales no son suficientes para alcanzar este modelo de formación que tiene como punto de partida la adquisición de un aprendizaje basado en habilidades o competencias fomentando que los estudiantes comiencen a pensar como aprendices (Evers, Rush & Berdrow, 1999) y los profesores se posicionen a su lado guiando la adquisición de estos nuevos conocimientos.

De acuerdo con Martínez (2010), con el objetivo de conseguir una formación por competencias orientada al logro profesional y a la innovación, los espacios de aprendizaje deben diseñarse en función de un propósito formativo, un enfoque experiencial y multidisciplinario.

Un espacio de aprendizaje innovador debe promover un aprendizaje entre pares (Wang, Sierra & Fólter, en Cleary & Marcus-Quinn, 2008) donde se facilite la colaboración, la interacción entre los estudiantes, la interactividad mediante la incorporación de las tecnologías y el acceso a recursos de aprendizaje, además de permitir un aprendizaje autónomo y dirigido (Guitert, Romeu & Pérez-Mateo, 2007). Para alcanzar una formación por competencias orientada al logro profesional y a la innovación atendiendo, desde una perspectiva socio-constructivista (Bautista, 2007), a las características del aprendizaje: constructivo, comunicativo e interactivo (Coll Salvador, Rochera Villach & Mayordomo Saíz, 2007; Colomina, Rochera & Mauri, en Álvarez & Guasch, 2006).

3.1 Modelo de espacio de aprendizaje de nueva generación orientada al logro profesional

En este contexto, podemos establecer que el modelo educativo de formación por competencias es aquel que fomentan que los alumnos desarrollen unas capacidades que les permitan aprender y desaprender de manera autónoma adaptándose a los diferentes cambios que se pueden producir a lo largo de su vida (Martínez, Navarro & Sánchez, 2012).

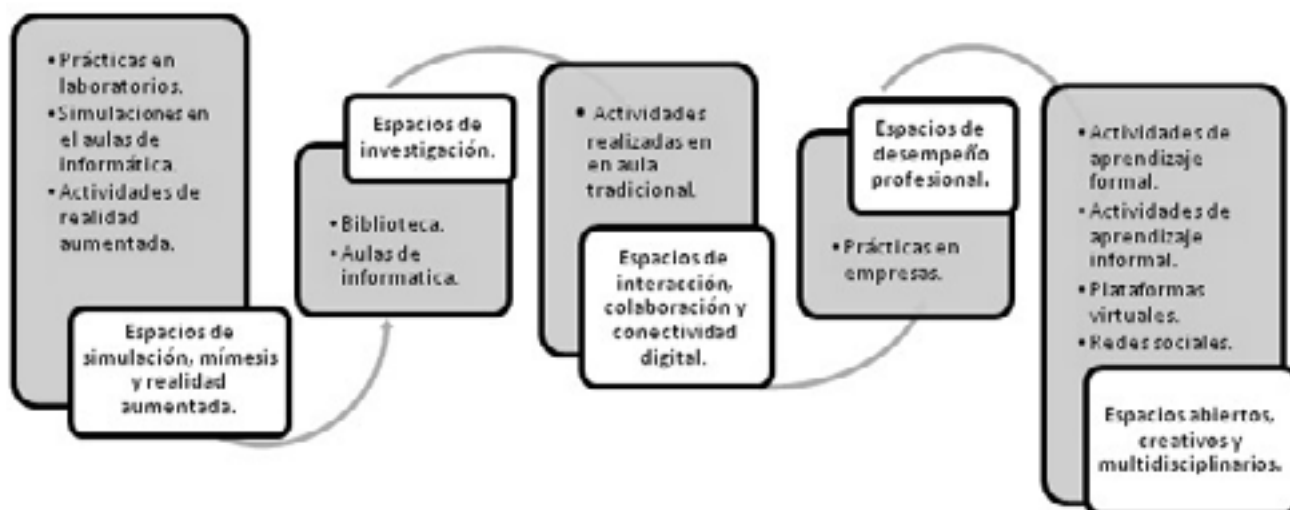
El modelo de formación por competencias orientada al logro profesional y a la innovación pretende hacer más efectivo el proceso de enseñanza-aprendizaje en el contexto actual fomentando en el profesorado la observación sobre el desempeño para poder dar una retroalimentación adecuada al alumnado (De Miguel, 2005; Martínez, 2010).

Para que los alumnos adquieran estas competencias se tiende, cada vez más, a ir más allá de las fronteras de los centros (Ballano, 2013) y valerse de las innovaciones realizadas por toda la comunidad educativa de la educomunicación y de la educación no formal.

Para alcanzar el objetivo que se plantea se deben introducir en el aula actividades de aprendizaje, utilizando las nuevas tecnologías de información y comunicación, ya que van a permitir simular dentro del aula tradicional un ambiente orientado al desempeño (Coll Salvador, Rochera Villach, Mayordomo Saíz *et al.*, 2007), combinadas con otro tipo de actividades complementarias realizadas fuera del aula tradicional.

A continuación, se expone un modelo de espacio de aprendizaje de nueva generación (figura 1) que se ha obtenido a partir de las concepciones docentes en experiencias de aprendizaje recientes en el que se introducirán diferentes actividades, realizadas en distintos espacios, que serán utilizadas en función de su propósito formativo. Puesto que está demostrado que no es suficiente incorporar dentro del aula un ordenador, un proyector y una conexión a Internet para conseguir un espacio de aprendizaje innovador (Martínez, 2010).

Figura 1. Modelo de espacio de aprendizaje de nueva generación en la formación profesional



Fuente: Elaboración propia

4. DISCUSIÓN Y CONCLUSIONES

En los últimos años, se ha puesto de manifiesto que la organización y la disposición de los espacios de aprendizaje influyen de manera crítica en los patrones de aprendizaje (Li *et al.*, 2005) y en la práctica educativa (Brooks, 2012), siendo considerado como un agente de cambio en la enseñanza (Mulcahy, Cleveland & Aberton, 2015).

Los modelos educativos basados en competencias orientadas al logro profesional no deben limitarse a simular desempeños profesionales, sino que deben proporcionar la formación de estudiantes capaces de adaptarse a un aprendizaje basado en habilidades profesionales medidas a través de las competencias. Para que los alumnos adquieran estas competencias se tiende, cada vez más, a ir más allá de las fronteras de los centros y valerse de las innovaciones realizadas por toda la comunidad educativa, de la educomunicación y de la educación no formal. Este modelo educativo pone de manifiesto la necesidad de nuevos espacios de aprendizaje como son los espacios de simulación, mimesis y realidad aumentada, los de investigación, los de interacción, colaboración y conectividad digital, los de desempeño profesional y los espacios abiertos, creativos y multidisciplinarios que promueven el aprendizaje formal e informal. Estos espacios fomentan en el profesorado la observación del desempeño de los alumnos y la retroalimentación para formar estudiantes con la capacidad de aprender y adaptarse a las situaciones cambiantes de su vida profesional de manera autónoma a través de la adquisición de las competencias.

5. LIMITACIONES Y FUTURAS INVESTIGACIONES

En cuanto a las limitaciones de la revisión bibliográfica, cabe mencionar que solamente se incluyeron artículos originales publicados en español o en inglés, por lo que podría haber un sesgo de publicación.

Asimismo, aunque las bases de datos consultadas, tanto multidisciplinarias como específicas, albergan un volumen importante de artículos relacionados con la educación, probablemente exista información científica publicada sobre el tema abordado en informes y documentos o en bases de datos de temática educativa que no fueron incluidas al no consultarse otras fuentes de información.

En futuras investigaciones, se pretende buscar en otras fuentes de información y hallar informes o documentos, no estudiados ahora, con información científica publicada sobre el objetivo de esta publicación.

REFERENCIAS

- Aguayo Giménez, E. P., Briones Peñalver, A. J., Cegarra Leiva, D., García Bermejo, J. T., García Martín, A., García Martínez, J. C. and Santos, A. (2014). Guía para la integración en la docencia de la competencia 7: diseñar y emprender proyectos innovadores. In: R. Herrero and A. García (eds.), *7 Competencias UPCT*. Universidad Politécnica de Cartagena, Servicio de Documentación. Cartagena.
- Alemany, L., Álvarez, C., Planellas, M. and Urbano, D. (2011). *Libro Blanco de la iniciativa emprendedora en España*. Fundación Príncipe de Girona. Barcelona.
- Álvarez I., and Guasch, T. (2006). Diseño de estrategias interactivas para la construcción del conocimiento profesional en entornos virtuales de enseñanza y aprendizaje. *Revista de Educación a Distancia*.14:1-12.
- Ballano, S. (2013). *Retos y perspectivas de la educación mediática en la ESO. Una aproximación al contexto catalán*. Accessed in 23th of January 2017, on the Web site of: II Congreso Internacional Educación Mediática & Competencia Digital: <http://goo.gl/rWBCPR>
- Bautista, A. (2007). Alfabetización tecnológica multimodal e intercultural. *Revista Educación*. 34(3): 589-600.
- Boddington, A., and J. Boys (2011). Re-shaping Learning – An Introduction. In: A. Boddington and J. Boys, *Re-shaping Learning: A Critical Reader*. Sense. Rotterdam.
- Brooks, D. C. (2011). Space Matters: The Impact of Formal Learning Environments on Student Learning. *British Journal of Educational Technology*. 42(5):719–726. doi:10.1111/j.1467-8535.2010.01098.x.
- Brooks, D. C. (2012). Space and consequences: The impact of different formal learning spaces on instructor and student behavior. *Journal of Learning Spaces*. 1(2).
- Brooks, D. C. (2012). *Space and Consequences: The Impact of Different Formal Learning Spaces on Instructor and Student Behavior*. Journal of Learning Spaces 1 (2). Accessed in 28th of January 2017, on the Web site of: The University of North Carolina Greensboro: <http://libjournal.uncg.edu/ojs/index.php/jls/article/view/285>.
- Buzón-García, O. (2005). La incorporación de plataformas virtuales a la enseñanza: una experiencia de formación on-line basada en competencias. *RELATEC: Revista Latinoamericana de Tecnología Educativa*, 4(1), 77-100.
- Cleary, I. and Marcus-Quinn, A. (2008). Using a Virtual Learning Environment to Manage Group Projects: A Case Study. *International Journal on E-Learning*. 7 (4): 603-621.
- Coll Salvador, C., Rochera Villach, M. J., Mayordomo Saíz, R. M. *et al.* (2007). Evaluación continua y ayuda al aprendizaje. Análisis de una experiencia de innovación en educación superior con apoyo de las TIC. *Revista Electrónica de Investigación Psicoeducativa*. 5 (3): 783-804.

- Collins, L., Hannon, P. D. and Smith, A. (2007). Enacting entrepreneurial intent: the gaps between student needs and higher education capability. *Education & Training*. 46(8/9): 454-463.
- Comisión Europea (2008). Fomento del espíritu emprendedor, especialmente en estudios no empresariales. Dirección General de Empresa e Industria. España.
- De Miguel, M. (2005). Cambio de paradigma metodológico en la educación superior: exigencias que conlleva. *Cuadernos de Integración Europea*. 2: 16-27.
- Evers F.; Rush J. and Berdrow I. (1999). *The Bases of Competence. Skills for Lifelong Learning and Employability*. Jossey-Bash. San Francisco.
- Fernández, A. (2010). La evaluación orientada al aprendizaje en un modelo de formación por competencias en la educación universitaria. REDU. *Revista de Docencia Universitaria*. 8 (1): 11-34.
- Guitert, M., Romeu, T. and Perez-Mateo, M. (2007). Competencias TIC y trabajo en equipo en entornos virtuales. *Revista de Universidad y Sociedad del Conocimiento*. 4(1):1-12.
- Kane, M.T. (1992). An argument-based approach to validity. *Psychological Bulletin*. 112 (3):527-535.
- Lasnier, F. (2000). Réussir la formation par compétences . Guerin. Montreal.
- Li, P.P., Locke, J., Nair, P. and Bunting, A. (2005). Creating 21st century learning environments. PEB Exchange. *Programme on Educational Building*. 10:15-26.
- Lugo, M.T. and Kelly, V. (2012). *Tecnología en educación ¿Políticas para la innovación?*. Accessed in 21th of January 2017, on the Web site of: XVII Congreso Internacional de Tecnologías para la Educación y el Conocimiento: <http://goo.gl/BgcRSq>
- Martínez, A. M., Navarro, J. M. C., and Sánchez, J. A. R. (2012). Aprendizaje basado en competencias: una propuesta para la autoevaluación del docente. *Profesorado, Revista de Currículum y Formación del Profesorado*. 16(2): 373-386.
- Martínez, G. M. F. (2010). Espacios de aprendizaje en educación superior: de la profesionalización a la innovación para la transformación social. *Apertura*. 2(2): 18-27.
- Mulcahy, D., Cleveland, B., and Aberton, H. (2015). Learning spaces and pedagogic change: Envisioned, enacted and experienced. *Pedagogy, Culture & Society*. 23(4): 575-595.
- Noriega, J. A. V., Moran, L. E. T., and García, E. E. M. (2014). Evaluación de competencias básicas en tic en docentes de educación superior en México. *Píxel-Bit. Revista de Medios y Educación*. 44: 143-155.
- Ortega, P., Ramírez, M., Torres, J., López, A., Servín, C., Suárez, L. and Ruiz, B. (2007). Modelo de innovación educativa. Un marco para la Formación y el desarrollo de una cultura de la Innovación. *Revista Iberoamericana de Educación a Distancia*. 10(1):145-173.
- Padilla, N., Medina, N., Gutiérrez Vela, F.L., Paderewski, P., López, J.R., Núñez, M.P. Delgado and Polo, J.R. (2015). Evaluación continua para aprendizaje basado en competencias: Una propuesta para videojuegos educativos. *IE Comunicaciones: Revista Iberoamericana de Informática Educativa*. 21 (Enero-Junio): 25-38.
- Perrenoud, P. (2004). *Diez nuevas competencias para enseñar*. Graó. Madrid.
- Prieto, L. (2008). *La enseñanza universitaria centrada en el aprendizaje*. Octaedro/ICE UB. Barcelona.
- Roe, R. A. (2002). Competences- A key towards the integration of theory and practice in work psychology. *Gedrag en Organisatie*. 15: 203-224.
- Stephenson, J. and Yorke, M. (1998). *Capability and Quality in Higher Education*. Kogan Page Editorial. London.
- Tobon, S., Pimienta, J. and García, F. (2010). *Secuencias didácticas: aprendizaje y evaluación por competencias*. Pearson. México.

INTERDISCIPLINARITY AND INTERPROFESSIONALITY IN PROFESSIONAL MASTER'S: CONCEPTS, PRACTICES AND SKILLS DEVELOPED ACCORDING TO MASTER'S STUDENTS

Adilene Gonçalves Quaresma
University Center UNA/MG
(adilene.quaresma@prof.una.br)

Ari Silva Gobira
University Center UNA/MG
(arigobira@gmail.com)

Eva Prado
University Center UNA/MG
(eva.prado2010@hotmail.com)

ABSTRACT

The interdisciplinarity and interprofessionalism aim to integrate areas of knowledge and professionals, respectively, and are constituted as epistemological and pedagogical categories since 1960, demanded by the labor market and later for education. Currently, they are constituted as pedagogical principles that guide the basic and higher education. The research, which originated the article, was constituted as a quali-quantitative one, its instrument for data collection was a semi-structured interview with the students of the researched program and aimed to identify the contribution of interdisciplinarity to the professional training. It is considered that the interdisciplinary practices developed in the program, according to the students, have contributed to the development of capacities to interact, to dialogue with different areas, to exchange experiences, to open to the new, to collectivize, to listen, to share, to contextualize, to relate theory and practice, as well as the dialogue between knowledge and professionals from different fields of study and work, preparing future professionals and masters for a more interactive, reflexive and active action in the work environment.

Keywords: Work and Education, Professional Master's, Interdisciplinarity, Interprofessionality.

JEL Classification: I23

1. INTRODUCTION

In the complement of Notebook II, page XXXIX, Private Property and Communism, in his Economic and Philosophic Manuscripts, Marx (2010), when talking about the integration of the Sciences of Man with the Sciences of Nature, already pointed to the integration of the areas of knowledge. In the Socialist Pedagogy, Pistrak (1981 and 2009) brings the Thematic Complexes that, starting from a complex to be analyzed, articulates and integrates the areas of knowledge to develop the teaching-learning process from this Thematic Complex. In this sense, it is affirmed that it was already in this discussion of Marx and in Pistrak's proposal of curriculum the perspective of interdisciplinarity, of the integration of the areas of knowledge, of theory with practice, of the individual in an individual-effective collectivity, of an omnilateral essence in man, of a whole man.

There are three strands of analysis and interpretation of interdisciplinarity. A humanist, which defends that the realization of an ecumenical and reflexive dialogue between the various areas of knowledge needs a change of mind of the subjects involved in the interdisciplinary endeavor. This indicates that interdisciplinarity depends on changing posture. The component of complexity, which defends different proposals of disciplinary integration based on the incorporation of the complexity theme and systemic perspective. And the social-critical aspect, which considers the historical and social dimension of the production of knowledge subordinated to capitalism, taking as reference the Marxian perspective of reality analysis (Mangini; Mioto, 2009).

Thus, based on Marx's (2010) discussions, in the Economic and Philosophic Manuscripts, on the unity between the sciences of nature and man, in the discussions of complexity and the social-critical strands, the interdisciplinarity and interprofessionalism will be analyzed, as epistemological and pedagogical categories necessary for professional formation in the perspective of integral human formation. In the world of work and education, interdisciplinarity, since 1960, becomes the object of research and interest of researchers and entrepreneurs. As of 2008, it becomes an area of Capes that brings together many academic and professional postgraduate programs.

Interprofessionalism is a category present in the health area and it appears as Interprofessional Education, in view of the interprofessional work in the context of the policy of full health care. Therefore it is argued in this article that these

categories are necessary for professional formation in all branches, given the complexity of the world of work and society nowadays.

The research from which this article resulted is part of the research group on Pedagogical Processes in Professional Education of the Postgraduate Program in Social Management, Education and Local Development of the University Center Una, entitled “Interdisciplinarity in the context of the professional Master’s degree: a case study of the experience of the Professional Master’s in Social Management, Education and Local Development of the University Center Una - interdisciplinary educational practices and formation for work” and was developed in two stages: the first, from 2014 to 2015, analyzed the interdisciplinary practices developed in the program and the students’ evaluation of them. The second, developed from 2015 to 2016, analyzed the contribution of these practices to professional formation. This article presents the data of this second stage.

As for the approach, it was oriented by the quali-quantitative perspective. As for the type of research, it comprised bibliographical research with analysis of books and articles on the contribution of interdisciplinarity in professional formation and case study through which it was aimed to identify, from semi-structured interviews with 12 (twelve) master’s students, the abilities they develop in the teaching-learning process that contribute to professional formation.

From this objective, the following specific objectives were formulated: to analyze, in specialized literature, the relation between interdisciplinarity and professional formation and to identify, in the interdisciplinary educational practices developed in the program researched, the contribution to the professional formation. So, the central axis of analysis was the contribution of interdisciplinarity to the professional formation of master’s students. However, the interprofessionality category appeared in the bibliographic research and began to constitute a theoretical category of analysis in this research.

The text is structured around three main axes. The first is a general discussion of the concepts of interdisciplinarity and interprofessionality and their meanings for the professional master’s degree courses; the second discusses the concepts of interdisciplinarity and interprofessionality from the discussions of Marx (2010) on the integration of the Sciences of Nature with the Sciences of Man, as well as the interdisciplinarity contained in the Thematic Complexes of Pistrak (1988 and 2009); the third presents the data of the research carried out in the Postgraduate Program in Social Management, Education and Local Development of the University Center Una. It is considered that the interdisciplinary practices developed in the program, according to the students, have contributed to the development of capacities that allow to establish a relationship between theory and practice, knowledge and the world of work, as well as the dialogue between knowledge and professionals from different fields of study and work.

2. INTERDISCIPLINARITY AND INTERPROFESSIONALITY IN PROFESSIONAL MASTER’S

The professional master’s degree is constituted, in a *stricto sensu* post-graduation, instituted by the Coordination of Improvement of Higher Level Personnel - CAPES, by means of Ordinance No. 47, dated October 17, 1995.

The professional master’s degrees are developed in Brazilian postgraduate programs since the 1960s, after the promulgation of Law 4024, of December 20, 1961, the Law of Guidelines and Bases of National Education. In 1965, with Statement No. 977/65, in the report by Professor Newton Sucupira, the distinction in Brazil was made between the nature and purposes of postgraduate programs, leading to the regulation of letter b of Art. 69 of the referred law and to the organization of the expansion of these courses.

For Capes, in a text about parameters for analysis of professional master’s projects, from 2002, the professional master’s programs must promote the integration between theory and application, knowledge and technical-professional practice; be a preferential demand of the common interest of academic and non-academic sectors; be an initiative of a qualified institution to offer a professional course that contributes to the development or induction of the rise of fields of professional activity and to have its implementation and development supported by a scheme of common activity between the proposing institution and the non-academic professional sectors related to the areas of the course (BRASIL, 2005b).

So, central elements in the professional master’s degree are the integration between theory and application; its formation potential of qualified professionals both in theory and technically for professional performance and the promotion of the development and induction of the rise of new professional activities that consider the demands of the academic and non-academic sectors of each place. The professional master’s, in this perspective, requires an integration of theoretical formation with the demands of the world of work, as well as with the needs of innovation imposed by current social and economic development. According to Quelhas, Faria Filho and França (2005):

The professional master’s degree constitutes an opportunity for a closer approximation between the works conducted by the university to spontaneous or induced demands by the university itself in the social and professional field, demands for technological, social and, in general, knowledge structuring solutions in professional activities. It presents a dimension focused on the horizontality and verticalization of knowledge and therefore vital to the current needs of Brazil (Quelhas, Faria Filho, & França, 2005, p. 98).

Another important issue is the validity of the professional master’s degree with emphasis on the qualification process for the work in social institutions. According to Feltes and Baltar (2005, p. 74), “the qualification of the professionals who work in different areas of knowledge is a demand both by the market and society in a broad sense.”

According to Giuliani (2010, p. 99), “the professional master’s degree has arisen in areas of the most different natures.” This is another important aspect in this expansion of the professional Master’s degree. There is a variety of professional

master's courses, and this variety adds two important characteristics: the local potential, ie courses that meet the demands, local needs and the pragmatic, practical and applied potential, ie, the courses turn to the needs of a particular area of knowledge in which there is a need to apply scientific, social, cultural and technological knowledge to solve problems. What justifies the fact that, in addition to the dissertation, in the professional master's degree the student has to present a technical product.

But what is the relationship between interdisciplinarity, interprofessionality and professional formation? What is the contribution of these categories in the formation in a professional master's degree? First, one of the objectives of the professional master's degree is the integration between theory and application, knowledge and technical-professional practice; and to seek technological, social and, in general, knowledge structuring solutions in professional activities, in order to solve the current problems, as well as the constant demands of the world of work and life. Another element, quoted by Quelhas; Faria Filho and França (2005, p. 98) "[...] is the horizontality and verticalization of knowledge and thus vital to the current needs of Brazil", that is, it is defended that educational practices that take interdisciplinarity and interprofessionality as a reference allow the formation of professionals with the conditions to help solve the great current problems in the society in general, once they get to such complexity that they require the integration of knowledge and actions of several professional areas. In addition, as will be seen further on, the integration of the areas of knowledge have already been proposed by Marx in the Economic and Philosophic Manuscripts.

This principle of the integration of the areas of knowledge is nothing new, as some imagine, and in the professional master's degree it enables the integration of formation with the world of work and life in general, as well as the dialogue with the knowledge of several areas and among a variety of professionals.

Another relevant aspect that gives meaning to the interdisciplinary and interprofessional categories in the professional master's degree is the requirement of the technical product, that is, thinking of a technical product as a result of a research requires thinking that it will be used and by different subjects. In this sense, the listening, the dialogue and the construction of it presupposes the integration of knowledge, its use, cultures, technologies, etc. This imposes a constant attitude of openness and dialogue between master's students, researchers and the community, society in general.

3. INTERDISCIPLINARITY AND INTERDEPENDENCE BETWEEN MEN FROM MARX, PISTRÁK'S THEMATIC COMPLEXES AND THE SOCIAL-CRITICAL PERSPECTIVE

In the complement of Notebook II, page XXXIX, Private Property and Communism, in his Economic and Philosophic Manuscripts, Marx (2010, p. 112) writes about the *Natural science of man*:

History itself is a *real* part of *natural history* – of nature developing into man. Natural science will in time incorporate into itself the science of man, just as the science of man will incorporate into itself natural science: there will be *one* science. |X| *Man* is the immediate object of natural science; for immediate, *sensuous nature* for man is, immediately, human sensuousness (the expressions are identical) – presented immediately in the form of the *other* man sensuously present for him. Indeed, his own sense-perception first exists as human sensuousness for himself through the *other* man. But *nature* is the immediate object of the *science of man*: the first object of man – man – is nature, sensuousness; and the particular human sensuous essential powers can only find their self-understanding in the science of the natural world in general, just as they can find their objective realisation only in *natural* objects. The element of thought itself – the element of thought's living expression – *language* – is of a sensuous nature. The *social* reality of nature, and *human* natural science, or the *natural science of man*, are identical terms. (Marx, 2010, p. 112)(italics by the author).

Marx (2010) starts from the understanding of history as the development from nature to man and from the humanization of this nature by man to start his idea of integration between man and nature and then to say about the integration of the science of nature with the science of man, that is, the natural science of man.

Moreover, it says that man's first object, man himself, is nature, is sensitivity, and only a science of the natural being in general can promote the knowledge of this man nature about itself. And there is, also as an important element, language as an externalization of thought and necessary in this process of integration.

Therefore, there is in this discussion of Marx on the integration of the science of nature with the science of man the perspective of the integration of knowledge and the necessity of the formation of the total, omnilateral, objective and subjective, social being, provided with senses and feelings, because:

[...] the senses of the social man differ from those of the non-social man. Only through the objectively unfolded richness of man's essential being is the richness of subjective human sensibility (a musical ear, an eye for beauty of form – in short, senses capable of human gratification, senses affirming themselves as essential powers of man) either cultivated or brought into being. For not only the five senses but also the so-called mental senses, the practical senses (will, love, etc.), in a word, human sense, the human nature of the senses, comes to be by virtue of its object, by virtue of humanised nature (Marx, 2010, p. 110).

From Marx, the integration of the areas of knowledge through the Thematic Complex is proposed by the first experience of socialist education, after the Russian Revolution of 1917, by Pistrak (1981 and 2009), that is: "students must have a clear understanding of the regularities of history in its concrete manifestations (exchange of economic forms, development of

productive forces, class struggle, etc.) in the light of marxist understanding” (Pistrak, 2009, p. 411). Hence, the Thematic Complex is not only a way of organizing knowledge, but “a system that guarantees an understanding of current reality according to the dialectical method” (Pistrak, 1981, p. 106), since kinds of knowledge are gathered from a theme, complex and, in an integrated way, these establish relation, in a contextualized and problematized way with reality. There are three great complexes: Nature and Man, The work and The society, and from them the disciplines are integrated. In relation to the complex The work, for example, according to Pistrak (1981), this should be introduced in the school “... as an element of social and socio-pedagogical importance destined to unify around it the whole process of education and formation” (Pistrak, 1981, p. 42). To the Thematic Complex, the categories of “actuality” and “self-organization or self-management” are articulated, being “actuality” the present context, with all its contradictions. The category “self-management” encompasses collectivity and self-organization, which occur in living and organizing collectively. Thus, the integration takes place from the complexes and categories “actuality” and “self-management”.

The social-critical slope points to the analysis of the historical and social dimension of the production of knowledge based on the marxist perspective, which says that modern science is subordinated to the logic of social and technical-scientific division of labor in the capitalist way of production. In this sense, interdisciplinarity for this slope is a necessity, but also, and above all, a problem (Mangini; Miotto, 2009). It is a problem not only regarding its concretization, but also with the appropriation of the concept by other slopes, that is, the humanist and the Theory of Complexity.

So, for Frigotto (1995, p. 26), interdisciplinarity arises from the form from which the human being produces as a social being and as subject and object of social knowledge: “[...] it is based on the dialectical character of social reality, by the principle of contradiction, by which reality can be perceived, at the same time, as one and diverse”.

For Moacir Gadotti (2004), interdisciplinarity aims to ensure the construction of a globalizing knowledge, breaking with the boundaries of disciplines. For this, to integrate content would not be enough. It would be necessary, as Fazenda (1979) says, an attitude, that is, an interdisciplinary stance. Attitude of search, involvement, commitment, and reciprocity in the face of knowledge. For Morin (2005),

The ambition of complexity is to account for the links shattered by the cuts between disciplines, between cognitive categories and types of knowledge. In fact, the aspiration to complexity tends towards multidimensional knowledge. It does not want to give all the information about a phenomenon studied, but to respect its many dimensions: like I have just said, we must not forget that man is a biological-sociocultural being, and that social phenomena are at the same time economic, cultural, psychological and so on. Having said this, in aspiring to multidimensionality, complex thinking has within it a principle of incompleteness and uncertainty (Morin, 2005: 176-177).

So, for the theory of complexity, what is put is the need to articulate the disciplines, the categories and the knowledge and understand the human being as biological sociocultural, because knowledge and reality are incomplete and uncertain.

According to Japiassu (1976, p. 74), “interdisciplinarity is characterized by the intensity of exchanges between the specialists and the degree of real interaction of the disciplines within the same research project”. It is not enough to integrate the disciplines, it is necessary the exchange between specialists and professionals.

It is in the perspective of the integration of professionals that comes interprofessionalism. It includes the integration of professional practices in order to provide more efficient, effective and quick answers to the demands of the work. According to D’Amour and Oandasan (2005, quoted by Araújo and Galimberti, p. 467), “interprofessionalism is a response to the fragmented health practices, developed through a cohesive practice among professionals from different disciplines with a focus on the needs of the user, the family and the community”.

In the area of health, Interprofessional Education (IPE) is defined as “the learning that happens when two or more professions learn about, with and between, in order to improve collaboration and results in health” (WHO 2010, Apud Germani *et al.*, p. 3).

Interprofessional education, as interprofessional work, requires the interprofessional cooperation that, according to D’Amour and Col. (2005 quoted by Matuda, Aguiar and Frazão, 2013, p. 179): “Interprofessional cooperation can be defined as the set of relations and interactions which happen between professionals who work together in the field of health teams. It is a complex, multi-determining process, voluntary and dynamic, which implies constant negotiation”.

Discussions in the health area on education and interprofessional collaboration began in the first half of the 20th century, but it was in the 1970s that, following the same direction as of the discussions on Primary Health Care (PHC), the World Health Organization (WHO) “now considers interdisciplinary education as a complementary strategy to traditional education programs in the formation of health professionals (Oandasan *et al.*, 2004 quoted by Matuda, Lucena and Frazão, 2013, p. 176).

But, in practice, according to Peduzzi *et al.* (2015, p. 8), the formal and informal opportunities for IPE in Brazil are rare, “for example, among the 197 medical courses (42% public and 58% private) and 883 nursing courses (16% public and 84% private)” and only one public university implemented an integrated curriculum based on IPE and only a few courses promote interprofessional practices (Peduzzi *et al.*, 2015).

However, it is perceived that interdisciplinary and interprofessional practices add the necessary skills for the professionals of the various branches, in order to work efficiently, with commitment and social responsibility. In interprofessional cooperation, for example, some skills and concepts are needed, for example:

In a literature review, D’Amour *et al.* (2005) identified terms related to the definition of the concept of interprofessional cooperation, classified according to the following keywords: (1) sharing, described as divisions of responsibilities, sharing of decision making; (2) partnership, referring to affinity relationships, open communication,

mutual respect and trust; (3) interdependency, mutual dependence, participation of each professional in the therapeutic projects; and (4) power, empowerment of each member, which has its power/value recognized by the team (Matuda, Lucena and Frazão, 2013, p. 179).

These concepts and capacities, in view of the complexity of the world of work and life nowadays, and the experience of Interprofessional Education and Work, require pedagogical strategies and practices to be acquired. In the presentation of the field research data, the interviewees talk about the importance of these and others for the professional formation.

4. INTERDISCIPLINARITY AND PROFESSIONAL FORMATION

The Postgraduate Program in Social Management, Education and Local Development of the University Center UNA has a single area of concentration (Social Innovations and Local Development), which aims to produce knowledge, intervention and make professionals with the capacity to develop innovative social actions in the fields of education and social management committed to local development and social innovation. To this area of concentration two lines of research are integrated: Social Management and Local Development and Education and Local Development.

Because it is interdisciplinary and professional, besides having faculty and students of several areas of knowledge, the program develops interdisciplinary practices in an attempt to promote the integration of the knowledge and the diverse experiences of these teachers and students, as well as of those with the reality of life and the world of work for master's students and future masters and professionals. The interdisciplinary practices developed in the program include:

Shared Teaching, in which 2 or 3 teachers together teach a discipline or with a division of the content of the discipline and with meetings with all the teachers and the class at the beginning, middle and/or end of the course.

Interdisciplinary field activity: the interdisciplinary field activity comprises didactic strategy of teaching-learning processes, carried out by professors and academics in the place where the studied phenomenon occurs. The interdisciplinarity in this activity consists in the dialogue and integration of the knowledge of the discipline(s) and of these to the contextualized, analyzed and visited reality. The objectives are to contextualize contents studied in disciplines; to develop the capacity for observation and critical sense; to integrate social practices into academic activity; to form attitudes such as sense of responsibility, cooperation, dialogue and teamwork; to develop skills in collecting, systematizing and analyzing data; to develop the capacity to work with analytical models and concepts to understand the realities observed, especially through interdisciplinary practice; to develop skills related to the methodological procedures appropriate to scientific research; to make possible the exchange of ideas and experiences between the participants in the academic environment and between these and the visited places. The places can be a community, public or private space, association of residents, camping and/or settlement, urban occupation, among others. This activity is developed by the discipline of Fundamentals of Social Management, Education and Local Development (compulsory subject), taught by 3 teachers, and the visit, in the first half of 2015, was to Vila Itaú, in Contagem/MG, in which residents are in dispute with the public power for the permanence and possession of the land of their houses. In the first half of 2016, it was in Rosa Leão Occupation, which is located in the Isidora region, northern of Belo Horizonte, which borders with the city of Santa Luzia. This occupation began on April 13, 2013.

Interdisciplinary Thematic Seminar which comprises a seminar on the issue, theme or activity involving two or more subjects. The Interdisciplinary Thematic Seminar strengthens interdisciplinarity, it starts from a single theme, activity or problem of interest to two or more disciplines that seek foundation and turn their different eyes to the same theme, object of study or problem; provides the diversity of interpretations of teachers and students. It follows the presentation and analysis of the data according to each category of analysis.

3.1 The abilities developed according to the master's students from the interdisciplinary practices

The question that guided the interviews about category 1 was: Explain how the interdisciplinary practices contribute to the acquisition of each of these capacities and learnings and what their importance for the professional performance of your area is: 1- To dialogue with other colleagues from other professional areas; 2. To produce new knowledge; 3- To integrate the knowledge of the disciplines and the exchanges of knowledge and experiences with colleagues from other areas; 4- To develop positive interpersonal relationships and 5- To contextualize the acquired knowledge in the observed reality.

Based on this question, interview data were organized into two categories of analysis: Category 1 Contribution of interdisciplinary practices to professional practice and Category 2 Contribution to the formative process and to personal life.

It is important to clarify, too, that the abilities presented above, that compose the question, were presented by the master's students when they answered the questionnaire applied in the first stage of the research that aimed to evaluate the interdisciplinary practices developed. In this second phase, what was sought was to verify how these capacities, presented by them, contribute to their professional formation and life. The presentation and analysis of the data follows:

CATEGORY 1 - Contribution of interdisciplinary practices to professional practice

All interviewees said that interdisciplinary practices contributed to professional formation and altered their current professional practices, as shown below:

Some situations seen in the master's course have made me change my practice in the teaching itself and some methodologies used in the classroom stimulated me to listen to the other that has a different perspective (Interviewee 3).

The interdisciplinary practice has contributed both to teaching and to the clinic in which I work, due to the more diverse and comprehensive view of the professional work that patients take to the office, because I can talk better to the patients, for they bring unknown areas and it is necessary to enter these areas to understand them better (Interviewee 2).

This, I really felt in the discipline that I am doing now, developing a network that changed my way of acting as a coordinator, and to understand that it is necessary to work in a different way with my students because I understood that I could not develop a top-down approach with my teachers, and so with my students, and I could see that everyone has something to contribute, some more, some less, depending on the emphasis of the event, and during the master's classes, while we were discussing the texts, I changed my behavior and my perceptions and I applied a lot of things to my private groups, even during the classes, trying to get them to participate with me (Interviewee 10).

It happens all the time, and it makes you think hard about your professional practice. The classes are not only expositive, they present the texts before and throw them into the debate in the classroom. In the production of knowledge, it happens all the time, from the moment you study, debate and think about your professional practice, in everything you create things that will contribute to your professional area and to the academic environment, eg: the writing of articles, dissertations (Interview 12).

These lines emphasize the contribution to listen to the other, to dialogue with the other that comes from different areas, unknown ones, but necessary for the professional practice.

The interdisciplinary practices worked in the master's degree helped me a lot in the pedagogical practice, because in children's education the curriculum is a moving curriculum, then the interdisciplinary practices are inserted all the time in this curriculum, in the work in all the languages, where the contents articulate among themselves (Interviewee 5).

The interdisciplinary practices worked in the master's degree made easy the world view that I didn't have, that is, it opened a much larger field that I can work with my students adding new knowledge to this work and the question of adding new disciplines helped us go beyond theories, but also to complement the practice by breaking formalities that were totally closed, and we have been working a little more of that, we are improving our interaction and thus, they are interacting better (Interviewee 6).

In addition to facilitating, broadening the world view, interviewees talk about the contribution of the activities in integrating the disciplines and the practice, breaking the closed, fragmented formalities and opening for interaction, exchange beyond theory.

In my work, in the part of the other's view, I am more open to listening to modify my practices through the other's opinion and view, my opinion now is not the only one, everything starts being relativized. The solutions nowadays are joint and everyone is happy about it (Interviewee 2).

And, after seeing this practice in the master's course, I was able to rethink my day to day work and I saw that everything gets better, and the proposal that I took to the coordination was to insert geography in the daily life of these students, and before I saw things in a fragmented way, and now my view has changed, so the interdisciplinary practices are very important for the work performance (Interviewee 8).

Here, it is possible to rethink the work, to listen to the other's opinion, to relativize and understand that solutions can be built together. It can be noticed, therefore, that the interviewees pointed out contributions of the interdisciplinary practices developed in the program that meet the discussions presented by the theorists regarding the contribution of interdisciplinarity and interprofessional education to professional formation, namely: listening to the other, the different; to dialogue, to open yourself to the new; to share; to integrate theory and practice; to interact; to exchange opinion, knowledge; to share solutions; not to impose your opinion; to enter other areas.

CATEGORY 2 - Contribution to the formation process and to the personal life, which means:

In the master's degree, interdisciplinary practice provides a more open view, to realize that nothing has only one dimension, there are several angles. In life, in general, it is important that we have this interaction [...] (Interviewee 2).

The interdisciplinary practices allow you to relate the content of different areas, your world experience, your conception of place, where you speak from in relation to things, both your formation and your professional performance, and also in relation to the daily life that allows you to have a greater integration, to make a relation between what you study and your professional practice and your world experience and your reality (Interviewee 3).

It is highlighted here what the interviewees talk about the contribution of interdisciplinary practices to school education and to life in general. To see all dimensions, the problem's angles, helps in the formation and the personal life. In this sense, it is also considered that our everyday interpersonal relationships are asking for a more dialogic, interactive posture, beyond tolerance, the need to live with and to dialogue with the different, the divergent, the strange.

Whether we are in modernity or in postmodernity is an intense, controversial, polemical debate, but that we are in a troubled world, in all senses, we may have more concordances. In this sense, to dialogue, to interact, to integrate, to converge, to agree, to get closer, even with differences, divergences, are important actions in the formation and in the practice of any professional nowadays.

5. FINAL CONSIDERATIONS

The article presented the results of the research carried out in a Professional and Interdisciplinary Postgraduate Program on the contribution of the interdisciplinary practices developed in this program for professional formation. For this, it defended that the category of interdisciplinarity was already present in Marx's Economic and Philosophic Manuscripts, when he defends the integration of the Sciences of Nature with the Sciences of Men, as well as in Pistrak through the Thematic Complexes.

Still in the attempt of the theoretical foundation of the thematic, it presented the meanings for the professional master's degree of interdisciplinary practices, once that it demands preparation from professionals that establish integration between scientific knowledge and the demands of the world of work and society, with an innovative character, considering the complexity of this society.

Regarding to the interdisciplinary and interprofessional categories, it has been shown that they occupy the educational and professional scene since the 1960s and aim to contribute to a more efficient, effective and responsible professional formation and action in terms of meeting the demands of the users, from the health area or any other professional ones. Coming from the world of work, they were inserted in the educational environment in an attempt to improve professional formation in view of society's current demands. In this sense, once society has divergences and contradictions, different ways of understanding interdisciplinarity have been placed in the scenario, that is: the humanist aspect, complexity and social-critic.

The social-critic aspect was taken as a reference for the discussion presented on interdisciplinarity and interprofessionality, for which interdisciplinarity understands the human being as a social being and subject and object of social knowledge, and in this process the dialectical character of social reality needs to be considered and it must be noticed, at the same time, in its totality and diversity that complement each other.

Thus, for the master's students interviewed, the interdisciplinarity allowed to develop the capacity to dialogue with the different; integration of knowledge in the many areas; to change the opinion; to relativize; to open to the new; to interact with the other; to exchange knowledge; to collect solutions not only in the work environment, but in life in general. In this sense, one interviewee's speech stands out: "And after seeing this practice in the master's degree I was able to rethink my work in my day to day life and I have seen that everything gets better [...]", that is, despite of the contradictions of the world of work, is there even the slightest possibility of work getting better?

REFERENCES

- Araújo, E. M. D.; Galimbertti, P. A. A colaboração interprofissional na estratégia saúde da família. In: *Psicologia & Sociedade*, 25(2), 461-468. Available at: <http://www.scielo.br/pdf/psoc/v25n2/23.pdf>. Accessed on: May 11, 2016.
- Brasil, Capes. Ordinance n. 47, of October 17, 1995. RBPG. V. 2, n. 4, p. 147-148, jul. 2005a.
- Fazenda, I. C.(1979). *Integração e interdisciplinaridade no ensino brasileiro*: efetividade ou ideologia. São Paulo: Loyola.
- Feltes, H. P. de M.; Baltar, M. A. R. Novas perspectivas para mestrados profissionais: competências profissionais e mercados regionais. *R B P G*, v. 2, n. 4, p. 72-78, jul., 2005.
- Frigotto, G.(1995). A interdisciplinaridade como necessidade e como problema nas ciências sociais. In: Jantsch, Ari Paulo; Bianchetti, Lucídio (Orgs.). *Interdisciplinaridade: para além da filosofia do sujeito*. Petrópolis: Vozes, 199, p. 23-35.
- Gadotti, Moacir.(1993) *A organização do trabalho na escola*: alguns pressupostos. São Paulo: Ática.
- Germani, A. C.C.G *et al.* Aprender a trabalhar juntos: desafios no ensino da prática interprofissional e colaborativa. (s.a e s.p). Available at http://www.convibra.org/upload/paper/2013/59/2013_59_6391.pdf. Accessed on: May 11, 2016.
- Giuliani, A. C.. Perfil Profissiográfico dos Egressos do Programa de Mestrado Profissional em Administração de uma Instituição de Ensino do Interior do Estado de São Paulo. *Rev. Adm. UFSM*, Santa Maria, v. 3, n.1, p. 94-108, jan./abr., 2010. Available at: <http://periodicos.ufsm.br/reaufsm/article/viewFile/2242/1369>. Accessed on: March 13, 2014.

- Japiassu, H. (1976). *Interdisciplinaridade e patologia do saber*. Rio de Janeiro: Imago.
- Mangini, F. N. da R.; Miotto, R. C. T.. A interdisciplinaridade na sua interface com o mundo do trabalho. *Rev. Katál*. Florianópolis v. 12 n. 2 p. 207-215 jul./dez. 2009. Available at: <http://www.scielo.br/pdf/rk/v12n2/10.pdf>. Accessed on: June 29, 2012.
- Marx, K.(2010). *Manuscritos Econômico-filosóficos*. Jesus Ranieri, 4reimp. São Paulo: Boitempo.
- Matuda C. G.; Aguiar, D. M. de L.; Frazão,P. Cooperação Interprofissional e a Reforma Sanitária no Brasil: implicações para o modelo de atenção à saúde. *Saúde Soc*. São Paulo, v.22, n.1, p.173-186, 2013. Available at: <http://www.revistas.usp.br/sausoc/article/view/76419/80126>. Accessed on: may 11, 2016.
- Peduzzi,M.; Norman,I.;Coster,S. 3, Meireles, E.. Adaptação Transcultural e validação da *Readiness for Interprofessional Learning Scale* no Brasil. *REVISTA:Rev Esc EnfermUSP*,2015;49(Esp2):7-15.Available at: <http://www.scielo.br/pdf/reusp/v49nspe2/1980-220X-reeusp-49-spe2-0007.pdf>. Accessed on april 10, 2016.
- Pistrak, M. M.(1981). *Fundamentos da Escola do Trabalho*. São Paulo, Brasiliense.
- Pistrak, M. M. (2009). *A Escola-comuna*. 1 ed. São Paulo: Expressão Popular.
- Quelhas, O. L. G.; Filho, J. R. F.; França, S. L. B. F. O mestrado profissional no contexto do sistema de pós-graduação brasileiro. *RBPG*, v. 2, n. 4, p. 97-104, jul. 2005.

THE IMPLEMENTATION OF A CORE OF UNIVERSITY EXTENSION OF TRANSDISCIPLINARITY AND ENTREPRENEURSHIP: A PROPOSAL FOR PROFESSIONAL COMPLEMENTATION FOR THE MARKET

Celso José de Campos
Federal University of the State of Rio de Janeiro
(celso.campos@uniriotec.br)

ABSTRACT

The purpose of this study is to develop and implant in a University a Nucleus of Transdisciplinarity and Entrepreneurship as a model of strategic mental posture that transforms transdisciplinary epistemology into entrepreneurial attitudes. This study aims to define the existing interrelations of the knowledge acquired in professional training in competitive businesses, both in the social area and in the market. We study, therefore, that transdisciplinarity is a stage after interdisciplinarity, where it is understood that we are highlighting an emerging vision and a new attitude towards professional knowledge and practice. Thus, the predominance of transdisciplinarity deepens the specific knowledge and provides conditions for the development of science and the technological progress we enjoy today. But otherwise, if we think of the course of humanity, driven only by the disciplinary sciences, we perceive singularly its inhumane aspect and the myopia of the disciplinary “way of thinking” of the specialists. According to De Freitas (De Freitas *et al.*, 1994), human history is full of expert solutions that put the planet and humanity at risk. In this way, considering the transdisciplinary attitude (rigor, openness and tolerance), this nucleus will seek to cultivate the lucidity, creativity, prudence and daring of the learner student who seeks to undertake business, be they short, medium or long term, With objectives well delineated within an approach of sustainable development of the society and of the human being.

Keywords: Entrepreneurship, Transdisciplinarity, Strategy, Sustainability, Market.

1. INTRODUCTION

The purpose of this study of the implantation, in a University, a Nucleus of Transdisciplinarity and Entrepreneurship as a proposal of professional complementation for the Market. This Nucleus is to develop and implant an institutional academic model of research and reflective practice on transdisciplinary epistemology into the current areas of knowledge, education and work, considering the interrelationships between them. It is observed, therefore, that transdisciplinarity is a stage after interdisciplinarity. This is here considered as the interaction between two or more disciplines. In this case, when we speak of transdisciplinarity what is between, through or beyond the disciplines, we are highlighting an emerging vision and a new attitude towards knowledge. Respecting the transdisciplinary attitude (rigor, openness and tolerance), this study tries to cultivate in the participants the lucidity, the creativity, the prudence and the daring to undertake in businesses to be created or already developed, be they, of short, medium or long term, In order to contribute to the sustainable development of society and the human being.

2. THE PROBLEM AND ITS JUSTIFICATIONS

The problems of life are solved with transdisciplinary thinking, but the problems of knowledge tend to follow a Cartesian reasoning of objectivity, linearity and decontextualization. Nature is not linear. Linearity is a lens constructed by classical logic, it is part, but nature has a complex logic. The predominance of disciplinarity deepened the specific knowledge and gave conditions to the development of science and the technological progress we enjoy today. But if we think of the course of humanity, led by the disciplinary sciences, we will see its inhuman aspect and the myopia of the disciplinary “way of thinking”. In this context, Morin (Morin, 1998) states that “human history is full of this short-sightedness”, stressing that “a specialist who is only a specialist is a danger to the world and to humanity, and specialized science does not explain life.” This, according to the author, only acquires meaning when being contextualized, through all accumulated knowledge, recognizing the right of every human being, whatever its truth, religion, sex, culture and race to exist and inhabit this planet, living and Contributing, respecting and being respected by individual and group differences. This change of attitude, at the local level of university communities, begins with a sense of tolerance and openness in dealing with human differences. “To love the equal is to love oneself, the challenge lies in loving the different.” (De Freitas *et al.*, 1994). In this case, the purpose of this study is to propose the implementation of a “University Extension Nucleus of Transdisciplinarity and Entrepreneurship, being a proposal of complementation in the professional formation of the students of a University for the market”, in the sense of developing and implanting a An institutional academic model of research and reflective practice on transdisciplinary epistemology and its generation of projects aimed at its implementation in the current areas of knowledge, teaching and work, considering the interrelationships between them.

3. THEORETICAL DEVELOPMENT

3.1 Transdisciplinarity and Its Impact on Professional Training

Transdisciplinarity, in this case, represents a shift in thinking about research and education challenging the division of academic work into traditional disciplines such as quantum physics, museology, anthropology, philosophy, etc. (Freeland, 1992). In this case, teaching must be transcended. The advent and development of transdisciplinarity demonstrate emerging ways not only of organizing, but of thinking about knowledge and research in a world that has become “too big to be known” (Weinberger, 2011). Mahan’s (Mahan, 1970) study of literature in the philosophy of social sciences indicates that while transdisciplinarity may have been a new term, the concerns that gave rise to such a notion were already present as undercurrents in the writings of twentieth-century scholars, which he quotes. Although it does not provide a concise definition of transdisciplinarity, it at least gives us an idea of what it thinks it means and how it can improve the quality of academic work. Yet, according to Mahan (Mahan, 1970), transdisciplinary research would be characterized by a common orientation to transcend disciplinary boundaries and an attempt to bring continuity to research and knowledge. Other characteristics, he continued, would be: (a) attention to the breadth, context and frame of reference of the survey and knowledge; (B) interpenetration of boundaries between concepts and disciplines; (C) exposing disciplinary boundaries to facilitate understanding of implicit assumptions, research processes, and resulting knowledge; (d) humanistic reverence for life and human dignity; (E) desire to actively apply knowledge to the improvement of man and society. New discoveries on many fronts have also led scholars and scientists to think of large macro systems (including cosmic awareness, intelligent life outside Earth, Intergalactic Village, etc.) and to develop meaningful links between superficially held subjects. The glorious moment of our civilization was the spectacular realization of the landing of the man on the moon in 1969. Thus some utopian speculation began on the future possibilities for universities, and some of this was expressed in the early writings on transdisciplinarity. In fact, new colleges and universities were established based on some of these new theories. Interdisciplinary cooperation and collaboration, long established in higher education in the United States, continued at an accelerated pace, advancing in the 1970s in women’s (and later gender) studies, environmental science, urban studies, and cognitive science. Klein, 1996). Later, other pieces of interdisciplinary innovation can be seen in new specialties, including disability studies and peace and conflict studies, to name two successes. As courses and academic programs were created around these new concentrations, the curricula needed to be defined and ratified and the resources needed to be allocated. However, the notion of transdisciplinarity introduced in the early 1970s remained underdeveloped and almost parted up to the early 1990s. Therefore, although the words transdisciplinarity and transdisciplinary with their basic meanings involving transcending the established framework of traditional academic disciplines, were first used around 1970, the conditions for initiating transdisciplinary work did not materialize for at least two decades. (Kessel & Rosenfield, 2008). Issues of sustainability and the global environmental crisis were key words in moving the previously unused concept of transdisciplinarity to the forefront of science and planning debates. At the world summit, called the “United Nations Earth Summit” in Rio de Janeiro (Brazil) in 1992, the key interlocutor in the debates on new combinations of disciplines in education identifies, as the inflection point, awareness about the need for action in the academic and scientific communities. Shortly thereafter, in 1994, the First World Congress of Transdisciplinarity was held at the Arrábida Convent in Portugal, producing a Letter of Transdisciplinarity, attributed to Romanian physicist Basarab Nicolescu, Portuguese painter Lima de Freitas and French transdisciplinary Edgar Morin. (Morin, 1994). Nicolescu’s views are evident in the Charter, and he has taken the lead in developing a theory and program for transdisciplinary work. In this and other works, Nicolescu (2010) explicitly describes transdisciplinarity as complementing disciplinary approaches. His concept of transdisciplinarity focuses on complexity as a fundamental feature of reality, on the premise of different levels and dimensions of reality and on what he calls the logic of the included medium, challenging the Aristotelian axiom of the excluded environment, suggesting that in the spirit of mechanics Quantum theory, scientists “rethink” the traditional absolute separation of subject and object. The transdisciplinarity of Nicolescu (Nicolescu, 2010) seems applicable to the integration of the humanities, including spiritual subjects such as religion, philosophy and education with subjects of physical sciences such as those existing in laboratories and space observatories. As Sue McGregor (McGregor, 2015b) explains, Nicolescu is concerned with the meaning of going beyond disciplines and states that “transdisciplinarity identifies with a new understanding of what is between, beyond and beyond disciplines”. Exactly the same year in that the First World Congress of Transdisciplinarity took place, another project appeared presenting a somewhat different approach to transdisciplinarity. The book “The New Production of Knowledge” (Gibbons *et al.*, 1994) produced at least as much impact as Nicolescu’s theoretical framework, but presented a different vision and program for transdisciplinarity, where his work was seen as more immediately practical than the programmatic and oracular work of Nicolescu, even though he lacked his daring visionary visions. The fact that his work is collaborative is significant in itself, since part of his message concerned the collaboration of experts from various fields in specific projects that transcended the boundaries of specific disciplines. Its innovation was the “Knowledge 2” knowledge production concept, involving the knowledge developed for a specific application and involving the work of experts drawn from academia, government and industry. Gibbons (Gibbons *et al.*, 1994) also emphasizes that such knowledge production and problem solving are not merely applied research and development, nor are they limited to sciences, technology or medicine, but also extend to the humanities, such as museums, architecture and modes of research that rely on “information technology”.

The production of Mode 2 knowledge, according to Gibbons (Gibbons *et al.*, 1994), linked to transdisciplinarity, came with increasing globalization as the Cold War ended. Instead of offering a philosophy of transdisciplinarity, as did Nicolescu, Gibbons’ study was descriptive and analytical. He has helped subsequent readers understand transdisciplinarity and has influenced paving the way for research on the sociology of science, technology, and higher education as well as policies in those fields. Even if we do not fully accept Gibbons’s postulation of Mode 2 knowledge production, the interconnections

between academia, industry, governments, and nongovernmental organizations are clearly central to understanding knowledge production in today's world. This new social, economic, political and bureaucratic organization is crucial in the works of some transdisciplinary.

As has been said so far, transdisciplinarity emerged in the latter part of the twentieth century in response to a number of concerns about the pitfalls of specialization and the compartmentalization of knowledge due to a globalized economy, changes in the center of gravity in the production of knowledge, Research ethics and the environmental crisis. It has become more than a critique of Disciplinarity and gained recognition as a mode of research applied to real-world problems that need not only be understood in new ways but also require practical solutions. For the transdisciplinary concerned with justice, sustainability and the eradication of poverty, war, genocide, famine or other such bad problems, theoretical solutions are not enough, although they realize that perverse problems by definition may be impossible solve. However, transdisciplinarity is not necessarily applied or practical. Those who focus on the educational benefits of transdisciplinarity insist that transdisciplinarity is as much about the liberal arts as about cultural symbolism. What differentiates transdisciplinarity from other approaches is their acceptance and their focus on the inherent complexity of reality when a university examining board judges a problem or phenomenon of multiple angles and dimensions in order to "discover hidden connections between different disciplines." It is by using this multidimensional complexity to analyze problems, communicate and teach alternative solutions about them, that is where the contribution of transdisciplinarity is. As disciplinarity has withdrawn the meaning of life, filling it with values of adaptation to the current system, modern education is no longer concerned with the integral development of young apprentices in universities. It simply prioritizes the rational dimension trying to equip them with the necessary to integrate and give continuity to the current system. In dichotomizing the subject of the object, the being of knowledge, we consider the phenomena of subjectivity as emotion, feeling, intuition, sensibility, as being a second category aspect, "source of errors" in Descartes's words. But globalization itself indicates a new way of educating young people, suggesting the rescue of this dimension omitted throughout modernity. Transdisciplinarity thus transgresses the epistemological boundaries of each disciplinary science and builds a new knowledge "through" the sciences, an integrated knowledge in function of humanity, rescuing relationships of interdependence, since life is constituted in the relations maintained by the individual with the environment .

3.2 Entrepreneurship and Employability

As already discussed above, transdisciplinarity transgresses the epistemological boundaries of each science, building a new knowledge, applied to the problems of the real world. In this case, innovation then comes from this knowledge. Thus, the term entrepreneur of the knowledge has gained remarkable prominence and becoming essential for the academic formation of the students of superior course. We say that a knowledge is produced when there is a codification, a communication and an acceptance of it by a collective of people, mainly by the scientific community. The entrepreneur of knowledge is defined by many researchers as "an ability to recognize or create an opportunity, producing or carrying out an innovative practice of knowledge..." As Gibbs (Gibbons *et al.* Mode 2 knowledge production concept aims to develop knowledge for a specific application, involving the work of specialists drawn from academia. Rather than producing knowledge, a public or private market oriented organization is needed that is capable of sustaining itself through the production of such knowledge, discarding public funds or research grants. It would be sustainable entrepreneurship of knowledge, becoming the most important characteristic of the entrepreneur of knowledge would then be the ability to boost, coordinate and manage himself and his team in order to increase scientific knowledge. This characteristic is already born in university courses, and without it, any form of teamwork, or concrete results with respect to the creation of knowledge, would be impossible. The word entrepreneurship has been a subject in the main media and used in several areas, making it difficult to perceive the real meaning and its use. In our view, the common components in all definitions of entrepreneur: has initiative to create a new business and passion for what it does; Uses the resources available in a creative way transforming the social and economic environment where it lives; Accepts taking risks and the possibility of failure. Thus, Dolabela stresses (Dolabela, 2010) that "The entrepreneur is someone who dreams and seeks to transform his dream into reality". Taking as reference the Brazilian companies established in 2007 and the information on these companies, available at the Federal Revenue Service - SRF, until 2010, the survival rate of companies with up to 2 years of activity was 75.6%. This rate was higher than the rate calculated for companies born in 2006 (75.1%) and born in 2005 (73.6%). As the mortality rate is complementary to that of survival, it can be said that the mortality rate of companies with up to 2 years fell from 26.4% (born in 2005) to 24.9% (born in 2006) and to 24, 4% (born in 2007), according to the Global Entrepreneurship Monitor survey -GEM in 2015. (Gem, 2015). However, in Brazil, although Micro and Small Enterprises (SMEs) are dominant among formal companies, management difficulties are evident, since they are born more of the enthusiasm of their idealizers and follow operations carried out with little planning. Faced with this scenario, education agencies at all levels can provide training to the population and work towards creating a culture conducive to entrepreneurship in Brazil. The intensification of studies in the field of entrepreneurship invariably leads us to attempts to associate the entrepreneur's profile with economic and social factors and implications (Drucker, 1987). Historically, Schumpeter's studies (Schumpeter, 1988) were determinant for to attribute to the entrepreneur the character of expansion factor of an economy. However, under the prospect of the effects of economic globalization, we are led to believe that the necessary economic growth is not enough to generate development. From the point of view of sustainability, besides economic efficiency, it is also necessary to consider the issue under the dimensions of social equity and environmental conservation. In this sense, the incentive to strengthen organized regional structures of small enterprises is the response to competitiveness and, especially, to reduction of social problems (Buarque, 2002). According to Dolabela (2006): "The foundation of entrepreneurship is citizenship, the concept of entrepreneurship deals not only with individuals, but with communities, cities, regions, and countries." In this way, entrepreneurship assumes connotations

of social phenomena. However, in order for micro and small enterprises and their entrepreneurs to be drivers of solutions to chronic social problems - for example, by generating jobs and better income distribution - the development of their development requires their preparation for the formulation (Gomes, 2005). In this paper, we present the results of a study of the social and economic development of the Brazilian economy. The Global Entrepreneurship Monitor survey (Gem, 2015) - a study done in more than 50 countries, representing together 90% of the GDP and 2/3 of the world population - among several aspects highlight the evolution of the rate of entrepreneurship by motivation (need or opportunity). According to the Micro and Small Business Support Service (SEBRAE, SEBRAE, 2013), entrepreneurs by opportunity generally use maximum innovation potential, and in Brazil, business tends to use a minimum potential for innovation. Lack of resources of the majority of the Brazilian entrepreneurs and also because the businesses are opened, for reasons of survival and the lack of jobs in the country.

3.3 Teaching of Entrepreneurship in Universities

The concept of “entrepreneurship” was popularized by economist Joseph Schumpeter in the year 1945 as the basis of the theory of Creative Destruction. Second, (Schumpeter, 1954), According to him, the entrepreneur is a versatile individual with techniques and skills to know how to produce based on capitalism. The author pointed out that the measure for a society to be considered capitalist is to know if it entrusts its economic process to the man of private business, that is to say, the entrepreneur. However, our school system, mainly in Latin America, is designed to learn how to master analytical questions, where the student spends years, from primary to university, in a relationship of almost passivity with learning. To know if entrepreneurship can be taught, we must adapt the pedagogical approach to the logic of each discipline or field of study. One can not teach entrepreneurship as one teaches other subjects (Filion, 1994). Also, Filion (1994) states that it is perfectly possible to offer programs and courses as learning systems adapted to the logic of this field of study, making it interesting to have this type of pedagogical challenge. The same author also points out that the people who enroll in these courses do not want everyone to become entrepreneurs, but several want to discover the world of the entrepreneur. Therefore, it is necessary to make distinctions between the categories of courses they deal with, both awareness-raising and management practices. Therefore, educational institutions are now able to institute certificates and diplomas in this field. Today it is very easy to find courses on entrepreneurship, including case studies, fieldwork and contacts with people who experience this world. Entrepreneurship arises from cultural contexts that develop around entrepreneurs who run small businesses. (Oliveira, F. M, 2012). In Oliveira (Oliveira, F. M, 2012), we find the information that, about a hundred years ago, the creation of schools and the phenomenon of education for the population was aimed at separating learning from its context and its practical application. So if we ask ourselves who is more prepared to teach the discipline: the researcher or who practices entrepreneurship? The most appropriate response tends to a combination of the two. In fact, several researchers were interested in the issue. Thus, also emphasizes Oliveira (Oliveira, F. M, 2012), that university students tend to prioritize elements of conceptualization and abstraction, while entrepreneurs generally prefer the most concrete. It is recognized that there is no link between the level of school learning and success in business. As the trend among students is to define success according to own achievement criteria, where priorities are no longer accumulation and status, but balance of quality of life, entrepreneurship teaching aims to strengthen this idea, seeking to encourage the student to develop Creative processes that explore their capabilities and capabilities. Previously, entrepreneurship education was centered on the business plan. Currently, the mainly in Latin America, it is designed to learn how to master analytical questions, where the student spends years, from primary to university, in a relationship of almost passivity with learning. To know if entrepreneurship can be taught, we must adapt the pedagogical approach to the logic of each discipline or field of study. One can not teach entrepreneurship as one teaches other subjects (Filion, 1994). Also, Filion (1994) states that it is perfectly possible to offer programs and courses as learning systems adapted to the logic of this field of study, making it interesting to have this type of pedagogical challenge. The same author also points out that the people who enroll in these courses do not want everyone to become entrepreneurs, but several want to discover the world of the entrepreneur. Therefore, it is necessary to make distinctions between the categories of courses they deal with, both awareness-raising and management practices. Therefore, educational institutions are now able to institute certificates and diplomas in this field. Today it is very easy to find courses on entrepreneurship, including case studies, fieldwork and contacts with people who experience this world. Entrepreneurship arises from cultural contexts that develop around entrepreneurs who run small businesses. (Oliveira, F. M, 2012). In Oliveira (Oliveira, F. M, 2012), we find the information that, about a hundred years ago, the creation of schools and the phenomenon of education for the population was aimed at separating learning from its context and its practical application. So if we ask ourselves who is more prepared to teach the discipline: the researcher or who practices entrepreneurship? The most appropriate response tends to a combination of the two. In fact, several researchers were interested in the issue. Thus, also emphasizes Oliveira (Oliveira, F. M, 2012), that university students tend to prioritize elements of conceptualization and abstraction, while entrepreneurs generally prefer the most concrete. It is recognized that there is no link between the level of school learning and success in business. As the trend among students is to define success according to own achievement criteria, where priorities are no longer accumulation and status, but balance of quality of life, entrepreneurship teaching to strengthen this idea, seeking to encourage the student to develop Creative processes that explore Their capabilities and capabilities. Previously, entrepreneurship education was centered on the business plan. Currently, the Business Plan is increasingly used as a conclusive step. Another point to emphasize, within the purpose of teaching to enhance individual capacities, is the cultural issue. For many years, our parents educated us to seek a good and stable job in a large company. This paradigm led to an unfounded perception that those who had chosen the entrepreneurial career were those who did not like to study. Setting up the business itself was the only way out of the incompetent. Another important issue to be addressed is that it is rare for teachers with masters or doctorates to specialize in entrepreneurship or to teach this discipline. Although the growth of entrepreneurship

courses in higher education is good news, the offerings are still timid in terms of number of subjects on the subject, being in most cases optional. In the United States, where capitalism is at its peak, entrepreneurship is a subject that is deployed in several obligatory and elective disciplines, in addition to several other extension courses, such as corporate entrepreneurship, social entrepreneurship, franchising, family businesses and venture capital. Few areas have in their studies the discipline of entrepreneurship. Stories of entrepreneurs, cases of failure, dilemmas of managers, serve as fundamental tools for the teacher. The task of the educator is arduous, it is incumbent upon him to instill the seed of curiosity about the subject in his students, helping them to know this career possibility and showing them the paths to self-development. The task of transferring this passionate knowledge leads us to infer that, as important as academic knowledge, the teacher should have had the entrepreneurial experience in his / her life history, be it as a specialized official, consultant or entrepreneur. This would be the ideal way to recognize that there is no link between the level of school learning and success in business. As the trend among students is to define success according to own achievement criteria, where priorities are no longer accumulation and status, but balance of quality of life, entrepreneurship teaching aims to strengthen this idea, seeking to encourage the student to develop Creative processes that explore their capabilities and capabilities. Previously, entrepreneurship education was centered on the business plan. Currently, the business plan is increasingly used as the conclusive step. Another point to be emphasized, within the purpose of teaching to enhance individual capacities, is the cultural issue. For many years, our parents educated us to seek a good and stable job in a large company. This paradigm led to an unfounded perception that those who had chosen the entrepreneurial career were those who did not like to study.

Setting up the business itself was the only way out of the incompetent. Another important issue to be addressed is that it is rare for teachers with masters or doctorates to specialize in entrepreneurship or to teach this discipline. Although the growth of entrepreneurship courses in higher education is good news, the offerings are still timid in terms of number of subjects on the subject, being in most cases optional. In the United States, where capitalism is at its peak, entrepreneurship is a subject that is deployed in several obligatory and elective disciplines, in addition to several other extension courses, such as corporate entrepreneurship, social entrepreneurship, franchising, family businesses and venture capital. Few areas have in their studies the discipline of entrepreneurship. Stories of entrepreneurs, cases of failure, dilemmas of managers, serve as fundamental tools for the teacher. The task of the educator is arduous, it is incumbent upon him to instill the seed of curiosity about the subject in his students, helping them to know this career possibility and showing them the paths to self-development. The task of transferring this passionate knowledge leads us to infer that, as important as academic knowledge, the teacher should have had the entrepreneurial experience in his / her life history, be it as a specialized official, consultant or entrepreneur. This would be the ideal way for him to find the best balance between theory and practice, conceptual and instrumental. (Oliveira, 2012).

The creation of an Entrepreneurship Center at the University should strive to penetrate effectively the academic environment, seeking to share relevant knowledge and cultivate the entrepreneurial spirit within this community. The introduction of a strategic mindset in the opening of business, based on the mastery of several broad disciplines in the scenario, where the business is inserted, introducing new pedagogical methodologies directed to the “learn-by-doing”, is intended as follows:

- 1) Familiarize students with the underlying concepts of entrepreneurship and entrepreneurship, as well as those inherent in the transformation of an idea into a business plan;
- 2) Familiarize students with the steps necessary to create a business with a higher value;
- 3) Provide students with the minimum legal knowledge required for the creation of companies and businesses; Provide students with the main tools for assessing the risks and resources needed to create business and businesses, within a framework of efficiency and effectiveness of allocation and results;
- 4) Familiarize students with the main forms of investment financing in the scope of incentives to entrepreneurship; Provide the students with the necessary knowledge to create and develop companies and businesses responsible for the integrated development of the societies where they settle and with whom they develop trade.

But not everything is perfect. As young companies grow and have to deal with the demands of size and complexity, they become bureaucratic. As the bureaucracy deepens, the sparks of entrepreneurship disappear. This is how insurgents of yesterday become the stragglers of today. We know that entrepreneurship is declining and the conglomeration of organizations are increasing. This is a problem, since it is impossible to create a truly vibrant economy if it is dominated by companies that are politically isolated and trapped in the bureaucracy chain. The challenge, then, is not merely to encourage more entrepreneurial spirit in universities but to develop in students a “strategic awareness”, enabling them to undertake more within large established organizations. (Hamel, G. & Zanini M., 2017).

4. THE STAGES OF THE PROCESS OF IMPLEMENTATION OF A UNIVERSITY EXTENSION CORE OF TRANSDISCIPLINARITY AND ENTREPRENEURSHIP IN UNIVERSITIES

The purpose of this study is to conceive, as its general objective, the “Implementation of a Nucleus of University Extension of Transdisciplinarity and Entrepreneurship NEUTE, as a proposal of professional complementation for the market in the Universities”, with the creation of an institutional academic model Research and professional practice. To this end, as specific objectives of the proposal, the NEUTE also aims: to reflect on the epistemology, the theory and the transdisciplinary methodology for the enterprise; To create bridges between theory and practice, through the three pillars of transdisciplinarity: complexity, the different levels of reality and the logic of the third included; Promote virtual and

face-to-face conferences and meetings; Offer face-to-face, semipresential and distance learning courses; Coordinate research groups and monitor the implementation of pilot projects; Produce, translate and publish transdisciplinary texts with bias for entrepreneurship; And, to establish partnerships with institutions, associations, private companies and national and international centers. The study also includes, as specific objectives, to propose a model that meets the centrality of life in the planetary discussions, proposing a change in the reference system, supported by three requirements: consider several levels of reality; Work with the logic of the Third Included Term; And, encompassing the vision of the complexity of social and economic phenomena to be undertaken. At the end of the project, with the implementation of NEUTE, the students of the Higher Education Institutions (IES) will add to their professional specialties, transdisciplinary entrepreneurial knowledge that, once used continuously, should provide them with an entrepreneurial and intrapreneurial attitude in future businesses where Will become professionalized:

- e) In relation to the organizational structure and processes of the business: by creating the value chain to provide superior services in the NEUTE, students will realize that the employees of the business organization in which they work, receiving constant training for the new challenges Proposed, they will feel valued in their day-to-day performance and can always plead for better working conditions and rewards. The users of these services provided by the organization will be the greatest advocates of the employees for any claim in that direction;
- f) In relation to the users of the services provided by the business: greater knowledge of the market and the profile of the consumer and target citizen, as well as the community where the business will be inserted. With this, it will be possible to anticipate decisions about the services that will actually meet the real needs of this final consumer;
- g) In relation to business technology: the development of a continuous process of improvement of the training in information technology, defined from the needs perceived in the development of the business in line with its peculiar characteristics;
- h) Regarding the sustainability of the business venture to be created: the continuous improvement in the process of innovating and applying market knowledge, by reducing the time of execution of activities and minimizing errors with the consequent modernization of the processes that seek to satisfy, Or perhaps, enchant the target consumer;
- i) In relation to the benefits to be achieved with the business:
 - Facilitating and streamlining the provision and use of information;
 - Be the main source of market information for consumers involved in strategic decisions;
 - Creation of a discussion forum with the community, where the business operates;
 - Creation of a granary of structured information that supports the development of business plans; Reducing the cycle of development of services provided, reducing costs, increasing efficiency and developing new innovative solutions.

Through stages, the operationalization process of a nucleus of university extension of transdisciplinarity and entrepreneurship in the HEI requires a set of operational actions, dimensioned in two distinct and integrated modules, composed as follows:

Module 1 - First Moment of Market Entrepreneurial Practice: divided into two integrated and distinct actions: a) Knowing the final consumer of the business; B) Awareness raising for stakeholders and the public market in general.

Module 2 - Second Moment of Market Entrepreneurial Practice: development of an organizational structure to sensitize the market in a transdisciplinary way. We briefly describe here what we hope to develop in these two parts:

- 1) About Module 1 - First moment of market entrepreneurship: this module is divided into two distinct actions and integrated with the whole:
 - a) Knowing the final consumer of the business: a methodology will be used that includes a set of actions to be identified the true consumers of the business, be it a public or private business, thus defining their real needs;
 - b) Awareness of the business market in a transdisciplinary way: a training and improvement model will be developed for business employees, in the sense of raising awareness and awareness of the market, aiming to awaken in management a new mentality in the conduct of the organization's business, where Every effort of the employee's contribution will be strictly focused on the satisfaction of the target consumers. With this, the revolutionary transdisciplinary vision in the offer of products and services to the target consumers of the business is that in which all internal process is only justified when it adds value superior to the final consumer. With this transdisciplinary approach to business, the production of knowledge of Mode 2, proposed above by Gibbons (Gibbons *et al.*, 1994), involving the knowledge developed for a specific application and also involving the work of specialists, drawn from academia, government And industry, such knowledge production and problem solving extend to the humanities, as in museums, architecture, and modes of research that rely on "information technology." In this way, the social cell, where the expected internal behaviors such as: openness, systemic thinking, creativity, personal effectiveness, market awareness and capacity building will take place, will only take place with the integration of these practices aimed at the full satisfaction of needs of the target consumer.
- 3) About Module 2 - Second moment of market entrepreneurship: this module only comprises a distinct and more integrated action with the whole: Development of an Organizational Model of Effective Management for the Market: this module aims at the entrepreneurial development of a An organizational model for the creation of emerging, market-sensitized organizations, based on an integrated system of internal actions, forming a lucrative chain of enduring services for the final consumer. This presupposes a spirit of cooperation and synergy of internal processes throughout the organization to ensure that all service provided internally is of high value and strictly focused on meeting and meeting the real needs of the organization's target market. We aim at the model, the object of this practice, is for transdisciplinary entrepreneurs to be personally involved in analyzing and discussing the carefully constructed facts and at the same time engaging with the research of the relevant factors that affect the organization

to be undertaken and which should be considered in the decision-making process. The strategy to be adopted in the organization, corresponding to Mode 2, mentioned above, will be to always seek a great involvement and a high attention of all the stakeholders responsible for the results of internal excellence. This strategy will have the characteristic of being action oriented instead of just being in the process and therefore will have a greater chance of being well implemented.

As the central objective of the NEUTE model is to establish an entrepreneurial transdisciplinary organization, aware of its role in the market, with the constant aggregation of superior value in the delivery of a product or service to the target consumer. Thus, culture is considered as an integral part of a group's learning and experience process, in which six key intervention points and processes will be tackled to make the model feasible, namely: (1) learning to innovate with knowledge Acquired in transdisciplinary studies; (2) constantly changing the strategic mindset of the business manager; (3) to justify the behavioral changes of the organization's stakeholders to the market; (4) to communicate cultural messages about behavior change to the market; (5) to hire and socialize new members who "fit in" into the transdisciplinary entrepreneurial culture totally geared towards the market; And, finally, (6) constantly train members who deviate from the desired market-oriented culture and consumer satisfaction.

5. FINAL CONSIDERATIONS

Several scientific-academic productions were researched and analyzed in order to measure the importance of the concepts of transdisciplinarity and entrepreneurship focused on the needs of the market and the training of undergraduate and postgraduate students with some or no professional experience. With this, we could understand the elements that seem to indicate that, in Brazil:

- a) Transdisciplinarity does not seem to be a subject of wide recognition and treatment in the field of scientific-academic production, although it is a subject of interest in a considerable number of fields of research, including education under a diversity of looks (teacher training, technologies Education, curriculum development, supervision Pedagogical);
- b) The different aspects in which this thematic category has been approached, which undermine both our personal capacity to deal with a variety of complex social problems and the very capacity of universities to respond to the challenges and demands arising from the rapid and constant changes Social, cultural, economic, technological and political; and
- c) The thematic scope of the idea of transdisciplinarity as a new model of teaching in undergraduate and postgraduate knowledge in educational institutions in Brazil. (Cruz, E. and Costa, F.A., 2015). With all this, the results obtained and the reflection resulting from these elements may make it possible to propose a set of initiatives that will allow to go a little deeper and further than what has been achieved here. The creation of the University Extension Nucleus of Transdisciplinarity and Entrepreneurship becomes, in this case, one of the first steps to be taken in the direction of sustainability of this academic activity with the suggestion of expanding this object of study, considering not only the deepening above Of the diverse sources of research and scientific production that constantly feed this context to the specific domain of theory and curriculum development. In addition to this, it is necessary to create a mentality focused on the need for sustainable employability of our students, in a critical moment in our world economy. Finally, in this study, we sought to identify the theoretical perspectives that aim to inform the approaches of a transdisciplinary nature, as well as to define the teaching and learning strategies and methodologies that are in line with the practice directed to the market knowledge aiming at the creation of innovative businesses.

REFERENCES

- Cruz, E and Costa, F.A. (2015). Forms and manifestations of transdisciplinarity in scientific-academic production in Portugal. University of Lisbon, Lisbon, Portugal. *Revista Brasileira de Educação* v. 20 n. 60 jan.-ma
- De Freitas, L., Morin, E., & Nicolescu, B. (1994). *The charter of transdisciplinarity*. Retrieved from International Encyclopedia of Religion & Science, <http://inters.org/Freitas-Morin-Nicolescu-Transdisciplinarity>.
- The secret of Luisa*. Ed. Rev. And current. São Paulo: Culture Publisher.
- Dolabela, F. (2010). The rope and the dream. *HSM Management Review*, 80, pp. 128-132.
- Filion, L.J. (1994) .Ten Steps to Entrepreneurial Teaching. *Journal of Small Business and Entrepreneurship*, Vol. 11, No.3: 68-78.
- Freeland, R. M. (1992). *Academy's Golden Age: Universities in Massachusetts, 1945-1970*. New York, NY: Oxford University Press.
- Freire, P. (2004). *Education as a practice of freedom*. Rio de Janeiro: Peace and Earth.
- Gibbons, M., L., Nowotny, H., Schwartzman, S., Scott, P. T. M. (1994). *The new production of knowledge: The dynamics of science and research in contemporary societies*. London, UK: Sage.
- Hamel, G. and Zanini M. (2017). *A Few Unicorns Are No Substitute for a Competitive, Innovative Economy* HBR, February 08.
- Gem -Global Entrepreneurship Monitor. *Entrepreneurship in Brazil* (2015). Coordination of Simara Maria de Souza Silveira Greco; Authors: Mariano de Matos Macedo ... [et al.] - Curitiba: IBQP: [http://www.bibliotecas.sebrae.com.br/chronus/ARQUIVOS_CHRONUS/bds/bds.nsf/4826171de33895ae2aa12cafe998c0a5/\\$File/7347](http://www.bibliotecas.sebrae.com.br/chronus/ARQUIVOS_CHRONUS/bds/bds.nsf/4826171de33895ae2aa12cafe998c0a5/$File/7347). Pdf.

- Gomes, A.G. (2005). *The School of Quality for All: Opening the Layers of Onion*. <http://www.scielo.br/pdf/ensaio/v13n48/27551.pdf>.
- Kessel, F., and Rosenfield, P.L. (2008). Toward transdisciplinary research: Historical and contemporary perspectives. *American Journal of Preventive Medicine*, 35 (2S), S225-S234.
- Klein, J.T. (1996). *Crossing boundaries: Knowledge, disciplinarity, and interdisciplinarity*. Charlottesville, VA: University Press of Virginia.
- Mahan, J.L., Jr. (1970). *Toward transdisciplinary inquiry in the human sciences*. Doctoral dissertation, United States International University. UMI No. 702145. Retrieved from ProQuest Dissertations & Theses Global.
- McGregor, S. L. T. (2015). The Nicolescuian and Zurich approaches to transdisciplinarity. *Integral Leadership Review*, 15 (2). Retrieved from: <http://integralleadershipreview.com/13135-616-the-nicolescuian-and-zurich-approaches-to-transdisciplinarity/>
- Morin, E. (1994). *Carta of the Transdisciplinaridade*. Convento of Arrábida, November 6, 1994.
- Morin, E. (1998). *Science with consciousness*. Maria D. Alexandre and Maria Alice Sampaio Dória. 2nd ed. Rio de Janeiro: Bertrand Brasil.
- Nicolescu, B. (2008). In vitro and in vivo knowledge: Methodology of transdisciplinarity. In B. Nicolescu (Ed.), *Transdisciplinarity: Theory and practice* (pp. 1-21). Cresskill, NJ: Hampton.
- Nicolescu, B. (2010). Methodology of transdisciplinarity: Levels of reality, logic of the included middle and complexity. *Transdisciplinary Journal of Engineering & Science*, 1, 17-32.
- Nicolescu, B. (2012). Transdisciplinarity: The hidden third, between the subject and the object. *Human and Social Studies*, 1 (2), 13-28.
- Oliveira, F. M. (2012). *Epreprehension: theory and practice*. Especialize. IPOG. Revista On Line, May: file: /// C: / Users / Celso / Downloads / entrepreneurship-theory-and-practice-1119143% 20 (1) .pdf.
- Schumpeter J. (1954). *History of economic analysis*, published posthumously.
- Schumpeter, Joseph Alois. (1911). *The theory of economic development: an investigation of profits, capital, credit, interest, and the economic cycle*. São Paulo: New Cultural, 1988, Collection the Economists.
- Sebrae (2013). *Survival of Companies in Brazil: collection studies and research*. Http://www.sebrae.com.br/Sebrae/Portal%20Sebrae/Anexos/Sobrevivencia_das_empresas_no_Brasil=2013.pdf
- Weinberger, D. (2011). *Too big to know: Rethinking knowledge now that the facts are not the facts, experts are everywhere, and the smartest person in the room is the room*. New York, NY.

THE PHASES OF SERIAL KILLERS

Alberto Pintado Alcázar
 Universidad de Murcia
 (alberto.pintado@um.es)

RESUMEN

La figura del asesino en serie ha existido desde tiempos inmemoriales, pero no fue hasta los años 80 cuando comenzó a tener una repercusión mundial gracias a las investigaciones llevadas a cabo por el jefe del FBI, Robert K. Ressler. A partir de ese momento, su incidencia en el mundo criminal reviste gran importancia debido a la crueldad con la que estos sujetos cometen sus acciones.

Un *serial killers* es aquella persona que comete un número indeterminado de asesinatos, siendo tres la cifra que se estima mínima para ser considerado como tal. Es necesario destacar que, entre crimen y crimen, estos individuos padecen un período de enfriamiento que puede ir desde determinadas horas hasta varios años.

No obstante, es importante destacar que todos los *serial killers* seguirán un proceso criminal, con independencia de la tipología concreta en la que se les pueda agrupar. En este sentido, dentro de la doctrina criminológica existen determinados investigadores que hablan sobre la existencia de diferentes fases dentro de dicho proceso, las cuales pueden condicionar la futura acción delictiva de los asesinos en serie.

El objetivo del presente artículo se fundamenta en profundizar en los principales factores que inciden en la evolución del comportamiento criminal que desarrollan los asesinos en serie.

Palabras clave: Asesinos en Serie, Fases, Período de Enfriamiento, Crimen.

1. INTRODUCCIÓN

La figura del asesino se remonta a épocas pasadas, siendo considerado como aquella persona que actuaba contra otra u otras personas arrebatándoles la vida. En determinadas ocasiones, estos asesinos podían ser vistos como justicieros de una determinada sociedad que peleaban por salvar a los ciudadanos, luchando contra las clases altas.

En la actualidad, lo verdaderamente llamativo para la opinión pública es la presencia de un individuo que lleva a cabo un número indeterminado de muertes, lo que induce a un gran revuelo social debido a la inseguridad que genera y al miedo colectivo que provoca dicha actuación.

A lo largo de la historia, todos los países y civilizaciones se han tropezado con diversos casos de asesinatos, ya que no se contempla la posibilidad de un Estado que presente un nivel de delincuencia de este tipo con índices negativos, ya que es poco probable que no se haya cometido ningún caso de asesinato durante un período de tiempo concreto. Al respecto, es relevante destacar que este tipo de sucesos se consideran como un fenómeno social y criminológico que poco a poco va generando más investigaciones, debido al creciente desarrollo que se ha producido desde los años 60, dejando de ser un acontecimiento aislado (Pozueco Romero, Romero Guillena y Casas Barquero, 2011).

Salfati y Canter (1999) consideran necesario establecer una serie de pautas para discernir la voluntad que presentan los asesinos respecto a sus víctimas. Las diferencias entre los comportamientos violentos de los agresores han llevado a clasificar a las acciones más agresivas y violentas en una dicotomía hostil e instrumental, dependiendo de los objetivos o recompensas buscadas por el autor. Por ello, cabría distinguir entre:

Tipo de agresión hostil: Hacen mención a aquellas respuestas a determinadas acciones que inducen al insulto o el ataque físico. El propósito de este tipo de ataque es hacer que la víctima tenga un sufrimiento extremo.

Tipo de agresión instrumental: Se produce como resultado del capricho que presenta el delincuente hacia la obtención de una serie de objetos de los cuales carece, y son poseídos por su futura víctima (las joyas o el dinero suelen ser los objetos más deseados).

2. DEFINICIÓN DE ASESINO EN SERIE

El origen del asesinato en serie se debe a la creciente concentración de violencia debido a la complejidad de la sociedad y la violencia entre personas, lo que se traduce en una expansión de las diferencias culturales que generará una sociedad en la que dichas civilizaciones se enredan unas con otras sin respetar las costumbres de cada una de ellas. Ressler (2010) espetó que estos delitos violentos tendrán un aumento considerable “allí donde la gente se sienta apartada de la sociedad, donde los vecinos apenas se conozcan entre sí, donde las familias no mantengan una relación estrecha, donde los adolescentes deambulen por calles peligrosas, donde la violencia aparezca como respuesta viable a los problemas”.

No resulta anómalo creer que determinadas acciones cometidas por una persona sean consideradas propias del mundo cinematográfico. Estas vicisitudes se producen cuando determinadas personas cometen una serie de asesinatos a lo largo de un período de tiempo sin ser atrapados por las Fuerzas y Cuerpos de Seguridad del Estado. Estos hechos se traducen en la figura del asesino en serie o *Serial Killers*, el cual debe de llevar a cabo una serie de procesos para poder ser considerado como

tal, no siendo confundido con otro tipo de homicidas como podrían ser los asesinos en masa o el asesino itinerante, también llamado *Spree Killer*.

Muchos investigadores han estudiado a este tipo de sujetos aportando cada uno de ellos su propia conclusión al respecto. Resultando de gran interés las aportaciones que llevó a cabo el investigador del FBI, Robert Ressler quien acuñó el término de “asesino en serie”, modificando la expresión “asesinatos de extraños” que se utilizaba con anterioridad para definir a estos individuos y que no resultaba del todo acertada, ya que en determinadas ocasiones los asesinos sí conocen a sus víctimas, siendo incluso amigos de los propios verdugos o familiares directos de los mismos. Resulta llamativa la forma mediante la cual Ressler estableció la expresión de “asesino en serie”, ya que dicho vocablo fue el resultado de su presencia como asistente en una conferencia realizada en Inglaterra, donde se utilizó el término “crímenes en serie” para referirse a aquellas reiteraciones de violaciones, robos o asesinatos, lo que le llevó a sugerir la modificación de la expresión antes utilizada para referirse a ese tipo determinado de sujetos, “ese término me pareció una manera acertada de caracterizar los asesinatos de las personas que matan una y otra vez y lo hacen de un modo bastante repetitivo [...]. La nomenclatura no nos pareció un asunto trascendental en aquella época; era simplemente parte de nuestro esfuerzo general por entender estos crímenes monstruosos, por buscar maneras de comprenderlos y, de ese modo, detener más rápidamente al siguiente asesino en serie”. Ressler (2012) concluyó definiéndolos como “un don nadie que quiere ser alguien, no a través de la fama positiva, sino de la infamia. Cualquier tipo de reconocimiento es importante para él. [...], son adolescentes o adultos que se comportan igual que lo hace un niño cuando quiere llamar la atención”.

Conceptos de asesinos en serie hay muchos, si bien todos se constituyen sobre dos criterios identificativos: i) cuantificación numérica; y ii) requisito temporal. Por ello, la definición que más relevancia ha tenido en la doctrina criminológica es la aportada por Ressler (2004), quien establece que será “aquel sujeto que mata a tres o más víctimas transcurriendo un período de enfriamiento entre cada una de ellas”.

Otros autores se centran en predecir la existencia de diferentes emplazamientos en los que los asesinos llevan a cabo sus acciones criminales. Este es el caso de escritores como Schechter (2004), quien establece que para determinar una definición propicia para hacer mención a estos sujetos es necesario tener en cuenta tres factores fundamentales: a) Cantidad: Al menos deben de realizarse tres asesinatos; b) Localización: Se llevarán a cabo en diferentes lugares; y c) Tiempo: Debe de existir un periodo de reflexión entre los crímenes, dicho espacio temporal puede persistir desde diversas horas a varios años.

Scott (2008) también se muestra partidaria de esta tesis estableciendo una ligera apreciación al respecto, ya que no sólo habla de los sujetos que matan a tres o más individuos, sino que también hace hincapié en aquellos individuos que han expresado una intención o voluntad de llevar a cabo dichos asesinatos. Al respecto, establece que para ser incluido dentro de la clasificación de asesinos en serie se debe tener en cuenta que “es una persona que ha intentado o que ha matado a tres o más personas. Estos asesinatos, o intentos de asesinatos, se llevan a cabo durante un período prolongado de tiempo con un período de enfriamiento entre los mismos [...]. Mientras que los hombres exteriorizan motivos relacionados con la fantasía sexual, las mujeres cometen estos crímenes por razones más instrumentales, como podría ser el beneficio económico”. En consecuencia, Scott introduce la motivación criminal del asesino.

Otros investigadores se centran en buscar el lado humano de estos sujetos ya que no los consideran distintos al resto de la sociedad, sino que experimentan una serie de habilidades que lo hacen diferente al conjunto de la comunidad. Al respecto, Skrapek (2008) establece que “aunque consideremos los asesinatos en serie actos <<malinos>>, los individuos que los cometen son indudablemente humanos. Su <<maldad>> radica en la premeditación con que planean acabar con vidas humanas. En este sentido, los asesinos en serie no son distintos de nosotros, sino que muestran aspectos extremos del ser humano”.

Actualmente, determinados autores siguen considerando que el criterio principal para clasificar a estos sujetos viene determinado por el hecho de haber cometido al menos un triple asesinato, así se entiende que serán aquellos individuos que cometen de forma reiterada y premeditada, sin que haya un motivo para llevarlos a cabo, tres o más asesinatos con la existencia de intervalos temporales entre un acontecimiento y otro (Torre y Silva, 2013).

3. FASES DE ASESINOS EN SERIE

A la hora de hacer referencia a las etapas por las que transita un criminal que comete sus actos delictivos en espacios de tiempo correlativos, hay que tener en cuenta que la doctrina criminológica ha establecido que dichos períodos se fundamentarán en base a una categorización genérica donde, principalmente, se hará hincapié en la diferenciación de este tipo de criminales.

3.1 Ressler, Burgess y Douglas

La primera clasificación relacionada con los asesinos en serie que revistió gran interés fue la impuesta por estos autores, la cual fue propuesta en 1988. Con la finalidad de poder discernir las diferentes fases por las que atraviesan estos sujetos, intentaron comprender la forma de actuar de los mismos para intentar descubrir la personalidad que se encontraba detrás de dichos acontecimientos criminales. Para ello, llevaron a cabo una investigación sobre treinta y seis delincuentes, cuyo propósito se centraba en poder descubrir todas aquellas etapas por las que estas personas transitaban antes de conseguir su propósito final: el asesinato de las víctimas que habían elegido.

Esquema 1. Etapas de un asesinato en serie



Fuente: Ressler, Burgess and Douglas (1995)

A) Antecedentes. Dentro de esta fase, estos autores establecen una serie de escenarios concretos, los cuales son considerados necesarios para que el individuo perturbado alcance su meta: el asesinato.

- a) Factores estresantes. Diversos acontecimientos externos al sujeto pueden llegar a perturbar al mismo, llegando a alterar su estado mental y emocional. Por este motivo, estos elementos pueden ser desencadenantes de determinadas agresiones hacia otras personas.
- 1) Conflictos con mujeres. En los estudios desarrollados entre más de ochenta asesinos, Ressler, Burgess y Douglas descubrieron que en más de la mitad de los casos, estos individuos habían presentado problemas previos con mujeres antes de cometer los crímenes.
- 2) Conflictos con los padres. Al igual que en el supuesto anterior, más de la mitad de los sujetos estudiados presentaron factores de estrés previos al crimen, los cuales estarían relacionados con enfrentamientos con cualquiera de sus progenitores.
- 3) Problemas económicos. Contexto que puede provocar en el sujeto una situación de estrés, el cual podría generar una sucesión de acciones violentas ante determinadas personas.
- 4) Problemas laborales. Aquellas situaciones en las que determinados individuos están desempleados y no encuentran trabajo, inconveniente que puede generar en el criminal una respuesta agresiva.
- 5) Conflictos maritales. Es un escenario que no representa un porcentaje muy elevado en el cómputo general, ya que uno de cada cuatro asesinos en serie presentan problemas previos con su pareja. Durante este período, sus fantasías de violación y asesinato se intensifican.
- 6) Otros factores estresantes. Existen otras situaciones que pueden provocar en el sujeto una reacción violenta, tales como: problemas legales, lesiones físicas o el fallecimiento de una persona importante.
- g) Estado de ánimo. Se podría asociar con el mecanismo de interpretación de los acontecimientos externos. Este período, cuando se identifica con criminales, revelará un elevado índice de emociones negativas, las cuales se representarán en situaciones concretas, tales como: frustración, hostilidad, agitación y excitación. También revisten gran importancia aquellos síntomas relacionados con una ansiedad interiorizada, es decir; nerviosismo, depresión, miedo, calma o confusión.
- h) Planificación previa. Estos sujetos premeditan determinadas acciones criminales con la finalidad de poder desarrollarlas en un período de tiempo cercano. En esta fase también incide un aura de impulsividad para cometer el acto, la cual estará muy presente en estos individuos. Tienen conocimiento de lugares propicios para cometer los asesinatos y han elaborado una estrategia para conseguir a sus víctimas.
- i) Acciones previas. Generalmente, estos individuos, en los días previos al asesinato, están involucrados en actividades delictivas. Durante las horas previas a la acción criminal, suelen buscar a sus futuras víctimas entre aquellas que más se adapten a sus pretensiones. En definitiva, un determinado comportamiento agresivo podría ser predecesor de un futuro asesinato.
- j) Selección de la víctima. Se centra en calificar a aquellos asesinos en serie que presentan una serie de fantasías sexuales, las cuales provocan en el mismo una necesidad interna relacionada con la búsqueda de personas que se asemejen a su proyecto victimario.
- k) Factores desencadenantes. La fantasía se configura como el principal componente delictivo que puede originar determinadas conductas criminales. No obstante, existen una sucesión de procesos que pueden inducir a la repetición de dicho resultado, entre las que destacaría el alcohol.

B) Asesinato. Como su propio nombre indica, en esta fase se produce el fallecimiento de la víctima. En este momento es cuando el individuo se percata de que la fantasía no se asemeja al completo con la realidad vivida, pudiendo sentirse más nervioso de lo esperado o teniendo que utilizar más violencia de la prevista para poder cometer el crimen.

C) Disposición del cuerpo.

- a) Patrones de eliminación. Algunos métodos de eliminación de la víctima serán más desarrollados que otros, llegando a ser perfeccionados por el criminal a través de la reiteración de asesinatos. Cada sujeto actuará de forma diferente, atendiendo a las posibilidades que le ofrece su propia fantasía.
- b) Estado del cuerpo. Atendiendo a la forma en la que el asesino procede sobre el cuerpo de la víctima, se pueden encontrar diferentes características referentes al mismo. Para ello, se tendrán en cuenta la visibilidad del cuerpo del fallecido, el posicionamiento del mismo y el estado de sus ropajes.
- c) Localización. El emplazamiento final del cuerpo de la víctima puede variar dependiendo de la intencionalidad del criminal.

D) Actuaciones posteriores al crimen. Las reacciones de los asesinos pueden variar una vez cometidos los respectivos actos delictivos. No obstante, dichos comportamientos posteriores pueden evidenciar que la fantasía continúa dentro de ellos.

- a) Respuesta inmediata. Inminentemente después de abandonar la escena del crimen, el asesino puede sentir una fuerte sensación de alivio. En determinadas ocasiones, algunos sujetos regresan a su domicilio y duermen profundamente.
- b) Respuestas posteriores. Generalmente, las reacciones del asesino después de cometer el crimen se fundamentan en la necesidad de autoprotección. No obstante, sus comportamientos pueden ir en contra de las acciones previstas para evitar la atención en su persona. Por ello, se establecen cuatro acciones concretas: Retornar a la escena del crimen, observar el descubrimiento del cuerpo, guardar recuerdos, y participar en la investigación.

3.2 Norris

A raíz de una serie de investigaciones, referentes a las experiencias vividas por los asesinos en serie, Norris (1989) describió a finales de la década de los ochenta una serie de etapas por las que pasa todo criminal encuadrado en dicha categoría, y que terminó perfeccionando a través de la elaboración de más de medio millar de entrevistas realizadas a distintos asesinos convictos. Su conclusión final estuvo coronada con la determinación de establecer siete puntos característicos dentro de dichas fases que desarrollan estos sujetos, las cuales siguen estando presentes en las investigaciones actuales debido al éxito alcanzado a la hora de elaborar un esquema relacionado con los ciclos de violencia por los que transcurren estas personas. Siguiendo las investigaciones realizadas por Norris, pueden establecerse las siguientes fases psicológicas que imperan en el asesino en serie.

Esquema 2. Ciclo psicológico de los asesinos en serie



Fuente: Norris (1989)

- a) Aúra. El sujeto sufre un abandono relacionado con el sentido de la realidad y penetra en su propio mundo de fantasías perturbadas, aislándose de cualquier tipo de interacción humana, lo que provocaría el inicio de un cambio de comportamiento. Tienen el presentimiento que el tiempo avanza más lento de lo normal, sus sentidos se alteran percibiendo colores más vivos, sonidos y olores más intensos de lo habitual. Este período no representa un ciclo de tiempo determinado ya que puede persistir un momento específico o, incluso, prolongarse durante varios meses. Sería

en esta fase cuando el sujeto divisa su alrededor para así poder buscar posibles objetivos a los cuales culpar de una determinada situación vivida, exteriorizando con ello su ira y odio.

El individuo convive con un desarrollo continuado de la tentación criminal que padece, produciéndose en la mente del asesino una serie de fantasías sexuales y violentas, que se identificarían con la posterior comisión de un asesinato. Al respecto, Ressler (2012) estableció que los asesinos a los cuales entrevistó durante largos períodos de tiempo “asesinaban para llevar a la realidad lo que habían visto una y otra vez en su mente desde la infancia y la adolescencia. Cuando eran adolescentes, en lugar de desarrollar intereses y actividades normales con sus iguales sin tener un estricto control sobre todo, estos asesinos se refugiaron en fantasías sexualmente violentas donde sí podían controlar el mundo a su alrededor. Sobrecompensaban las agresiones sufridas en la infancia repitiendo el maltrato en sus fantasías, pero ya no como víctimas, sino como agresores”. Dentro de esta fase es común que los sujetos estén relacionados con un abuso constante de drogas y alcohol.

- b) Búsqueda. Una vez superada la fase del áurea, el asesino comienza a buscar su próxima víctima, centrando especial atención en aquellos emplazamientos donde tenga mayor probabilidad de encontrar el tipo de individuos que anda buscando, sin olvidar la ubicación donde realizaría el acto y en el que tendrá previsto deshacerse del cuerpo. El sujeto experimenta una serie de modelos del comportamiento compulsivos, frenéticos y paranoicos, que lo transforman en un ser que se encuentra en un estado exaltado de alerta y concentración.
- c) Seducción. Una vez superadas las dos fases anteriores, el asesino en serie centra sus esfuerzos en ganar la confianza de su víctima mediante el uso de su encanto personal, intentando atraerla hacia una determinada trampa que tiene preparada para poder llevar a cabo su cometido.
- d) Captura. Esta fase hace referencia al evento mediante el cual el asesino comete un acto repentino sobre la víctima, dejándola desconcertada y desprotegida, impidiendo con ello su intento de fuga. En muchas ocasiones, estos sucesos se refieren a un golpe fulminante en la cabeza, un empujón inesperado o un secuestro, lo que supondrá una dificultad extra para el sujeto pasivo por no esperar dichos acontecimientos. Para cometer sus actos, el asesino esperará el tiempo necesario hasta que víctima elegida se encuentre sola e indefensa. Los mecanismos utilizados para llevar a cabo las capturas de victimarios se llevarán a cabo de modo distinto dependiendo de la personalidad y actuación de los asesinos en serie.
- e) Asesinato. El asesino en serie comete el asesinato que anteriormente había planificado lo que conlleva un alto valor emocional para estos sujetos. Esta etapa se identificaría con aquellos supuestos en los que el fallecimiento de las víctimas genera un desahogo sexual tan importante que se traduce en un sentimiento continuo de triunfo, lo que generará una serie de orgasmos espontáneos por parte de los sujetos activos. Al igual que ocurría en la fase de captura, el asesino va a actuar de distinta forma a la hora de cometer el asesinato, ya que algunos proceden a matar a sus víctimas de manera inmediata, mientras que otros prefieren torturarlas para así tener un sentimiento de grandeza prolongado en el tiempo.
- f) Fetichismo. Debido a que la emoción derivada de sus actos criminales comienza a desvanecerse rápidamente, el asesino en serie decide prolongar su deleite mediante el robo de unos determinados recuerdos o fetiches que considera que están asociados a sus víctimas, lo que le provoca un recuerdo agradable de la fantasía que tuvo y que desembocó en un hecho real. Puede darse la especial circunstancia que determinados sujetos decidan guardar como trofeo determinadas partes del cuerpo de sus víctimas que posteriormente utilizaran como ajuar o para fabricar prendas de ropa, lo que sería más propio de los asesinos en serie desorganizados.
- g) Depresión. Constituye la etapa es la última del ciclo por el que pasa todo asesino en serie, y se traduce en una decepción emocional debido a la desigual situación acontecida entre su propia fantasía y la realidad del hecho criminal. Una vez fallecida la víctima y con el fin de superar dicha frustración, el sujeto comienza a planificar un nuevo asesinato en el que vuelve a dar comienzo el proceso psicológico por el cual comete el acto, interiorizando una nueva fantasía delictiva e intentando mejorar todos aquellos errores cometidos en el crimen previo. Este proceso se repetirá en reiteradas ocasiones debido a que los asesinos en serie no satisfacen sus fantasías y atesoran la necesidad de seguir intentando alcanzar un nivel de complacencia pleno.

3.3 Holmes y Holmes

De manera contraria a lo expuesto por Norris, existe un sector doctrinal que considera que no es necesario que se produzca el desarrollo de todas las fases expuestas anteriormente, sino que sería idóneo establecer un catálogo de mínimas concurrentes en la generalidad de supuestos. Así, a modo de ejemplo, Holmes y Holmes (2001), como se puede apreciar en el siguiente esquema, establecen un modelo con cinco fases que difieren del comúnmente aceptado, en tanto determinan que no sería necesario que en un mismo asesinato se produzcan todas las fases propuestas, sino que consideran que dichas etapas pueden variar dependiendo del hecho cometido y de la forma de realizarlo.

Esquema 3. Fases establecidas por Holmes y Holmes



Fuente: Holmes and Holmes (2001)

- a) **Fantasía.** Constituye la existencia de una serie de ideas o pensamientos que impulsan la actuación del individuo, configurándose como la parte fundamental del proceso de creación de este tipo de sujetos, siendo considerada como la primera fase dentro de este círculo delincencial.
En consonancia, hace referencia a aquellos procesos que padecen todos los asesinos en serie y que se relacionará directamente con las necesidades, las motivaciones y las esperanzas que el sujeto tiene depositadas en el pensamiento criminal que está desarrollando. Generalmente, estas imaginaciones se centran en aspectos sexuales, codiciosos o, incluso, demoniacos convirtiéndose en los motores necesarios para el futuro proceso criminal.
- b) **Acecho.** En este supuesto es frecuente encontrar a estos criminales organizando la futura escena del crimen para intentar conseguir los resultados que desean obtener, algo que sería propio de los asesinos en serie psicópatas, no estando presente en los desorganizados.
En esta fase se producirá una vigilancia constante por parte del sujeto hacia su víctima y variará en función del tiempo, de la oportunidad, así como de la necesidad que muestren estos individuos por llevar a cabo el acto criminal en un período de tiempo más efímero.
- c) **Secuestro.** Dentro de esta fase es recomendable destacar que a la hora de cometer sus actos criminales, no todos los asesinos en serie llevan a cabo un rapto previo. En este caso, no es necesario distinguir entre organizados y desorganizados ya que cualquiera de las dos tipologías puede realizar este acto u omitirlo, dependiendo de la motivación criminal que presente dicho sujeto.
Partiendo de la base de que el asesino lleve a cabo un secuestro previo, estos pueden variar, presentándose de forma muy sencilla o, por el contrario, con un perfil más complejo. En este supuesto, la captura sería llevada a cabo por un asesino en serie organizado que habría planeado con anterioridad el acto criminal y todas las acciones que debería realizar para poder cumplir con su fantasía.
- d) **Muerte.** Se produce el fallecimiento de la persona que el sujeto había seleccionado. Es importante destacar que dicho acontecimiento se puede realizar de diversas formas:
 - Con rapidez: El acontecimiento criminal se realiza de forma decisiva e inmediata.
 - Mediante un proceso más lento: El acto se centra en un deseo o sensación de potencia/control sobre la víctima. El sujeto presenta un guión que desea realizar. En este caso, el padecimiento de la persona damnificada será más elevado que en el supuesto anterior.
- e) **Eliminación del cuerpo.** El proceso finaliza cuando el sujeto accede a la quinta fase propuesta por Holmes y Holmes. Al igual que ocurría en el apartado anterior, el sujeto puede llevar a cabo este acto de diferentes maneras, dependiendo de su forma de actuación:
 - El asesino no se molesta en mover el cuerpo de la escena del crimen, dejándolo en el mismo lugar y posición que cuando cometió el acto criminal.
 - En el lado contrario, se puede observar como el individuo traslada el cadáver de un lugar a otro, colocándolo en un lugar visible u ocultándolo. En determinadas ocasiones, hay asesinos que han transportado los cuerpos de sus víctimas cientos de kilómetros para intentar con ello que no sean descubiertos y poder prolongar su sensación de poder.

4. CONCLUSIONES

Como se ha podido apreciar, establecer una definición concreta que haga referencia a los asesinos en serie resulta una tarea de difícil realización, ya que muchos autores establecen sutiles matices que provocan la diferenciación entre los términos aportados por cada uno de ellos.

En este sentido, considero primordial aunar esfuerzos con la finalidad de concretar una definición eficaz que sirva para definir a estos individuos, sin necesidad de ir seleccionando todas aquellas pinceladas que consideremos útiles dentro de cada una de las ilustraciones aportadas por los diferentes investigadores.

Por otro lado, una vez expuestas las diferentes etapas por las que pasa un asesino en serie a la hora de cometer sus crímenes, considero importante poder establecer una nueva clasificación con las fases que desde mi punto de vista son imprescindibles para intentar comprender las acciones de estos sujetos.

Esquema 4. Etapas propias de los asesinos en serie



Fuente: Elaboración propia

- a) **Fantasía.** Es aquí donde se producen los primeros síntomas relacionados con los asesinatos seriales. Dentro de esta fase se encuentran todos aquellos pensamientos que angustian a los asesinos en serie y que, con posterioridad, intentarán trasladar a la realidad. Será en esta etapa cuando empiezan a comprender la necesidad de realizar estas acciones para intentar lograr un sentimiento de superioridad a través de los posibles actos cometidos. Esta fase será propia de todas las tipologías establecidas para catalogar a los asesinos en serie, ya que tanto los organizados, los desorganizados o los mixtos necesitan de una fantasía previa donde cada uno de ellos comience a visualizar sus futuras acciones criminales.
- b) **Escaso control.** Una vez aparecida la fantasía criminal en la mente del asesino en serie, estos sujetos muestran un pobre dominio de sus propios pensamientos, lo que les lleva a no saber apreciar la gravedad de los actos que van a cometer.
- c) **La fantasía los oprime,** no siendo capaces de detener ese dominio fatuo, pudiendo utilizar para ello el razonamiento lógico que manejaría cualquier persona para discernir entre lo que está bien y lo que está mal. Cuando el sujeto se encuentra en esta fase, dependiendo de la motivación criminal de cada uno, es el momento en el que comienzan la búsqueda de sus víctimas; realizan un plan; si es necesario, utilizaran su encanto personal y procederan a secuestrarlas o asesinarlas en el propio domicilio de la persona damnificada. Son individuos que se muestran incapaces de controlar sus impulsos y, por ello, proceden a plasmar el asesinato.
- d) **En lo referente a la selección de sus víctimas,** diferentes estudios llevados a cabo por Quinet (2007, 2011) demuestran la inexistencia de datos fiables que hagan referencia a aquellas personas que desaparecen pero que no se reportan como desaparecidas (*the missing missing*), referencia importante para poder llevar a cabo un recuento eficaz. Dentro de este estudio se podrían incluir: prostitutas, niños en hogares de guarda legal, jóvenes expulsados de sus hogares por sus padres, individuos fallecidos cuyos cuerpos nunca fueron encontrados o aquellas personas que fallecieron por causas desconocidas. En estudios posteriores, Quinet destacó que el porcentaje relacionado con las prostitutas se ha incrementado sustancialmente a lo largo del tiempo, convirtiéndose en el grupo de desaparecidos con mayor incidencia.
- e) **Asesinato.** En esta fase se produce el fallecimiento de la víctima, convirtiéndose en el punto culmen del asesino. Obedeciendo a la tipología de los criminales seriales, estos sujetos podrán llevar a cabo sus acciones de una forma más violenta, cruel o esporádica, dependiendo de lo que a estos individuos les produzca una mayor satisfacción personal.
- f) **Fetichismo.** Desde mi punto de vista, todos los asesinos en serie muestran su lado fetichista a la hora de escoger un recuerdo de sus víctimas, lo que para ellos será un trofeo que les hará recordar las sensaciones vividas. En este caso, creo conveniente distinguir entre dos tipos de individuos:
 - **Organizados:** Estas personas, una vez realizada su acción criminal, seleccionan algún objeto de la víctima para llevársela con él y así poder tener un recuerdo de la misma, por ejemplo: joyas, tarjetas, ropa interior, etc. En determinadas ocasiones, estos trofeos se centran en la necesidad que presenta el sujeto de visitar reiteradas veces la escena del crimen o en realizar fotografías de los fallecidos en una posición o con unas vestimentas que serán elegidas por el propio asesino.
 - **Desorganizados:** Si bien es cierto que su forma de actuación es completamente diferente a la de los organizados, estos sujetos también mostrarán su lado fetichista cuando decidan seccionar una parte del cuerpo de sus víctimas para poder realizar con ellas diferentes alhajas o, por el contrario, para mantenerlas como elemento de decoración en su propio hogar.

BIBLIOGRAFÍA

- Douglas, J.E., Burgess, A.W., Burgess, A.G., and Ressler, R.K. (2013) *Crime classification manual*. Jossey-Bass, New Jersey.
- Holmes, R.M., and Holmes, S.T. (2012) *Fatal Violence: Case Studies and Analysis of Emerging Forms*. CRC Press, New York.
- Holmes, R.M., and Holmes, S.T. (2001) *Murder in America*. Sage Publications, California.
- Holmes, R.M., and Holmes, S.T. (2010) *Serial Murder*. Sage Publications, California.
- Morillas Fernández, D.L. (2002) Aspectos criminológicos de los psicópatas y asesinos en serie, en *Cuadernos de política criminal*, Vol. 77: págs. 409-455.
- Morillas Fernández, D.L. (2007) Sobre la conceptualización de los asesinos en serie, en *Cuadernos de Política Criminal*, Vol. 93: págs. 181-212.
- Norris, J. (1989) *Serial Killers*. Anchor, New York.
- Pozueco Romero, J.M., Romero Guillena, S.L., y Casas Barquero, N. (2011) Psicopatía, violencia y criminalidad: un análisis psicológico-forense, psiquiátrico-legal y criminológico (parte II), en *Cuadernos de Medicina Forense*, Vol. 17(4), págs. 175-192.
- Ressler, R.K., *Asesinos en serie y agresores sexuales hiperviolentos*, (2004) Curso Magistral pronunciado en el Centro Reina Sofía para el Estudio de la Violencia: Valencia.
- Ressler, R.K., and Shachtman, T. (2012) *Asesinos en serie*. Ariel, Barcelona.
- Ressler, R.K., and Shachtman, T. (2014) *Dentro del monstruo. Un intento de comprender a los asesinos en serie*. Alba minus, Barcelona.
- Ressler, R.K., Burgess, A.W., and Douglas, J.E. (1995) *Sexual homicide. Patterns and motives*. The Free Press, New York.
- Salfati, C.G., and Canter, D.V. (1999) Differentiating stranger murders: Profiling ofender characteristics from behavioral styles, en *Behavioral Sciences and the Law*, Vol. 17(3), págs. 391-406.
- Schechter, H. (2004) *The Serial Killer Files: The who, what, where, how, and why of the world's most terrifying murderers*. Ballantine Books, New York.
- Scott, H. (2008) The "Gentler Sex". Patterns in Female Serial Murder, en: Kocsis, R.N., *Serial Murder and the Psychology of Violent Crimes*. Humana Press, Sydney.
- Skrapec, C.A. (2008) Los motivos del asesino en serie, en: Raine, A., and Sanmartín, J., *Violencia y psicopatía*, Ariel, Barcelona.
- Torre, R.O., y Silva, D.H. (2013) *Perfiles Criminales*. Dykinson, Argentina.

ESPACIOS VERBALES DEL LENGUAJE VISUAL: ARTETERAPIA Y SECUENCIAS NARRATIVAS EN PERSONAS MAYORES

Juan Román Benticuaga

Universidad de Huelva, Departamento Didácticas Integradas. Área Artes Plásticas

(milyunaformasdemirar@gmail.com)

RESUMEN

Las palabras se han esculpido como rostros y ahora muestran su gesto anónimo, obras realizadas a través de la memoria visual, de la plasticidad de las imágenes, introyectos y proyecciones de vidas vividas y por vivir. De esta forma personas diagnosticadas con Alzheimer o con otros trastornos neurocognitivos han conseguido a través de la imagen construir palabras en una estructura sincrónica que permite no solo evocar. Sino también construir a partir de su discurso su propia descripción íntegra de la realidad, tal y como los resultados manifiestan.

Palabras clave: Alzheimer, Arteterapia, Expresión, Palabra, Visual.

1. INTRODUCCIÓN

El programa “Arteterapia para personas con alzhéimer” se propone transferir los conocimientos y recursos generados a partir de la aplicación evaluada de un programa de arteterapia realizado, desde 2012 hasta la actualidad, en el geriátrico San Joaquín y Santa Ana, de San Juan del Puerto. Este programa, evaluado según estándares científicos, ha generado evidencia sobre la eficacia y eficiencia de la arteterapia (AT) como tratamiento para personas afectadas de la enfermedad de alzhéimer (EA) u otras demencias seniles en fase moderada o avanzada. Por tanto, se trata, de, sobre la base de la evidencia obtenida, extender los constatados beneficios de la intervención arteterapéutica a nuevos colectivos con el mismo perfil clínico (personas mayores afectadas de alzhéimer u otro trastorno neurocognitivo –TNC- mayor prevalente en la vejez).

El programa aquí propuesto, sería implementado en la sede de San Juan del Puerto (Huelva) durante el año 2017-2018.

El programa se aplica a enfermos de alzhéimer u otros TNC prevalentes en la vejez en una sesión semanal por grupo de 2 h. de duración cada una, coordinadas por un arteterapeuta profesional y monitorizadas por dos psicólogas con experiencia acreditada en arteterapia, todos ellos formados en la Universidad de Huelva y en colaboración con los medio y el personal Estancia univesitaria de la Universidad del Algarve.

2. OBJETIVOS

- Crear técnicas y recursos que permitan composiciones visuales a partir de la memoria plástica y visual de la palabra, su evocación, sentido, definición única y personal, y los trazados creativos que la secundan.
- Demostrar que la construcción de mensajes visuales a través de las palabras es universal, no limitándose a creadores en función de sus conocimientos académicos, personales o culturales.
- Validar técnicas creativas que faciliten composiciones visuales con las palabras.
- Construir la palabra como elemento de transformación personal.
- Convertir en expresión artística a través de la palabra como imagen, el conocimiento biográfico y significativo de nuestras experiencias vitales.
- Evocar la palabra como forma de representar visualmente, emociones, biografía e historias de vida con trascendencia y belleza.
- Modificar la naturaleza de la palabra para su transformación y sus posibilidades de expresión natural.
- Reconocer al autor de cada yo creativo que construye a través de la representación visual de sus palabras biográficas, extrapolando su creación a la individualidad de la creatividad mayestática.
- Identificar géneros de construcción visual como medios de incorporar la palabra a su proceso creativo.
- Inferir posibilidades creativas para géneros alternativos vinculados a otras disciplinas de conocimiento.
- Disfrutar de la palabra como medio artístico, plástico y expresivo, motivando a la creación de autobiografías, aprendizaje e historias de vida. La palabra como una forma de belleza.

3. METODOLOGÍA

La experiencia visual de las palabras es la expresión didáctica de experiencias e intervenciones reales con el fin de crear expresiones creativas a través de la palabra. La persona, como sujeto de inteligencias múltiples sobre las que actúa con un sí mismo descompensado, busca significados coherentes e integrados de las que pueda disponer.

Experiencias reales, activas y vividas, recreadas en la vida plástica y respiradas por mujeres de la Asociación de Voluntarias del Barrio del Castillo de Alcalá de Guadaíra, estudiantes de grado de las disciplinas de Educación Infantil,

Graduados y doctorandos de enfermería y educación, alumnos y alumnas de primaria y secundaria, personas sin titulación básica y dificultades de alfabetización, residentes en centros de mayores con alzhéimer y otros trastornos neurocognitivos, construcciones experimentadas desde el yo propio y único que representa cada yo que lo expresa.

La expresión visual de las palabras se ha construido con la participación de colectivos diversos en situaciones y entornos diversos y en condiciones socioeconómicas diversas, de esta manera se conjuga cada una de las formas desde la igualdad expresiva de la evocación, símbolo distintivo de ser, llegar a ser, querer, saber y tener. Historias de vida, juegos espontáneos, vínculos biográficos y construcciones autobiográficas, fuera de la demostración reconocida de falsas transformaciones.

La memoria visual de las palabras es la construcción de imágenes a través de la evocación, recuerdos, sensaciones, vidas, proyecciones, introyectos en los que habitamos y en los que nos dejamos vivir, palabras fotografía y referencia, nombres de lugares, personas, objetos, situaciones que forman parte de la definición de lo que somos, polisemia continua y continuada, una mesa de cocina, la misma y distinta, Germán, un nombre, amigo, evocado, viviente y vivido, uno entre los definidos.

Las palabras tienen patria y *matría*, no asisten a la determinación, su evocación provoca la continuidad de generosas arquitecturas visuales, plásticas y artísticas, al tiempo que permiten la construcción de mensajes dentro de un proceso creativo y de comunicación en el que el diálogo entre obra, palabra y sujeto interactúa en una suerte de igualdad modificada por la participación activa de interferencias, canal, situaciones y contextos.

La memoria resuelve expresiones que forman parte de narrativas explícitas y visuales donde la estructura profunda hace sinergia con la superficial, vomitando lo explícito y rescatando la palabra como elemento válido de la representación visual de la escena. La palabra, a través de la creatividad, permite universalizar toda construcción artística como producto inclusivo para cualquier sujeto actor de la creación, independientemente de su condición académica, cultural, social, ya que las palabras proponen evocaciones vinculadas a la memoria y biografía personal, válida, hábil y real en cualquiera de las historias de vida en las que habitamos.

No se trata de producciones vinculadas a la escritura creativa condicionada por los elementos narrativos, coherencia y cohesión, sino que participa estrechamente de la función catártica y terapéutica de la palabra como expresión artística y composición, así como de las funciones estética y comunicativa que le son propias.

Las posibilidades de expresión de la memoria visual de las palabras permiten la conversión y la búsqueda de nuevas formas de expresión creativas, visuales y biográficas, en las que la identidad personal y la palabra se nutren de estructuras tan espontáneas, como automáticas y visuales, próximas a la retórica; enumeraciones, metonimias, simetrías, etc. como otras alternativas, títulos, repeticiones, formatos gráficos de representación, soportes y medios varios enfáticos de significación, significativo y sentido, y cuya denotación promueve un estadio preactivo de la expresión: *Una pluma, unas gafas; El amor y las ciudades; Una conversación; Los domingos; Hacer números; Valle del recuerdo; Los recordados; Toda una vida; Una música; La realidad; Una carta, dos vidas; Deshoras*,¹ etc. *Escrito en un instante* como referencia de estilos y pseudogéneros, títulos de evocación sinestésica y personal. Antonio Muñoz Molina como ejemplo de escritura biográfica donde la intertextualidad supera los límites de las artes para corresponder en la vida, intertextualidad como paseo, mirada, ciudad, taxi, regreso, aeropuerto, ventana, escuchar, contar, música, más allá del texto, la intertextualidad como relación individual con las formas personales de evocar, fluir, memorar, recuperación visual de los episodios de nuestras vidas, traducidos en obras creativas de belleza plástica, visual, artística y trascendental.

Las técnicas creativas, la expresión plástica como recurso y el fomento dialógico, nos permiten poemas visuales, imágenes escritas, gradación de colores, espacios de miradas, expresiones verbales construidas desde la representación no explícita de la palabra.

Y siempre volviendo a la intertextualidad del paseo, Stendhal, Nietzsche, Josep Plà, Pío Baroja, Walser, Thoreau, a las posibilidades mediáticas y la necesidad de transformación de la palabra por encima de la evocación, como producto personal, creativo, estético, catártico y expresivo; artístico.

La expresión visual de las palabras son paseos por la belleza, los motivos y recorridos de vida, pasados y lastres, recuerdos y felicidades, un regalo para el alma que se plantea por qué seguir viviendo, mientras construye belleza y memorias transformadas. La convivencia en un sí mismo habitado.

Literatura, psicología, arte... la memoria visual de las palabras altera y participa diversas disciplinas académicas, invitando a las más expresivas, a compartir la comunicación e introyección como posibilidad de expresión artística y plástica, concentrando su intención en consignar la creación visual como un elemento de trascendencia biográfico, que argumenta sus antecedentes en el sí mismo creativo.

- La expresión visual de las palabras es habilitar álbumes fotográficos, cuajados de referencias sintomáticas de lo que somos, la esencia particular de vivir tiene un carisma propio de las escenas: imágenes.
- Somos la realidad que visualizamos y construimos, hacer de la acción e interacción una modalidad de expresión artística lleva a concretar la creatividad como una posibilidad donde lo correcto se evade para transformarse en lo explícito, formas no significadas parte de las nuevas composiciones afectadas por sema, significativo y asociaciones transformadoras. La evolución del pensamiento verbal como una suerte de imaginación pertrechada por la mirada personal, la alternancia, las posibilidades y el juego.

4. ESTADO DE LA CUESTIÓN

La palabra, como elemento de creatividad artística, permite y facilita la evocación, lectura y escritura puesto que se nutre de la palabra y el relato biográfico como forma de extender el medio de aprendizaje.

Gianni Rodari, en su obra *Gramática de la fantasía* (1983) recupera algunos aspectos de la expresión pero no redundando

¹ Títulos de Antonio Muñoz Molina para las entradas de su blog www.antoniumunozmolina.es en su sección Escrito en un instante.

en las posibilidades que puedan ofertarse a otro tipo de colectivos exentos de formación académica o en otras situaciones sociales, médicas o económicas.

La palabra como experiencia plástica y visual no solo consigue alcanzar el futuro necesitado de otros colectivos sino también profundizar en la manifestación no verbal de la palabra como forma de la que no consta alternativa argumentada ni bibliográfica para su consecución, aunque existen algunas formas originales y creativas vinculadas a un conocimiento previo de la lengua y su expresión distintos de la palabra como mensaje de experiencia visual que argumentadas permiten pluralizar las transmisión de mensajes, que no la socialización de la palabra, eje vertebrador de ese concepto.

No existe bibliografía acogida directamente al tema planteado pero si se pueden encontrar apoyos en Gianni Rodari y su *Gramática de la fantasía* y en la estética y filosofía general de la imagen y la palabra como puede ser *La poética del espacio* (1957) de Bachelard.

5. LA EXPRESIÓN VISUAL DE LAS PALABRAS

Soy la boca de una madeja
que flota en tu laberinto²

Cuando escribe su nombre no percibe otra sensación que la del color rodeando una forma, líneas concéntricas que se acumulan sobre el rastro de una palabra que es ella.

Ochenta y siete años esperando para contar a través de un agujero que se escapa todos los miércoles, con la literalidad suficiente para no soportar el lastre de la soledad que la acompaña cuando mira desde su silla antes de intentar ponerse en pie: *una madeja de lana, una boca, un flotador, un laberinto, una colchoneta*, soy más de lo que siento, soy lo que me represento, una imagen que evoca y resucita, la simpleza de un juego que traslada una vida que le pertenece y no poseía, tercera persona de quien se es, primera de quien medita, segunda para quien habla, cuenta y escribe.

Cada analogía se convierte en el cauce de una nueva palabra, la misma idea en la misma conversación, construyendo relatos y autorrelatos: todas y la única biografía posible que se traslada a la realidad de la realización y autorrealización personal, la estética de la identidad, el introyecto de vida, el pasado fusionado en la hermosura de lo contado, de lo que existe, de la sensación creadora en la autoría, he hecho, has hecho, hemos creado, la construcción del yo y todas sus posibilidades, como si una tercera persona distinta, ajena y creadora nombrara mi nombre, produjera mi espacio, recuperara mi estar y lo contara explícito, con la convulsión efímera de lo que soy, de la belleza que es distante y próxima (Eisner, 2004).

“Las formas de representación son medios por los que se hacen públicos los contenidos de la conciencia. (...), el proceso de hacer público el contenido de la conciencia es una manera de descubrirlo, estabilizarlo, revisarlo y compartirlo”.³

Nombrar el mundo, nombrar la realidad, una narrativa visual de lo que soy, nombrarlo para que las palabras se conviertan en la memoria reconstruida de biografías en las que he vivido, evocaciones espontáneas, provocadas o simuladas de las posibilidades que represento, sin el acto de nombrar y la sustancia de su sema, sin su presencia visual, grafía y forma no existen los estadios posibles de memoria, realidades paralelas, alternativas identitarias y vidas habitadas.

Macondo era entonces una aldea de veinte casas de barro y cañabrava construidas a la orilla de un río de aguas diáfanas que se precipitaban por un lecho de piedras pulidas, blancas y enormes como huevos prehistóricos. El mundo era tan reciente, que muchas cosas carecían de nombre, y para mencionarlas había que señalarlas con el dedo.⁴ (García Márquez, 1987)

Nombrar el mundo para nombrar la memoria representada en palabras, el contenido superficial de su forma sobre la construcción real de su estructura profunda, la connotación sobre la denotación, el juego tácito y personal de la metonimia y la metáfora como confusión cierta con la realidad, porque la intriga íntima de lo que soy se representa con una forma y tantos fondos como alternativas sugiere mi vida, historias he vivido y personas he habitado, como voces he escuchado y pieles he ocupado, vidas vividas y posibles, vidas no vividas y ocupadas, vidas observadas, vidas... El diario El País una mañana de calor y agosto titula *Todo lo que se nombra existe*⁵, con determinación de forma y soporte en que se representa lo nombrado, voz, grafía, papel, aire, etc. puesto que el sentido de propiedad biográfica y su trascendencia se nutren de su simbolización.

El mundo nombrado se representa desde la memoria visual. El pensamiento lógico hilvana las secuencias temporales que el pensamiento divergente traduce en diversidad y alternativas, superando los prejuicios creadores, arrancando desde la sema íntima de los imaginarios, como otro yo posible entre todos los yoes habilitados, conversaciones sin cuerpo a través de la distancia, como personas hechas de teclados y tiempo, existiendo en las redes virtuales y comunicando sobre el soporte efímero de la espontaneidad y el instante de su definición, habitualmente esas vidas se llevan más tiempo, imaginación y deseos que las vidas materiales cargadas de rutinas y faltas de imaginación. Se rodean de actos y proyecciones personales, que el desbloqueo creativo asume nombrar y transcribir.

Nombrar el mundo, toda su diversidad y personalidades, contextos, experiencias, edades y fórmulas posibles, individualidad

² Fragmento de la experiencia creativa realizada con personas mayores con Alzheimer u otro trastorno neurocognitivo. 2016

³ Eisner, Elliot (2004). El arte y la creación de la mente. El papel de las artes visuales en la transformación de la conciencia. Barcelona. Paidós, página 25.

⁴ García Márquez, Gabriel. (1987). Cien años de Soledad. Madrid. Cátedra, página 71.

⁵ Frabetti, C. (5 de agosto de 2016). Todo lo que se nombra existe. El País. Recuperado de http://elpais.com/elpais/2016/08/04/ciencia/1470305622_158020.html

matemática que nos lleva a la gramática de lo colectivo, viaje de la creatividad emergida desde el instante individual hasta la autoría personal, tantas miradas como sucesos acontecen en cada vida, posibilidad, relato y alternativa. La palabra tiene formas tan vinculadas a su fondo, que se convierten en epítetos fijos de su significado en la evocación visual y personal de cada una de ellas.

Las palabras tienen memoria. Es una memoria innata instalada en el largo plazo y amarrada a su existencia. Las palabras se recorren como ciudades, anotando los números de posición en los que habitan, esperando lugares desvestidos, memorias confusas, recuerdos que permanecen tácitos e indelebles, espacios y personas en los rincones de miradas, gestos, situaciones, belleza podrida en un motivo divergente que se sostiene de nada, del aire del nombre, del nombramiento nómada que duele, se condena, disfruta y entiende.

Las palabras tienen tanta memoria que, escritas, pueden leerse, escucharse y transformarse, con sus pulsos y sus antorchas, con la capacidad erigida en fiebre, no son más que trozos desfragmentados de pasado en los que proyectamos el presente, una palabra evoluciona y se hace plástica, representa lo que no es y quisimos y se vuelve literatura en la medida que se construye.

Hay palabras que no son literatura, que se sumergen de la mano de una voz que las nombra y hace prisioneras, vidas instantáneas que no son la espontaneidad de vivir, porque inventado y escrito, el azar es menos fortuito que la vida.

Una palabra se transforma y condena, vinculada a la biografía objetiva y subjetiva de cada yo, que es otro y no puede serlo, y su manifestación es el arte de la exhibición de los desnudos, cuerpos memoria no deteriorados por el tiempo, referencias conjuntas que no son definiciones sino más que evocación insólita de quien se es, yo era, tu eres, él es, ella es, una conjugación dispuesta a la palabra, al sema, a la inducción del determinismo en el género de construcción artística que es la expresión de cada vida, como un lexema origen que vincula y justifica su presencia física y evocadora, el trazo, la forma, el fondo, la perspectiva, el color, sonido, representación, simetría, sincronía y anacronía, su tiempo, la palabra como un género no sustantivo sino original, dotado de la creación tácita de sus recreadores, palabras diseñadas para la identidad desfragmentada del pasado, de lo propio, íntimo y personal, y que se manifiesta sobre soportes físicos y etéreos, sobre desestructuras gramaticales, normalizadas, correctas, aceptables, la palabra como una expresión identitaria, plástica, consecuencia visual de la memoria de sí misma.

Hay palabras dotadas de poder para reptar por el suelo. Tienen que ver con los pies y con las manos, con la textura de lo blando y de los cuerpos, con la orina y con la tierra, con la pobreza y con las cosas groseramente digestivas. Merodean el recuerdo de los primeros sabores, el aroma a hojas quemadas y las manos frías de alguien que te importa; palabras que de pronto en el exceso cotidiano de teclas e imágenes te sorprenden, ¡caramba, hay cuerpo! Son sobre todo palabras del tocar y del oler, de la muerte, de la boca y de la carne.⁶ (Zafra, 2015)

Palabras sinestesia, palabras biográficas, palabras exentas de teoría, pulsadas de yo, de introyectos reales, imaginarios, representaciones, evocaciones, significado y grafía, el nombre de una panadería, su neón encendido, el pulso escrito, el tiempo vinculado al pan y aquella panadería, la voz de la panadera, la forma hecha palabra de los mismos hábitos, en los mismos lugares, en el mismo tiempo, en el ciclo anacrónico en el que se representa la validez de sus sonidos equiparada a la de sus palabras, porque su pronunciamiento es la voz en la que significa, rotunda de lo que es.

Hay nombres de lugares, personas, palabras que no existen más que en una voz y una garganta, y que rompen su significado a través de otra pronunciación, palabras que se evaporan lejos de los tonos y los timbres originales, paisajes sonoros no transcritos que se pueden escuchar evocando la memoria personal y biográfica de quien hemos sido y somos, los cerramientos de un ciclo que se detesta o entiende y habita próximo a la marginación, al reverso, bucle o recuerdo preciso, imágenes como palabras que se esparcen con la necesidad de trascender su vida, representación gráfica y visual de las voces y significados esenciales a los que pertenecen. Existen palabras tan vinculadas a otras personas que no existen en otro pulso, tono ni voz, aparecen enterradas en voces distintas, copias fraudulentas de la realidad que evocamos, un rostro, un presente y una mano que la memoria se empeña en compartir y que, fuera de su imaginario, se modifican, prejuicios del plagio en que la insinuamos.

Lo que importa es que las vidas no sirven como modelos. Sólo las historias sirven (...). Sólo podemos vivir en las historias que hemos leído u oído. Vivimos nuestras propias vidas a través de textos. Pueden ser textos leídos, contados, experimentados electrónicamente, o pueden venir de nosotros, como los murmullos de nuestra madre, diciéndonos lo que las convenciones exigen. Cualquiera que sea su forma o su medio, esas historias nos han formado a todos nosotros y son las que debemos usar para fabricar nuevas ficciones, nuevas narrativas.⁷ (Heilbrun, 1988)

No hace falta comenzar para retener las imágenes que concede una palabra: mesa, la de la cocina, blanca, con sus cuatro sillas alrededor, respaldo metálico, inoxidable, abierta, extensible, ala izquierda para José, ala derecha para el abuelo. Mesa, en la voz de mamá, es la mesa, en nadie más la misma; cambia su significado, la imagen de su evocación, la de los gritos encerrados, roces y mediodías de cocina.

Las palabras representan la fotografía inconsciente de nuestro álbum de miradas, lugares encontrados que no llevan a ningún sitio porque no hay creencia en la resistencia que ofrecen, el objeto es concertado por el pensamiento pero su grafía puede no corresponderse con su significado, no hay una palabra concisa, hay una noción de experiencias personales que son más que el juego del que participan.

Las palabras tienen memoria, recuerdan movimientos, sonidos y espacios, recuerdan colores, gestos y cumpleaños,

⁶ Zafra, Remedios. (2015). Ojos y capital. Bilbao. Consonni. Página 11.

⁷ Heilbrun, Carolyn. (1988). Writing a woman's life. Ballantine books. New York. Página 62.

recuerdan personas, viajes y lugares, ventanas y taxis antes del aeropuerto, transiciones y momentos que el pensamiento conserva en el silencio ruidoso e inconsciente, intrahistoria de sí mismo, áreas en la que se es y está sin tiempo alguno ni espacio propio, el viaje, cada Ítaca.

de una vida feliz es aprender a lograr el fluir del mayor número posible de las cosas que hacemos. (...) El mundo es de nuestra incumbencia, y no podemos saber qué parte de él se ajusta mejor a nuestro yo, a nuestras potencialidades, a menos que hagamos un esfuerzo serio por aprender tantos aspectos de él como sea posible.⁸ (Csikszentmihalyi, 1997)

Las vidas son creatividad de acción, pruebas continuas de perspectivas y experiencias mediatizadas por sesgos culturales, poderosas razones para nuestra transición. Fluir surge de la inercia provocada por cambios coyunturales y estructurales en defensa de la vida y la evolución personal, sintonizando con la sociedad, herrajes de agilidad anímica en la que los desbloques creativos se expresan como antecesores fundamentales del hecho. El desbloqueo como ejercicio de reivindicación de la mirada, la persona, el hecho, la perspectiva y la creación, contienen una vocación de ser y hacer, una decisión de posibilidades en cada una de sus alternativas.

No siempre se acuerda uno de todos los episodios decisivos de su vocación. Hay descubrimientos que nos afectaron y que nos importaron mucho, que nos despertaron a mundos que habíamos ignorado hasta entonces y que, con el tiempo, se olvidan, igual que se olvidan libros y películas o canciones que por un motivo u otro dejaron de tener un efecto consciente sobre nuestra imaginación (...).⁹ (Muñoz Molina, 2013)

La palabra, trascendiendo los géneros biográficos y literarios, comporta la posibilidad de hacer de sí misma una representación plástica y visual, evocando y permitiendo que la creatividad se integre en las miradas, fluya nombrando el mundo y cualquiera de sus perspectivas, recreando significativo y significando como constructores de nuevas experiencias, reivindicando grafías, soportes y formatos desde la memoria visual de lo representado.

Toda palabra requiere un alejamiento de la realidad a la que se refiere; toda palabra es también una liberación de quien la dice. Quien habla aunque sea de las apariencias, no es del todo esclavo; quien habla, aunque sea de la más abigarrada multiplicidad, ya ha alcanzado alguna suerte de unidad, pues que embebido en el puro pasmo, prendido a lo que cambia y fluye, no acertaría a decir nada, (...) ¹⁰ (Zambrano, 1996)

El viaje, la mirada, estares y habitares, y la palabra como referencia biográfica y representación visual enrocan con la creatividad la opción de vomitar alternativas en continuo diálogo con la expresión y la producción artística. *Escrito en un instante* calcina formas arbitrarias de creación, conjugación de vida posible, autor y obra a partir de su interacción. La comunicación como espacio artístico donde las referencias son perspectivas implicadas en un proceso de creación alternativo, la palabra como expresión visual.

5.1 Habitación de mapas

Intrahistorias de una vida que continúa despacio, hoy desesperada, ayer expectante. Las voces se derraman alrededor y el tiempo se confina como un diario, anotaciones que existen sin trascender, con el dominio de la purga de lo que somos, desprendimientos de anécdotas en la estructura que contemplamos, si yo fuera o hubiera sido, si yo hiciera o hubiera hecho, si yo estuviera o ... desnormalizar la escritura nos convierte en una creación al margen que reconoce la autoría, yo creo, al tiempo que te hablo, buscando un formato que me enseñe que eres tú quien me escucha, tú, a setenta y siete kilómetros o cincuenta y tres centímetros de largo, tu cuerpo pequeño y agarrotado, los ojos en la esquila de los movimientos que no confunden los abrazos, el número ciento dieciséis y la espera. Llego a dormir donde se encuentra la calma, el paisaje fabuloso de otro viaje, la paz, el mar, los ojos cerrados, el coche, todo contenido en la música de jazz que suena a no más de las once, sin naufragio ni posibilidad, y lo cuento, te escribo en un espacio donde la norma es el argumento de una imitación, donde romper el trazado del hacer es la copia explícita de la memoria visual.

Te recuerdo en una palabra, en el papel de unos tickets de comida que envejecen con una fecha, la anotación por detrás de un número de teléfono, hoy, cualquier día, tu mensaje de whatsapp, y no existe lo que exhibes, existe lo que espera, cualquier palabra acumulada que me lleva a la habitación de los mapas de mi vida, la cartografía existente de la memoria que me retrotrae al descubrimiento de las veces que me he enamorado, las condiciones de cada consecuencia, las paradojas de cada estafeta. Música, busco música en las estanterías de los libros, pulsaciones del desayuno antes de la cama, te espero, la puerta cerrada y la noche caída, jueves, un sendero de mensajes que acaban en el sofá donde me esperas, es mi habitación de mapas, los retales de cartón sobre los que escribes con tu letra más decidida, el mensaje que te presto en el desayuno o pones sobre mi ordenador, mi habitación de mapas, las trabas para no contar lo que no he sido y las posibilidades que tengo de serlo, mi vida estructurada sin guión ni argumento, recuerdos amontonados sobre restos de papel y centros de depilación, ofertas de pizza y llamadas a distancia, ahora que las redes me permiten encontrarte para ser la persona que mi vida recuerda a las trece, una calle de Madrid, una mesa de cocina, una palabra grabada en la sien de un paisaje sonoro, habitar, habito, la palabra en que descanso.

⁸ Csikszentmihalyi (1997). *Fluir, una psicología de la felicidad*. Barcelona. Kairos. Página 394.

⁹ Muñoz Molina, Antonio (2013). *Hilos de la vocación*. En [www.antoniomuozmolina.es](http://xn--antoniomuozmolina-nxb.es/2013/01/hilos-de-la-vocacion/). Recuperado de <http://xn--antoniomuozmolina-nxb.es/2013/01/hilos-de-la-vocacion/>. Consultado 7 de enero de 2013.

¹⁰ Zambrano, María. (1996). *Filosofía y poesía*. Madrid. Fondo de Cultura Económica de España. pág 21.

Haces la cena y murmullas, juegan, la vida en la mesa del teclado fluye precisa, si escribiera a mano no podría encontrar esta disertación, porque tengo la necesidad de que el pensamiento fluya con la expresión, con la palabra, con la desinhibición explícita de lo que procede. Miro mi pluma, el cuaderno rojo, el bolígrafo, acompañantes previos de la belleza de una papelería en Reina Mercedes, en los comerciales donde practicábamos este juego que quiero relatar, cuadernos manuales, encuadernados de cinta adhesiva y papel reciclado, con un color leve y distinto del blanco, ésta es la sinestesia, la necesidad de que mi habitación de mapas se construya como mi cartografía, y tenga miedo de recelar de su contenido, donde escribo opciones de mis carreras, anotaciones similares a un diálogo próximas a no ser compartidas, porque yo no soy trascendente, no escribo como Munch aunque creo como un acto, no soy el escritor que presenta *Escrito en un instante* y lo instala con la seguridad de que alguien alabaré, aplaudirá, leerá, compartirá, expondrá sus razones sobre lo leído, porque en lo comercial no hay tregua para el intelecto, no soy ni pretendo la pareja que anima el ánimo y lo construye sin soledad, la misma indulgencia con la que se trastabillan las palabras y no logran su sentido antes de perjudicar la pausa.

Escribía cualquier cosa: diarios, poemas, arranques de obras de teatro o de novelas, críticas futuras que los periódicos internacionales publicarían sobre ellas. Escribir era una tarea completamente material: la pulsación de los dedos, los golpes de las teclas sobre el papel ceñido al carro, el timbre que avisaba del final de la línea. También el olor a grasa y a metal de la máquina. Eran los dedos y la máquina los que me llevaban, no la inteligencia, ni la imaginación. Escribir algo a mano y pasarlo luego habría sido hacer trampa: la escritura era inseparable del medio en el que se hacía.¹¹ (Muñoz Molina, 2010).

Mi habitación de mapas es la caja de mi vida, la historia contada en parcelas de calma, cada uno de los mensajes que me dejas, la palabra precisa con la que me adornas, la factura del hotel de Aracena, su nombre y la palabra, el recibo del ingreso de la hipoteca, el seguro del coche, la parte que sólo reconozco, y yo, y los nosotros que somos y hemos sido, el ticket del peaje a Lisboa, los nombres de lugares y su metonimia, logos que son la palabra representada, los titulares del periódico que recuerdo y recreo en una cadena de sentido, las noticias que recorto, los archivos de historias que sólo leo en su inicio, y forman parte de la ficción que vivo tan real como irreal e instintiva. Las imágenes de la cabecera del periódico, El País, temprano, la palabra clave habitual que anoto en google, y me lleva con el desayuno a las rutinas que recuerdo, habitación de mapas.

Mi habitación de mapas son todos los lastres de una vida contada por la propia memoria, donde las evocaciones directas provocadas por soportes, medios y mensajes (Puig beso mujer araña) son capaces de hacer del documento, la presencia con la que intervenir artísticamente sobre la plasticidad de la palabra y su pensamiento visual, con la oportunidad de transformarlo.

La palabra creativa, biográfica y su representación visual se nutre de la materia prima de cada habitación de mapas, de las estanterías que la adornan, la paz de su incienso y las esquinas de sus delitos, la acumulación de objetos, papeles y sabores, se nutre de lo efímero, conservando las pequeñas cosas en el valor de su emoción, la observación y la mirada diaria, el recorrido del mismo paseo, de habitaciones de mapas tan particulares como universales, únicas y comunes, donde la literatura no es la escritura del argumento, sino donde la palabra se pronostica como construcción artística de la imagen de lo que soy, yo, cualquier yo, también todos los que somos en una sola vida.

5.2 Siete formas

En *Siete maneras de decir manzana*, Benjamín Prado comparte apuntes para explicar un género que se construye a través de la creatividad y la representación visual, buscando formas de expresión de la palabra, que tiene por causa y efecto la construcción de imágenes, bien como poesía, bien como modelos alternativos para evocar, nombrar, transcribir o fragmentar la realidad.

La originalidad, la introyección, y prospección de la palabra conforman el germen original del ser original en el mundo *desoriginal* que habitamos, a través de la autoría como sinónimo de creación.

Se experimenta con las formas gramaticales la expresión visual que el pensamiento simbólico otorga a la palabra con finalidad no solo comunicativa, sino terapéutica, creativa, innovadora, personal, socializadora y artística, derivando a su vez en una propuesta de géneros creativos en los que conviven los cuadernos personales con el diario, la historia de vida, el relato, etc.: La palabra como un modelo de narrativa visual.

Una región psíquica y afectiva en la que el lenguaje debe cumplir un papel muy diferente del que tiene fuera de la vida real,...inventarle algún nuevo sentido a las palabras, establecer asociaciones inéditas entre ellas o descubrirles atributos desconocidos,...urden imágenes que nunca habíamos visto,...se estiran y mudan de forma, intercambian su sentido, acogen significados nuevos,...las propias palabras se canjean por objetos, para explicar qué son,... un nuevo significado equivale a una nueva palabra,... ¿Y qué serían entonces las imágenes? Lo que se ha de percibir sólo una vez, siempre una vez y sólo ahora y sólo aquí,... todas las palabras son, a lo sumo, palabras aproximadas,..., ¿De qué manera puede actuar la imaginación?¹² (Prado, 2008)

Un texto es un escenario, y también el apunte de un lector sobre el cuaderno desordenado, tachones ensimismados que aprenden palabras copiando y reproduciendo cada mensaje, para reflexionar el valor que compartimos, reproduce las sensaciones del paseante profesional de flexo, café y tarde, de campo, ruido y soledad que, en una palabra, intenta convertir un mensaje, y que anota, y escribe, sobre cualquier papel y en cualquier margen, sobre cualquier línea y cualquier párrafo,

¹¹ Muñoz Molina, Antonio (2010). Una primera tentativa.. En www.antonio-munozmolina.es. Recuperado de <http://xn--antonio-munozmolina-nxb.es/index.php?s=una+primera+tentativa>. Consultado 2 de julio de 2010.

¹² Prado, Benjamín. (2008). *Siete maneras de decir manzana*. Madrid: Visor. Página 45.

con post it y colores, fluorescentes y rayas, tachones y formas, ocupando los límites del libro, y escuchando el poder de la acera, la mirada sobre los zapatos, y la flexión de su rodilla, donde se juntan Bécquer, Lorca, Valery, Rilke, Lowell, Wallace Stevens, Octavio Paz, Guillén, Azorín, Celan, Pound, Cernuda, Gil de Biedma, Valente, justificando que cada forma de anotar pertenece a la anotación, no a la justificación. De esta forma reivindica la exploración de los sentidos a través de la mirada y las formas en las que se presenta, el papel del observador, la escucha de la que somos testigos en primera, segunda o tercera persona, y del ciclo vital al que nos conduce el álbum fotográfico y visual que representamos con las palabras, como un bodegón de memoria.

6. LA PALABRA PLÁSTICA

Desde lo biográfico, la palabra determina su pensamiento en pos del proceso, acompañamiento y géneros procuradores de la demanda, modelos que actúan por sí mismos como desbloqueantes por el valor no solo empático sino pedagógico que representan, insistir en el encuentro como teoría de aproximación, es hacer material el encuentro verbal, físico u orgánico, donde las palabras de forma física intervienen en una sistemática de huida de espacios de salón a lugares en otra plaza, ese movimiento es la provocación de que las palabras en su enunciado contengan un contenido visual exclusivamente vinculado a la existencia de cada yo, las referencias objetuales, personales, implícitas en la sinestesia y gesto acodado en la empatía, concluye por producir la entelequia de mensajes dispuestos para su transformación, así el reconocimiento e interlocución evadida de la escucha, proporciona el milagro de la creación, la mirada hacia el cumplimiento de la estética, la comunicación, el llanto que reúnen unos dedos al escribir, una voz al pronunciar, un oído al escuchar desde la sabiduría corporal de un cuerpo que no sabe que lo sabe, pero sabe que lo puede saber y necesita demostrarse que saberlo y representarlo es el síntoma de su propia trascendencia, del valor de una vida construida en un sentido, de las ventanas abiertas para que el paseo continúe su dirección, catarsis, estética, comunicación de una vida que el bolsillo de la satisfacción ahueca en una lágrima.

El ensayo verbal de esa visualización se integra en lo plástico, posibilidades, el derecho a la elección de cada optativa, con el sentido de su participación.

El valor biográfico de la palabra procura el sema de su imagen, la gramática una posibilidad de su trazo, el significante una denotación de su significado, la obligatoriedad de irrumpir en la normatividad como un trazo lo hace sobre la materia. Cabe en la garganta la pronunciación, así embolsadas las palabras precisan de un soporte y un medio que las determine plásticamente, no sólo para la producción sino también para el flujo de sus pesquisas, la forma distinta y distante con la que brotarán fortalecidas por los elementos externos y los auto generados por la motivación implícita de los obstáculos esquivos, desbloqueo.

Y en esa perspectiva con la ciudad al fondo, el paseo por la mirada se convierte en el parabrisas de una línea continua, donde los kilómetros se caen manteniendo su estructura, transformando las distancias en paisajes ya no míticos, lugares a los que se accede más allá de la imaginación y que a su regreso contienen otra memoria visual, la de la palabra proferida en el accidente, el lugar, el punto mismo, la carretera, la chocolatina de la merienda, hace cuarenta años, antes si eres tú, después si soy yo, no existe una chocolatina que en esa palabra tenga otro sabor, valor, precio, hora, calle, tienda, vendedor, retinas retenidas en el mensaje visual que concentra una chocolatina, la misma que recojo del supermercado y sigue siendo la que era, aún con la forma deformada de lo que representaba, la memoria como un objeto que evoco en una palabra y connota más allá de ella y pide transformarse para el regodeo del recuerdo de su belleza, buscando fórmulas, entrenamientos no concentrados, miradas inéditas, formas de conservar su recuerdo con la misma diligencia que el paso del tiempo lo hace sobre ellas.

Te quiero, es lo que recuerdo del aparcamiento del coche y las veces que me he enamorado, las luces apagadas, tu cuerpo rendido y el nombre en los labios, hoy, antes los tuyos. Sara es un nombre, definición de un personaje sin construir que forma parte de una memoria, unos años, una conversación y una mesa, quinientos kilómetros, los lugares de Alcalá, Torrellano y Barcelona, los pantalones y las campanas, la noche de los cuerpos, julio y agosto, no son recuerdos, no es la memoria continua de un relato, sino la narración visual que el propio nombre de Sara recuerda, único, como los números indescifrables que en una combinación probable y distinta se manifiestan en el orden del lector de tu rostro 656393973, continuidades casuales, numeración asociada a la plasticidad enumerada de un nombre, también viceversa, porque hay palabras voluntarias que en combinaciones consisten en recrear el tiempo sincrónico de la belleza de los tiempos vividos, conjugando desde la analogía, la asociación, la forma, el soporte, el medio, todos los estilos de belleza posible.

Las premisas son evocaciones que continúan el gesto de la emoción, las palabras, la facilidad del componente retórico como herramienta visual, las dimensiones fónicas, semánticas y sintácticas como agujeros de expresión artística, plástica. Palabras horizontales por forma, fondo, contenido o evocación, *murmullo*, moviéndose despacio hasta huir del soporte, con la verticalidad de su forma y la horizontalidad de su sonido, con la profundidad sin escorzo de su lema ni la evocación reciente de su carisma, línea de tierra que se evade del conflicto en una tabla de referencias donde no cabe más que el sonido.

Palabras verticales por forma y fondo, la agudeza con la que cae un *plato* en mi memoria, la verticalidad de su forma *p* embarazada, cabeza, pipa, trompeta, sonido, *l* caída, así hasta una suma de analogías embebidas de ellas mismas, la combinación de las grafías y el significado. Te espero con la letra clara y específica de la mano, porque la grafía es la configuración perfecta de un calendario vital que se arruga en los confines de su sentido. Sentido, significado, espera, estética de una belleza avanzada que se idealiza en la realidad de su visión, incluyendo la perspectiva lineal de su tiempo y la longitud emocional de la sensación, analogías, asociaciones, vínculos, cuando los trazos se cruzan y descubren nuevos colores, los similares son los intercambios desordenados de sintagmas que no llegan a enfrentarse en su espera, transcripción de paisajes sonoros en los que las voces comparten instantes, segundos exactamente perfectos, tiempos idénticos y espacios exactos, con una inspección temporal donde no cabe la confusión entre tiempo y espacio y han de practicar la compañía sobre el soporte,

Preguntas de un lead que interrogan las analogías, dónde, cuándo, quién, qué, por qué, cómo, el juego creativo que en clave serena obtiene los trajes y sombreros verdes, rojos, ... que De Bono prefiere para el rescate. Jugar, representar, la misma ilusión que lleva hasta el aprendizaje y experimentación del juego, los elefantes, espectogramas, maneras, la selección a ciegas, los contrastes que hacen de la palabra una representación, la magia de una isla que entiende el paisaje en el que resiste. La escritura ciega, con diversos medios, en diferentes soportes, la escritura de impresión inversa, la combinación de grafías, las nuevas palabras de la propia, su concatenación en la estructura de tu cuerpo, los cuadernos de nombres, juguetes, recuerdos, regalos, objetos, cuadernos fríos combinados de nuevo y depurados a la vez donde lo explícito es la memoria visual congénita de la sustancia que representan, las conjunciones, determinantes, pronombres como nexos cotidianos aferrados a las palabras, límites de los trazos del papel que se entorpecen sin decir nada, el retrato del silencio con las pausas aguerridas, la velocidad precisa de la sucesión, enumeración, hasta evaporarse en la coma y punto final del silencio de la muerte similar a la persona que no está y te inscribe sin proceso, las multiformas de cada palabra, formas curvas, cíclicas y paralelas, líneas de fondo y de tierra, palabras circulares que empiezan, rectas, curvas, puntos de luz en el trazado del subrayado de una materia que es la palabra, línea de márgenes, palabras retornos, palabras estándar, industriales y explícitas, palabras ruidosas, bélicas y concebidas, en vientres confidenciales que conocen la derivación como transformación de su naturaleza, prefijos, sufijos, lexemas, leyes de la transformación productora de imágenes que reconquistan la fortaleza del mensaje, que esparcen fogonazos y demoras, a y o coinciden, a o s, masculino, femenino, plural, cuántas elecciones hay en tu nombre, cuántos diálogos existen en tu piel, personajes fluyen de tus formas o elegantes de tu garganta. No hay textualidad, hay orificios de materia, plasticidad combinada de mensajes que se enganchan a la creatividad sin la crisis del ánimo.

Lo racional como una postura de juicio en el imán de la razón imbricada con su cambio. Alternativas, miradas, otras, las mismas, diferentes, mirar con la norma y para ella, en contra de su quien se resiste. Concentración intensa y ordenada en la felicidad improvisada y prevista, casi automática, la palabra como vivencia de integración, obra fluida que nace del elemento en el que reposa, próxima a la pasión creadora como acción autotélica en la que dificultad y destreza se alían en contacto con la actividad y la conciencia creadora.

La palabra prescribe términos asiduos, la comodidad de traducir su realidad sistémica al certamen cultural en el que convive, incluyendo las facciones idiomáticas, y palabras con capacidad de forma y contenido nombrado. La personalidad cultural como un mensaje que se mantiene en círculos concéntricos evadiendo su calor desde el yo hasta el nosotros como comunidad global de convivencia, el modelo artístico, una referencia hábil que dialoga consigo mismo lejos del límite de un título, la palabra con forma, no como ilustración de la forma, la palabra como color primario que grada su energía en el escenario de la imagen.

¹³ Composición de la conjugación de la palabra como recurso visual.

Imágenes esporádicas, imágenes vencidas, imágenes en palabras que sufren manipulables, dúctiles, flexibles, dinámicas, amorfas, líneas sobre una imagen que tuercen su sentido y agarran su sema, devastándolo, haciendo un juego continuado de sufijación, prefijación, lexema, sin respeto por la raíz y conjura por el significado, visualizando palabras comprensibles que no se desbaratan en nada, proyectos sobre un cartón que significa tanto como su propio contenido y que no aísla la palabra de su sentido evaporado.

Las palabras son palabras únicas, modifican y alteran los semas en función de su significante representación, adiós con prisas, adiós hasta siempre, adiós María, no te he vuelto a ver, y el marco donde sucede y el asfalto del escenario, una pista de deporte a los catorce años. Si la sema se enriquece, cada palabra aumenta su valor significativo en la forma de lo que representa, no de lo que es, la transformación de la palabra convierte imágenes en perspectivas de sí misma, jugando no sólo con la condición de forma, tamaño, grafía, soporte y medio en un plano puramente plástico, físico y visual, sino que a través de su sema, las modificaciones aplicadas, la actuación sobre su enraizado, y la deconstrucción y conversión de su estructura formal, permiten imbricar y persuadir su propio sentido, significación y aceptabilidad, en cuanto a su experiencia visual y su trazado formal en condiciones gramaticales, incluso reconstruyendo su imagen por elipsis o zeugma de la expresión original.

La palabra es una experiencia global de comunicación, denostada por la unidireccionalidad de su intencionalidad verbal, expresa drásticamente los sonidos no arbitrarios de las percepciones humanas, considerando la estructura gramatical palabra como entidad en una dimensión no arbitraria, aquélla que fallece y se rinde ante los intentos incondicionales de las primeras palabras de un niño de un año, las expresiones que forman parte del acervo cultural y casi industrial de personas que publican mensajes con su rostro, su memoria, su recuerdo y que los afrontan diversificando y ampliando la memoria, palabras familiares, derivadas de las correctas, imbricadas con pronunciaciones y unidades fonéticas deslavazadas y que, en cumplimiento de su función redundaban en la sonrisa provocada por la imagen que representan.

Una palabra es la vertical de una fotografía, su carácter visual es personal y compartido, no transferible, se comparte en distintos significados, contextos y evocaciones para plenarla de implicaciones, connotaciones, estructura superficial capaz de retratar segmentos temporales, arraigos y raíces, lexemas, leyes tergiversadas que hacen que lo global, universal y arbitrario de la palabra no se traslade el significado biográfico sino la entidad neutra no evocadora. La palabra como referente visual no define, evoca, recuerda, sonríe, tiene, vomita, olvida, no quiere, espera, es, somos, soy.

6.1 Verbalizar a través de la imagen.: Proyección Artística de la palabra

“Un espacio donde la flexibilidad, aceptación, confrontación con sus emociones y tolerancia son reales”.
(Pérez Fariñas, 2004, p. 249).

Sobre el producto creativo descansa la expresión subjetiva y personal de la autoría. Este hecho permite establecer de forma integral funcionalidades tanto catárticas como expresivas o estéticas según la disposición intrínseca, innata o sugerida del sujeto creador.

La proyección artística ofrece la oportunidad de involucrar percepciones, sensaciones, emociones, pensamientos, situaciones, estancias, habitares,... observarlos y explorarlos. Rigo Vanrell (2004) destaca la expresión subjetiva de la imagen en el grado de implicación, las reacciones de fobia, rechazo o afinidad que surgen durante el proceso creativo: temáticas elegidas, carga simbólica, elección y modo de aplicación de técnicas, el estado de ánimo, el grado de aprobación y satisfacción de las realizaciones propias o ajenas revela la personalidad, no sólo se trata de lo representado sino de la afección con la que se ha engendrado. (Omenat, 2006).

El uso de los medios artísticos, el pensamiento visual y espontáneo amplía la capacidad expresiva y comunicativa de una persona en el acceso a sus estados mentales, especialmente en situaciones en las que el lenguaje verbal se encuentra bloqueado o limitado por falta de dominio, inhibiciones o disfunciones físicas, cognitivas o emocionales. La persona se exterioriza, formaliza la realidad de sus apegos, inquietudes, deseos, conversiones, simientes,..., invocando la oportunidad de inhibir el tiempo personal a través de la actuación del pensamiento visual y la palabra como catalizadores del proceso.

Case y Dalley (1992) destacan la supervivencia en el tiempo de las imágenes como una herramienta muy útil, especialmente en situaciones donde la persona no puede verbalizar lo realizado y entra en contradicción con el uso de la palabra, que reúne las mismas características si se llega a ella a través del pensamiento visual, estando presente en su trascendencia.

La creación se inspira en el juego simbólico y la interiorización biográfica como una estrategia para fomentar el proceso creativo. El uso de los medios artísticos fomenta el desarrollo de actitudes asociadas al deseo de expresión.

7. LA PALABRA COMO EXPERIENCIA

7.1 Técnicas de creatividad artística

Creemos fórmulas para contagiar de creación a la propia palabra, todo este escrito parece un circunloquio de lo que no es, pero se trata de representar textual y artísticamente expresiones que pasan por ser historias de vida, acontecimientos, vidas propias, descompuestas o no, voces y rostros en silencio, pasando por querer fortalecer la autoestima, acobardada, letal, la fortaleza de los que quieren y no pueden, la fortaleza de los que quieren y pueden, la repetición de palabras como un escondite donde crear arte, expresión artística evocar momentos, recuerdos, situaciones, nombres, personas, instantes. lo fugaz como un eterno en la madeja de los pasados.

La creación artística como un trazo, de forma y fondo, de características que validan todas sus funciones, naciendo de lo plástico o viviendo de lo escrito, estrategias de construcción de textos a través de paisajes sonoros, composiciones visuales de gramática morfológica, gradación de colores, historia de vida como retrato, la palabra como fotografía, lo simbólico como

imagen, palabra después del color único y compacto, y viceversa, el juego de la analogía en el hecho, la palabra, la sílaba incluso la letra, la matemática de la palabra como forma artística de su representación, suma de analogías que confieren arte a lo artístico y creación a lo creado, dibujo, formas de trazados, ¿Qué es?, ¿Quién soy? Conjugaciones personales, cadáver exquisito, transformaciones de la palabra utilizando su idéntico significante y su más precisa fonética, el espectograma como forma de creación única y diversa en la medida del interlocutor, las formas que pluralizan las posibilidades al trabajarlas en combinación con otro lengua, idioma, dialecto o habla, la creación de diálogos a partir de las analogías, las respuestas, procedentes o no, pero su naturaleza vital e envidiable, la pausa como texto, la tilde como orden y gerencia de mando, el caligrama a través de formas no azarosas sino extremadamente delimitadas por la propia palabra, el autopoema como una reflexión social de nuestra presentación en vida social, cómo nos somos y nos representamos, quiénes nos miran, cómo nos ven, el juego como técnica plástica, la manualidad del recorte de palabras como voz identitaria que concluye con la frase que es, soy, o puede ser. La búsqueda de sentido sin él mismo, completar la fotografía de una palabra, actuar sobre ella, modificar sus negativos morfológicos, derivaciones, pausas, sufijaciones. Reformular las preguntas con una plástica visual elevada, llegando hasta dónde no se llega con la palabra plana, lisa y defectuosa, elevar ese crecimiento al yo personal, al que estima la prudencia de lo puro y lo impuro, y tomarlo como medio de transformación; la historia continuada, el arte como un medio cooperativo, convertir la retórica en pincel, la enumeración en sintonía y proclamar así la libertad de los colores con o sin sentido, dentro de lo biográfico y global, de lo alternativo, como noticia de quien se es y vuelve a descubrirse, quién quiere saberlo

La creatividad artística hace de la palabra una posibilidad ilimitada, para los que escriben y para los que no lo hacen, permiten que el arte sea de quien lo necesita, de quien lo espera, de quien se arroja en él con el sentido de la no pérdida, la aparición. Te quiero, te lo he dicho muchas veces, pero aprovecho el texto para decírtelo antes de tenga aún más miedo, y estos reptiles gráficos que se arrastran por el papel, conforman lo que es la realidad artística del arte bañado por la palabra

Para cambiar todo lo que no he hecho.

Lo que no he hecho para cambiar.

Hecho todo para no cambiarlo.

Todo no lo he hecho.

¿Cambiarlo para qué?

¿Qué lo para?

Lo hecho.

Cambia¹⁴.

Y así buscando, explorando formas que le permitan a la palabra estar convincente en su razón artística, desde la identificación, el reconocimiento y la transformación, haciendo también comanda de una entidad arteterapéutica fundamental para el proceso expresivo y catártico del arte que todos practicamos y necesitamos como revisión transformadora de estares, seres y haceres.

Comportamientos, experiencias, vivencias y sus espacios físicos, o no, como los cuerpos. No es una forma de construir escritura creativa sino de utilizar el arte y la expresión escrita para buscar nuevas formas y significados “Un escritor puede malograrse si nadie le hace ningún caso, y también si le hacen demasiado; si descuida el tono de su voz para convertirse en portavoz de algo” “la grandilocuencia es lo contrario de la literatura”, el arte no. “La literatura es precisión a una escala casi molecular, brillo o el golpe seco de una palabra justa, la chispa como de pedernal golpeado, la reacción química cuando se combinan dos palabras bien elegidas, imantadas entre sí. La literatura es lo que no puede ser dicho de otra manera y lo que necesita ser leído despacio y en voz alta, al menos dos veces, en soledad o en pareja, en un grupo reducido”.

7.2 Coplas para vivir

Los miércoles son los mejores días de cada semana, se relacionan con los símbolos y apuntan signos de complacencia, construyendo imaginarios que son reales. Son cada uno de mis miércoles, las voces, preguntas y respuestas que los pueblan, cada icono como un bolígrafo en su lugar, un teclado sobre la mesa o la inauguración de un diálogo que no entenderá nadie. Los miércoles permiten construir, desde su palabra biográfica pasando por las miradas, mirando para no desatender las escenas, evocando en la almohada sus idilios abrazos, besos y despedidas, y buscando la sinonimia incorrecta, el sema aceptado para subrayar la palabra miércoles en relación con todas las relaciones expeditas de su propia nominalidad, miércoles como besos, ordenador, naranja, agua, mochila negra, conversación, abrazo intenso, deseo controlado, miércoles como una sucesión de palabras que admiten la construcción fotográfica de la evocación, pura, real, decisiva

Las miradas cansadas a sus noventa y dos años destiñen el papel que sujeta con la mano. No es un relato, la realidad expulsada es el alegato de la vida, la música, las ruedas que los trasladan a la sala de un gimnasio, mesas, colores, abrazos, besos, agradecimientos, escritura pintada, pellizcos de besos, grafías de relatos en bucle que construyen argumentos con líneas rojas de rotulador. No parar, no dejar, mantener en la orilla la versión de la condena, la misma de la semana que viene, la otra, y la que le sucede, y su escritura, y su dibujo, grabación fónica de lo que expresa, y una historia, escrita con pinceles, con lápiz académico que le recuerda el papel de estraza. ¿Hemos terminado de vivir? ¿Cuántas vidas no conozco?

La bolsa es un sobre desarrapado. Adjetivación automática amedrentada por los consuelos, preposiciones en sintagma que alargan el título, fuerte vientre de levante en la Huelva azul sonora y natal de los que recuerdan y viven. Se alza una mano,

¹⁴ Fragmento de la obra El Castillo se vuelve esencia de mujer.

“caminar” rotulado en un papel que elige José, poema, Bienvenida, poesía, Carmen, fiesta, Zapatito, y ahora la tristeza inunda este escrito como lo hace el mismo momento de yacer, Zapatito, ya no está.

Las palabras aleatorias como relación expresa y escogida de los participantes, términos afines, positivos y fluidos que permiten la evasión, la identidad y la abstracción para crear a través de la evocación provocada, los deseos, retenciones y esperanzas, la compañía, la realidad o los olores, el ruido, la flexibilidad de un espacio que solo se evade en palabra propia, la escogida.

Y sus palabras, y sus representaciones, su plástica traducida y sus composiciones. Coplas para vivir, ¿Cuántas vidas cabe en una copla?, ¿Cuántas coplas tiene una vida?

*Vivir, primavera, recuerdos, hablar, música, poesía, río, compartir, fiesta, tiempo, sonreír, flor, ilusión, luchar, esfuerzo, risa, paciencia, caricia, emoción, idea, ola, calle, ánimo, luna, beso, fe, poema, manos, amigo, etc...*¹⁵ palabras posibles, instantáneas de los minutos, del exterior interno, collage de imágenes sobre las que descansa nuestra vida, la de los brazos en los besos. Te echo de menos.

Los sintagmas contruidos y elegidos aleatoriamente no solo promueven la motivación y externalización personal de los deseos sino que son copa de la producción visual y artística desde lo biográfico.

*Que tus recuerdos vivan la primavera,
tu música hable de poesía
Y tu río comparta su fiesta.*

*Porque somos...
La risa de la paciencia
La música de una caricia
La forma de una ola
La plaza de una idea
La calle del ánimo
Un beso de la luna
La amistad de la alegría
La fe de un poema
Las manos de un amigo.
Todo en un abrazo*

*Así que...
Camina con tus manos
Triunfa en tu jardín
Lucha en una idea
Sueña en la calle
Besa el sol.
Canta una caricia
Ama una canción*

*Comparte tu paciencia
Cumple con el río
Quiere los besos
Vive en los abrazos
Acompaña una flor
Escoge la palabra libertad
antes que una paloma.*¹⁶

Creatividad con el respeto del aprendizaje personal.

La palabra, como elemento de creatividad artística permite y facilita la evocación, y la lectura y escritura para personas con dificultades, discapacidades o incidencias para hacerlo, puesto que se nutre de la palabra biográfica y del relato biográfico como forma de extender el medio de aprendizaje. Gianni Rodari, en su obra *Gramática de la fantasía* recupera algunos aspectos de la expresión pero no redonda en las posibilidades que puedan ofertarse a otro tipo de colectivos exentos de formación académica.

La palabra como experiencia plástica y visual no solo consigue alcanzar el futuro necesitado de otro colectivos sino también profundizar en la manifestación no verbal de la palabra como forma, y conseguir la construcción de belleza a partir de la individualidad, independientemente del contexto y estado social del sujeto participante.

No existe bibliografía acogida directamente al tema planteado pero si se pueden encontrar apoyos en Gianni Rodari y su

¹⁵ Palabras escogidas para la evocación vital y visual del grupo de personas mayores con alzhéimer u otro trastorno neurocognitivo mayor para la composición Coplas para vivir.

¹⁶ Fragmento de la composición de poesía visual Coplas para vivir, realizada por el grupo de personas mayores con alzhéimer u otro trastorno neurocognitivo mayor.

Gramática de la fantasía y en la estética y filosofía general de la imagen y la palabra como puede ser *La poética del espacio* (1957) de Bachelard.

7.3 Instrumentos de observación/medición y método

7.3.1 Instrumentos de observación/medición

Los siguientes instrumentos son aplicados a ambos grupos, control y experimental, antes y después de la intervención. Se utiliza pues la técnica de retest con un máximo de dos utilizaciones con el fin de evitar contaminaciones por sobreutilización, a excepción del MMSE, que es aplicado cada 6 meses según el protocolo de seguimiento habitual en esta institución.

Depresión: BDI-II

Deterioro cognitivo: MMSE

Estado funcional y calidad de vida: COOP/WONCA

7.3.2 Instrumentos de valoración cualitativa: observación y entrevista

La psicóloga del Centro ha realizado un seguimiento continuo del programa mediante observación y entrevistas. Las propias sesiones han sido objeto de esa observación, centrándose ésta en el comportamiento de los sujetos y de los arteterapeutas, los climas generados, la implicación en las tareas y las conductas interpersonales. Entre sesiones, la psicóloga ha observado la existencia o no de modificaciones en las relaciones interpersonales de los residentes, consideradas cuantitativa y cualitativamente, la implicación de éstos en las actividades vinculadas a la autonomía personal, el estado de ánimo y su nivel de participación en otras actividades (como rehabilitación y fisioterapia) ofrecidas por la institución.

Las entrevistas permitían complementar la información obtenida mediante observación con una exploración en las vivencias subjetivas implicadas en los aspectos observados, tal como son percibidas e informadas por los propios residentes.

7.3.3 Lugar de realización de las intervenciones

La siguiente institución ha aceptado la realización de este proyecto con las personas mayores residentes en sus espacios. Este proyecto está previsto para su aplicación con personas permanentemente residentes en un centro residencial. Es preciso agradecer la magnífica acogida y el espíritu de colaboración del equipo psicológico y directivo de la institución.

Residencia San Joaquín y Santa Ana
Asociación San Joaquín y Santa Ana
C/ Huelva, 8-10.
San Juan del Puerto, 21610 Huelva

7.3.4 Equipo de trabajo

El estudio requiere la participación de un equipo multidisciplinar constituido básicamente por:

- Arteterapeutas: su misión es llevar a cabo intervenciones directas con la aplicación de técnicas de AT.
- Personal de la institución residencial donde están internados los sujetos, colaboradores del proyecto: psicóloga y directora. Facilitarán los trámites burocráticos para la implementación del programa, aplicarán tests y entrevistas, harán seguimiento y emitirán sus valoraciones.
- Evaluadores externos: interpretarán y valorarán los datos, obtenidos mediante tests, y las observaciones cualitativas de las entrevistas. Emitirán una evaluación de resultados.

7.3.5 Coordinación

Pilar M^a Domínguez Toscano

8. RESULTADOS

8.1 Descripción e interpretación de resultados cuantitativos

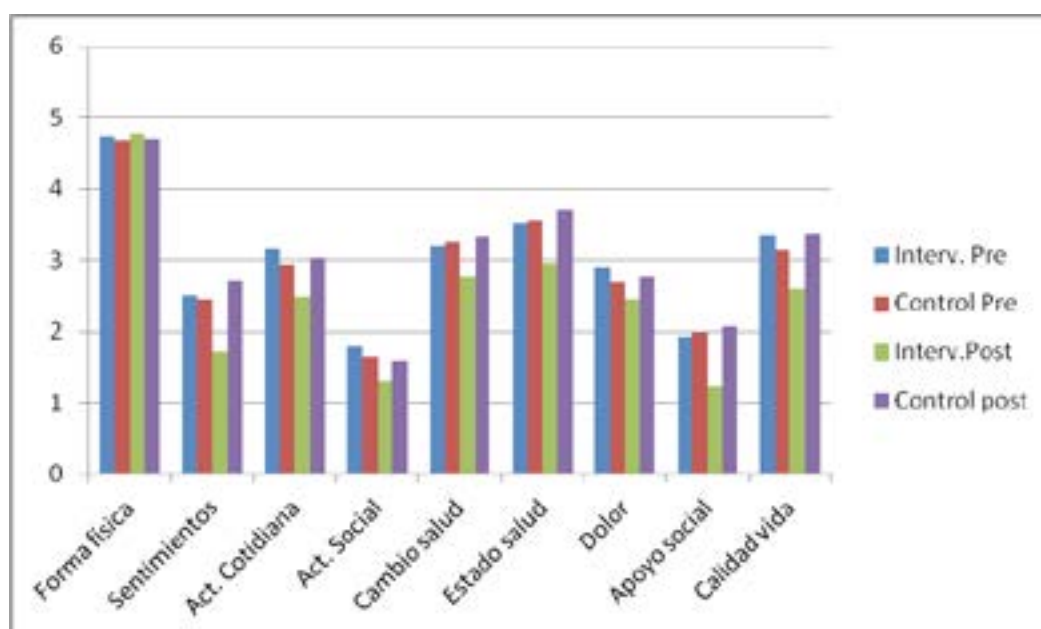
Los análisis estadísticos de las medidas de Depresión (instrumento utilizado: BDI-II), Estado Funcional y Calidad de Vida (instrumento: COOP/WONCA) y Estado Cognitivo (instrumento: MMSE) son calculados por un equipo de metodólogos, evaluadores externos de este programa. Los cálculos se hacen a partir de los tests administrados por la psicóloga del centro residencial. El grupo experimental está constituido por 16 sujetos en la primera fase de la intervención, y 12 sujetos en el grupo control. Y 13 sujetos en el grupo experimental al término de la segunda fase de intervención, 12 en el grupo control; esta segunda fase es objeto de evaluación de seguimiento.

Como estadístico de contraste de medias se utiliza *T* de *Student* para dos muestras independientes. Se utiliza un nivel de confianza del 0.95 ($\alpha = .05$) y 26 grados de libertad.

8.1.1 Medidas del estado funcional y calidad de vida

Datos

	Interv. Pre	Control Pre	Interv.Post		Control post	
	Media	Media	Media	S ² Insegada	Media	S ² Insegada
Forma física	4.74	4.69	4.78	0.72	4.71	0.49
Sentimientos	2.51	2.46	1.72	0.68	2.70	0.58
Act. Cotidiana	3.16	2.94	2.48	1.25	3.02	1.20
Act. Social	1.79	1.64	1.17	0.70	2.57	0.30
Cambio salud	3.19	3.26	2.77	0.44	3.33	0.32
Estado salud	3.52	3.55	2.95	0.70	3.72	0.50
Dolor	2.90	2.68	2.45	0.99	2.77	1.32
Apoyo social	1.92	1.99	1.22	0.68	2.08	0.79
Calidad vida	3.35	3.13	2.60	0.70	3.37	0.55



Interpretación de resultados

Con un nivel de confianza del 0.95 ($\alpha = .05$) y 26 grados de libertad, los datos de Estado Funcional obtenidos arrojan resultados significativamente diferentes entre los grupos experimental y control para las medidas post, en el sentido de mejora de Estado Funcional en el grupo de intervención en 6 de las 9 escalas, y mejora que no alcanza en nivel de significación en las escalas restantes puesto que no supera el nivel crítico.

Desglosados los resultados, no se aprecian resultados significativos en la escala Forma Física ($T = 0.23$), en la escala Dolor ($T = -0.79$) y en Actividades Cotidianas ($T = -1.28$) en el sentido de escasa mejoría en el grupo de intervención que no alcanza el nivel de significación.

En el grupo de intervención, respecto al control, se observa mejora significativa pero moderada en Cambio de Salud ($T = -2.36$), Calidad de Vida ($T = -2.54$), Estado de Salud ($T = -2.58$) y Apoyo Social ($T = -2.65$); el grupo intervenido con arteterapia ha obtenido una mejora significativa y alta en Sentimientos ($T = -3.22$) y Actividades Sociales ($T = -5.05$).

8.1.2 Medida de depresión

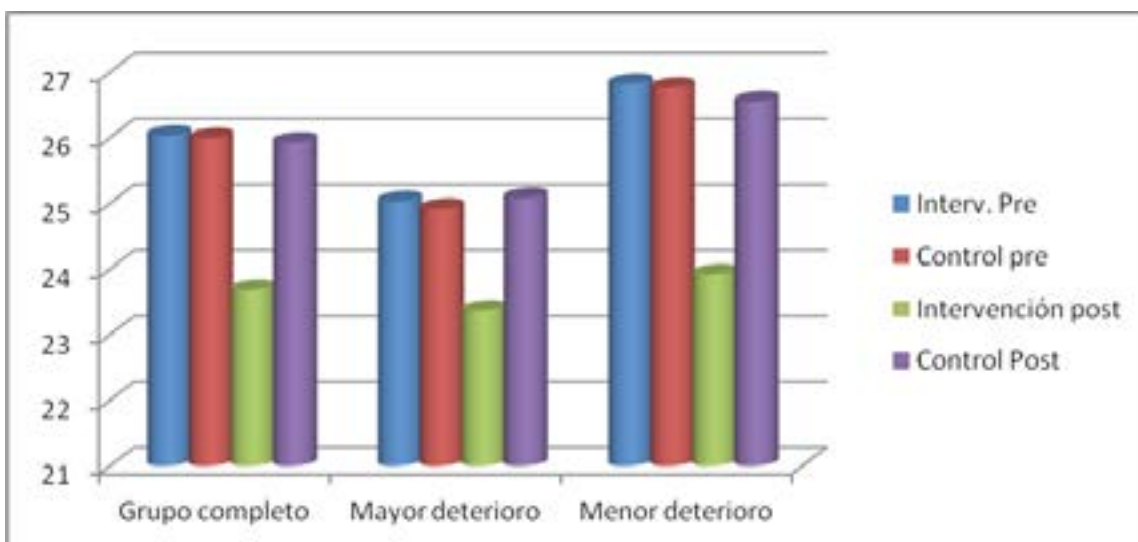
Datos

Se ofrece a continuación los datos de Depresión medida con el BDI-II, expresados mediante un índice de tendencia central (media) y otro de dispersión (varianza insegada):

	Intervención				Control			
	Pre		Post		Pre		Post	
	Mayor	Menor	Mayor	Menor	Mayor	Menor	Mayor	Menor
M	25.03	26.82	23.37	23.92	24.92	26.76	25.08	26.55
S ² _{inses}	2.66	2.89	3.06	2.95	3.11	2.76	3.06	2.56

	Intervención		Control	
	Pre	Post	Pre	Post
M	26.03	23.68	25.99	25.93
S ² _{inses}	2.79	3.00	2.90	2.76

Gráfico 1: comparación de medidas pre y post en grupos experimental y control con mayor y menor deterioro



Descripción e interpretación de resultados

El contraste de medias de medidas post de depresión en grupos de mayor deterioro proporciona un valor de $T = -2.57$. Para el contraste de medias de medidas post de depresión en grupos de menor deterioro, se obtiene un $T = -4.14$. Del contraste de medias de medidas post de depresión en ambos grupos, resulta un $T = -3.47$.

Los datos muestran que las mediciones de depresión previas a la intervención son mayores en sujetos con menor deterioro, es decir, el aumento del deterioro fundamentalmente cognitivo no implica incremento en la depresión, sino que puede darse la tendencia inversa: las personas que padecen EA u otras demencias seniles en grado moderado sufren mayor trastorno del estado de ánimo (mayor depresión) que las personas en fase más avanzada de su demencia. Sin embargo, las menos deterioradas son más sensibles a la intervención, por lo que, en ellas, la reducción de la depresión es mayor que en las que sufren mayor deterioro cognitivo.

8.1.3 Medida del estado cognitivo

Los datos fueron obtenidos por la psicóloga del centro residencial tras aplicar el MMSE (adaptado por Lobo *et al.*, 1979).

	MEDIDAS PRE		MEDIDAS POST		MEDIDAS SEGUIMIENTO	
	Intervención	Control	Intervención	Control	Intervención	Control
M	3.1	3.2	3.0	2.8	2.7	1.8
S ² _{insesg}	0.70	0.50	0.58	0.44	0.49	0.59

Gráfico 2: comparación de mediciones pre, post y seguimiento en sujetos experimentales y controles

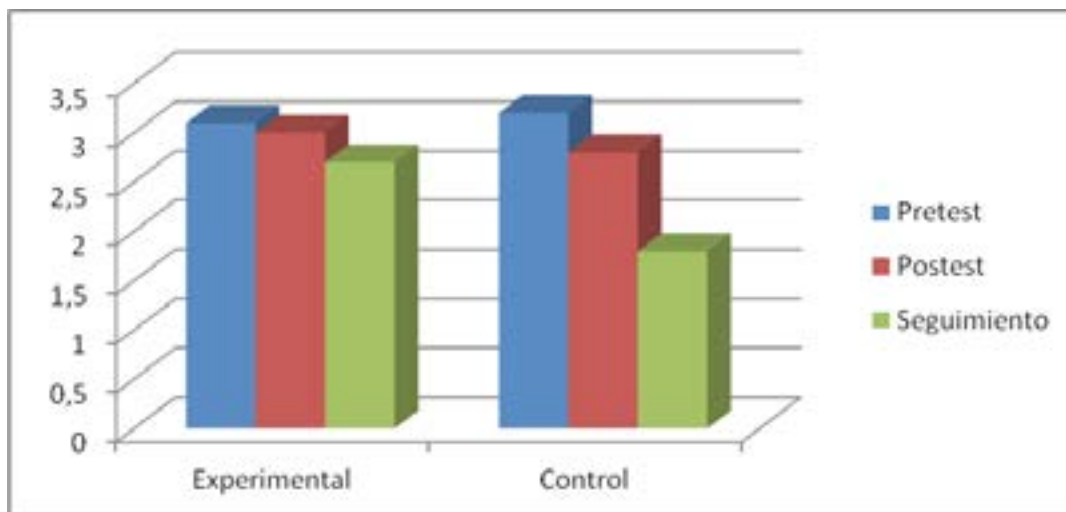
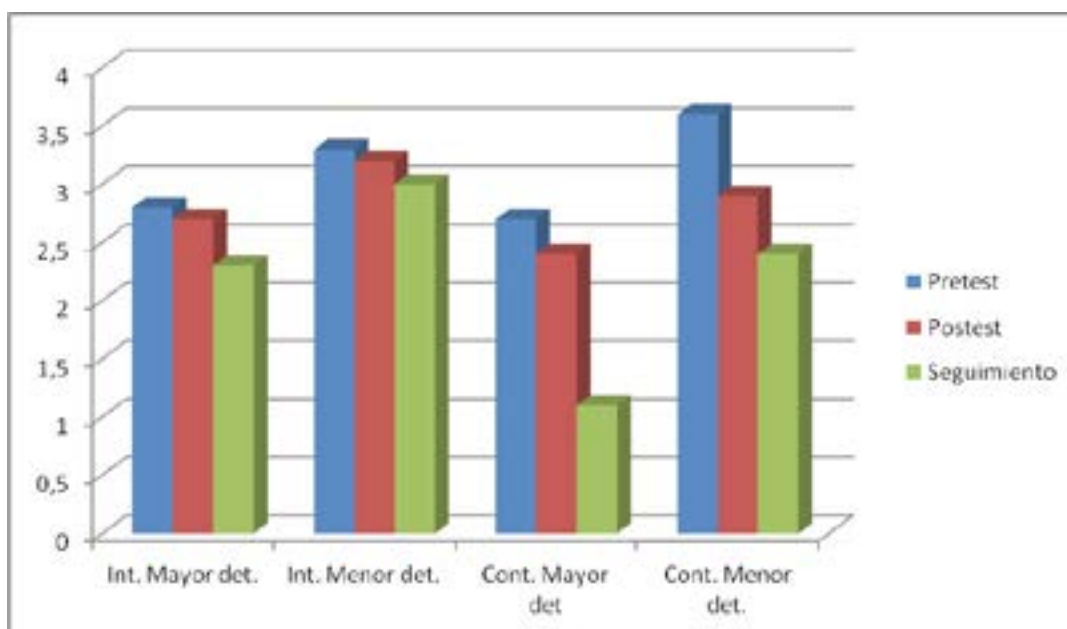


Gráfico 3: comparación de mediciones pre, post y seguimiento en sujetos experimentales y controles, diferenciando mayor y menor deterioro



Descripción e interpretación de resultados

Se utiliza T con 26 g. l. y $\alpha = .05$.

Tras el cálculo del estadístico de contraste de medias T para dos muestras independientes, experimental y control, entre medidas pre y post y medidas pre y seguimiento y medidas post y seguimiento, se obtiene lo siguiente:

T para medidas pre control y experimental = - 0.33

T para medidas post control y experimental = - 0.73

T para medidas seguimiento control y experimental = -3.25

Estos resultados muestran que, en todas las mediciones comparativas entre el grupo intervenido y el no intervenido, tanto tras la primera fase del programa (medida post) como en la segunda (medida de seguimiento), se observa una mejora comparativa a favor del grupo intervenido. Este efecto no alcanza el nivel de significación en la medición post, y sí en la medición de seguimiento.

Tal diferencia parece indicar que, si bien el programa de arteterapia incide beneficiosamente en los niveles de estado cognitivo, cuando la intervención es de 4 meses (primera fase) este efecto no es significativo, pero sí lo es cuando aumenta el tiempo de intervención (primera y segunda fase, 16 meses en total).

8.2 Descripción de resultados cualitativos

Éstos han sido obtenidos mediante observación (continua) y entrevistas semiestructuradas (pre y post, más las de seguimiento) realizadas por la psicóloga del centro. Respecto a la autoestima, variables implicadas en el fortalecimiento

emocional (aparte de la Depresión, ya analizada), motivacional y actitudinal, más conductas relacionadas con las relaciones interpersonales y la implicación en actividades dirigidas a la autonomía personal, los resultados muestran mejora en las personas participantes en el programa, más acusada que a nivel cognitivo.

9. CONCLUSIONES

En suma: los datos de Estado Funcional y Calidad de Vida obtenidos mediante la aplicación del COOP/WONCA arrojan resultados significativamente diferentes entre los grupos experimental y control para las medidas post, en el sentido de mejora en varios parámetros indicativos del Estado Funcional en el grupo de intervención. Desglosados los resultados por escalas, no se aprecian resultados significativos en la escala Forma Física, Dolor y Actividad Cotidiana en el sentido de escasa mejoría en el grupo de intervención que no alcanza el nivel de significación. En este grupo, respecto al control, se observa mejora significativa moderada en Estado de Salud, Cambio de Salud, Apoyo Social y Calidad de Vida. La mejora es significativamente alta en Sentimientos y Actividad Social.

La reducción de la Depresión en el grupo experimental respecto al control es significativa, debida tanto a la reducción intrínseca en el experimental como al aumento de Depresión en el control.

Se observa en el grupo intervenido una mejoría que no alcanza el nivel de significación en los parámetros cognitivos medidos mediante el MMSE tras la primera fase de la intervención. Tras la segunda fase, esta mejoría sí es significativa. No obstante, tal diferencia parece deberse más al aumento del deterioro en el grupo control que a la mejoría intrínseca en el grupo experimental, lo que puede ser indicativo de que el estado mental empeora con el paso del tiempo, pero que ese empeoramiento puede frenarse o desacelerarse mediante intervenciones como la aquí informada.

En conjunto, la evaluación realizada por personal psicológico y tratamental del centro, más la emitida por evaluadores externos, concluyen en afirmar que el programa de arteterapia ha mejorado notoriamente la percepción de calidad de vida, ha desacelerado el deterioro cognitivo y disminuido los niveles de depresión de las personas participantes en el mismo.

BIBLIOGRAFÍA

- Asociacion Americana de Psiquiatria (2013). Guía de consulta de los criterios diagnósticos del DSM 5. Arlington: VA, Asociacion Americana de Psiquiatria.
- Beard, R.L. (2012). Art therapies and dementia care: A systematic review. *Dementia*, 11(5), 633-656.
- Belloch, A., Sandín, B. y Ramos, F. (2009). *Manual de Psicopatología*, vol. II. Madrid: McGraw-Hill/Interamericana de España.
- Beck, A. T.; Sterr, R.A. y Brown, G.K. (1996). Beck Depression Inventoty- Second Edition. USA: NCS Pearson. Para la adaptación española: Sanz, J. y Vázquez, C. (2011). *Inventario de Depresión de Beck-II*. Madrid: Pearson.
- Camic, P.M.; Tischler, V. y Pearman, Ch. H. (2014). Viewing and making art together: a multi-session art-gallery-based intervention for people with dementia and their carers. *Aging & Mental Health*, 18(2), 161-168.
- Chandraiah, Sh., Anand, S.A. y Avent, L. Ch. (2012). Efficacy of group art therapy on depressive symptoms in adult heterogeneous psychiatric outpatients. *Art Therapy*, 29(2), 80-86.
- Chase, D. (2011). More than words. *Business West*, 26, 20-58.
- Chen, R-Ch.; Liu, Ch-L.; Lin, M-H; Peng, L-N; Chen, L-Y; Liu, L-K; Chen, L-K. (2014). Non-pharmacological treatment reducing not only behavioral symptoms, but also psychotic symptoms of older adults with dementia: a prospective cohort study in Taiwan. *Geriatric Gerontology International*, 14(2), 440-446.
- Choi, A. N., Lee, M. S., Cheong, K. J. y Lee, J. S. (2009). Effects of group music intervention on behavioral and psychological symptoms in patients with dementia: A pilot-controlled trial. *International Journal of Neuroscience*, 119(4), 471-481.
- Ciccarello, A. (2010). Comparative study on elderly and disabled subjects with various degrees of dementia. *Bulletin De La Société Des Sciences Médicales Du Grand-Duché De Luxembourg*, 1(1), 205-17.
- Eekelaar, C., Camic, P. M. y Springham, N. (2012). Art galleries, episodic memory and verbal fluency in dementia: An exploratory study. *Psychology of Aesthetics, Creativity, and the Arts*, 6(3), 262-272.
- EFE (2014). Datos y cifras del alzhéimer que no se deben olvidar (<http://www.efesalud.com/noticias/datos-alzheimer-afectados-olvidar/>) (20-10-2014).
- Fernández Ballesteros, R. (2009). *Psicología de la vejez. Una Psicogerontología Aplicada*. Madrid: Pirámide.
- Fernández Ballesteros, R., Santacreu Ivars, M., López Bravo, M^a. D. y Molina, M.A. (2012). Trastornos asociados a la vejez. En *Manual de Terapia de Conducta*, Vallejo Pareja, M.A. (Coord.), 722-792. Madrid: Dykinson.
- Ferrero-Arias, J. (2011). Dementia; Research from J. Ferrero-Arias and Co-Researchers Yields New Findings on Dementia. *Obesity, Fitness & Wellness Week*, 2112.
- Fitzsimmons, S. y Buettner, L. L. (2002). Therapeutic recreation interventions for need-driven dementia-compromised behaviors in community-dwelling elders. *American Journal of Alzheimer's Disease and Other Dementias*, 17(6), 367-381.

- Folson, J.C. (1968). Reality orientation for the elderly patient. *Journal of Geriatric Psychiatry*, 1, 291-307.
- Folstein, M.P.; Folstein, S.E. y Hugh, P.R. (1975). "Mini-mental state". A practical method for grading the cognitive state of patients for the clinician. *Journal Psychiatric Research*, 12, 189-198.
- Francés, I., Barandirán, M., Marcellán, T. y Moreno, L. (2003). Estimulación psicocognoscitiva en las demencias. *Anales del Sistema Sanitario de Navarra*, 26, 405-422.
- Hattori, H., Hattori, C., Hokao, C., Mizushima, K., & Mase, T. (2011). Controlled study on the cognitive and psychological effect of coloring and drawing in mild Alzheimer's disease patients. *Geriatrics & Gerontology International*, 11(4), 431-437.
- Instituto Nacional de Estadística (2015a). INEBASE (Cifras de población y Proyecciones de población). <http://www.ine.es>
- Ingeberg M.H., Wikström, B.M. y Berg, A. (2012). The essential dialogue: a Norwegian study of art communication in mental health care. *Journal of Psychosocial Nursing and Mental Health*, 50(8), 22-30. doi: 10.3928/02793695-20120703-01
- Johnson, C. M. y Sullivan-Marx, E. M. (2006). Art Therapy: Using the Creative Process for Healing and Hope Among African American Older Adults. *Geriatric Nursing*, 27(5), 309-316.
- Judge, K. S., Camp, C. J. y Orsulic-Jeras, S. (2000). Use of Montessori-based activities for clients with dementia in adult day care: Effects on engagement. *American Journal of Alzheimer's Disease*, 15(1), 42-46.
- Kang, H. Y., Bae, Y. S., Kim, E. H., Lee, K. S., Chae, M. J. y Ju, R. A. (2010). An integrated dementia intervention for Korean older adults. *Journal of Psychosocial Nursing & Mental Health Services*, 48(12), 42-50.
- Kinney, J. M. y Rentz, C. A. (2005). Observed well-being among individuals with dementia: Memories in the Making, an art program versus other structured activity. *American Journal of Alzheimer's Disease and Other Dementias*, 20(4), 220-227
- Kornreich, Sh. (1989). An Alzheimer patient's use of art as a form of constancy. *Pratt Institute Creative Arts Therapy Review*, 9, 29-39.
- Kunzmann, B., Aldridge, D., Gruber, H. y Wichelhaus, B. (2005). Künstlerische therapien: Zusammenstellungen von studien zu künstlerischen therapien in der onkologie und geriatric. *Hintergrund Umsetzung Perspektiven Aufforderung. Musik, Tanz und Kunsttherapie*, 16(2), 77-86.
- Lancioni, G. E. Perilli, V., Nirbhay N., Mark F. & Cassano, G. (2011). A man with severe Alzheimer's disease stops wandering during a picture colouring activity. *Developmental Neurorehabilitation*, 14(4), 242-246.
- Lázaro, M. (2009). Síndromes geriátricos. En P. J. Castañeda (Coord.), *Vejez, dependencia y salud. Guía práctica de gerontología* (pp. 27-36). Madrid: Pirámide.
- Lee, K. L. y Mustaffa, M. S. (2011). Using art in counselling adults: A pilot study. *Asia Pacific Journal of Counselling and Psychotherapy*, 2 (1), 98-114.
- Lobo, A. et al. (1979). El "Mini-examen cognoscitivo": un test sencillo, práctico para detectar deficiencias intelectivas en pacientes médicos. *Actas luso-españolas de Neurología Psiquiátrica*, 3, 189-192.
- Lobo, A. et al. (2007). Prevalence of dementia in a southern European population in two different time periods: the ZARADEMP Project. *Acta Psychiatrica Scandinavica*, 116 (4), 299-307.
- Marshall, M. J. y Hutchinson, S. A. (2001). A critique of research on the use of activities with persons with Alzheimer's disease: A systematic literature review. *Journal of Advanced Nursing*, 35(4), 488-496.
- Martín Carrasco, M. (2006a). Enfermedad de Alzheimer. En Agüera, L., Cervilla, J. y Martín, M., *Psiquiatría Geriátrica*, (pp. 284-306). Barcelona: Masson.
- Martín Carrasco, M. (2006b). Demencia de los Cuerpos de Lewy y demencia en la enfermedad de Parkinson. En Agüera, L., Cervilla, J. y Martín, M., *Psiquiatría Geriátrica*, (pp. 322-333). Barcelona: Masson.
- Martínez Lage, J.M. y Laínez Andrés, J.M. (2000). *El Alzhéimer: teoría y práctica*. Madrid: Aula Médica Ediciones.
- McBee, L. (2008). *Mindfulness-based elder care: A CAM model for frail elders and their caregivers*. New York: Springer Publishing Co.
- McCaffrey, R., Liehr, P., Gregersen, T., y Nishioka, R. (2011). Garden walking and art therapy for depression in older adults: A pilot study. *Research in Gerontological Nursing*, 4(4), 237-42.
- McFadden, S. H. & Basting, A. D. (2010). Healthy aging persons and their brains: Promoting resilience through creative engagement. *Clinics in Geriatric Medicine*, 26(1), pp. 149-161.
- Méndez, M. F. y Cummings, J.L. (2003a). *Dementia. A clinical approach* (3ª ed.). Philadelphia: Butterworth-Heinemann.
- Méndez, M. F. y Cummings, J.L. (2003b). Demencia: significance, definition and epidemiology. En Méndez, M.F. y Cummings, J.L., *Dementia. A clinical approach* (3ª ed., pp. 1-18). Philadelphia: Butterworth-Heinemann.
- Mimica, N. & Kalinić, D. (2011). Art therapy may be beneficial for reducing stress related behaviours in people with dementia: case report. *Psychiatria Danubina*, 23(1), 125-8.
- OMS (2012). *10 datos sobre el envejecimiento de la población*. (<http://www.who.int/features/factfiles/ageing/es/>) (10-10-2014)

- Orešnik, M. (2008). The influence of cognitive rehabilitation on cognitive competence in patients with Alzheimer's disease. *Psychiatria Danubina*, 20(2), 174-178.
- Ozdemir, L., & Akdemir, N. (2009). Effects of multisensory stimulation on cognition, depression and anxiety levels of mildly-affected Alzheimer's patients. *Journal Of The Neurological Sciences*, 283(1-2), 211-213.
- Peisah, C; Lawrence, G. y Reutens, S. (2011). Creative solutions for severe dementia with BPSD: a case of art therapy used in an inpatient and residential care setting. *International Psychogeriatrics*, 23(6), 1011-13.
- Perich, J. (2014). Roses in December: Case studies from a program combining Reminiscence, Art, and Music therapies (RAMP) for persons with early to mid-level Alzheimer's dementia. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 75, 1- B (E).
- Petersen, R.C. (2007). The current status of mild cognitive impairment--what do we tell our patients? *Nat Clin Pract Neurol* 3 (2), 60-1. doi:10.1038/ncpneuro0402.
- Rentz, C. (2002). Memories in the making: outcome-based evaluation of an art program for individuals with dementing illnesses. *American Journal Of Alzheimer's Disease And Other Dementias*, 17(3), 175-181.
- Ri, K.Y., Jeong, K.Y. y Jung, K. H. (2014). Effect of Art Therapy Program on the Physical, Emotional, Cognitive functions of the Korean elderly with Dementia. *Life Science Journal*, 11(7), 489-493.
- Rockwood, K. (2004). Lending a helping eye: artists in residence at a memory clinic. *Lancet Neurology*, 3(2), 119-123.
- Sandrick, K. (1995). Art therapy. Passage into their pasts. *Hospitals & Health Networks / AHA*, 69(14), 55-67.
- Sandrick, K. (1996). Art therapy: a passage into patients' pasts. *Trustee: The Journal For Hospital Governing Boards*, 49(5), 32-43.
- SCATP (1989). *Standing Committee of Arts Therapies Professions. Artists and art therapies*. London: Carnegie UK Trust.
- Sendak, M. (1963). *Where the wild things are*. New York: Harper.
- Smith, B. (2010). Treatment of Dementia Through Cultural Arts. *Care Management Journals*, 11 (1), 42-47.
- Tárraga, L., Boada, M., Modinos, G., Espinosa, A., Diego, S., Morera, A., Guitart, M., Balcels, J., López, O.L. y Bécker, J.T. (2006). A randomised pilot study to assess the efficacy of an Interactive, multimedia tool of cognitive stimulation in Alzheimer's disease. *Journal of Neurology Neurosurgery Psychiatry*, 77, 1116-1121.
- Yanguas, J.J., Buiza, C., Exebarria, I., Galdona, N., González, M.F., Arriola, F., López, A. y Urdaneta, E. (2006). *Estudio Longitudinal Donostia*. Madrid: Caja Madrid y Ediciones Témpera.



COPLAS PARA VIVIR

Manual de canciones

Coplas para vivir es un manual de instrucciones para canciones de vida, creado por deseos y palabras de compañía, tantos, que desbordan lágrimas antes del abrazo.

Cada canción es una mirada, un viaje de lo que somos, una secuencia de palabras que se encuentra en cada vida, cantando.

¿Cuántos miércoles tiene una copla?

¿Cuántas coplas tiene una vida?

Autores

Bienvenida

Carmen

Curro

José

María

Marín

Rosa

Rosario

Rocío

Zapatito

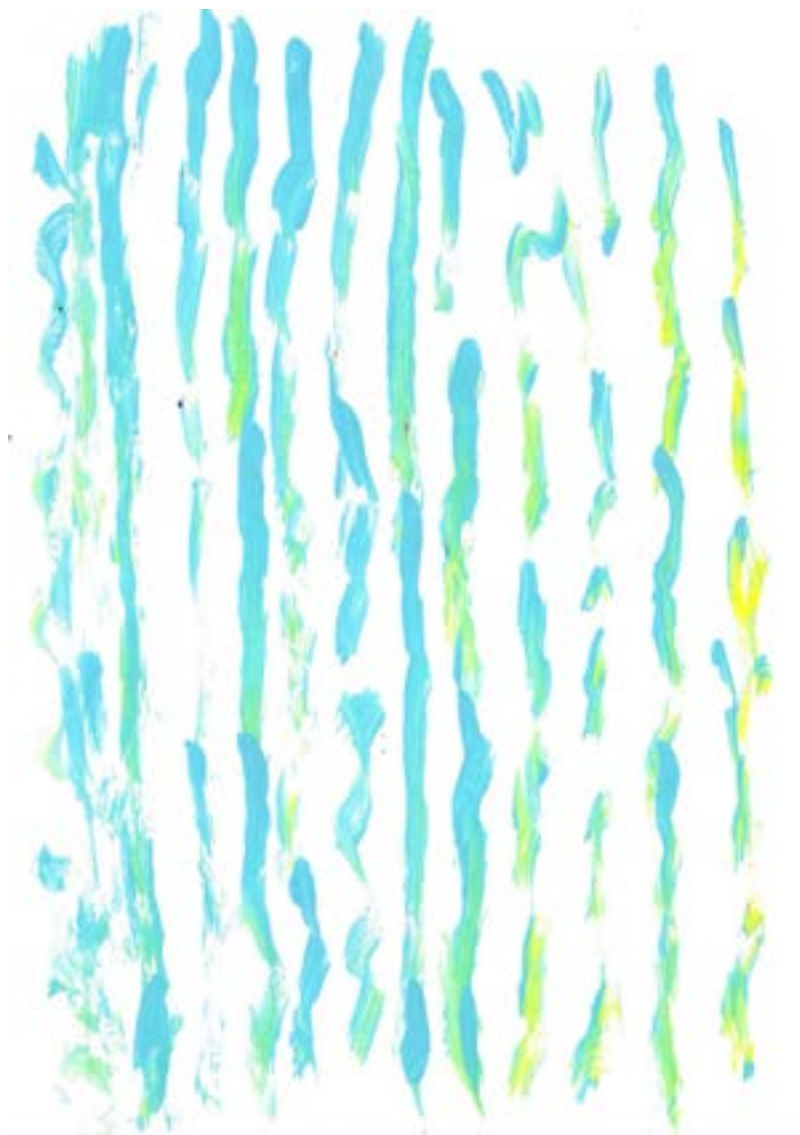
Y todos los que vivimos cada copla de vida, Daniel, Teresa, Isidora, Ana,
Paca...

*Ay, qué desgraciaita
gitana tú eres teniéndolo to.*

María de la O.



Que tus recuerdos vivan la primavera,



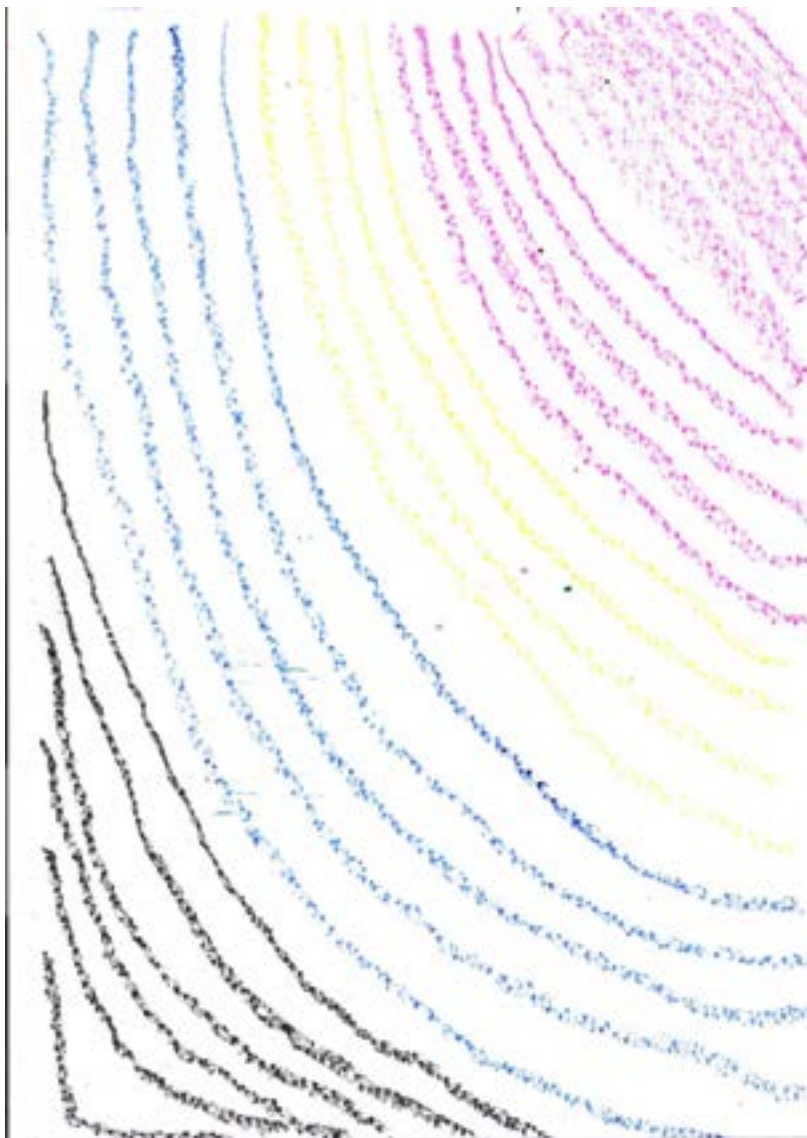
tu poesía hable su música,



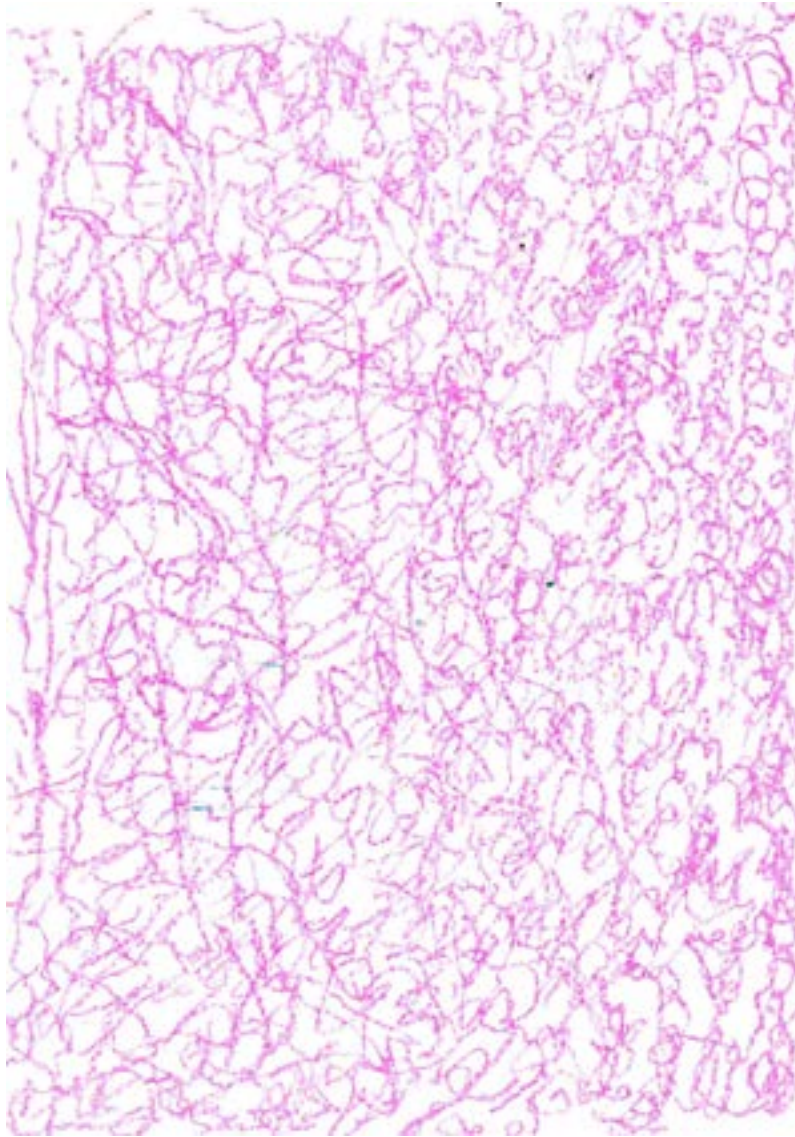
y tu río comparta su fiesta.



Que tu vida camine por el jardín,



tu sol quiera una familia,



y tu canción cante su amor.



Que tu tiempo sonría una flor,



y tu ilusión luce por su esfuerzo.

Porque somos...



La risa de la paciencia,



la música de una caricia,



la forma de una ola,



la emoción de una idea,



la calle del ánimo,



la luna del beso,



la amistad de la alegría,



la fe de un poema,



las manos de un amigo,



y un abrazo de todo.

Así que...



camina con tus manos,



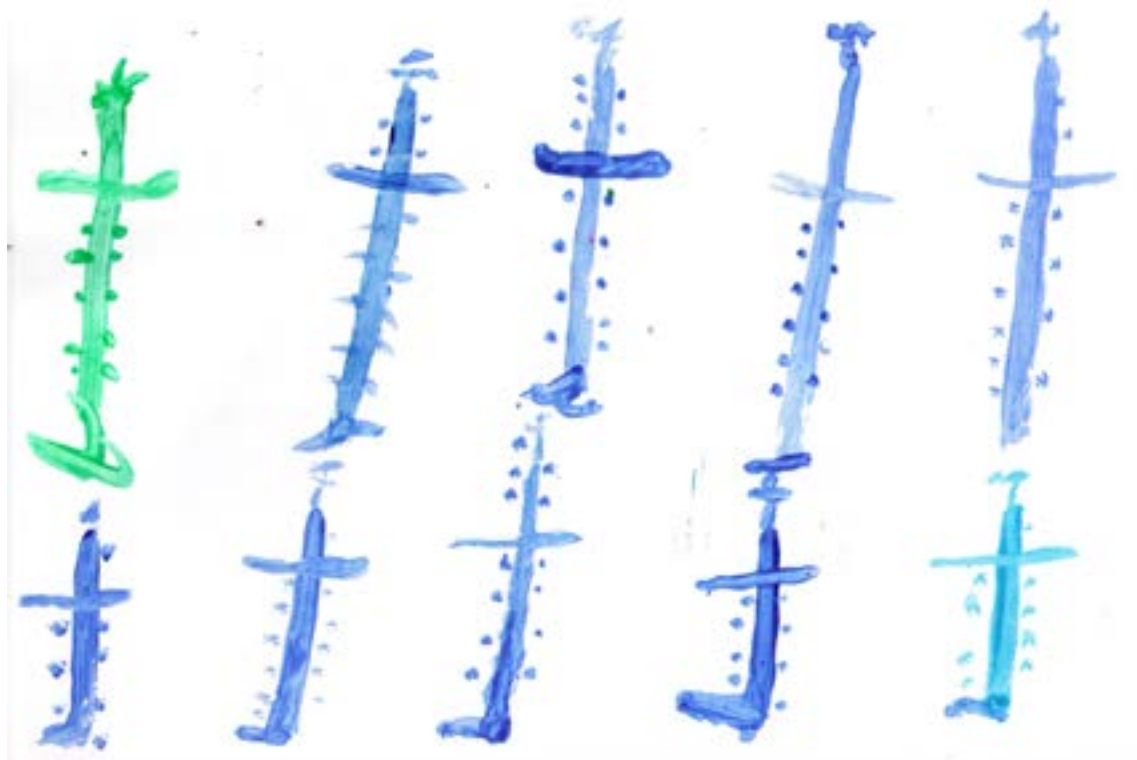
triunfa en tu jardín,



lucha en una idea,



sueña en la calle,



vuela en una vida,



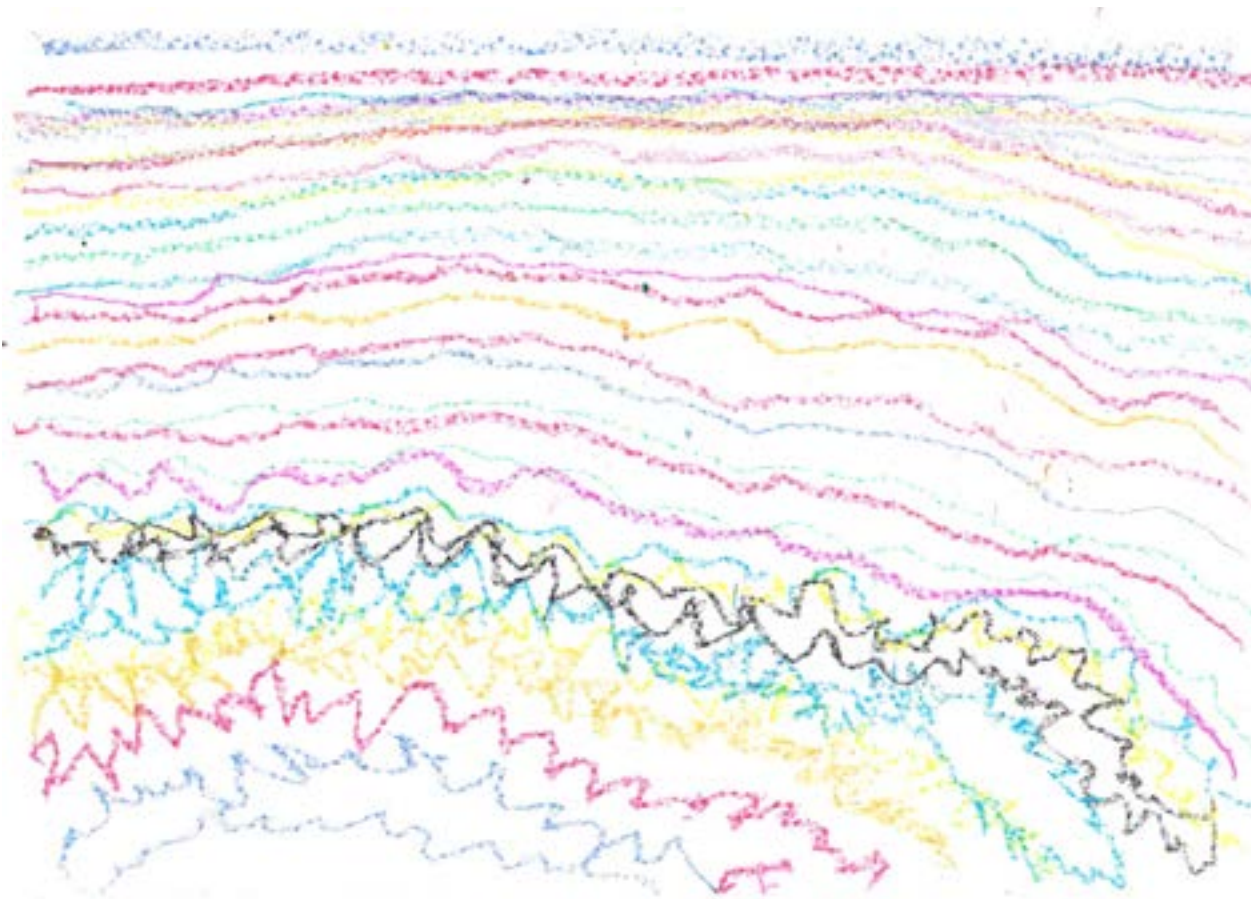
besa en el sol.



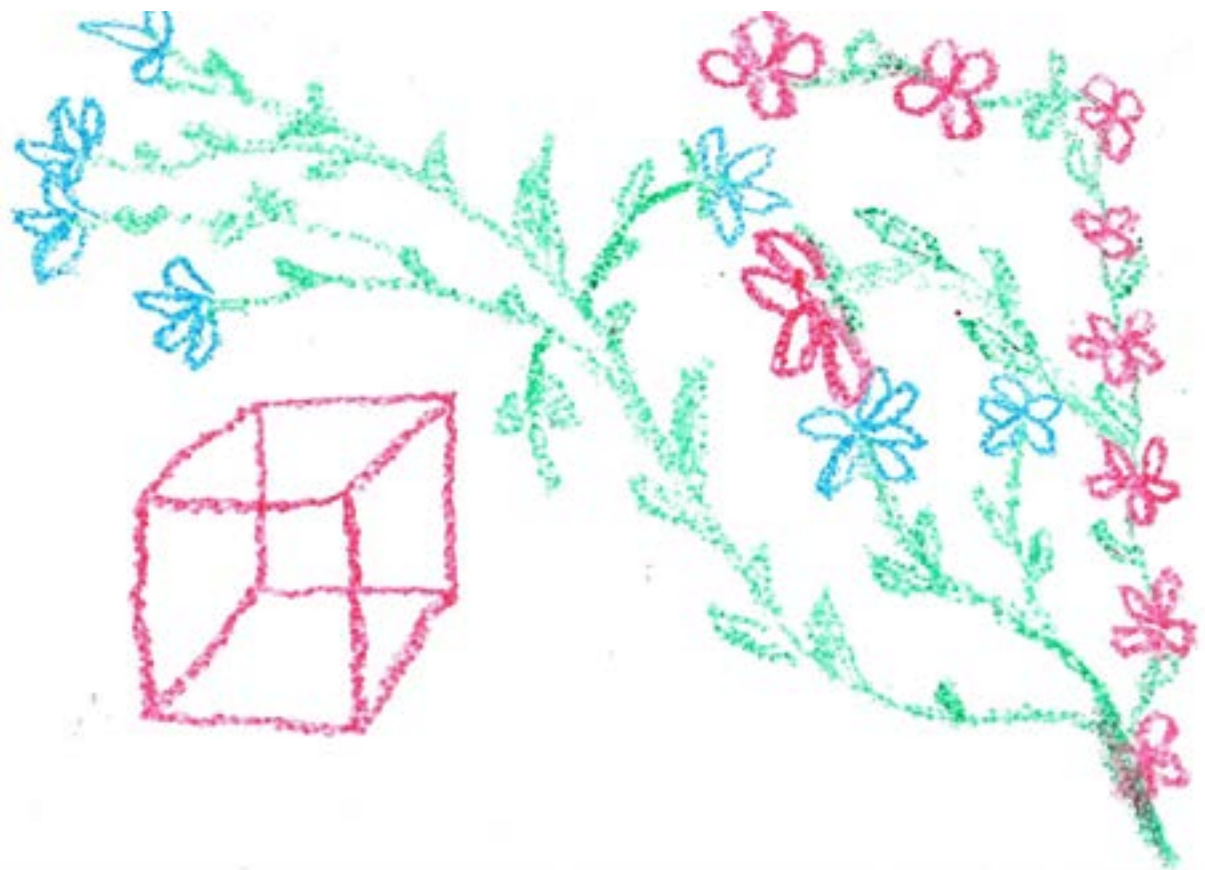
Canta una caricia,



sonríe tu alegría,



ama una canción,



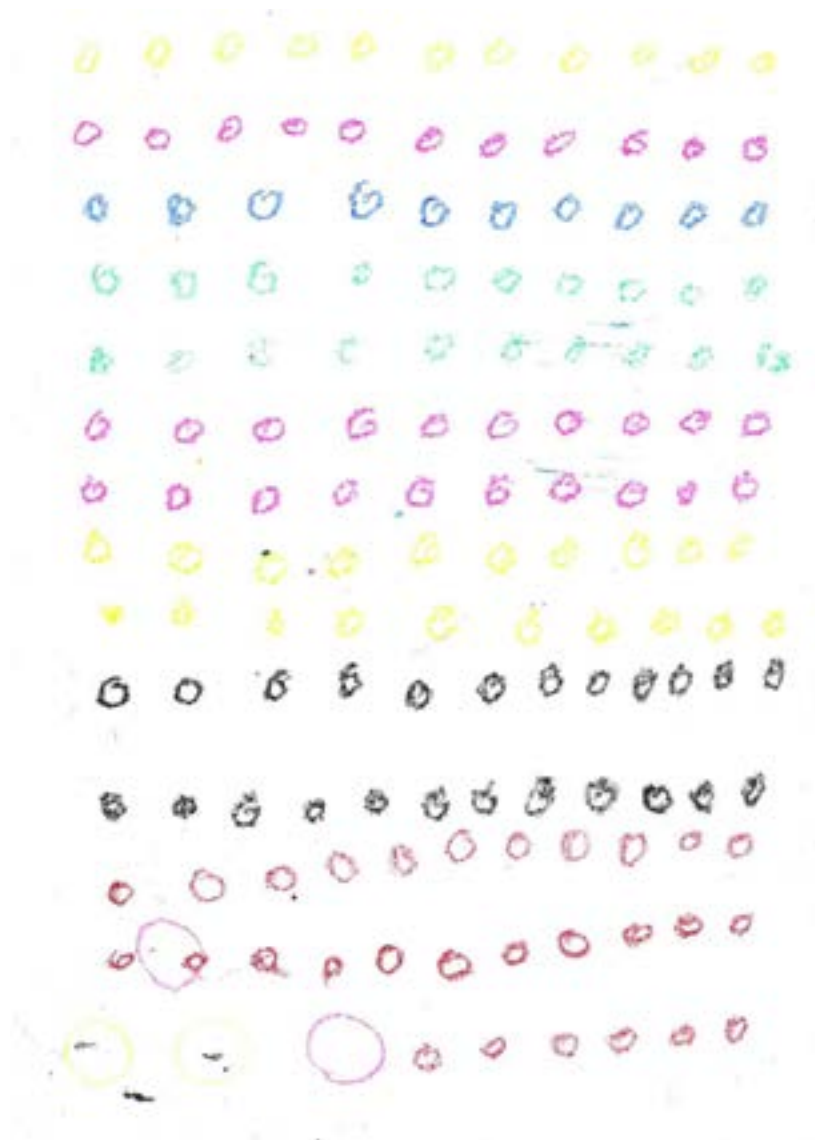
comparte tu paciencia,



juega con cariño,



escucha tu viaje,



quiere los besos,



vive en los abrazos,



acompaña una flor.



Canta tu poesía,



habla con un poema,



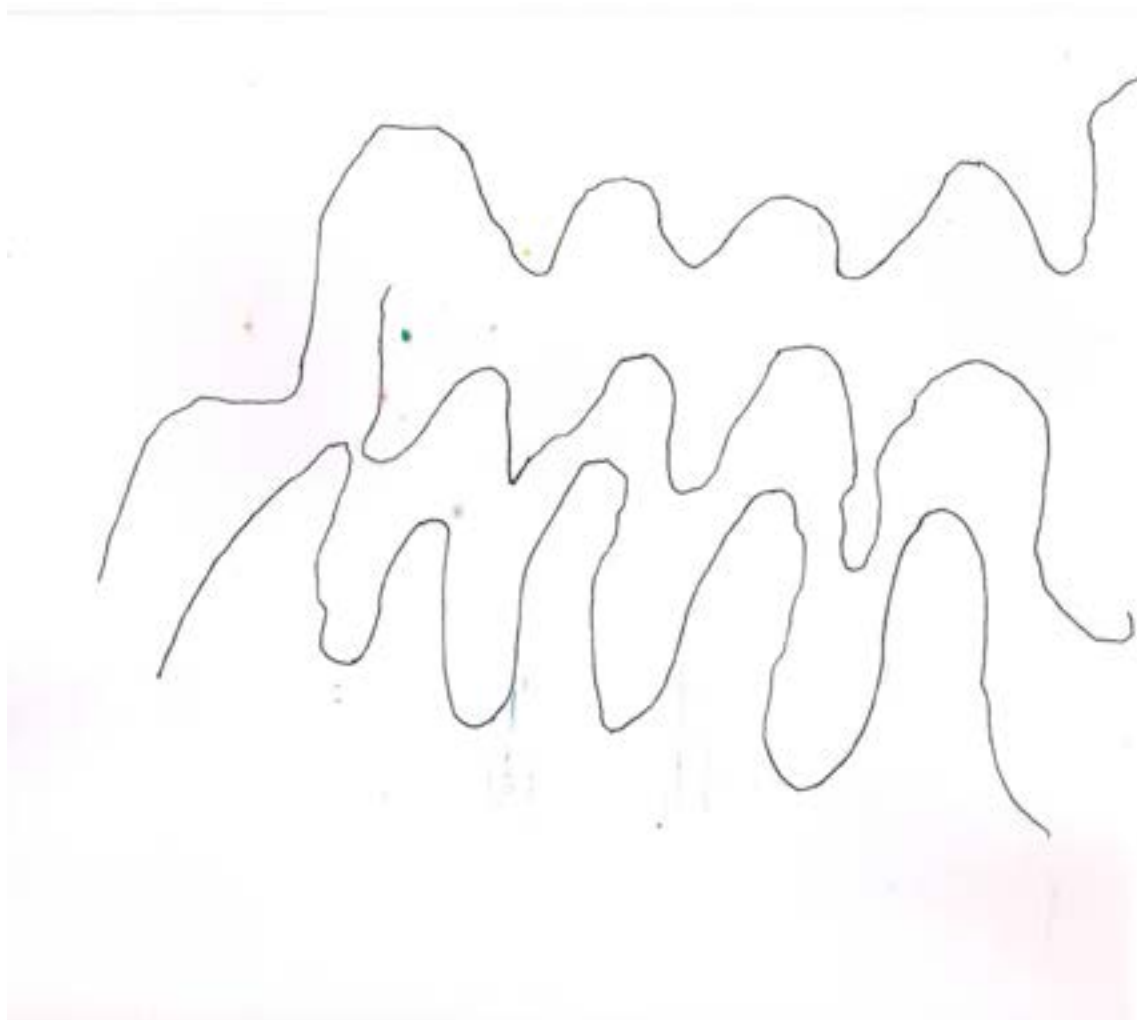
confía en tus recuerdos,



pinta una ilusión.



Y escoge la palabra libertad...



...antes que una paloma.

San Juan del Puerto,
Otoño de los miércoles de 2015 y 2016.

Gracias por enseñarnos la vida antes de que ocurra, por hacer de cada miércoles una lágrima de emoción, por vuestras manos y la espera, por cada rueda de vuestro tiempo, y por el color de vuestra voz.

Gracias por regalarnos el futuro, antes de que nos pertenezca.

*Te quiero más que a mi vida,
más que el aire que respiro,
y más que a la mare mía.*

Y sin embargo te quiero.

Residencia San Joaquín y Santa Ana, San Juan del Puerto, en Huelva, otoño
y noviembre de 2015 y 2016.

PARALLEL SESSION III

LOS TRABAJADORES FRONTERIZOS Y SU AFECTACIÓN TURÍSTICA

Alejandro Zalvide
 Universidad de Huelva
 (alejandro.zalvide@dam.uhu.es)

RESUMEN

Uno de los movimientos internacionales de personas que originan una situación ciertamente singular, es la de los trabajadores fronterizos, ya que al desplazamiento que se produce para esta finalidad, se une la frecuencia de los mismos, originando una corriente repetitiva en el cruce de fronteras que se genera especialmente en zonas territorialmente limítrofes. Estos viajes de ida y vuelta, cuyo objetivo principal es trabajar, han de ser analizados tanto desde una perspectiva laboral como desde una perspectiva turística.

Partiendo del reconocimiento en el espacio europeo del derecho a la libre circulación de trabajadores, donde se contempla expresamente al trabajador fronterizo, como una manifestación más de dicha movilidad; interesa delimitar esta figura y su evolución conceptual en el panorama de la Unión Europea (UE). Hay que destacar dos factores determinantes en su configuración, el territorial y el temporal; en el factor territorial se integran, dos espacios diferenciados que son el lugar de residencia y el lugar de trabajo; y en el factor temporal, hay que tener en cuenta que es un viaje de retorno, el cual ha de desarrollarse dentro de una determinada frecuencia, ya sea diaria o semanal, lo que supone una repetición constante de trayectos, cruzando la misma frontera y con la misma finalidad. Como consecuencia de todo lo anterior, hay que valorar los elementos coincidentes con los viajes turísticos según los criterios marcados por la Organización Mundial del Turismo (OMT), para posteriormente poder calificar la verdadera naturaleza turística o no, de estos visitantes internacionales.

Palabras clave: Trabajador Fronterizo, Visitante Turístico, Viaje Internacional, Laboral, Frontera.

1. INTRODUCCIÓN

Un tipo de desplazamiento entre distintos países por motivos profesionales que originan una situación ciertamente singular, es la de los trabajadores fronterizos, ya que al desplazamiento en sí que se produce para esta finalidad, se une la frecuencia reiterativa de los mismos y su especial motivación. Esta situación hace que este tipo de viaje de ida y vuelta, con el objetivo claramente marcado de trabajar, precise ser matizado tanto desde la perspectiva laboral como desde la perspectiva turística.

En el espacio común europeo encuentra esta situación un reconocimiento dentro del marco general de la libertad de movimiento de personas, en concreto en el derecho a la libre circulación de trabajadores, donde se reconoce expresamente como una manifestación más de esta movilidad dentro del territorio de la Unión, la de los trabajadores fronterizos (Reglamento UE 492/2011). De hecho, los mercados de trabajo son menos cerrados y el número de individuos que cruzan las fronteras para trabajar se ha incrementado en las últimas décadas (Ortiz y Nestares, 2003). Estos sujetos precisan desplazarse de un país a otro para acudir a prestar su trabajo ordinario, originando una corriente repetitiva en el cruce de fronteras que se genera más fácilmente en aquellas zonas territorialmente limítrofes, donde se ve más factible el desplazamiento de trabajadores de un Estado a otro para desempeñar la actividad laboral, para una vez concluida, regresar de nuevo al lugar de residencia habitual.

Esta situación conlleva la existencia de una serie de circunstancias que van a condicionar el desarrollo de la misma, destacando el factor territorial y el factor temporal. Dentro del factor territorial se integran, dos espacios diferenciados que son el lugar de residencia y el lugar de trabajo, a lo que hay que sumar el desplazamiento necesario y el traspaso de fronteras. En cuanto al factor temporal, hay que tener en cuenta como cuestión principal que es un viaje de ida y vuelta, el cual ha de desarrollarse dentro de una determinada frecuencia, ya sea diaria o semanal, lo que supone una repetición constante de trayectos, cruzando la misma frontera y con la misma finalidad.

En cualquier caso conviene delimitar este supuesto en el que se ven afectados dos territorios con jurisdicciones diferentes, pero sobre todo la figura del trabajador fronterizo y su evolución conceptual en el panorama de la UE, para saber a su vez, como ha de ser tratado dicho sujeto desde la perspectiva turística. Para ello hay que analizar como eje fundamental, la normativa reglamentaria europea que ha ido definiendo este sujeto trabajador a los efectos oportunos.

2. EL CONCEPTO DE TRABAJADOR FRONTERIZO EN EL REGLAMENTO 1408/1971 DE LA UNIÓN EUROPEA

2.1 Delimitación conceptual

En los movimientos de trabajadores migrantes, existe una falta de coincidencia entre el lugar de trabajo y el de residencia habitual, pero no solo son puntos geográficos diferentes, sino que su particularidad estriba en el hecho de estar situados en países diferentes. Este escenario donde existe una dualidad territorial y por tanto con ordenamientos jurídicos diferentes a los que someterse, sirvió como detonante para que desde la UE se atendiera esta situación laboral y su repercusión, con la

finalidad de coordinar esta realidad y su sistema de protección en temas relativos a los regímenes de seguridad social dentro del espacio común europeo (Reglamento CEE 1408/71).

La regulación se establece como garantía hacia los trabajadores y sus familias que precisan desplazarse dentro del territorio europeo, para lo cual se trata de clarificar el ámbito de protección social aplicable. Aunque al margen de atribuir los regímenes pertinentes de seguridad social a estos trabajadores y sus familias; establece la norma, una cuestión de índole definitoria que sirve para reconocer la figura del trabajador fronterizo. Así, el Reglamento inicia sus disposiciones generales estableciendo qué ha de entenderse por trabajador fronterizo, considerando como tal “a todo trabajador por cuenta ajena o por cuenta propia que ejerza su actividad profesional en el territorio de un Estado miembro, y resida en el territorio de otro Estado miembro, al que regresa en principio cada día o al menos una vez por semana”.

Aparece así, el concepto de trabajador fronterizo de forma novedosa, abarcando inicialmente tanto la actividad de trabajo dependiente o por cuenta ajena, como la realizada de forma autónoma o por cuenta propia, sirviendo en todo caso para ambos supuestos. Se manifiesta de esta manera el reconocimiento de esta figura como una garantía más de la libre circulación de trabajadores en el marco europeo, ordenando cuestiones de aplicación relativas al ámbito de la seguridad social, en el que van a verse afectados distintos Estados con el movimiento de este personal trabajador.

Sobre estos desplazamientos que se dan entre distintos territorios y que se generan por motivos de trabajo, interesa delimitar su elemento subjetivo desde la perspectiva del trabajador fronterizo, y su diferenciación con otros sujetos afines que también intervienen en estas corrientes migratorias. Asimismo, existen una serie de factores determinantes que conviene aclarar para saber cuándo se está ante situaciones de estas características, ya que de otra forma no va a corresponder con la figura del trabajador fronterizo. De tal suerte, que el alcance de dicha condición y sobre todo la motivación que subyace en este tipo de viajes, van a condicionar asimismo la naturaleza de estos movimientos internacionales desde una óptica turística.

2.2 Factores determinantes

Dos son los factores que condicionan este tipo de flujo de personas, por un lado, el factor territorial, en cuanto a la existencia de dos espacios geográficos diferentes que hacen necesario el desplazamiento, y por otro, el factor temporal, para saber la frecuencia en la que se han de dar estos movimientos y hasta cuando ha de durar la condición de trabajador fronterizo.

a) El factor territorial

El desplazamiento lleva implícito un lugar desde donde se inicia el trayecto, que para estos casos según la normativa de referencia ha de corresponder necesariamente a un Estado miembro de la UE, donde el trabajador ha de tener fijada su residencia, y el lugar de destino, donde se va a ejecutar la actividad laboral, que ha de corresponder igualmente a otro Estado perteneciente a la UE. Por tanto el espacio territorial donde se va a dar la circulación de estos trabajadores, es el europeo, tanto para considerar el punto de partida y llegada, como para conectar la nacionalidad del sujeto ejecutante de la acción.

La “residencia” del trabajador según este Reglamento ha de considerarse como la estancia habitual, a diferencia del término “estancia”, que lo considera como la estancia temporal. Es decir, ha de entenderse desde el punto de vista de su localización, el primer territorio, como el de residencia habitual, y el segundo, como el de lugar de trabajo. Por consiguiente se marca tanto el lugar que ha de servir como punto de partida del viaje (y a la vez de regreso), y el lugar de destino donde va a desenvolverse la actividad del viajero trabajador.

Se da en el caso del fronterizo un desplazamiento necesario entre el lugar de residencia y el de trabajo, que a los efectos turísticos, hay que conectarlo con el concepto de entorno habitual, entendiendo que en principio solo se van a considerar como viajes turísticos aquellos que se realicen fuera de este espacio geográfico. La delimitación del entorno habitual para con el sujeto no es tarea fácil, al ser este concepto ciertamente ambiguo, por depender de varios criterios de referencia que no alcanzan la suficiente precisión. En cualquier caso sí resulta indudable que el lugar de residencia como origen del desplazamiento, corresponde al territorio habitual del viajero, luego hasta ese instante se cumple al menos con la premisa turística de ese tipo de viajes, de tener que realizarse fuera del entorno habitual.

La cuestión no parece tan evidente cuando de lo que se trata es de considerar como entorno habitual el territorio del destino, es decir el que corresponde al lugar de trabajo, máxime si como además sucede en este tipo de caso, hay que cruzar de un Estado a otro. Sin embargo, es significativo señalar la previsión que se hacía en la definición de entorno habitual a efectos estadísticos por parte de la Comisión Europea (Decisión de 9 de diciembre de 1998), cuando consideraba que “los lugares visitados con frecuencia (como media una vez a la semana o más a menudo), de manera regular, forman parte del entorno habitual de una persona, aunque estén situados a una distancia considerable del lugar de residencia (o en otro país)”. De tal forma que el tenor literal de esta definición parece estar hecho a la medida del trabajador fronterizo, ya que al igual que en dicho concepto, el trabajador se desplaza una vez a la semana o con una frecuencia mayor, que dicho movimiento se realiza de forma rutinaria, que se encuentra a una distancia determinada del lugar de residencia habitual, e incluso se da la particularidad, igualmente prevista en la definición, de tener que dirigirse a otro país. Luego siguiendo este criterio interpretativo habría de considerar los desplazamientos realizados por el sujeto fronterizo para realizar su trabajo, como parte del denominado entorno habitual, y por tanto sin que suponga una salida hacia un espacio diferente, tal y como se prevé que ha de ser en los viajes de orden turístico.

Sin embargo, la última definición dada de “entorno habitual” desde Europa (Reglamento UE 692/2011), a efectos estadísticos, no parece ser tan clarificadora. De tal suerte, que se utiliza como elemento definitorio principal, la habitualidad de las actividades que se lleven a cabo en este espacio, sobre la base de criterios generales como: el traspaso de fronteras, la distancia desde la residencia habitual, la duración, la frecuencia y el objetivo. Dejando por tanto un amplio margen interpretativo en lo que ha de entenderse como entorno habitual, más allá del rasgo tautológico de habitualidad, que no

hace sino volver a incidir en lo mismo, sin realmente establecer una delimitación a la medida. De hecho los dos criterios territoriales a utilizar como indicadores de referencia, poco parecen aclarar para estos casos, o incluso pueden llegar a desviar el verdadero sentido de esta actividad; ya que en estos supuestos, se va a dar un traspaso de fronteras, lo que inicialmente parece alejar al sujeto de su entorno, y en cuanto al factor distancia desde la residencia habitual, ha de entenderse por pura lógica que no debería ser muchas para no alejarse del espacio habitual, pero que sin embargo para el caso del viajero trabajador puede llegar a ser considerable, como se pondrá de manifiesto.

El ámbito territorial conecta también con la nacionalidad que ha de poseer el sujeto fronterizo, toda vez que la previsión justificativa de la libre circulación de trabajadores, parte de la ostentación de la nacionalidad de un Estado miembro, y por tanto bajo la naturaleza de ser ciudadano de la Unión Europea (Tratado de Funcionamiento de la Unión Europea-versión consolidada-). Previsión de carácter nacional que en cualquier caso no se prolonga más allá de compartir una cualidad concéntrica con el criterio de residencia o lugar de trabajo, que igualmente han de corresponder a Estados miembros de la UE. Por tanto, siempre y cuando se mantenga la condición comunitaria del trabajador, lo que realmente va a someter la situación desde la perspectiva reglamentaria va a ser el factor territorial tanto de residencia como de trabajo.

De hecho el criterio de la residencia habitual prevalece por encima incluso de la nacionalidad para otorgar la condición de trabajador fronterizo, de tal suerte que el nacional de un Estado miembro donde además trabaja, que conservando el empleo en su país de procedencia traslade su domicilio a otro Estado miembro, se entiende que ejerce desde entonces su actividad profesional como trabajador fronterizo pudiendo invocar su condición de trabajador migrante (STJCE 2007/199). Es decir el ciudadano de un país que vive y trabaja en su mismo territorio pero que traslada su residencia a otro Estado, pasa a considerarse como trabajador fronterizo a los efectos oportunos, sin que sirva de impedimento el hecho de disponer de la nacionalidad del territorio donde además trabaja; en el mismo sentido y por extensión, ha de ser igualmente considerado como trabajador fronterizo, el sujeto que ostenta una nacionalidad, reside en otro Estado y trabaja en un tercero.

Por consiguiente, lo determinante va a ser el elemento locativo en el que se desenvuelve el sujeto, en cuanto a lugar de residencia y trabajo, siempre y cuando se respete en ambos casos la regla de pertenencia al espacio común europeo; y no tanto, el de la nacionalidad del trabajador, que en todo caso ha de ser de un país comunitario. No obstante, hay que matizar que el ostentar una determinada nacionalidad sin ser determinante en la aplicación de la norma, siempre ha de estar presente como requisito de fondo en cuanto a su tratamiento como trabajador fronterizo.

En el panorama turístico (OMT, 2010) el criterio determinante también viene marcado por el país de residencia habitual, y no por la nacionalidad, de tal forma que sirve de base para delimitar la salida de su entorno habitual, pudiendo desplazarse como turista al territorio del que se posee la ciudadanía.

El desplazamiento de los trabajadores por el espacio europeo es el objeto de atención general de la norma, pero es la dualidad geográfica, entre el lugar de residencia y el de trabajo, la que genera un tratamiento específico, aplicando reglas particulares para determinadas prestaciones a los trabajadores fronterizos y/o los miembros de sus familias (Reglamento CEE 1408/71). Siendo precisamente esta marcha desde un país de partida, donde el trabajador tiene su domicilio, hacía otro de destino, donde va realizar su prestación de trabajo habitual, la que ocasiona un cambio de ordenamiento jurídico de un Estado a otro, que precisa ser regulado bajo un criterio uniforme de carácter supranacional, con el que dar respuesta a las necesidades especiales de este colectivo de trabajadores y por extensión a su entorno familiar más cercano.

El factor territorial también condiciona el sometimiento de estos trabajadores a una normativa diferente según el lugar que se tenga en consideración. Para estas situaciones el principio general de *lex loci laboris* juega con normalidad y, por tanto, el trabajador fronterizo queda incluido en el ámbito de la Seguridad Social del país donde desarrolla su trabajo (Bonete, 2006). No obstante, el propio Reglamento establece una excepción a dicho principio general, para el caso concreto de los trabajadores fronterizos que se encuentren en situación de desempleo total (Decisión 2006/351/CE). La jurisprudencia europea también se hace eco de esta cuestión (STJCE 1997/50), como consecuencia del cambio de residencia de un trabajador fronterizo al Estado miembro competente, reconociendo que el hecho de encontrarse en situación de desempleo origina una ficción jurídica con el sometimiento a la legislación del Estado de residencia “como si” dicho Estado fuera el del último empleo.

Es también significativo desde el punto de vista territorial, que pese a la apariencia calificativa en la denominación trabajador “fronterizo”, el Reglamento no establece el carácter limítrofe entre los territorios afectados como requisito necesario para la existencia de esta figura, centrando la cuestión en el hecho físico de tener que traspasar una frontera para trabajar. Aunque el tratamiento dado sobre esta cuestión no haya sido el mismo en el ámbito del turismo en cuanto a la recogida de información estadística (Decisión CE, 1998), ya que para estos casos se aludía a los trabajadores fronterizos, como aquellos que residen cerca de la frontera de un país y trabajan en otro. Denominación por tanto que estaba limitada para estos casos a territorios contiguos y a situaciones de cercanía, término este último además, poco preciso por ser indeterminado en cuanto al factor distancia.

En cualquier caso, seguramente el supuesto del fronterizo estaba previsto en origen para el movimiento de trabajadores en territorios colindantes, con una distancia relativamente corta entre el domicilio y el centro de trabajo, porque tal vez en ese momento no se imaginara otro escenario posible. Sin embargo, hoy en día se permite interpretar otro tipo de actuaciones, debido en gran medida al avance de las comunicaciones y los medios de transportes, siendo perfectamente factible el desplazamiento de un país a otro no fronterizo (máxime si la frecuencia del retorno no es diaria sino semanal), y no por ello se ha de perder el carácter de trabajador fronterizo. Quiere ello decir, que lo determinante va a ser el desplazamiento de un Estado a otro para el desempeño de una actividad profesional, con independencia de si dichos países comparten o no frontera.

Este planteamiento sin duda altera uno de los criterios básicos de referencia de lo que ha de interpretarse como entorno habitual en los viajes turísticos, en concreto el factor distancia. De hecho en el supuesto de territorios no limítrofes y frecuencia semanal, la distancia desde el lugar de residencia habitual al centro de trabajo, puede ser bastante considerable como para entender que pueda influir a la hora de formar parte de su entorno habitual. Lo que a su vez tampoco obsta, para

que sirva a modo de impedimento para alcanzar dicha consideración si tiene a bien el cumplimiento de otros criterios que de igual forma han de servir de mera referencia, sin que existan unos verdaderos parámetros que han de darse, y sin que en realidad exista un criterio uniforme para todos los países.

b) El factor temporal

El factor temporal gira en torno a la frecuencia, estableciéndose una regla general que contempla el regreso del lugar de trabajo al domicilio cada día o al menos una vez por semana; siendo esta última y en principio, la posibilidad más distante que reconoce la norma para otorgarle la calificación de trabajador fronterizo. Esta previsión temporal de regreso se mantiene constante hasta la actualidad desde el plano normativo-definitorio de este colectivo de trabajadores, luego, la frecuencia diaria o semanal es la referencia temporal para este tipo de desplazamientos. Este regreso necesario, supone una importante restricción dentro del conjunto de trabajadores que realizan su actividad económica en otro Estado distinto del que residen (García, 2008), dejando así al margen a un contingente significativo que realizan ciertas actividades cíclicas y/o eventuales.

El regreso diario de estos trabajadores una vez finalizada la jornada se da como la de cualquier empleado normal, con la particularidad de que en estos casos se produce cruzando una frontera. Esto origina un movimiento fronterizo que se asemeja al que se da en la figura turística del excursionista, el cual desde el punto de vista temporal, también permanece menos de veinticuatro horas en el destino. Se da por tanto un criterio de semejanza entre estos trabajadores que cruzan diariamente a otro país para trabajar, y los visitantes del día o excursionistas que son aquellos que por su propia denominación entran y salen del territorio en el mismo día.

Desde la perspectiva del excursionista se incide en su temporalidad corta pero necesaria, cuando en las Recomendaciones internacionales dadas para estadísticas de turismo (OMT, 2010), utilizando el mismo criterio que en el ámbito europeo de considerar solo como turísticos los viajes realizados fuera del entorno habitual, se define otro componente necesario de estos viajes, la “visita turística”. En este sentido se considera como “visita turística” la estancia en un lugar visitado durante un viaje turístico, aclarando que no es necesario que la estancia incluya una pernoctación para que se considere como visita turística, pero sí ha de suponer necesariamente la realización de una parada, tal y como sucede en el caso del excursionista. Es más, caso contrario ni tan siquiera va a ser considerado como tal, es decir, la entrada en una zona geográfica sin realizar una parada en la misma, no presupone la realización de una visita en el sentido turístico. Por tanto en el ámbito del turismo, el término “estancia” significa la realización en el lugar visitado de al menos una parada, no siendo necesario en cualquier caso la pernoctación, situación que evidencia y caracteriza al denominado visitante de día o excursionista.

Para el caso de los trabajadores fronterizos en relación a sus desplazamientos se ha de realizar una estancia en el lugar donde se va a ejecutar la prestación de trabajo, que a los efectos de su definición ha de ser en otro Estado, siempre con carácter temporal en referencia al regreso necesario al territorio de partida que a estos mismos efectos debe coincidir con el del domicilio habitual. Lo que viene a significar su coincidencia en cuanto a la estancia prevista con los viajes turísticos, ya que de igual forma se precisa al menos una parada en el destino, cuestión que se da plenamente en el caso del fronterizo, el cual va a acudir a otro territorio donde va a parar al menos durante la jornada de trabajo, al ser esta la frecuencia mínima prevista desde el punto de vista conceptual para poder alcanzar la consideración de trabajador fronterizo. Luego al igual que sucede con respecto a los excursionistas y su estancia prevista para la visita turística, va a cumplirse en el caso del trabajador fronterizo, donde no solo es perfectamente factible sino incluso mucho más frecuente la estancia diaria en el territorio donde se va a desarrollar la actividad laboral. Por tanto se evidencia un paralelismo temporal entre el visitante del día o excursionista y el trabajador fronterizo, todo ello con independencia de otras cuestiones de fondo que pueden ofrecer una perspectiva bien distinta, fundamentalmente en cuestiones como la motivación de estos desplazamientos.

En cuanto a la posibilidad de ampliar la frecuencia del regreso a una vez por semana, parece indicar que en esta ocasión el trabajador por la circunstancia que sea, o no puede o no le interesa el regreso diario, pero su vuelta se materializa una vez disponga del preceptivo descanso semanal que corresponde a todo trabajador por cuenta ajena, permaneciendo en todo caso el ánimo del retorno al domicilio. Para estos casos la similitud viene de la figura central en los movimientos turísticos, el turista, el cual por definición ha de viajar por un periodo no superior a doce meses consecutivos.

Por tanto, se cumple con respecto al reconocimiento del entorno habitual del viajero turístico, el criterio de la frecuencia, que para los fronterizos ha de ser preceptivamente de carácter diario o en todo caso semanal, circunstancia esta, que condiciona además otro de los indicadores de referencia, el de la duración. Este criterio de la duración si puede servir para aclarar la no pertenencia al entorno habitual cuando las estancias son medias o largas, pero no parece ser tan clarificador para otras posibilidades viajeras como la del excursionista o viajes de corta duración (entendiendo por ello menos de una semana), los cuales podrían acoplarse perfectamente a esta modalidad de viajero trabajador.

La frecuencia contemplada con carácter general para el regreso (diario o semanal), se ve no obstante ampliada por la propia norma a renglón seguido, cuando establece una previsión excepcional para el trabajador destacado. Se entiende como tal, aquel trabajador fronterizo que se encuentra destacado por la empresa de la que depende, o que preste servicios en el territorio del mismo Estado miembro o de otro Estado miembro, conservando la condición de fronterizo pese a que esta circunstancia le impida regresar con la continuidad prevista como regla general. Luego la prestación laboral desempeñada por el trabajador se ve sometida a una de las vicisitudes previstas en las relaciones laborales para este tipo de circunstancia, como es la movilidad geográfica, sea de orden nacional o transnacional, es decir, se produce el desplazamiento del trabajador hacia un lugar distinto y posiblemente distante del centro de trabajo habitual, impidiéndole el regreso a su lugar de residencia habitual. Para este tipo de situación de desplazamiento coyuntural, se amplía la regla temporal hasta cuatro meses, y por tanto, pese a no darse el retorno diario o semanal, se mantiene la calificación de trabajador fronterizo durante ese periodo de tiempo.

Otra cuestión temporal que sin duda afecta a la consideración de trabajador fronterizo, es saber hasta cuándo se mantiene esta cualidad, ya que la situación parece poder prolongarse más allá del espacio temporal en el que se mantiene el vínculo

contractual. Esta circunstancia se planteó como cuestión prejudicial para saber si un trabajador fronterizo pierde esta condición por el hecho de hallarse en situación de desempleo total, a lo que la STJCE 1991/277, responde negativamente y por tanto no se pierde la condición de trabajador fronterizo en situación de desempleo total. Es decir, se da una prolongación temporal de dicha cualidad, en aquellas circunstancias en las que realmente ya no existe la relación laboral que originaba el movimiento transfronterizo entre los Estados de residencia y trabajo, pero que sin embargo, ha servido como causa necesaria para originar la situación posterior de desempleo total, y por tanto el reconocimiento a los efectos oportunos como trabajador fronterizo.

3. LA SIMPLIFICACIÓN DEL CONCEPTO EN LOS REGLAMENTOS 883/2004 Y 589/2016 DE LA UNIÓN EUROPEA

El Derecho Comunitario trata de actualizar el Reglamento existente desde 1971, como consecuencia de las modificaciones que se habían ido sucediendo fruto de la evolución natural desde entonces en el ámbito europeo, así como de la jurisprudencia suscitada al efecto, y de las diferentes legislaciones acaecidas en los panoramas nacionales. Como consecuencia de todo ello se elabora el Reglamento (CE) 883/2004, que trata de coordinar los sistemas aplicables de seguridad social dentro del marco de la libre circulación de personas.

Sin embargo, con independencia de la aplicación correspondiente en materia de seguridad social, la cuestión conceptual sobre los trabajadores fronterizos, no solo no se ve actualizada, sino que se ve simplificada, definiendo como tal a “toda persona que realice una actividad por cuenta ajena o propia en un Estado miembro y resida en otro Estado miembro al que regrese normalmente a diario o al menos una vez por semana”. De tal suerte, que ya no aparece incluida en la misma, ninguna mención sobre el trabajador fronterizo destacado, obviando la equiparación temporal que durante cuatro meses se hacía en la norma precedente que seguía considerando a estos trabajadores como fronterizos, pese a la falta de regreso diario o semanal.

Siguiendo el orden cronológico, todavía se llega a una mayor simplificación del concepto, cuando el Reglamento 589/2016 de la UE, sobre la red europea de servicios de empleo (EURES), el acceso a los servicios de movilidad por parte de los trabajadores e integración de los mercados de trabajo; considera como “trabajador fronterizo”: “el trabajador que realice una actividad por cuenta ajena en un Estado miembro y resida en otro Estado miembro al que el trabajador en principio regrese a diario o al menos una vez por semana”.

Se llega por tanto al concepto más restrictivo de trabajador fronterizo en el que solo va a tener cabida el trabajador por cuenta ajena o asalariado, dejando al margen al trabajador por cuenta propia o autónomo, que hasta entonces se reconocía como fronterizo en las reglamentaciones precedentes. Bien es verdad, que se realiza a efectos de esta norma, sin que a priori pueda interferir en la definición dada anteriormente a efectos de prestaciones sociales; pero no lo es menos, que se hace en el marco de la libre circulación de trabajadores en lo que ha de ser un verdadero mercado único de trabajo europeo, y por tanto, con unificación de criterios a la hora de definir el elemento subjetivo del que ha de partir su posterior aplicación normativa.

4. DIFERENCIACIÓN CON FIGURAS AFINES

4.1 La distinción entre trabajador fronterizo y trabajador transfronterizo

La denominación utilizada en la normativa europea de “trabajador fronterizo”, para definir a las personas que atraviesan fronteras para trabajar y regresan posteriormente a su lugar de origen, no coincide con la mencionada en la legislación española para describir esta situación. De hecho la ley de extranjería (RD 557/2011) lo denomina como “trabajador transfronterizo”, definiéndolo como aquel “que haya sido autorizado para desarrollar actividades lucrativas, laborales o profesionales por cuenta propia o ajena en las zonas fronterizas del territorio español, residiendo en la zona fronteriza de un Estado limítrofe al que regrese diariamente”.

Pero no solo parece una discrepancia literal, sino que efectivamente describen realidades diferentes, de hecho, ya en el ámbito temporal, la frecuencia prevista para el regreso del transfronterizo es solo de carácter diario, a diferencia de la previsión para el fronterizo que abarca también la de carácter semanal. Dicha previsión temporal conecta a su vez con el ámbito territorial, toda vez que en el caso de los transfronterizos, según la definición, tanto el lugar de desempeño del trabajo, como el lugar de residencia, han de estar situados en zonas fronterizas de Estados limítrofes. Cuestión en la que incide el legislador, cuando prevé como uno de los requisitos necesarios para poder obtener la autorización para trabajar en nuestro país, en el hecho de “residir en la zona fronteriza con territorio español de que se trate” (RD 557/2011, art. 183. a) y b), 3º). No existe a este respecto la misma previsión territorial en la reglamentación europea para el caso de los trabajadores fronterizos, los cuales han de residir y trabajar en diferentes Estados miembros, sin más precisiones al respecto, dejando por tanto abierta la posibilidad que se desarrolle en zonas no necesariamente limítrofes.

Pero sobre todo, lo más significativo es precisamente, el hecho de que el trabajador transfronterizo necesite de una autorización previa para poder desarrollar la actividad en nuestro territorio, toda vez que para los ciudadanos de la UE rige el principio de libre circulación de trabajadores, y por tanto estarían exentos de dicha autorización. Lo cual nos lleva a concluir que en España la denominación utilizada ha de referirse a una realidad diferente, en el sentido de que con la expresión “trabajadores transfronterizos” se hablaría de trabajadores extracomunitarios, mientras que la expresión “trabajadores fronterizos” aludiría a los trabajadores comunitarios (Vázquez, 2009).

4.2 Trabajador fronterizo y trabajador de temporada

Con independencia del tratamiento correspondiente a efectos de seguridad social, se define por el Reglamento (CEE) 1408/71 en términos parecidos al fronterizo, al trabajador de temporada, considerando como tal, a aquel trabajador que igualmente se desplaza de un Estado a otro para efectuar un trabajo, regresando al de residencia una vez finalice el mismo. Luego sin duda coincide con el trabajador fronterizo en cuanto al hecho de tener que cruzar la frontera de un país a otro por motivos de trabajo y el regreso posterior, pero a partir de aquí, existen notables diferencias, en cuanto a que, para los temporeros, el trabajo a efectuar ha de tener carácter estacional, y en cuanto a que, el regreso al lugar de residencia habitual no se da con carácter repetitivo, sino de una sola vez.

La figura del trabajador de temporada también es objeto de atención en la normativa española, concretamente en la conocida como Ley de extranjería que solicita al ejecutivo la regulación reglamentaria de la autorización de residencia y trabajo para los trabajadores extranjeros en actividades de temporada o campaña (LO 4/2000). En dicha norma se perfilan ya, los rasgos más significativos de este supuesto, en el sentido de ir dirigido expresamente al personal extranjero, el cual ha de precisar de una autorización para poder trabajar, por tanto dejando al margen al personal comunitario, incluidos los trabajadores fronterizos, que no necesitan de este permiso.

Por otro lado, la exigencia de una autorización de residencia temporal, indica la permanencia necesaria por el periodo de tiempo que ha de durar el trabajo, con el límite máximo de nueve meses (RD 557/2011); dejando claro que ha de ser un trabajo temporal de carácter estacional. Cuestión muy distinta a la prevista para los trabajadores fronterizos, los cuales pueden prolongar su actividad sin límite, de forma indefinida, siempre y cuando no permanezcan en lugar de trabajo más allá de una semana de manera continuada, toda vez que para estos trabajadores se exige el regreso reiterativo al territorio de residencia.

Se manifiesta por todo ello, la diferencia existente entre el trabajador fronterizo y el temporero, ya que este último necesita permiso de residencia y trabajo, permanece en el país mientras dura la campaña de trabajo, normalmente vinculada a actividades agrícolas o estacionales, que no tienen por qué darse en el fronterizo (San José, 2013), y regresa al domicilio una sola vez al finalizar la temporada, tiene además carácter cualitativamente temporal, y sobre todo por el hecho de ser realizado por trabajadores extranjeros no comunitarios.

4.3 Otros supuestos afines

Existen otras situaciones en las que también se da el movimiento de personas de un territorio a otro por razones de trabajo, y en los que al igual que en el caso de los trabajadores fronterizos, no coincide el Estado de residencia con el Estado de trabajo. Estos supuestos obedecen a panoramas bien distintos, que podemos agrupar en dos grandes bloques, por un lado las relaciones que se desarrollan en el marco de prestaciones transnacionales de servicios, y por otro, aquellas otras destinadas a ejercer un trabajo por cuenta ajena de duración determinada en otro país.

En cuanto a la prestación transnacional de servicios, supone en esencia, el desplazamiento de trabajadores que realizan las empresas para trabajar en otro Estado miembro distinto al que lo hacen normalmente, en lo que se considera como transnacionalización de las relaciones de trabajo (Directiva 96/71). Esta situación también denominada “expatriación”, es distinta del traslado de un trabajador ya contratado en la contratación para prestar servicios en el extranjero (Valverde y otros, 2016). Este supuesto en el espacio europeo supone una manifestación más de la libre prestación de servicios que se prolonga para estos casos en la libre circulación de trabajadores, pero este tipo de prestaciones también puede afectar a trabajadores extranjeros provenientes de empresas no pertenecientes a la Unión Europea (RD 557/2011).

Este supuesto de hecho coincide con el previsto para el caso del trabajador fronterizo en la existencia de dos territorios distintos, el de residencia habitual y el de trabajo; sin embargo a partir de aquí existen notables diferencias. De tal forma, que en el caso del trabajador desplazado de carácter transnacional, el trabajo habitual era el que se desempeñaba en el territorio de residencia, siendo el actual de carácter meramente transitorio, sin que suceda lo mismo en el caso del trabajador fronterizo, que su trabajo habitual coincide con el actual, que desempeña de forma no necesariamente temporal. Tampoco se da el regreso continuado propio del trabajador fronterizo, y donde además el vínculo laboral sigue existiendo con la empresa del territorio de origen, no así en el caso de los fronterizos. Por último, en cuanto al sujeto en sí, puede ser no solo ciudadano europeo como se regula para el trabajador fronterizo, sino también extracomunitario, eso sí, siempre y cuando en este último caso medie la pertinente autorización para su ejercicio, de residencia y trabajo.

El resto de supuestos afines serían aquellos que se integran en el bloque de los que van a ejercer un trabajo por cuenta ajena de duración determinada en otro país. En particular la normativa española contempla a los que se realizan como obras o servicios para ciertas actividades de: montaje, construcción o de instalación y mantenimiento; otros de carácter temporal de alta dirección, deportistas profesionales, artistas y otros posibles colectivos; y en su caso para formación o prácticas profesionales (RD 557/2011).

Para este conjunto de supuestos sirve extender los mismos argumentos comparativos esgrimidos entre trabajadores fronterizos y de temporada, en el sentido de que para estos últimos y a diferencia de los primeros, se necesita permiso de residencia y trabajo, que no regresan al país de residencia habitual de forma reiterativa, que tienen carácter temporal y que quienes lo realizan son según la normativa trabajadores extranjeros, en el sentido ya aludido de extracomunitarios.

5. CONCLUSIONES

El derecho fundamental de carácter general a la libre circulación de trabajadores dentro del territorio de la Unión Europea, se manifiesta también como una parte representativa de los movimientos de personas de un Estado a otro por

motivo de trabajo, con el reconocimiento de la figura del trabajador fronterizo. Este reconocimiento se ve plasmado en la reglamentación europea, sobre todo para ordenar cuestiones de prestaciones sociales referente a estos trabajadores en los distintos territorios que se vean afectados, ante lo cual se define el elemento subjetivo como parte fundamental sobre la que ha de girar toda esta normativa.

Sin embargo, la delimitación de este sujeto trabajador ha ido evolucionando en lo que parece ser una deriva legislativa, de un concepto integrador con inclusión de cualquier movimiento causado por una actividad profesional, e incluso con la equiparación de un supuesto inicialmente ajeno, hacía un concepto netamente restrictivo en cuanto a la única consideración como fronterizo, de los trabajadores por cuenta ajena sin más opciones ni equiparaciones. En cualquier caso, lo que sí se han mantenido han sido los mismos criterios territoriales y temporales, tratando de delimitar esta figura y sirviendo en gran medida como factores diferenciadores de otros supuestos afines, que al igual que en el caso de los fronterizos, originan movimientos migratorios de trabajadores. No quiere ello decir, que dichos criterios estén exentos de debate sobre su necesaria adaptación a los tiempos actuales, en lo que debe ser una nueva fórmula que dé respuesta a la verdadera realidad en la que se encuentran este tipo de trabajadores “inter- fronteras”.

De todo lo cual se desprende el uso de criterios diferentes según las necesidades normativas, sin haber conseguido establecer un concepto uniforme que sirviese como base delimitadora para ordenar las necesidades reales de estos trabajadores en todas las cuestiones en las que puedan verse afectados desde la perspectiva laboral, u otras que igualmente tuviesen alguna repercusión, como puede ser la materia fiscal. Por tanto hay que valorar la especial situación en la que se encuentran estos trabajadores con sometimiento a ordenamientos jurídicos diferentes según los territorios de origen y destino, que hacen aun más necesaria una definición uniforme y actualizada del trabajador fronterizo, que pueda ser aplicable a todos los ámbitos normativos en lo que viene siendo una demanda histórica (Resolución UE de 28 de mayo de 1998), que conviene resolver para dar garantías de un verdadero ejercicio del derecho a la libre circulación de trabajadores en el espacio de la Unión Europea.

Una vez hecha la delimitación del elemento subjetivo de estos movimientos desde un punto de vista jurídico-normativo de la UE como base reguladora del trabajador fronterizo; hay que conectar esta figura y los desplazamientos que originan desde una perspectiva turística. En este sentido, partiendo del supuesto de hecho que se genera en cuanto a desplazamiento de un sujeto fuera de su país de residencia habitual hacía otro territorio y su regreso posterior, parece coincidir con la base de los viajes de naturaleza turística. Sin embargo, los caracteres que rodean a esta figura laboral en relación con los que han de corresponder con los viajeros turísticos, son en cierta medida diferentes.

En este sentido, la primera circunstancia en la que presentan discrepancia es precisamente la que sirve de territorio de salida de los desplazamientos, de tal forma que si para este viajero trabajador ha de ser necesariamente el Estado de residencia, para el viajero turístico ha de ser lo que se denomina como entorno habitual. Cuestión que en una inmensa mayoría de los casos va a ser coincidente, pero que en realidad son conceptos diferentes, ya que el llamado entorno habitual engloba no solo el lugar de residencia, sino el espacio en el que ordinariamente se desenvuelve el sujeto. Este espacio tiene un carácter ambiguo, por la falta de precisión en los criterios utilizados como referencia, y por el hecho de tener una conexión individualizada que va a depender en definitiva de las peculiaridades de cada sujeto. No obstante, cabe entender objetivamente que la asistencia regular al lugar de trabajo, aun suponiendo un cambio de demarcación territorial como sucede en estos casos, e incluso en aquellas posibles situaciones en las que la distancia pueda ser considerable, o que ni siquiera se desplacen desde un Estados limítrofe; ha de ser considerado como una práctica inherente a la condición de cada sujeto como derecho-deber, y por tanto ha de formar parte de su entorno habitual.

En cualquier caso aunque los criterios de identidad puedan tener un cierto paralelismo en el que se den coincidencias territoriales y temporales, se diluyen en cuanto al ámbito motivacional de estos viajes, ya que en el caso del fronterizo viene claramente definida la intención de trabajar que provoca el desplazamiento, distando bastante de las opciones previstas para el turista. Tan es así, que desde el propio concepto de viaje turístico se excluye única y expresamente de su consideración, los desplazamientos cuya finalidad principal sea la de ser empleado por una entidad residente en el país o lugar visitado, cuestión que se da plenamente en el supuesto del trabajador fronterizo, quien por tanto ha de ser excluido de dicha calificación turística. Por si acaso, en la clasificación estadística de turismo de los visitantes internacionales, se excluye con carácter taxativo a los trabajadores fronterizos, lo que en definitiva viene a corroborar la separación que debe existir entre este tipo de “viajero trabajador” y el “viajero turista”.

REFERENCIAS

- Bonete, A. (2006). Trabajadores desplazados y trabajadores fronterizos en la Seguridad Social europea: del Reglamento 1408/1971 al Reglamento 883/2004. *Revista del Ministerio de Trabajo e Inmigración*, 64: 19-40.
- García, E. (2008). Trabajadores fronterizos y transfronterizos en España y Portugal a lo largo de la historia. *Revista de estudios extremeños*, 64: 61-88.
- Organización Mundial del Turismo (2010). *Recomendaciones internacionales para estadísticas de turismo 2008*. Naciones Unidas. Madrid/Nueva York. ISBN 978-92-1-361238-5.
- Ortiz, L. y Nestares, C. (2003). El trabajo y las relaciones laborales en zonas fronterizas: El caso de Melilla. *Trabajo*, 12: 111-130.
- San José, B. (2013). *A regulación laboral e de seguridade social do traballo fronteirizo*. Tese de doutoramento. Área de Dereito do Traballo e da Seguridade Social, Universidade da Coruña.

Valverde A., Gutiérrez F. y Murcia J. (2016). *Derecho del trabajo*, 25ª edición, Tecnos, Madrid. ISBN 978-84-309-6956-2.

Vázquez, X. (2009). Tres apuntes sobre la regulación legal de los desplazamientos fronterizos en el Derecho del trabajo y de la Seguridad Social de la Unión Europea y su impacto en el Derecho interno de los Estados miembros. *Anuario da Facultade de Dereito da Universidade da Coruña*, 13: 57-67.

Legislación:

Decisión 2006/351/CE, de la Comisión administrativa de las comunidades europeas para la seguridad social de los trabajadores migrantes.

Decisión de la Comisión Europea de 9 de diciembre de 1998, sobre los procedimientos de aplicación de la Directiva 95/57/CE del Consejo sobre la recogida de información estadística en el ámbito del turismo.

Directiva 96/71 del Parlamento Europeo y del Consejo de 16 de diciembre de 1996 sobre el desplazamiento de trabajadores efectuado en el marco de una prestación de servicios. Traspuesta al ordenamiento jurídico español mediante la Ley 45/1999, de 29 de noviembre, sobre el desplazamiento de trabajadores en el marco de una prestación de servicios transnacional.

Ley Orgánica 4/2000, de 11 de enero, sobre derechos y libertades de los extranjeros en España y su integración social.

Real Decreto 557/2011, de 20 de abril, por el que se aprueba el Reglamento de la Ley Orgánica 4/2000, sobre derechos y libertades de los extranjeros en España y su integración social, tras su reforma por Ley Orgánica 2/2009.

Reglamento (CEE) 1408/71 del Consejo de 14 de Junio de 1971, relativo a la aplicación de los regímenes de seguridad social a los trabajadores por cuenta ajena, a los trabajadores por cuenta propia y a los miembros de sus familias que se desplazan dentro de la Comunidad.

Reglamento (CE) 883/2004 del Parlamento Europeo y del Consejo, de 29 de abril, sobre Coordinación de los Sistemas de Seguridad Social.

Reglamento (UE) 492/2011, del Parlamento Europeo y del Consejo de 5 de abril de 2011 relativo a la libre circulación de los trabajadores dentro de la Unión.

Reglamento (UE) 692/2011 del Parlamento Europeo y del Consejo de 6 de julio de 2011, relativo a las estadísticas europeas sobre el turismo y por el que se deroga la Directiva 95/57/CE del Consejo.

Reglamento (UE) 2016/589 Del Parlamento Europeo y del Consejo de 13 de abril de 2016 relativo a una red europea de servicios de empleo (EURES), al acceso de los trabajadores a los servicios de movilidad y a la mayor integración de los mercados de trabajo y por el que se modifican los Reglamentos (UE) 492/2011 y (UE) 1296/2013.

Resolución de 28 de mayo de 1998, sobre la situación de los trabajadores fronterizos en la Unión Europea, *Diario Oficial de la Unión Europea C195 de 22 de junio de 1988*.

Tratado de Funcionamiento de la Unión Europea (versión consolidada), *Diario Oficial de la Unión Europea n° C 326 de 26 de octubre de 2012*.

Jurisprudencia:

Sentencia del Tribunal de Justicia de las Comunidades Europeas de 15 de octubre de 1991 (TJCE 1991/277), Caso Faux.

Sentencia del Tribunal de Justicia de las Comunidades Europeas de 18 de julio de 2007 (TJCE 2007/199). Caso Hartmann.

Sentencia del Tribunal de Justicia de las Comunidades Europeas de 13 de marzo de 1997 (TJCE 1997/50), Caso Huijbrecht.

CONSTRUÇÃO DE TESTES DE ESCOLHA MÚLTIPLA

Helena Monteiro
 ESTA - Instituto Politécnico de Tomar
 CDMES - Universidade do Algarve
 (helenamonteiro@ipt.pt)

Maria João Afonso
 Faculdade de Psicologia, Universidade de Lisboa
 (mjafonso@fp.ul.pt)

Marília Pires
 CDMES e Faculdade de Ciências e Tecnologia, Universidade do Algarve
 (mpires@ualg.pt)

RESUMO

A avaliação de conhecimentos dos estudantes é uma, das muitas, atividades desenvolvidas pela generalidade dos professores. Na maioria dos casos, essa avaliação é feita através da aplicação de testes académicos construídos pelos próprios professores. Estes testes são compostos por itens que podem assumir os formatos de resposta construída ou de escolha múltipla. Ambos os formatos de itens apresentam vantagens e desvantagens. Contudo, muitas das limitações que se apontam aos itens de escolha múltipla podem ser reduzidas, ou mesmo eliminadas, se eles forem construídos corretamente.

Neste artigo, elaborado com base numa revisão da literatura e na experiência da construção de um teste de conhecimentos de Matemática, o PMAT, apresentam-se técnicas de construção de testes de escolha múltipla, onde se inclui a aplicação de regras de redação dos itens que integram os testes desta natureza. Também se referem algumas técnicas elementares de análise de testes que podem identificar erros cometidos na sua construção e, por isso, facilitam a revisão e melhoria do teste quando se tem em vista o seu progressivo aperfeiçoamento.

Palavras-chave: PMAT, Construção de Testes, Itens de Escolha Múltipla, Avaliação de Conhecimentos.

1. INTRODUÇÃO

Os testes de avaliação académica, aos quais se restringe este artigo, são utilizados para avaliar resultados do processo de ensino e de aprendizagem. Em qualquer área disciplinar e em qualquer nível de escolaridade, os professores constroem e aplicam testes desta natureza para avaliarem os conhecimentos dos seus alunos nos conteúdos que lecionaram nas aulas, tendo como objetivo a classificação dos alunos ou o aperfeiçoamento do processo de ensino e de aprendizagem – ao verificarem se os objetivos definidos (conhecimentos a adquirir e capacidades a desenvolver pelos alunos) foram alcançados e se os métodos de ensino (meios pedagógicos para atingir os objetivos) foram adequados, podem, se necessário e possível, reformular os objetivos ou os métodos. Enquanto no primeiro caso a aplicação do teste é, normalmente, o fim de um processo, no segundo é um meio para o melhorar. Ainda no âmbito da avaliação formativa, os testes também são úteis para os estudantes fazerem a autoavaliação, para identificarem os tópicos sobre os quais os seus conhecimentos ainda não são suficientes para atingirem a meta que pretendem.

Qualquer prática pedagógica deve ser fundamentada na avaliação do nível de desempenho dos estudantes, das suas lacunas e necessidades de aprendizagem. Com o propósito de identificar, de forma objetiva e uniforme, os conhecimentos em Matemática dos estudantes à entrada do ensino superior de ciências e tecnologias, construiu-se um teste estandardizado, o PMAT (Monteiro, 2016), que se revelou apropriado para organizar recomendações de medidas preventivas e de melhoria efetiva das práticas de ensino nas unidades curriculares de Matemática do 1.º ano de cursos superiores.

O PMAT é um teste com itens de escolha múltipla. As características metroológicas que se pretendiam para o PMAT, a quantidade de estudantes a quem se iria aplicar e o interesse na rápida pontuação dos itens, fizeram com que a equipa que elaborou o teste decidisse que ele fosse composto por, apenas, itens de escolha múltipla. Tomada esta opção, desenvolveu-se uma pesquisa sobre a construção de testes com itens deste formato, a qual permitiu obter um instrumento de avaliação com características que lhe conferem objetividade e fundamentação científica na descrição dos conhecimentos dos estudantes. Neste artigo, apresentam-se os resultados mais relevantes desse estudo, os quais se aplicam a testes de conhecimentos dos estudantes em qualquer disciplina e em qualquer ponto do seu percurso escolar. Estes e outros resultados encontram-se descritos de forma mais detalhada em Monteiro (2016).

Os testes de conhecimentos, de utilização primordial em contexto educacional, são instrumentos de medida cognitivos, construídos em função da área do saber que se deseja medir. Pretende-se que descrevam quantitativamente o grau ou a quantidade de aprendizagem dos indivíduos, sob condições uniformes e estandardizadas de observação (Haladyna, 2004; Cohen, Swerdlik, & Sturman, 2013).

Como qualquer outro instrumento de medida psicológica, um teste de avaliação académica deve medir com rigor os conhecimentos que se querem medir, deve inspirar confiança aos seus utilizadores - quanto maior o grau de precisão e de adequação das medidas aos objetivos da avaliação, maior a convicção nas inferências feitas a partir dos resultados do teste. Estas características metrológicas são avaliadas através de indicadores que se conhecem após a administração do teste, observando e estudando os seus resultados.

A análise crítica da precisão e da legitimidade dos resultados de um teste, das medidas que ele proporciona, também faz parte do processo da sua construção - a análise faculta indicadores, para os itens ou outros fatores, que devem ser corrigidos no sentido de o melhorar. Daí que na última parte deste artigo se faça referência a procedimentos, muito simples, para obter determinados indicadores sobre a qualidade de um teste de escolha múltipla, depois de se mencionarem alguns tópicos sobre técnicas de construção de qualquer teste e se apresentarem diretrizes de redação de itens de escolha múltipla, caracterizados na primeira parte.

2. ITENS DE RESPOSTA CONSTRUÍDA E ITENS DE ESCOLHA MÚLTIPLA

Os testes são, normalmente, compostos por várias questões, instruções ou outras formas de solicitar respostas, que se designam por itens.

De um modo geral, um item tem três componentes: o enunciado (estímulo para a resposta) que pode ter a forma de pergunta aberta, de uma afirmação incompleta ou de uma instrução que requer uma resposta verbal ou comportamental; algumas condições fixadas para a resposta; o método de pontuação.

Para responder a cada item, pode ser necessário elaborar a resposta, ou selecioná-la de entre várias opções disponibilizadas. É em função do modo como a resposta é dada que se distinguem os formatos dos itens quanto à estrutura. Neste sentido, os itens podem ser agrupados em:

Itens de Resposta Construída - solicitam uma resposta que deve ser elaborada sem qualquer informação além da que se encontra no enunciado;

Itens de Escolha Múltipla - solicitam uma resposta que não é elaborada, mas selecionada entre as várias opções que são apresentadas, podendo esta seleção ser feita, por exemplo, entre o *sim* e o *não* ou entre o *verdadeiro* e o *falso*.

Os itens de escolha múltipla com dois níveis de pontuação (certo/errado) dizem-se dicotómicos, em oposição aos politómicos.

Entre os **Itens de Resposta Construída** diferenciam-se dois tipos de formatos:

- *Resposta fechada*: resposta dada através do preenchimento de espaço(s) em branco – numa frase, numa tabela ou outra estrutura – apresentado(s) para completar.
- *Resposta aberta*: resposta completa e estruturada do modo que parecer mais conveniente ao respondente que, na maioria dos casos, deve explicar como obteve essa resposta.

Entre os **Itens de Escolha Múltipla**, distinguem-se os seguintes formatos, de acordo com Haladyna, Downing e Rodriguez (2002):

- *Escolha Múltipla Convencional* (conhecidos por, simplesmente, itens de escolha múltipla): item composto pelo enunciado e por três a cinco alternativas de resposta ou opções - uma correta, a chave, e as outras erradas, os distratores (o avaliado deve indicar a chave).
- *Escolha Alternativa*: item composto pelo enunciado e duas alternativas de resposta - uma certa e outra errada (o avaliado deve indicar a resposta certa).
- *Verdadeiro-Falso*: item que consiste numa afirmação que pode ser verdadeira ou falsa (o avaliado deve indicar se a afirmação é verdadeira ou falsa).
- *Múltiplo Verdadeiro-Falso*: item formado pelo enunciado e por 3 a 30 opções, verdadeiras ou falsas (o avaliado deve indicar, para cada opção, se é verdadeira ou falsa).
- *Associação*: item constituído por grupos de opções (3 a 12) que o avaliado deve associar, em função de uma questão ou tarefa solicitada.

Exemplo: Ligue, com um traço, cada proposição verdadeira do grupo A a uma proposição falsa do grupo B.

Grupo A	Grupo B
$\sqrt{x^2} = x$, para todo o $x \in \mathbb{R}$	$\frac{x^2+2x^3}{x^2} = 2x$, com $x \in \mathbb{R} \setminus \{0\}$
$\sqrt{10^2 - 4^2} > 8$	$(n+2)^2 \neq n^2 + 4$, com $n \in \mathbb{N}$.
$3 - 5 \times 2 = -7$	$x^2 + 2x = 3 \Leftrightarrow x = 1 \vee x = 3$

- *Escolha Múltipla Complexa*: item formado pelo enunciado seguido de afirmações, numeradas, que são agrupadas em três a cinco alternativas de resposta, só uma delas correta.

Exemplo: Quais das seguintes afirmações são verdadeiras?

1. $2 - 3 \times 4 = -10$

2. $\frac{1}{3} + \frac{2}{5} = \frac{3}{8}$

3. $4^2 \div 4^{-2} = 4^4$

- A) 1 e 2
- B) 2 e 3
- C) 1 e 3
- D) 1, 2 e 3

- *Conjunto de Itens Dependentes do Contexto*: conjunto de 2 a 12 itens, com um dos formatos anteriores, cuja resposta depende do mesmo estímulo, dado por um poema, uma fotografia, uma tabela, um gráfico ou outro material visual.

Exemplo (Retirado de Preparing for the ACT, 2009/2010):

Utilize a informação que se segue para responder às questões 1 - 3.

Antes da eleição para Presidente da Câmara de Springdale foi selecionada uma amostra de 200 eleitores. Todos eles indicaram um de quatro candidatos em que iriam votar. Os resultados da sondagem são apresentados na tabela abaixo.

Candidatos	Número de Votos
Blackcloud	50
Lue	80
Gomez	40
Whitney	30

- Que percentagem, de eleitores da amostra, escolheram Whitney para Presidente da Câmara?
 - A. 15%
 - B. 20%
 - C. 25%
 - D. 30%
 - E. 40%
2. Se a sondagem for indicativa de que os 10.000 eleitores de Springdale votarão na eleição, qual das seguintes é a melhor estimativa do número de votos que Lue irá receber?
 - A. 1.500
 - B. 2.500
 - C. 4.000
 - D. 5.000
 - E. 8.000
3. Se a informação da tabela for convertida num gráfico circular (sectograma), quantos graus medirá o ângulo ao centro do sector correspondente a Gomez?
 - A. 54°
 - B. 72°
 - C. 90°
 - D. 108°
 - E. 144°

Um teste pode ser organizado com itens do mesmo formato ou de formatos diferentes. Como exemplo do primeiro caso, tem-se o teste de Matemática de acesso às escolas francesas que integram a *Fédération des Écoles Supérieures d'Ingénieurs et de Cadres (FESIC)* (Concours Puissance 11, 2017). Os exames nacionais portugueses de algumas disciplinas ou os testes do PISA são exemplos de testes constituídos por itens de vários formatos.

Desde a natureza dos processos cognitivos a medir até aos recursos disponíveis, são diversos os fatores que condicionam a escolha do formato dos itens que irão compor um teste académico, quer seja um teste típico de aplicação em sala de aula, quer seja um teste de larga escala - teste que avalia o desempenho dos estudantes de vários países, incidindo em conteúdos de aprendizagem definidos por programas de ensino diferentes, como o PISA ou o TIMSS.

Considerem-se as vantagens dos itens de escolha múltipla (EM) em relação aos itens de resposta construída (RC) e vice-versa.

Vantagens dos itens EM em relação aos itens RC¹:

- O procedimento da pontuação dos itens EM pode ser feito automaticamente ou por alguém que não é perito na matéria avaliada, o que os torna mais económicos do que os itens RC (normalmente, é atribuído 1 ponto a quem escolhe a alternativa de resposta certa e 0 pontos a quem escolhe uma opção errada ou não responde ao item; há casos em que se atribui uma pontuação negativa a respostas erradas);
- A facilidade da pontuação dos itens EM permite apurar os resultados mais rapidamente do que nos itens RC, o que proporciona, aos avaliadores e aos avaliados, o *feedback* sobre o desempenho de um modo mais oportuno;
- A pontuação dos itens EM é objetiva e relativamente fiável, pelo que são mais equitativos para os estudantes do que os itens RC;
- O grau de dificuldade dos itens EM não aumenta para os alunos que têm dificuldade de expressão, o que pode acontecer nos itens RC;
- Os enunciados dos itens EM são, geralmente, mais objetivos que os dos itens RC;
- Os itens EM podem ser respondidos mais rapidamente do que os itens RC, pelo que um teste pode ter um maior número de itens EM e, assim, abranger mais tópicos dos conteúdos a avaliar.

Vantagens dos itens RC em relação aos itens EM:

- Um item RC é mais fácil de construir do que um item EM;
- Um item RC permite obter toda a gama de respostas dadas pelos estudantes e incentiva a criatividade;
- Ao responder com as suas próprias palavras a um item RC, o estudante revela melhor o seu nível de conhecimentos de que num item EM;
- Por não ser mostrada a resposta certa, o estudante que não a conhece tem menos probabilidade de responder corretamente do que num item EM;
- Os itens RC são mais adequados para medirem aptidões, pois elas exigem processos construtivos, frequentemente complexos.

As vantagens dos itens de resposta construída em relação aos outros têm promovido muitas investigações no sentido de minimizar as limitações dos itens de escolha múltipla, de identificar o tipo de aprendizagens que estes itens avaliam eficazmente ou de comparar os resultados de testes com itens de um ou outro formato. Refira-se, por exemplo, o estudo de Ng e Chan (2009) relacionado com experiências que visam desencorajar as respostas dadas por intuição ou acaso para permitir que as respostas reflitam conhecimento parcial por parte dos estudantes; ou o de Lissitz e Hou (2008) que consistiu em avaliar o impacto da remoção de itens de resposta construída das provas Maryland High School Assessments (provas de final de curso, constituídas por quatro testes, cada um composto por itens de resposta construída e itens de escolha múltipla). Nem uns nem outros autores apresentam desvantagens na utilização dos itens de escolha múltipla. Tal como Willingham e Cole (1977, como citados em Beller & Gafni, 1996) que, na sequência de uma revisão global sobre Género e Avaliação Justa/Imparcial, concluíram que o formato de escolha múltipla dos itens não é suscetível de apresentar um problema significativo de equidade.

Em face das conclusões destas e de outras investigações, a maioria de natureza empírica, pode-se afirmar que não há formatos de itens melhores que outros, em sentido absoluto. Cada formato tem características que o tornam mais adequado, em função dos conteúdos a avaliar, da natureza dos avaliados e das condições de aplicação e procedimentos de apuramento dos resultados do teste. São essas características que devem determinar o formato, ou formatos, dos itens de um teste de avaliação académica.

3. TÉCNICAS DE CONSTRUÇÃO DE TESTES DE ESCOLHA MÚLTIPLA

Uma vez que o item é a unidade básica do teste, a primeira etapa da construção de um teste consiste na tomada de decisões que irão orientar todo o sistema de produção dos itens, determinante para o valor metrológico do instrumento de medida.

3.1 Decisões prévias

Atendendo às recomendações da Psicometria (ramo da Psicologia que se ocupa dos desenvolvimentos teóricos e metodológicos que fundamentam a construção, avaliação e utilização de testes psicológicos (APA, 2009)), ao formular os itens que vão compor um teste de conhecimentos, deve-se ter sempre presente *o que* se vai avaliar, *para que* se vai avaliar e *quem* vai ser avaliado. Segundo Almeida e Freire (2008), é com a definição destes parâmetros que, de facto, se inicia a criação de um teste. Ainda de acordo com estes autores, o passo seguinte é decidir:

- Qual a forma como o teste vai ser aplicado (forma papel-e-lápis ou digital, com ou sem formulário, com ou sem calculadora, individual ou coletivo, etc.);
- Qual o grau de dificuldade ou o nível de complexidade que se deverá imprimir ao teste, em face dos sujeitos e dos objetivos a que ele se destina;
- Qual o conteúdo dos itens (sobre que tópicos vão incidir);
- Qual o formato dos itens;
- Quantos itens vai ter o teste.

¹ Excluindo os itens de resposta construída fechada que solicitam a resposta marcada numa folha de respostas, de acordo com um determinado código.

Os especialistas em técnicas de construção de itens para testes académicos, como Haladyna (2004), recomendam que cada item represente um único tipo de conteúdo e envolva um único tipo de processo cognitivo - se um item medir vários conteúdos ou processos, pode não se tornar possível compreender o significado das respostas dadas pelos estudantes.

Quem constrói um teste deve ser perito no que se pretende avaliar, conhecer o tipo de ensino e de aprendizagem dos indivíduos que vão ser avaliados e saber qual é o objetivo da avaliação em questão. Estas informações irão facilitar-lhe a tomada de decisão em relação a cada uma das questões atrás mencionadas. Algumas dessas decisões estão interligadas, na medida em que a resolução de uma influencia ou determina as outras, como por exemplo: o uso de calculadora num teste de Matemática poderá condicionar o seu conteúdo, a dificuldade e o formato dos itens; testes com itens de um determinado formato podem abranger mais conteúdos, do que se tiverem outro formato, o que poderá ser relevante se houver limite de tempo para a realização do teste. Esta e outras consequências de cada formato de itens são fundamentais para refletir e fixar as condições de construção do teste.

Relativamente ao PMAT, o teste que foi construído de acordo com os tópicos apresentados neste artigo, tomaram-se as seguintes decisões prévias: ser aplicado a estudantes do 1.º ano/1.ª inscrição de cursos superiores de ciências e tecnologias que realizaram o exame nacional de Matemática A; ser administrado na primeira semana de aulas do ano letivo, na forma papel-e-lápis, individual, sem calculadora nem formulário; o conteúdo, a linguagem e o grau de dificuldade dos itens serem do nível do 12.º ano; o teste ter 32 itens, todos de escolha múltipla (convencional), sendo atribuído um ponto por cada resposta certa e zero pontos por cada resposta errada ou omissa².

3.2 Matriz dos Itens

Tomada a decisão sobre o formato dos itens e estabelecidas todas as outras condições da construção do teste, antes de começar a redigir os itens é imprescindível elaborar a **Matriz dos Itens** - tabela de dupla entrada onde se distribui o número total de itens em função de dois critérios de classificação estruturantes do teste: área de conteúdo e nível de complexidade, no caso de testes de conhecimentos.

A área de conteúdo de um item é definida pela matéria em que ele vai incidir.

O nível de complexidade de um item pode ser classificado em *baixo*, *moderado* ou *elevado*, consoante o processo ou processos mentais envolvidos. Segue-se uma possível descrição destes níveis de complexidade, influenciada por Martin, Olson e Wilson (2008), com identificação das categorias da clássica Taxonomia de Bloom relacionadas com cada nível. Adaptados de Bloom (1956), referem-se os objetivos cognitivos das categorias e os verbos que lhes estão associados.

Nível de Complexidade Baixo - Itens que exigem recuperação da memória ou reconhecimento de conceitos ou princípios previamente aprendidos; especificam o que o estudante deve fazer ou envolvem a utilização de procedimentos automatizados. Não se exige que o estudante utilize um método de resolução original.

Categorias da Taxonomia de Bloom:

- *Conhecimento*: recuperação de informação memorizada.

Verbos associados: reconhecer, definir, identificar, reproduzir, rotular, designar, mostrar, listar.

- *Compreensão*: compreensão do significado, interpretação ou extrapolação de instruções e de problemas.

Verbos associados: compreender, traduzir, interpretar, justificar, explicar, descrever, resumir, demonstrar.

Nível de Complexidade Moderado - Itens que exigem flexibilidade de pensamento e escolha entre alternativas de solução; que exigem resposta sem especificação de procedimentos ou que envolvem mais do que um passo de resolução. O estudante deve decidir que estratégias de resolução utilizar, recorrendo a conhecimentos de diversos domínios.

Categorias da Taxonomia de Bloom:

- *Aplicação*: utilização de conhecimentos na resolução de uma nova situação ou problema; utilização espontânea de abstração.

Verbos associados: aplicar, apurar, calcular, determinar, resolver, solucionar, fazer, construir, mostrar, ilustrar, experimentar.

- *Análise*: separação de fenómenos ou conceitos em componentes de modo a compreender a organização de uma estrutura; separação entre factos e inferências.

Verbos associados: analisar, relacionar, comparar, distinguir, classificar, categorizar, organizar, agrupar, arranjar, discriminar, diferenciar, deduzir.

Nível de Complexidade Elevado - Itens que exigem raciocínio abstrato, planeamento, capacidade de síntese, juízo avaliativo e pensamento criativo. O estudante tem que pensar de maneira abstrata e complexa.

Categorias da Taxonomia de Bloom:

- *Síntese*: construção de uma estrutura ou padrão a partir de diversos elementos; associação de partes de modo a criar uma nova estrutura ou um novo significado.

Verbos associados: sintetizar, integrar, projetar, combinar, compor, formular, inventar, criar, imaginar, inferir, produzir, predizer.

² A possibilidade de alguns estudantes não responderem a um item por não terem a certeza absoluta da resposta certa, levou os autores do PMAT a não atribuir pontuação negativa às respostas erradas. Tanto mais que investigações empíricas realizadas para analisar as vantagens ou desvantagens em descontar a pontuação das respostas erradas às certas não produziram resultados consistentes, como refere Frary (1988).

- *Avaliação*: emissão de juízos de valor relativamente a ideias ou fenómenos.

Verbos associados: avaliar, julgar, criticar, corrigir, verificar, discutir, escolher, decidir.

Preenchida a matriz dos itens, uma vez fixados a percentagem ou o número de itens relativos a cada área de conteúdo e, entre estes, quantos devem pertencer a cada nível de complexidade, estão reunidas as condições para iniciar o processo da construção dos itens.

Antes de se construírem os 32 itens do PMAT, foi decidido que 35% deles seriam da área de Análise, 30% de Álgebra, 15% de Probabilidades e Estatística, 15% de Geometria e 5% de Lógica e Teoria de Conjuntos; dentro de cada área de conteúdo, tanto quanto possível, 35% dos itens teriam nível de complexidade baixo, 50% moderado e 15% elevado.

3.3 Construção de Itens de Escolha Múltipla

As características dos itens de escolha múltipla e as suas vantagens em relação aos outros itens podem determinar a sua preferência para construir, total ou parcialmente, um teste de conhecimentos. No entanto, a opção por itens de escolha múltipla requer que, no processo da sua elaboração, sejam consideradas as limitações e críticas que lhes são apontadas, algumas das quais podem ser minimizadas, ou mesmo eliminadas, se os itens forem bem construídos.

Visando nortear e facilitar o trabalho de construir itens de escolha múltipla que venham a integrar um teste com boas propriedades metrológicas, existem algumas listas de diretrizes de redação ou regras básicas para a construção destes itens, como a que é proposta por Haladyna (2004), a de Zimmario (2010) ou a de Moreno, Martínez e Muñiz (2006). Apesar de a lista de Haladyna (2004) não ser a mais recente, a brevidade, clareza e objetividade das suas normas determinaram que ela fosse a preferida para este trabalho. Apresenta-se de seguida, adaptada da original, com a recomendação do autor de que as diretrizes devem ser aplicadas de modo criterioso mas não rígido.

Diretrizes para a Construção de Itens de Escolha Múltipla:³

Relativamente ao Conteúdo

- 1) Cada item deve refletir um conteúdo específico e um único processo cognitivo, de acordo com a matriz dos itens do teste;
- 2) Cada item deve incidir num conteúdo importante da aprendizagem e devem evitar-se conteúdos triviais;
- 3) Devem ser usados conteúdos ou cenários diferentes dos referidos no manual ou nas aulas para medir a compreensão e a aplicação de conhecimentos e de competências;
- 4) O conteúdo de cada item deve ser independente do conteúdo dos outros itens do teste;
- 5) Devem ser evitados conteúdos demasiado gerais e demasiado específicos;
- 6) Devem ser evitados itens baseados em opiniões;
- 7) Devem ser evitados itens com rasteiras.

Relativamente ao Estilo e ao Formato

- 8) A estrutura do item (disposição das alternativas de resposta) deve ser vertical e não horizontal;
- 9) A ideia central de um item deve ser apresentada com clareza;
- 10) A escrita do item deve ser correta quanto à construção gramatical, à pontuação, à ortografia e ao uso de letras maiúsculas;
- 11) O vocabulário do item deve ser simples, de modo a que a compreensão da leitura não interfira com o que se pretende avaliar;
- 12) O tempo de leitura do item deve ser o menor possível, devendo evitar-se palavras desnecessárias (como iniciar cada alternativa de resposta com a mesma palavra);
- 13) Deve ser feita a revisão de cada item (uma boa regra: se, no final da revisão do teste, forem localizados três erros, provavelmente ficou um por encontrar).

Relativamente à Escrita do Enunciado

- 14) As instruções, no enunciado, devem ser o mais objetivas possível (ao ler o enunciado, o estudante deve saber logo o que o item foca);
- 15) O enunciado deve ser o mais curto possível;
- 16) A ideia central do item deve estar no enunciado e não nas alternativas de resposta;
- 17) Deve ser evitada informação irrelevante;
- 18) O enunciado deve ser escrito na positiva (se, com cuidado, forem usadas palavras na negativa, como **NÃO** e **EXCETO**, elas devem ser escritas com letras maiúsculas e a negrito).

Relativamente à Escrita das Alternativas de Resposta

- 19) Deve ser criado o maior número possível de alternativas de resposta, mas duas ou três podem ser suficientes;
- 20) A posição da resposta certa deve variar entre os itens, devendo esta posição ser escolhida aleatoriamente;
- 21) As alternativas de resposta devem ser colocadas numa ordem lógica ou numérica;

³ Algumas destas diretrizes não se aplicam diretamente ao formato Verdadeiro-Falso.

- 22) As alternativas de resposta devem ser independentes, não devem ser sobrepostas;
- 23) As alternativas de resposta devem ser homogêneas no conteúdo e na estrutura gramatical;
- 24) As alternativas de resposta devem ter comprimentos sensivelmente iguais;
- 25) A alternativa “Nenhuma das anteriores” deve ser usada com moderação;
- 26) Evitar usar a alternativa de resposta “Todas as anteriores”;
- 27) Evitar usar palavras na negativa, tais como NÃO ou EXCETO;
- 28) Evitar alternativas de resposta que dão pistas para a resposta certa;
- 29) Os distratores devem ser plausíveis;
- 30) Devem ser usados erros típicos dos estudantes para escrever os distratores;
- 31) Pode ser usado o humor, se ele for compatível com o professor e o ambiente de aprendizagem.

Refira-se também uma recomendação de Zimmaro (2010) que parece pertinente na construção de itens para testes de conhecimentos em Matemática: as alternativas de resposta devem ser identificadas com letras e não com números.

Seguem-se exemplos de itens de escolha múltipla que não obedecem a algumas das diretrizes apresentadas (são exemplos de maus itens) com o intuito de ilustrar a necessidade de cumprir essas regras para reduzir o número de respostas certas dadas por estudantes que, de facto, não as conhecem - ou porque conseguem identificar a resposta certa por intuição, seguindo pistas não intencionais, ou porque têm algum conhecimento que lhes permite eliminar os distratores ou ainda porque, por intuição ou conhecimento parcial, excluem algumas respostas erradas e, por acaso, selecionam a certa entre as opções que restaram. Combater estes procedimentos dos estudantes é, acredita-se, o maior desafio que se apresenta a quem pretende construir um teste com itens de escolha múltipla.

Exceto a primeira, todas as regras mencionadas nos exemplos estão relacionadas com a escrita das alternativas de resposta. A resposta certa de cada item está assinalada com *.

➤ **O conteúdo de cada item deve ser independente do conteúdo dos outros itens do teste.**

1. Qual dos seguintes valores é igual a 2^7 ?	2. Qual deve ser o valor de n para que $2^n=128$?
A. 14	A. 7^*
B. 49	B. $\sqrt{128}$
C. 128^*	C. 64

Se o mesmo teste contiver estes dois itens, os estudantes encontram no item 2 a solução do item 1 e vice-versa. Esta dependência do conteúdo dos itens, um erro trivial da construção de testes de escolha múltipla, mas nem por isso raro, pode ocorrer quando os itens são revistos individualmente e não no seu conjunto - deve ser feita uma revisão completa do teste, antes da sua administração.

➤ **A posição da resposta certa deve variar entre os itens, devendo esta posição ser escolhida aleatoriamente.**

➤ **As alternativas de resposta devem ser colocadas numa ordem lógica ou numérica.**

3. Qual dos seguintes valores é igual a $15,33 \div 15$?
- A. 0,122
B. $1,022^*$
C. 1,02

Ao construir os itens, algumas pessoas tendem a colocar as alternativas de resposta corretas nas mesmas posições, normalmente nas centrais, padrão que pode ser detetado pelos alunos que respondem por intuição. Também se tem verificado que os alunos que respondem ao acaso têm tendência a rejeitar a primeira e a última opção. Para contrariar esta vantagem de quem não conhece a resposta certa, as alternativas de resposta devem ser distribuídas aleatoriamente pelas várias posições. Além disso, estas alternativas devem ser colocadas numa ordem numérica ou lógica (alfabética, comprimento das opções ou outra). Esta disposição das opções, além de desencorajar a resposta intuitiva, não aumenta o grau de dificuldade que se pretende para o item, como por vezes acontece quando as opções não são colocadas nesta forma.

O item 3 poderia ser melhorado escrevendo as alternativas de resposta por ordem decrescente (ou crescente) e com o mesmo número de casas decimais: A. $1,022^*$; B. 1,020; C. 0,122.

➤ **As alternativas de resposta devem ser homogêneas no conteúdo e na estrutura gramatical.**

➤ **Evitar alternativas que dão pistas para a resposta certa.**

4. A soma das idades do João e da sua irmã Ana é igual a nove e, daqui a três anos, a Ana terá o dobro da idade do João. Portanto, o João
- A. Tem menos cinco anos que a Ana.*
B. É 1 ano mais novo que a Ana.
C. É 2 anos mais novo que a Ana.

A opção A, por se distinguir das outras no formato de redação, poderá ser a escolhida por quem responder por intuição. O item tem uma pista para a resposta certa, o que é de evitar. No caso de a opção B ser substituída por “Tem menos um ano

que a Ana”, fica a opção C a distinguir-se das outras e, neste caso, o item dá uma falsa pista, o que vai contra as regras de escrita de itens (regra 7). Substituir também a opção C por “Tem menos dois anos que a Ana” evita a heterogeneidade das alternativas de resposta e, por consequência, pistas para a resposta certa ou rasteiras para os alunos.

➤ **As alternativas de resposta devem ser independentes, não devem ser sobrepostas.**

➤ **Os distratores devem ser plausíveis.**

5. Qual dos seguintes períodos se inclui nos anos em que, em Portugal, vigorou o Estado Novo?

- A. 1920 - 1950
- B. 1930 - 1950
- C. 1940 – 1970 *
- D. 1940 - 1980

Um aluno que não conheça o período em que vigorou o Estado Novo em Portugal poderá fazer o seguinte raciocínio para eliminar distratores: Se A fosse a opção correta, também B seria, logo A deve ser incorreta; entre C e D acontece o mesmo. Portanto, a resposta certa será B ou C.

Para evitar a sobreposição das alternativas de resposta deste item, admita-se a seguinte alteração: A. 1900 – 1940; B. 1920 – 1950; C. 1940 – 1970*; D. 1960 - 1980. A resposta certa poderá ser escolhida entre as opções B e C por um aluno que repare que o período indicado em A começa antes da Implantação da República Portuguesa e que o indicado em D termina depois de ter ocorrido a Revolução de 25 de abril. Embora estas alternativas de resposta não se sobreponham, dois dos distratores são facilmente identificados - não são plausíveis. Em boa verdade, tanto esta versão do item como a anterior, apesar de terem quatro opções, só têm um distrator para os alunos que não sabem as datas de início e de fim do Estado Novo mas têm alguns conhecimentos sobre História de Portugal.

Pretende-se que um item seja respondido corretamente apenas pelos estudantes que têm um elevado grau de conhecimento. Para que tal aconteça, qualquer distrator deve ser plausível, isto é, não deve revelar facilmente que é uma resposta errada a quem não tem o conhecimento necessário para ter a certeza da resposta certa. Um distrator que não seja plausível, não é um distrator eficaz. Depois de o teste ser aplicado, um distrator deste tipo identifica-se pelo número reduzido de indivíduos que o selecionaram como resposta certa (menos de 5%, segundo Linacre (2012) e Haladyna e Downing (1988)).

Como se observou, tanto a primeira como a segunda versão do item 5 poderão ser respondidas corretamente por um aluno que não conheça a resposta certa mas seja capaz de, com algum conhecimento parcial, eliminar opções erradas. Este item justifica a primeira diretriz relativa à escrita de alternativas de resposta: Deve ser criado o maior número possível de alternativas de resposta, mas duas ou três podem ser suficientes.

Com a aplicação de “Deve ser criado o maior número possível de alternativas de resposta” pretende-se reduzir a probabilidade de um estudante acertar a resposta por acaso - quantas mais opções tiver, menos hipóteses tem de escolher a correta. No entanto, nem sempre se consegue construir quatro ou cinco alternativas de resposta eficazes, e o item acaba por ficar, na realidade, com um ou dois distratores plausíveis. Nestes casos, em vez de ter “falsas” opções, talvez seja preferível ter só duas ou três “verdadeiras” opções. Daí a advertência, “mas duas ou três podem ser suficientes”.

Haladyna, Downing e Rodriguez (2002) justificam esta aparente contradição com o facto de 70% da literatura que reviram aconselhar a construção do maior número possível de opções (do total, apenas 4% defende quatro opções e os restantes abstêm-se de fazer qualquer recomendação), mas eles serem a favor de poucas alternativas de resposta.

Uma das diretrizes para a escrita de itens de escolha múltipla propostas por Moreno, Martínez e Muñoz (2006) indica que três é o número adequado de alternativas de resposta, embora um número maior também o possa ser. A eficácia dos itens de escolha múltipla com dois distratores também é defendida por outros peritos na matéria, como Bruno e Dirkzwager (1995) que se fundamentam numa investigação teórica e Rodriguez (2005) que efetuou um investigação empírica.

Além das propriedades metrológicas dos itens e do teste que justificam os itens de escolha múltipla com três opções, Rodriguez (2005) acrescenta argumentos práticos persuasivos:

- É necessário menos tempo para criar dois distratores plausíveis do que três ou mais;
- Podem ser administrados mais itens com três alternativas de resposta, por unidade de tempo, do que com quatro ou cinco, o que potencia uma maior abrangência do conteúdo a avaliar;
- Mais alternativas de resposta podem resultar no fornecimento de pistas para a resposta certa e para outros itens.

Para criar um teste com itens de escolha múltipla, os peritos recomendam que se construam mais itens do que os que se pretendem ter na versão final do teste - Almeida e Freire (2008) sugerem o dobro dos itens; segundo Haladyna (2004), devem ser construídos 250% do número de itens decidido para o teste. Reunidos todos estes itens, selecionam-se e organizam-se os mais adequados, de acordo com a matriz dos itens previamente definida e, como sugere Prieto (2010), dispondo os itens segundo a, esperada, ordem crescente de dificuldade para os estudantes. Com este procedimento, obtém-se a primeira versão do teste.

4. ANÁLISE DOS RESULTADOS DE UM TESTE

A aplicação de um teste subentende o objetivo de obter uma pontuação que represente o nível dos indivíduos, a quem é administrado, num determinado construto latente (um traço ou uma dimensão latente do comportamento de um indivíduo, como os conhecimentos de uma disciplina após um período de aprendizagem). Os indicadores dos níveis desse construto, uma entidade abstrata, não observável, terão sido identificados numa variável observável (a pontuação) por quem construiu

o teste (Prieto, 2010). Dessa identificação depende a qualidade do teste como instrumento de avaliação.

A qualidade de um teste não depende apenas do rigor técnico da redação dos itens. Depois de aplicado, há que analisar as suas características metrológicas e o respetivo impacto nos seus resultados. Este estudo tem por objetivo averiguar se as medidas proporcionadas pelo teste são suficientemente precisas para, então, se poder examinar se ele mede, de facto, o que se pretende (Monteiro, Afonso, & Pires, 2013). Embora esta análise se imponha na criação de um teste estandardizado, um instrumento de avaliação objetiva, com resultados generalizáveis e replicáveis, ela não é viável na construção de um teste académico realizado pelo professor para os seus alunos. Contudo, existem técnicas para obter indicadores da qualidade de um teste desta natureza que, utilizando uma folha de cálculo, podem ser aplicadas com relativa facilidade. Considerem-se alguns exemplos.

- O índice de dificuldade de um item define-se como sendo o número de respostas certas dadas a esse item a dividir pelo número de indivíduos que fizeram o teste. Na situação ideal, 80% dos itens têm um índice de dificuldade entre 0,20 e 0,80, 10% dos índices são superiores a 0,80 e os restantes inferiores a 20%.
- O índice de discriminação de um item é igual à correlação entre as pontuações, dos participantes, no teste e no item. Este índice é tanto melhor quanto maior o seu valor, uma vez que é maior a sua capacidade para prever o resultado de um indivíduo no teste, considerando-se aceitável se for superior a 0,30 e inadequado se for negativo.

Adaptando um procedimento sugerido por Linacre (2012) a uma primeira abordagem à qualidade de um teste, podem ser feitos os seguintes exercícios:

- Antes de se conhecerem os resultados do teste, escrever os itens pela ordem crescente de dificuldade que se espera para os estudantes a quem vai ser aplicado o teste. Se essa ordem for igual à que se vier a verificar, então o teste tende a medir o que se pretende.
- Antes de se analisarem os resultados do teste, anotar o nível de desempenho que se espera dos estudantes que resolveram ou vão resolver o teste. Se, depois de conhecidas as pontuações, os estudantes ficarem ordenados de acordo com o que se esperava, então o teste deve ter utilidade preditiva.

A utilização das técnicas apresentadas podem ser suficientes para identificar itens que devem ser revistos para melhorar a qualidade do teste, em particular quando se pretende repetir a sua aplicação. Com esta identificação fecha-se um ciclo do processo de construção do teste, um processo que, em rigor, nunca está concluído, pois exige constante escrutínio empírico, revisão de conteúdo e aperfeiçoamento técnico (Monteiro *et al.*, 2013).

5. CONCLUSÃO

Como já foi referido, o PMAT é um teste de escolha múltipla, que avalia conhecimentos em Matemática, construído com base nos procedimentos atrás mencionados. A análise dos resultados do PMAT, bastante mais desenvolvida do que a apresentada (fundamentada na Teoria Clássica dos Testes e na Teoria da Resposta ao Item), qualificam-no como um instrumento de avaliação com características que conferem legitimidade às inferências feitas sobre o nível de desempenho e de competência dos estudantes avaliados. O PMAT também faculta resultados que constituem uma base sólida e científica para a caracterização do tipo e do nível de conhecimentos em Matemática dos participantes, organizada a partir da interpretação das opções feitas pelos estudantes em cada item, face à redação do respetivo enunciado e das alternativas de resposta. Desses resultados fundamentados, destaca-se a identificação de necessidades de formação e lacunas de aprendizagem dos estudantes. Também é de referir a identificação de itens, ou subáreas de conteúdo, que são significativamente mais fáceis ou mais difíceis para os alunos do que para as alunas, assim como para os estudantes de engenharia do que para os estudantes de ciências sócio-económicas.

As potencialidades do PMAT resultaram, em grande parte, do rigor técnico da construção dos itens de escolha múltipla que o integram. A forma como eles foram elaborados permitiu obter um teste sem itens acertados por acaso por um número significativo de participantes; um teste em que, para qualquer item, a média do nível de competência dos indivíduos que acertaram o item é superior à dos indivíduos que o erraram e ao nível de dificuldade desse item; um teste que distribui os estudantes, em função da sua competência, de forma uniforme em torno do valor médio; um teste que facilita a interpretação dos erros cometidos pelos participantes que, por sua vez, proporciona a organização de práticas pedagógicas fundamentadas.

Do exposto, mostra-se como um teste de escolha múltipla pode constituir um bom instrumento de medida de conhecimentos, quer no âmbito da avaliação sumativa quer no da avaliação formativa.

REFERÊNCIAS

- Abreu, M., & Afonso, M. J. (2010, julho). *Prova de Matemática da SPM: propósitos e metodologia de construção de um teste estandardizado*. Comunicação ao Encontro Nacional da Sociedade Portuguesa de Matemática 2010, Escola Superior de Tecnologia e Gestão, Instituto Politécnico de Leiria.
- Almeida, L. S., & Freire, T. (2008). *Metodologia da investigação em Psicologia e Educação* (5ª ed.). Braga: Psiquilíbrios Edições.
- American Psychological Association. (2009). *APA concise dictionary of psychology*. Washington, D.C.: Autor.

- Beller, M., & Gafni, N. (1996). *Can item format (multiple-choice vs. open-ended) account for gender differences in mathematics achievement?* Obtido em 11 de Setembro de 2011, de National Institute for Testing and Evaluation: <https://www.nite.org.il/files/reports/e215.pdf>
- Bloom, B. S. (Ed.). (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I, cognitive domain*. New York; Toronto: Longmans, Green.
- Bruno, J. E., & Dirkzwager, A. (1995). Determining the optimal number of alternatives to a multiple-choice test item: an information theoretic perspective. *Educational and Psychological Measurement*, 55(6), 959-966.
- Cohen, R., Swerdlik, M., & Sturman, E. (2013). *Psychological testing and assessment: An introduction to testes and measurement* (8th ed.). New York: McGraw-Hill.
- Concours Puissance 11. (2017). *Concours école d'ingénieurs - Concours Puissance 11*. Obtido em 17 de abril de 2017, de <https://www.concourspuissance11.fr/epreuves-ecole-ingenieurs>.
- Frary, R. B. (1988). Formula scoring of multiple-choice tests (correction for guessing). *Educational Measurement: Issues and Practice*, 7(2), 33-38.
- Haladyna, T., Downing, S., & Rodriguez, M. (2002). A review of multiple-choice item-writing guidelines for classroom assesment. *Applied Measurement in Education*, 15(3), 309-334.
- Haladyna, T. M., & Downing, S. M. (1988, April). Functional distractors: Implications for test-item writing and test design. *Annual Meeting of the American Educational Research Association*. New Orleans, LA.
- Haladyna, T. M. (2004). *Developing and validating multiple-choice test items* (3rd ed.). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Linacre, J. M. (2012). *Winsteps® Rasch measurement computer program User's Guide*. Beaverton, Oregon: Winsteps.com.
- Lissitz, R. W., & Hou, X. (2008). *Multiple choice items and constructed response items: Does it matter?* Obtido em 11 de julho de 2011, de Maryland Assessment Research Center for Education Success: <http://www.education.umd.edu/EDMS/MARCES/Completed.htm>
- Martin, W., Olson, J., & Wilson, L. (2008). *Mathematics framework for the 2009 National Assesment of Educational Progress (NAEP)*. Washington, DC: National Assessment Governing Board (U.S. Department of Education). Obtido em 19 de setembro de 2010, de <http://www.nagb.org/content/nagb/assets/documents/publications/frameworks/math-framework09.pdf>
- Monteiro, H. (2016). *Conhecimentos de Matemática dos estudantes à entrada do ensino superior de ciências e tecnologia: contributo para a definição de um perfil de exigências*. Tese de doutoramento. Faculdade de Ciências e Tecnologias da Universidade do Algarve, Portugal. 350 pp.
- Monteiro, H., Afonso, M. J., & Pires, M. (2013). Testes de escolha múltipla: Construção de itens. *Boletim da Sociedade Portuguesa de Matemática - Actas do Encontro Nacional da SPM 2012* (pp. 53-56). Lisboa: SPM.
- Moreno, R., Martínez, R., & Muñoz, J. (2006). New guidelines for developing multiple-choice items. *Methodology*, 2, 65-72. doi: 10.1027/1614-2241.2.2.65
- Ng, A. W., & Chan, A. H. (2009). Different methods of multiple-choice test: Implications and design for further research. In S. Ao, O. Castillo, C. and Douglas, D. Dagan, & J. Lee (Edits.), *Proceedings of the International MultiConference of Engineers and Computer Scientists 2009* (Vol. 2, pp. 1958-1963). Hong Kong: Newswood Limited.
- Prieto, G. (2010). *Construção e Validação Estatística de Testes e Exames*. [Apontamentos do curso Construção e Validação Estatística de Testes e Exames]. Lisboa: Instituto Superior de Economia e Gestão.
- Rodriguez, M. C. (2005). Three options are optimal for multiple-choice items: a meta-analysis of 80 years of research. *Educational Measurement: Issues and Practice*, 24(2), 3-13. doi: 10.1111/j.1745-3992.2005.00006.x
- Zimmaro, D. M. (2010). *Writing good multiple-choice exams*. Obtido em 15 de Setembro de 2011, de Center for Teaching and Learning: <http://ctl.utexas.edu/assets/Evaluation-Assessment/Writing-Good-Multiple-Choice-Exams-04-28-10.pdf>

WOLFRAM | ALPHA: UMA FERRAMENTA DE APRENDIZAGEM ATIVA EM CÁLCULO I

Ana C. Conceição

Departamento de Matemática, Faculdade de Ciências e Tecnologia, Universidade do Algarve
Centro de Estudos e Desenvolvimento da Matemática no Ensino Superior (CEDMES)
Centro de Análise Funcional, Estruturas Lineares e Aplicações (CEAFEL)
(aicdoisg@gmail.com)

Susana Fernandes

Departamento de Matemática, Faculdade de Ciências e Tecnologia, Universidade do Algarve
Centro de Estudos e Desenvolvimento da Matemática no Ensino Superior (CEDMES)
(sfer@ualg.pt)

RESUMO

O motor de conhecimento computacional Wolfram | Alpha, desenvolvido pela Wolfram Research, é uma ferramenta dinâmica e interativa, de acesso livre e manuseamento intuitivo, que explora tópicos de várias áreas do conhecimento. Estas características facilitam a sua utilização no ensino e propiciam a criação de um contexto de aprendizagem ativa em sala de aula.

O Wolfram | Alpha foi utilizado, no ano letivo 2013/14, em aulas de Cálculo I, disciplina transversal a diversos cursos de ciências naturais na Universidade do Algarve, com o objetivo de consolidar conteúdos programáticos adquiridos durante o ensino secundário e de tornar mais interessante a aquisição de novos conceitos matemáticos nas áreas do Pré-Cálculo e do Cálculo Diferencial. Com o propósito de recolher e analisar as opiniões dos alunos sobre a importância da utilização do Wolfram | Alpha como instrumento de aprendizagem em Cálculo I foi elaborado um questionário e recolhidas as opiniões dos alunos matriculados na respectiva unidade curricular e que se submeteram à avaliação.

Palavras-Chave: Prática Pedagógica, Wolfram | Alpha, Cálculo.

JEL Classification: C02, C65

1. INTRODUÇÃO

Atualmente, ao ensinar Matemática, é geralmente reconhecida a importância da utilização de software educativo como uma ferramenta eficiente para ajudar a ultrapassar as dificuldades que os alunos têm em associar as representações algébricas gerais com as diversas representações numéricas e gráficas específicas (ver, por exemplo, (Conceição *et al.*, 2015), (Kilicman *et al.*, 2010) e (Prado *et al.*, 2010)). Obviamente, os cálculos com o apoio de tecnologia digital não são um substituto para os cálculos com papel e lápis, e devem ser devidamente combinados com outros métodos, incluindo o cálculo mental.

O Wolfram | Alpha (Figura 1), motor de conhecimento computacional desenvolvido pela Wolfram Research, foi utilizado em aulas de Cálculo I, para alunos inscritos em cursos de ciências naturais na Universidade do Algarve, com os objetivos de consolidar conteúdos programáticos adquiridos durante o ensino secundário e de tornar mais interessante a aquisição de novos conceitos matemáticos nas áreas do Pré-Cálculo e do Cálculo Diferencial.

Figura 1: <http://www.wolframalpha.com/>



O Wolfram | Alpha é uma ferramenta dinâmica e interativa, de acesso livre e manuseamento intuitivo, que explora tópicos de várias áreas do conhecimento (Figura 2). Estas características facilitam a sua utilização no ensino e propiciam a criação de um contexto de aprendizagem ativa em sala de aula, ou seja, a sua utilização adequada propicia um contexto de ensino-aprendizagem onde alunos e professores são igualmente convidados a contribuir.

Figura 2: Imagem ilustrativa de diversos tópicos que podem ser explorados através do motor de conhecimento computacional Wolfram|Alpha



2. DESCRIÇÃO DA PRÁTICA PEDAGÓGICA

2.1 Objetivos e público-alvo

O Wolfram|Alpha foi utilizado, no ano letivo 2013/14, na unidade curricular de Cálculo I, disciplina transversal a diversos cursos de ciências naturais na Universidade do Algarve. Esta utilização em sala de aula teve como objetivo estimular o interesse e participação dos alunos na apropriação e consolidação de conceitos, promovendo novas formas de raciocinar, ensinar e aprender que facilitam o processo ensino-aprendizagem.

2.2 Metodologia

Nas aulas teóricas e teórico-práticas, os conteúdos programáticos da disciplina foram explorados através da utilização do Wolfram|Alpha, sempre que foi considerado útil pelo docente responsável (resolução de equações e inequações, cálculo de limites, cálculo de integrais indefinidos e definidos, cálculo de áreas de regiões planas, cálculo de comprimentos de curvas, resolução de equações diferenciais ordinárias, entre outros). Foi também sugerida a sua utilização no trabalho autónomo dos alunos fora da sala de aula, nomeadamente como ferramenta de validação das resoluções dos exercícios propostos (Figura 3).

Apesar da área de interação do Wolfram|Alpha ser muito intuitiva, alguns pormenores devem ser explicados em sala de aula. Por exemplo, é importante referir que nem sempre a solução de $f(x) \neq 0$ corresponde a todos os números reais que não sejam solução de $f(x)=0$ (Figuras 4 e 5).

Figura 3: Exemplo de utilização do Wolfram | Alpha: cálculo de áreas de regiões planas

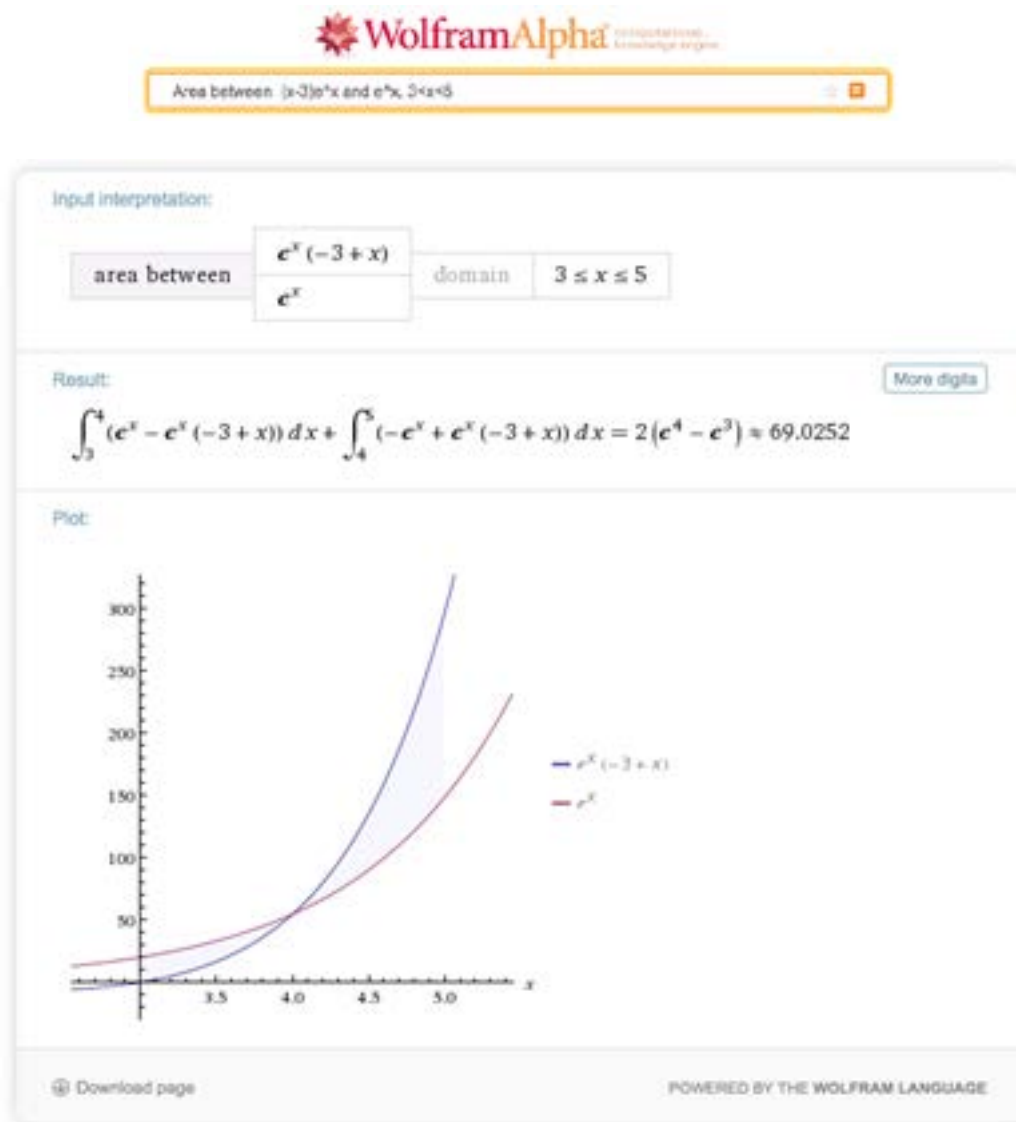
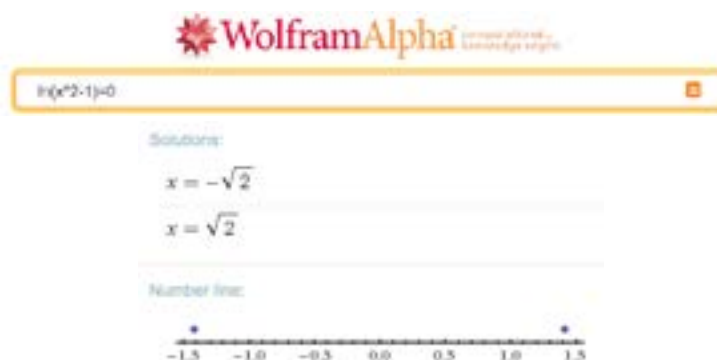


Figura 4: Exemplo de utilização do Wolfram | Alpha: resolução de uma equação



O docente deve fornecer aos alunos informação de como se representam alguns símbolos matemáticos (Figura 5) para evitar que o aluno perca muito tempo no seu estudo autónomo (Figura 6).

O docente deve também alertar os discentes que nem sempre a resposta apresentada por este motor de conhecimento computacional é a mais adequada pois depende da disciplina e do nível de ensino em causa (ver, por exemplo, (Fernandes and Conceição, 2014)). Por exemplo, caso se considere funções reais de variável real não é aconselhável utilizar o Wolfram | Alpha para representar graficamente funções logarítmicas (Figura 7).

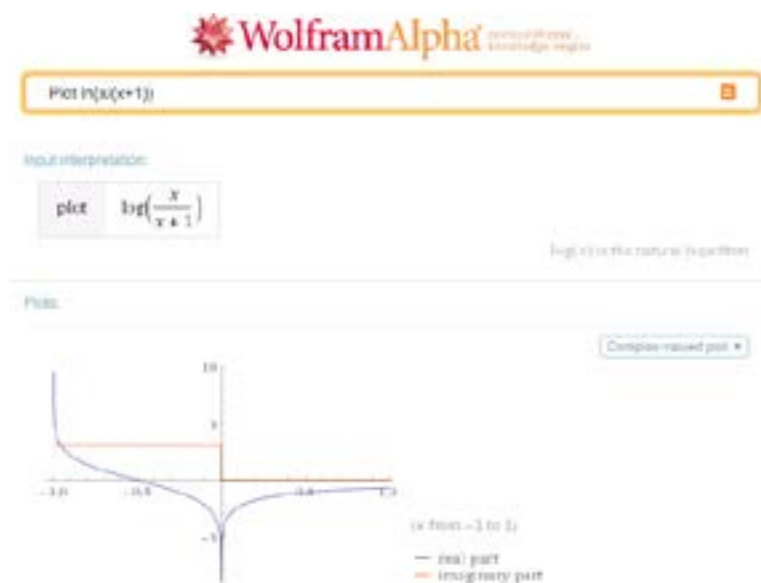
Figura 5: Exemplo que ilustra como representar $\neq$ ($\neq$) no Wolfram | Alpha



Figura 6: Comentário de um aluno que não assistiu à aula onde foi explicado como representar $\neq$ no Wolfram | Alpha

Comentário:
ontem foi um castigo para colocar
o sinal de " $\neq$ ".

Figura 7: Exemplo de utilização do Wolfram | Alpha para representação gráfica de funções



Adicionalmente, esta experiência pedagógica motivou a adaptação de alguns dos elementos de avaliação, permitindo a inclusão de questões com carácter mais conceptual e desviando um pouco o foco da mera aplicação mecânica de fórmulas e do simples cálculo numérico (para uma geração dependente da máquina de calcular).

2.3 Avaliação

Com o propósito de recolher e analisar as opiniões dos alunos sobre a importância da utilização do Wolfram | Alpha como instrumento de aprendizagem em Cálculo I foi elaborado um questionário dicotómico (Figura 8) e recolhidas as opiniões dos alunos matriculados na respectiva unidade curricular e que se submeteram a avaliação.

Figura 8: Questionário utilizado

2 – Wolfram|Alpha (responda SIM/NÃO)

2.1 - Conhece o motor de conhecimento computacional Wolfram|Alpha?

2.2 - Utiliza o Wolfram|Alpha?

2.3 - A utilização do Wolfram|Alpha em sala de aula foi útil em Cálculo I?

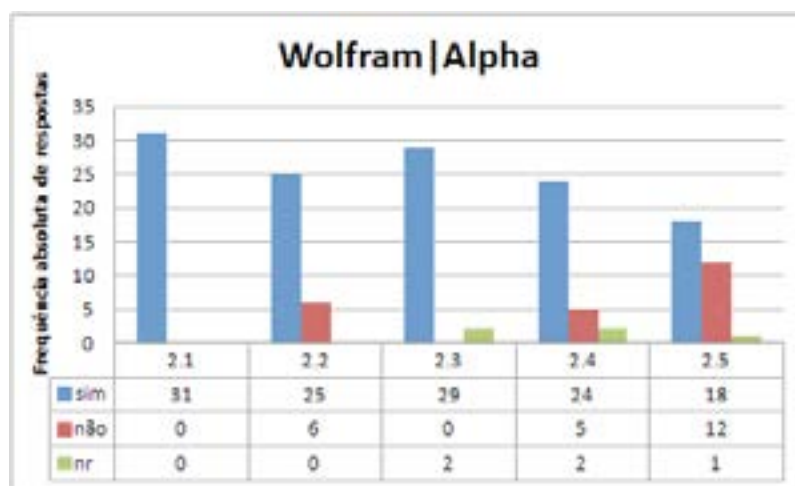
2.4 - A utilização do Wolfram|Alpha em trabalho autônomo foi útil em Cálculo I?

2.5 - Recomendou a alguém a sua utilização?

Comentário:

O questionário foi apresentado aos alunos durante a última semana de aulas. Foram recolhidas 35 respostas tendo sido validados 31 questionários.

Figura 9: Frequência absoluta das respostas às questões dicotômicas do questionário



Observando o gráfico de barras das frequências absolutas das respostas às questões dicotômicas do questionário, apresentado na Figura 9, é possível constatar que os alunos, em geral, consideraram a utilização do Wolfram|Alpha útil no processo de ensino-aprendizagem de Cálculo I. A maioria dos alunos sentiu-se motivado a estudar e a aprender novos conceitos com a utilização deste recurso digital (Figuras 10 e 11).

Figura 10: Comentário de um aluno relativamente à utilização do Wolfram|Alpha em Cálculo I

Comentário:
*É um excelente programa, e ajuda bastante no estudo autónomo quando se
 resolve os exercícios de programação.*

Figura 11: Comentário de um aluno relativamente à utilização do Wolfram|Alpha em Cálculo I

*Em geral, com as aplicações deste tipo o estudo
 tornou-se mais interessante.*

3. CONCLUSÕES

Atualmente, é imprescindível o recurso a software educacional para alcançar os objetivos e competências exigidos pelos programas modernos de matemática, nos diversos níveis escolares (Conceição *et al.*, 2015).

Por si só o Wolfram|Alpha é um recurso valioso para a construção de um profícuo processo de ensino-aprendizagem e reveste-se de especial importância quando num contexto de aprendizagem ativa.

Com o propósito de recolher e analisar as opiniões dos alunos sobre a importância da utilização do Wolfram|Alpha como instrumento de aprendizagem em Cálculo I, foram registadas as opiniões dos discentes através de um questionário

dicotómico. A análise das respostas aos questionários indica que a utilização do Wolfram|Alpha em sala de aula, e em trabalho autónomo, é considerada uma mais-valia para os alunos inquiridos. A maioria dos alunos sentiu-se motivado a estudar e a aprender novos conceitos com a utilização deste motor de conhecimento computacional desenvolvido pela Wolfram Research. Este resultado vem ao encontro das expectativas adquiridas por observação direta pelo docente em sala de aula.

Num futuro próximo pretende-se delinear e implementar um estudo para aferir o impacto da utilização do Wolfram|Alpha na aquisição e consolidação de conceitos e de que modo esse impacto se traduz numa eventual melhoria das classificações obtidas pelos alunos.

A utilização do motor de conhecimento computacional Wolfram|Alpha para a introdução de novos conceitos num contexto de aprendizagem ativa é uma metodologia de ensino necessariamente enriquecedora em qualquer área de conhecimento.

Tendo presente os tópicos explorados por esta ferramenta, a prática pedagógica descrita pode ser adaptada a outras áreas de formação como Ciências Médicas, Ciências da Terra, Ciências da Vida, Economia, Física, Química, entre outras (Figura 2).

REFERÊNCIAS

- Conceição, A.C., Fernandes, S., and Pereira, J.C. (2015). Prática pedagógica com o software educacional F-Tool em Cálculo I. In: F. Remião, J. Oliveira, L. Castro, M. Ferreira, P. Pinto, R. Cadima, (eds.), *Livro de Atas do Congresso Nacional de Práticas Pedagógicas no Ensino Superior (CNaPPES.15)*. Leiria. Portugal. 99-104.
- Fernandes, S. and Conceição, A.C. (2014). Pré-cálculo e a formação inicial de professores de Matemática: Resultados preocupantes de um teste diagnóstico. *Revista Lusófona de Educação*. **25**: 135-155.
- Kilicman, A., Hassan, M.A., and Said Husain, S.K. (2010). Teaching and Learning using Mathematics Software “The New Challenge”. *Procedia - Social and Behavioral Sciences*. **8**: 613-619.
- Prado, J.L., Freira, A.M., Albuquerque, I., and Júnior, P.P. (2010). Experienciando o Software Mathematica em Sala de Aula, *Livro de Atas do IV Colóquio Internacional Educação e Contemporaneidade*.

INNOVATION AS A MEDIATING VARIABLE ON THE COOPERATION AND PERFORMANCE OF AGRIBUSINESSES

Antonio Juan Briones-Peñalver
Technical University of Cartagena (UPCT)
(aj.briones@upct.es)

Juan Andrés Bernal-Conesa
University Centre of Defence at the Spanish Air Force Academy. Technical University of Cartagena (UPCT)
(jandres.bernal@udc.upct.es)

Carmen de Nieves-Nieto
University Centre of Defence at the Spanish Air Force Academy. Technical University of Cartagena (UPCT)
(carmen.denieves@upct.es)

ABSTRACT

In recent years, increasing interest in the study of different cooperation mechanisms in the field of international business has been observed. This paper analyzes the Innovation and its influence on Cooperation and Performance in agribusiness from Murcia (Spain). It is in this region where a larger number of Spanish exports occur. These companies have always been characterized by an innovative and cooperative spirit to meet the demands of its customers. In order to achieve this aim a model of structural equations is proposed. The model analyzes the mediation between Innovation and its influence on Cooperation and Performance in agribusiness since indirect or mediated effects constitute a type of relationship between constructs that often occurs. The results of the model reveal that the Innovation carry out a partial mediation between the cooperation and the performance increasing positively this relation, In addition, the model demonstrates empirically and reliably that innovation has a positive effect on agribusiness.

Keywords: Agribusiness, Cooperation, Innovation, Performance.

JEL Classification: O13, Q13, Q17

1. INTRODUCCIÓN

Las organizaciones están constantemente adaptándose a los cambios económicos con la intención de tener mayores posibilidades de supervivencia en el mercado. Un factor clave para ello es la innovación (Bernardo, 2014). Por otra parte, la innovación se define generalmente mediante la inclusión de los productos y servicios, así como los procesos de gestión. Por ello, las empresas, deben establecer aquellos procedimientos y herramientas que estén alineadas con su estrategia corporativa (Bocquet, Le Bas, Mothe, & Poussing, 2013) the authors identify two types of firms (strategic versus responsive ya que actualmente la importancia de la innovación es reconocida como un elemento diferenciador que permite alcanzar ventajas competitivas en las empresas (Melé, Argandoña, & Sanchez-Runde, 2011), ya sea en bienes y servicios como en procesos de gestión, que cada vez se están aplicando en mayor medida en un número creciente de empresas, sin embargo la investigación en agronegocios es escasa.

Así pues, tras realizar una revisión conceptual sobre innovación, cooperación, y performance, el presente trabajo trata de verificar a través de hipótesis como las empresas dedicadas a los agronegocios en la Región de Murcia fomentan la innovación, tanto en productos como en procesos, la cooperación y logran con ello mejorar su *performance*.

La metodología utilizada en el presente trabajo se basó en el análisis de los cuestionarios obtenidos, y el estudio de las variables dependientes que se incluyeron en el mismo, tanto para el estudio de la innovación y la cooperación como del performance a través de un modelo de ecuaciones estructurales.

El trabajo se estructura en cuatro secciones: (1) planteamiento de hipótesis, a través de una revisión de las contribuciones teóricas y empíricas a las relaciones de las variables incluidas en el modelo de estudio, mediante las cuales fijamos los objetivos de la investigación, (2) la metodología empleada, (3) resultados obtenidos y (4) conclusiones, discusión y limitaciones.

2. OBJETIVOS

Uno de los referentes más utilizados en la literatura para caracterizar la innovación es el trabajo de Damanpour, (1991) que distingue los tipos de innovación, de un lado en función a su naturaleza distinguiendo entre técnica y administrativa; y de otro, en función a la radicalidad diferenciando entre radical e incremental. Por ser una de las tipologías más aceptadas, en este trabajo, se considerarán las innovaciones técnicas, siendo éstas las que suponen cambios en los productos/servicios

y en la tecnología de procesos, dividiéndose en innovaciones de producto y de proceso, mientras que las innovaciones administrativas involucran a la estructura organizativa y a los procesos administrativos y de gestión.

Algunas conceptualizaciones de la estrategia de innovación como novedad apoyada en Damampour y Gopalakrishnan (2001) determinaron algunas de las dimensiones que consideramos para este estudio. En este sentido, si la cultura empresarial inciden en la innovación a través de cambios en la dinámica de sus trabajadores incorporando personal especializado; la tasa de cambio tecnológica, puede resultar crítica para sustentar la capacidad de innovación de la empresa (Damanpour & Schneider, 2006) o el establecimiento de acuerdos de cooperación y alianzas estratégicas. Por tanto, considerando la innovación como una estrategia llena de aspectos básicamente organizativos -puesto que son ellos los que más influyen en la misma, según Damanpour (1991), el estudio de la innovación será dependiente de la gestión propiamente dicha, y un factor determinante reflejo de los diferentes elementos sobre los que incide el *performance*.

Las fuentes que determinan la innovación no residen exclusivamente en la empresa, sino que también se asocian con la interacción con otras organizaciones, las interrelaciones mediante los acuerdos de cooperación que se establecen con otras organizaciones permiten el acceso a recursos complementarios tanto de competidores como proveedores, clientes, centros de investigación o universidades (Montoro-Sánchez, Mora-Valentín, & Ortiz-de-Urbina-Criado, 2012).

Si la innovación se entiende como una estrategia empresarial, esta puede ser fruto de la colaboración entre empresas y resultado de las relaciones interorganizativas, es decir, es fruto de la cooperación que se establece entre empresas y en colaboración con otras instituciones, universidades y centros de investigación permitiendo a la empresa trabajar en un entorno global, por ello formulamos la siguiente hipótesis:

H1. La cooperación influye positivamente en la innovación de los agronegocios

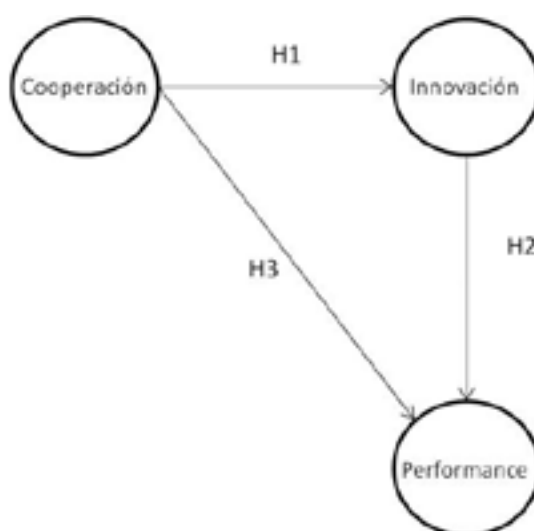
Hasta el momento la literatura existente proporciona información sobre el comportamiento innovador de la industria agroalimentaria, pero no proporciona una exploración en profundidad de sus efectos a largo plazo sobre el rendimiento económico (Alarcón & Sánchez, 2013). Así pues, se formulan la segunda y tercera hipótesis de investigación como sigue:

H2. La innovación en los agronegocios tiene una influencia positiva en el rendimiento económico de las empresas.

H3. La cooperación en los agronegocios tiene una influencia positiva en el rendimiento económico de las empresas.

El objeto del presente trabajo es conocer el estado de la cooperación en los agronegocios, tratando a su vez de analizar cómo ésta afecta a la innovación, tanto en productos como en procesos y por tanto, a mejorar los resultados empresariales y el desempeño de la organización (*performance*). Este objetivo se resume en la figura 1.

Figura 1: Modelo conceptual



3. METODOLOGIA

En los últimos años han aparecido estudios que además de realizar el análisis factorial, utilizado principalmente en trabajos cuya base de estudio se basa en encuestas (Rodríguez Gutiérrez, Fuentes García, y Sánchez Cañizares, 2013) y utilizar técnicas de regresión, han incorporado el análisis a través de ecuaciones estructurales, como Gallardo-Vázquez & Sánchez-Hernández, (2013) y Chen y Chang (2011). Para la realización del análisis se ha recurrido a un modelo de ecuaciones estructurales (SEM). Los SEM son procedimientos estadísticos para comprobar la medida de las hipótesis funcionales, predictivas y causales siendo estas herramientas estadísticas multivariantes esenciales para entender muchos elementos de investigación y llevar a cabo investigación básica o aplicada en las ciencias del comportamiento, de gestión, de salud y sociales (Bagozzi & Yi, 2011).

Además, los modelos de ecuaciones estructurales incluyen dos niveles de análisis (el modelo de la medición (outer models) y el modelo estructural (inner models) (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014). En el análisis del modelo de medición se verifica cómo los constructos hipotéticos se miden en términos de las variables observadas (indicadores) y el modelo estructural examina las relaciones entre los constructos (Chen & Chang, 2011). En definitiva, el modelo estructural trata de realizar un análisis similar al de la regresión pero con poder explicativo (Gallardo-Vázquez & Sánchez-Hernández, 2013), estudiando los efectos directos e indirectos del conjunto de los constructos.

La técnica elegida dentro de SEM es la conocida como Partial Least Squares (PLS), por diferentes razones pues: (1) se ha utilizado previamente en las investigaciones relacionadas con la agronegocios (Heyder & Theuvsen, 2012); (2) el uso de PLS es más adecuado para aplicaciones causales (análisis exploratorio) (Roldán y Sánchez-Franco, 2012) aunque también puede ser utilizado para la confirmación de dichas teorías (análisis confirmatorio) a través de la bondad de ajuste del modelo estructural global (Dijkstra & Henseler, 2015) (3) PLS puede estimar modelos con indicadores reflexivos y formativos sin ningún problema de identificación (Vinzi, Chin, Henseler, & Wang, 2010) porque trabaja con compuestos ponderados en lugar de factores (Gefen, Rigdon, & Straub, 2011). Por lo tanto, utilizamos PLS como un instrumento estadístico destacable para la gestión y la investigación de las organizaciones.

El software utilizado fue SmartPLS 2.0 M3, desarrollado por Ringle, Wende y Will en 2005. Dado que SmartPLS es un modelo de estimación y análisis SEM, utiliza el proceso de estimación en dos pasos evaluando el modelo de medida y el modelo estructural (Hair Jr *et al.*, 2014). En primer lugar, se estima el modelo de medida, donde se determina la relación entre los indicadores y el constructo (Roldán & Sánchez-Franco, 2012) y en segundo lugar, se realiza la estimación del modelo estructural, donde se evalúan las relaciones entre los diferentes constructos, a través de los coeficientes path, su nivel de significación (R^2) y la redundancia validada cruzada (Q^2) (Hair Jr *et al.*, 2014).

Esta secuencia asegura que tenemos los indicadores adecuados de los constructos antes de tratar de llegar a conclusiones sobre las relaciones incluidas en el modelo interno o estructural (Roldán & Sánchez-Franco, 2012).

Como ninguna de las variables consideradas respecto a las hipótesis establecidas es directamente observable, se definieron escalas de medida Likert para aproximarnos a sus valores, formadas por varios indicadores que recogen las percepciones de los directivos de las empresas consultadas en línea con otros estudios (p.e. Bernal-Conesa, De Nieves Nieto, & Briones-Peñalver, 2017) a structural equation model is presented to study the adoption of a strategy of Corporate Social Responsibility (CSR). El cuestionario está formado por varios indicadores considerados en el marco conceptual y consultado a los directivos y propietarios de las empresas en línea con la revisión de la literatura académica sobre cooperación e innovación en los agronegocios.

4. RESULTADOS

La investigación en agronegocios se realizó mediante encuesta postal, obteniéndose 226 cuestionarios completos. De los 226 cuestionarios completos empleados en el presente proyecto, 84 se obtuvieron vía postal, como respuesta a los cuestionarios enviados. Por lo que la tasa de respuesta se sitúa en un 15,46%, con un error del 10% para $p = q = 50\%$ y un nivel de confianza del 95,5%. Los 142 cuestionarios completos restantes, fue necesario obtenerlos mediante entrevista personal. Para ello, se realizó un desplazamiento a todas las oficinas de COAG concentradas en la Región de Murcia, siendo los técnicos de esta asociación los encargados de llevar a cabo la entrevista personal a sus asociados.

En primer lugar, antes de pasar a contrastar las hipótesis planteadas, previamente enumeraremos algunos aspectos descriptivos del tipo de agronegocios estudiados. Así, de las 226 empresas estudiadas, se obtiene que la actividad principal es la producción agrícola en un 46% de casos, y la preparación y conservación de frutas y hortalizas en un 23%, sumando ambos alcanzan cerca del 70% de casos analizados. El 30% restante está compuesto por agronegocios dedicados a la venta de abonos, fitosanitarios, riego y equipos agrícolas, semilleros, diseño y asesoría de riego, e invernaderos. Atendiendo a la identificación de los productos comercializados, observamos respecto a la actividad principal de las empresas, que el 51.85% está dedicado a la venta de frutas y hortalizas, mientras que el 24.81% está dedicado a la venta de ganado. El 23% restante se reparte entre venta de bienes y servicios relacionados con la agricultura (14.81%) venta de cítricos (5.92%) y venta de frutos secos (2.6%).

Como bien es sabido, el sector agrario de la Región de Murcia comercializa sus productos, tanto en el mercado nacional (79.37%) como al internacional (21.22%), siendo los destinos principales la Unión Europea, Latinoamérica y Norte de África.

4.1 Análisis modelo de medida

En el modelo de medida se definen las variables latentes que el modelo va a usar, y se le asignan indicadores a cada uno, por tanto contempla las relaciones entre cada constructo y sus indicadores y se basa en el cálculo de los componentes principales. En los modelos de medición reflexivos, este análisis se lleva a cabo con referencia a los atributos de fiabilidad individual del indicador, la fiabilidad del constructo, la validez convergente (Tenenhaus, Vinzi, Chatelin, & Lauro, 2005; Fornell & Larcker, 1981) y la validez discriminante (Hair, Sarstedt, Ringle, & Mena, 2012).

La fiabilidad de cada elemento individual se evalúa mediante el análisis del factor de cargas estandarizadas (λ), o correlaciones simples de los indicadores con su respectivo constructo (Hair Jr *et al.*, 2014). La fiabilidad del elemento individual es considerado adecuado cuando un indicador tiene un λ mayor que 0.707 en su respectivo constructo (Carmines & Zeller, 1979). En este estudio, todos los indicadores reflexivos tienen cargas por encima de 0.721 (cifras en negrita en la tabla 1).

Tabla 1: Cargas y cargas cruzadas para el modelo de medición

Indicador	Innovación	Cooperación	Performance
16.1	0,814	0,380	0,449
16.2	0,803	0,341	0,378
16.3	0,878	0,401	0,464
16.4	0,844	0,457	0,461
16.5	0,721	0,306	0,446
20.2	0,403	0,777	0,268
20.3	0,376	0,835	0,340
20.4	0,277	0,738	0,326
21.1	0,361	0,788	0,495
21.2	0,404	0,809	0,353
21.3	0,391	0,821	0,361
21.5	0,374	0,781	0,364
28.1	0,437	0,338	0,852
28.2	0,521	0,451	0,835
28.4	0,364	0,328	0,797

En los modelos de medida con indicadores reflexivos, se debe obtener la fiabilidad compuesta (r_c) (Hair Jr *et al.*, 2014) y el α de Cronbach (Castro & Roldán, 2013) para evaluar la consistencia interna de medidas de los constructos. Interpretamos ambos valores con las directrices que ofrecieron Nunnally y Bernstein (1994), los cuales sugieren un valor de 0,7 como punto de referencia para una fiabilidad modesta aplicable en las primeras etapas de investigación. En nuestra investigación, los tres constructos analizados tienen una alta consistencia interna ya que superan los niveles recomendados, así pues para la fiabilidad compuesta, incluso se supera el umbral más restrictivo propuesto por Nunnally y Bernstein (1994) de 0.8 (ver tabla 2).

Para valorar la validez convergente se calcula la varianza media extraída (AVE), la cual deber ser al menos igual a 0,5 (Fornell & Larcker, 1981), por lo que un AVE de 0,5 muestra que el constructo explica más de la mitad de la varianza de sus indicadores.

La validez discriminante representa el grado en que el constructo es empíricamente distinto de otros constructos o, en otras palabras, el constructo mide lo que pretende medir. La validez discriminante se analiza mediante dos métodos (Gefen & Straub, 2005). Por un lado, un método para evaluar la existencia de validez discriminante es el criterio de Fornell y Larcker (1981). Este método establece que el constructo deber estar formado con más varianza de sus indicadores que cualquier otro constructo. Para probar este requisito, la raíz cuadrada de la AVE de cada constructo debe ser mayor que sus correlaciones con cualquier otro constructo. Esta condición se cumple para todos los constructos en relación con sus otras variables (ver tabla 2). La segunda opción para la verificación de la validez discriminante se realiza examinando las cargas transversales de los indicadores. Este método, requiere que las cargas de cada indicador en su constructo sean más altas que las cargas cruzadas en otros constructos, como así ocurre en la tabla 1.

Tabla 2. Fiabilidad compuesta (r_c), coeficientes de validez convergente y discriminante

	r_c	α	AVE	Cooperación	Innovación	Performance
Cooperación	0,922	0,902	0,629	0,793		
Innovación	0,907	0,871	0,662	0,46	0,813	
Performance	0,868	0,775	0,686	0,458	0,542	0,828

Nota: Elementos de la diagonal (negrita) son la raíz cuadrada de la varianza compartida entre los constructos y sus medidas (varianza media extraída). Fuera de la diagonal los elementos son las correlaciones entre constructos. Para la validez discriminante, los elementos diagonales deben ser mayores que los elementos fuera de la diagonal.

4.2 Análisis del modelo estructural

Una vez que la fiabilidad y la validez del modelo de medida ha sido establecido, varios pasos deben tomarse para evaluar las relaciones hipotéticas dentro del modelo estructural (Hair Jr *et al.*, 2014), el cual evalúa el peso y la magnitud de las relaciones entre los distintos constructos.

La evaluación de la calidad del modelo se basa en su capacidad para predecir los constructos endógenos (Hair Jr *et al.*, 2014). La bondad del ajuste del modelo es comprobada a través del análisis del estadístico de la t de Student, el nivel de significación de los parámetros path (β) y el valor R^2 para cada constructo dependiente y la prueba de Stone-Geisser (Q^2), que

consiste en una validación cruzada del modelo evaluando en qué medida los parámetros estimados son útiles para predecir las variables observadas correspondientes a estos constructos, es decir se utiliza para la relevancia predictiva lo que permite una evaluación del modelo estructural (Roldán & Sánchez-Franco, 2012).

Así en primer lugar, se aceptarán aquellos coeficientes path, y por extensión las hipótesis planteadas, que sean significativos según una distribución t de Student de una cola con n-1 grados de libertad (Roldán & Sánchez-Franco, 2012). Estos valores, según (Chin, 1998) deben ser al menos de 0,2 e idealmente superar el valor 0,3, por tanto si $\beta < 0,2$ no hay causalidad y la hipótesis se rechaza. De acuerdo con Hair *et al.* (2011), se utilizó un *bootstrapping* (5000 remuestras) para generar los estadísticos t-Student y sus errores estándar, esto nos permitió evaluar la significación estadística de los coeficientes *path* (Castro & Roldán, 2013) y aceptar o no el resto de hipótesis (ver tabla 3).

En segundo lugar, se analiza la varianza explicada. La bondad de un modelo se determina a través de la fortaleza de cada relación estructural y se analiza utilizando el valor de R^2 para cada constructo dependiente. Según Falk y Miller (1992), estos valores deben ser superiores a 0.1 para poder considerar que el modelo tiene suficiente capacidad predictiva. Considerando que el R^2 es una medida de la exactitud del modelo (Hair Jr *et al.*, 2014), y por tanto mide la cantidad de varianza del constructo que es explicada por el modelo (Serrano-Cinca, Fuertes-Callén, y Gutiérrez-Nieto, 2007) con los valores 0.75, 0.50, 0.25, respectivamente, se describen los niveles sustanciales, moderados o débiles de la exactitud de la predicción (Hair, Ringle, & Sarstedt, 2011), como se puede ver en la figura 2, todos los R^2 están entre el mínimo 0.1 y el 0.75, por lo que tienen una capacidad predictiva en diferente grado.

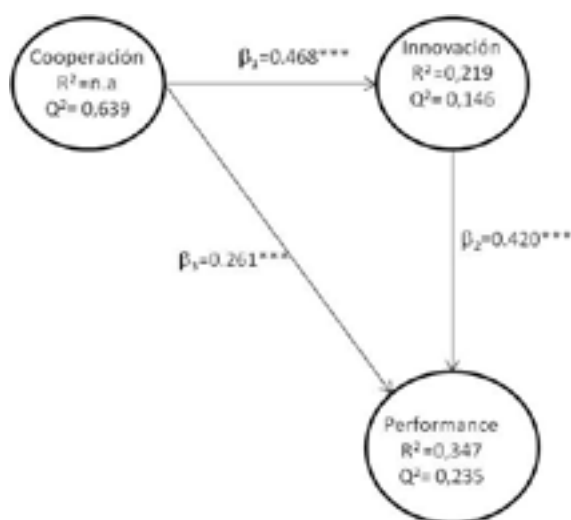
Tabla 3. Contraste de hipótesis planteadas

Hipótesis	Relaciones entre constructos	b	Standard Error	T Statistics
H1	Cooperación -> Innovación	0,468***	0,061	7,659
H2	Innovación -> Performance	0,420***	0,068	6,207
H3	Cooperación -> Performance	0,261***	0,078	3,348

Nota: $t(0.05, 4999) = 1,645158499$, $t(0.01, 4999) = 2,327094067$, $t(0.001, 4999) = 3,091863446$ * $p < 0,05$. ** $p < 0,01$. *** $p < 0,001$. ns. No significativo (basado en $t(4999)$, test de una cola).

Finalmente, el test de Stone-Giesser (Q^2) se usa como criterio para medir la relevancia predictiva de los constructos dependientes (Roldán & Sánchez-Franco, 2012) y por tanto es un medio para evaluar la relevancia predictiva del modelo estructural (Hair Jr *et al.*, 2014), esta medida permite examinar la pertinencia de predicción del modelo teórico y el modelo estructural. Para modelos reflexivos se utiliza el índice de redundancia de validez cruzada (Q^2) (Castro & Roldán, 2013). Si Q^2 es mayor que 0 esto implica que el modelo tiene relevancia predictiva (Hair Jr *et al.*, 2014 ; Castro & Roldán, 2013), en nuestro caso todos los Q^2 obtenidos tienen signo positivo y son mayores que 0, como se puede apreciar en la figura 2.

Figura 2: Contraste de hipótesis



Nota: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; (basado en $t(4999)$, test de una cola), n.a= no aplicable

Los resultados resumidos en la figura 2, confirman que el modelo estructural tiene una relevancia predictiva satisfactoria para las dos variables dependientes: innovación y performance, pudiéndose por tanto afirmar que todas las hipótesis planteadas son aceptadas. Siguiendo a Bernal-Conesa, De Nieves-Nieto, y Briones-Peñalver, (2016) a structural equation model is presented in order to explain the motivations of implementing Corporate Social Responsibility (CSR se han de tener en cuenta los efectos totales (directos e indirectos), los cuales se reflejan en la tabla 4.

Tabla 4. Efectos totales

Relaciones entre constructos	β	Standard Error	T Statistics
Cooperación -> Innovación	0,468***	0,061	7,659
Innovación -> Performance	0,420***	0,068	6,207
Cooperación -> Performance	0,458***	0,070	6,504

Nota: $t(0.05, 4999) = 1,645158499$, $t(0.01, 4999) = 2,327094067$, $t(0.001, 4999) = 3,091863446$ * $p < 0,05$. ** $p < 0,01$. *** $p < 0,001$. ns. No significativo (basado en $t(4999)$, test de una cola).

Como se puede observar en la tabla 4, el efecto total de la Cooperación sobre el Performance es mucho mayor que el efecto directo y además es significativo ($\beta=0,458$ $p \leq 0,001$). El efecto total es obtenido mediante la siguiente expresión: Efecto total = Efecto directo + Efecto indirecto (Sarstedt, Ringle, Smith, Reams, & Hair, 2014). Por lo que puede existir un efecto moderador de la variable Innovación en la relación entre la Cooperación y el Performance. Esta moderación puede ser aceptada, si este potencial efecto mediador es significativo.

Para ello, se han de responder tres cuestiones (Hair, Hult, Ringle, & Sarstedt, 2013): (1) ¿es el efecto directo entre una variable y su dependiente significativo cuando la variable mediadora es excluida del modelo?, (2) analizar si el efecto indirecto vía variable mediadora es significativo después de que la variable mediadora haya sido incluida en el modelo y (3) cuanta es la influencia del efecto indirecto sobre el total.

Para responder a la primera cuestión en referencia al papel mediador de la Innovación se excluye a ésta del modelo y se ejecuta el *bootstrapping* con esta condición. Como resultado se obtiene que el efecto directo entre la Cooperación sobre el Performance adopta el valor de 0,466 siendo significativo ($p \leq 0,001$). Así pues, cuando se excluye a la variable mediadora, el efecto directo es significativo.

Responder la segunda cuestión requiere re-calcular el modelo completo (con la variable mediadora incluida) y probar la significancia de los efectos indirectos. Para la variable mediadora Innovación el *bootstrapping* correspondiente muestra que el valor del efecto indirecto es 0,196 y significativo al $p \leq 0,001$ (Vinzi *et al.*, 2010).

Finalmente, para estimar la magnitud del efecto indirecto (Sarstedt *et al.*, 2014) se calcula la varianza explicada por la variable mediadora (VAF), que representa el ratio del efecto indirecto sobre el efecto total (Vinzi *et al.*, 2010). El resultado de este paso final produce un valor de 0,429, lo que indica que un casi mitad del efecto total de la Cooperación sobre el Performance está explicado por los efectos indirectos de la Innovación. Esto sugiere que la Innovación media parcialmente en la relación entre la Cooperación y el Performance, ya que la condición de que tanto el efecto directo como el indirecto son significativos representan la mediación parcial (Nitzl, Roldan, & Cepeda, 2016). Por otra parte, una situación en la que el VAF es superior al 20% y menor del 80% podría caracterizarse como una mediación parcial típica (Hair Jr *et al.* 2013).

5. CONCLUSIONES

A la luz de los resultados obtenidos estos confirman las relaciones establecidas en el modelo de investigación, y todas las hipótesis planteadas son aceptadas. Así se puede observar una influencia significativa de la Cooperación sobre la Innovación de las empresas de agronegocios. Se observa además que la Cooperación influye en el Performance de la empresas y al mismo tiempo se producen unos efectos indirectos sobre el Performance a través de la Innovación (ver tabla 4) en línea con otros estudios. Teniendo en cuenta estos efectos indirectos, la relación entre Cooperación y Performance mejora pues b_3 pasa de 0,261 a 0,458.

A través del estudio realizado, se pretende cubrir el vacío detectado en la literatura sobre las empresas de agronegocios para la implantación de medidas de RSC, ya que si bien existen estudios previos sobre innovación y *performance* estos no contemplan la relación entre la Cooperación y la Innovación y su influencia sobre el *performance*. Así pues, la ausencia de trabajos empíricos previos que analicen dichas relaciones en el sector de los agronegocios en España y su integración en la empresa justificó su realización y se considera que viene a añadir un suplemento investigador a los estudios que relacionan la Cooperación y su integración en las empresas, pues dicha relación no se estudia con un efecto directo únicamente, sino que incorpora una relación indirecta a través de la Innovación sobre el Performance.

La integración de medidas de cooperación responsable no se traduce únicamente en un posicionamiento ético o moral por parte de las organizaciones, sino también en la generación de intangibles de elevado valor estratégico, tales como la cooperación externa y la innovación de la empresa.

La principal contribución de este trabajo ha sido demostrar la vinculación entre la innovación y la cooperación y su influencia sobre el performance en las empresas de agronegocios de manera empírica y fiable. Desde un punto de vista práctico las empresas pueden utilizar los resultados de este estudio como un punto de apoyo para potenciar la cooperación y la innovación en su organización, pues la integración de estas tiene una relación directa con el performance de la empresa.

BIBLIOGRAFÍA

- Alarcón, S., & Sánchez, M. (2013). External and Internal R&D, Capital Investment and Business Performance in the Spanish Agri-Food Industry. *Journal of Agricultural Economics*, 64(3), 654–675. <https://doi.org/10.1111/1477-9552.12015>
- Bagozzi, R. P., & Yi, Y. (2011). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science*, 40(1), 8–34. <https://doi.org/10.1007/s11747-011-0278-x>
- Bernal-Conesa, J. A., De Nieves Nieto, C., & Briones-Peñalver, A. J. (2017). CSR Strategy in Technology Companies: Its Influence on Performance, Competitiveness and Sustainability. *Corporate Social Responsibility and Environmental Management*, 24(2), 96–107. <https://doi.org/10.1002/csr.1393>
- Bernal-Conesa, J. A., De Nieves-Nieto, C., & Briones-Penalver, A.-J. (2016). CSR and technology companies: A study on its implementation, integration and effects on the competitiveness of companies. *Intangible Capital*, 12(5), 1529–1590. <https://doi.org/10.3926/ic.721>
- Bernardo, M. (2014). Integration of management systems as an innovation: a proposal for a new model. *Journal of Cleaner Production*, 82, 132–142. <https://doi.org/10.1016/j.jclepro.2014.06.089>
- Bocquet, R., Le Bas, C., Mothe, C., & Poussing, N. (2013). Are firms with different CSR profiles equally innovative? Empirical analysis with survey data. *European Management Journal*, 31(6), 642–654. <https://doi.org/10.1016/j.emj.2012.07.001>
- Carmines, E. G., & Zeller, R. A. (1979). *Reliability and Validity Assessment*. SAGE Publications.
- Castro, I., & Roldán, J. L. (2013). A mediation model between dimensions of social capital. *International Business Review*, 22(6), 1034–1050. <https://doi.org/10.1016/j.ibusrev.2013.02.004>
- Chen, Y.-S., & Chang, C.-H. (2011). Utilize structural equation modeling (SEM) to explore the influence of corporate environmental ethics: the mediation effect of green human capital. *Quality & Quantity*, 47(1), 79–95. <https://doi.org/10.1007/s11135-011-9504-3>
- Chin, W. W. (1998). *Commentary: Issues and opinion on structural equation modeling*. JSTOR. Retrieved from <http://www.jstor.org/stable/249674>
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34, 550–590.
- Damanpour, F., & Gopalakrishnan, S. (2001). The dynamics of the adoption of product and process innovations in organizations. *Journal of Management Studies*, 38(1), 45–65.
- Damanpour, F., & Schneider, M. (2006). Phases of the Adoption of Innovation in Organizations: Effects of Environment, Organization and Top Managers. *British Journal of Management*, 17(3), 215–236.
- Dijkstra, T. K., & Henseler, J. (2015). Consistent and asymptotically normal PLS estimators for linear structural equations. *Computational Statistics & Data Analysis*, 81, 10–23. <https://doi.org/10.1016/j.csda.2014.07.008>
- Falk, R. F., & Miller, N. B. (1992). *A Primer for Soft Modeling* (1st edition). Akron, Ohio: Univ of Akron Pr.
- Fornell, C., & Larcker, D. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Gallardo-Vázquez, D., & Sánchez-Hernández, M. I. (2013). Análisis de la incidencia de la responsabilidad social empresarial en el éxito competitivo de las microempresas y el papel de la innovación. *Universia Business Review*, (38), 14–31.
- Gefen, D., Rigdon, E. E., & Straub, D. (2011). An Update and Extension to SEM Guidelines for Administrative and Social Science Research. *Mis Quarterly*, 35(2), III–XIV.
- Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information Systems*, 16(1), 5.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414–433. <https://doi.org/10.1007/s11747-011-0261-6>
- Hair Jr, Joe F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Hair Jr, Joseph F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2013). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. SAGE Publications.

- Heyder, M., & Theuvsen, L. (2012). Determinants and Effects of Corporate Social Responsibility in German Agribusiness: A PLS Model: Corporate Social Responsibility in German Agribusiness. *Agribusiness*, 28(4), 400–420. <https://doi.org/10.1002/agr.21305>
- Melé, D., Argandoña, A., & Sanchez-Runde, C. (2011). Facing the Crisis: Toward a New Humanistic Synthesis for Business. *Journal of Business Ethics*, 99(1), 1–4. <https://doi.org/10.1007/s10551-011-0743-y>
- Montoro-Sánchez, M. Á., Mora-Valentín, E. M., & Ortiz-de-Urbina-Criado, M. (2012). Localización en parques científicos y tecnológicos y cooperación en I+D+i como factores determinantes de la innovación. *Revista Europea De Dirección y Economía De La Empresa*, 21(2), 182–190. [https://doi.org/10.1016/S1019-6838\(12\)70005-7](https://doi.org/10.1016/S1019-6838(12)70005-7)
- Nitzl, C., Roldan, J. L., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling: Helping researchers discuss more sophisticated models. *Industrial Management & Data Systems*, 116(9), 1849–1864. <https://doi.org/10.1108/IMDS-07-2015-0302>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory* (3rd edition). New York: McGraw-Hill.
- Rodríguez Gutiérrez, P., Fuentes García, F. J., & Sánchez Cañizares, S. (2013). Revelación de información sobre clientes, comunidad, empleados y medio ambiente en las entidades financieras españolas a través de las memorias de responsabilidad social corporativa (2007-2010). *Investigaciones Europeas De Dirección y Economía De La Empresa*, 19(3), 180–187. <https://doi.org/10.1016/j.iedee.2012.12.002>
- Roldán, J. L., & Sánchez-Franco, M. J. (2012). Variance-Based Structural Equation Modeling: Guidelines for Using Partial Least Squares. *Research Methodologies, Innovations and Philosophies in Software Systems Engineering and Information Systems*, 193.
- Sarstedt, M., Ringle, C. M., Smith, D., Reams, R., & Hair, J. F. (2014). Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *Journal of Family Business Strategy*, 5(1), 105–115. <https://doi.org/10.1016/j.jfbs.2014.01.002>
- Serrano-Cinca, C., Fuertes Callén, Y., & Gutiérrez Nieto, B. (2007). Online reporting by banks: a structural modelling approach. *Online Information Review*, 31(3), 310–332. <https://doi.org/10.1108/14684520710764096>
- Tenenhaus, M., Vinzi, V. E., Chatelin, Y. M., & Lauro, C. (2005). PLS path modeling. *Computational Statistics & Data Analysis*, 48(1), 159–205. <https://doi.org/10.1016/j.csda.2004.03.005>
- Vinzi, V. E., Chin, W. W., Henseler, J., & Wang, H. (2010). *Handbook of Partial Least Squares: Concepts, Methods and Applications*. Springer Science & Business Media.

COMPORTAMIENTO DEL CONSUMIDOR DE TURISMO GASTRONÓMICO EN SISTEMAS CONVERSACIONALES DE MENSAJERÍA MÓVIL: LOS CHATBOTS

M. Romero

Departamento de Economía y Administración de Empresas de la Universidad de Málaga
(mariaromeroch@uma.es)

A. M. Casado

Departamento de Economía y Administración de Empresas de la Universidad de Málaga
(acasado@uma.es)

C.M.Q. Ramos

ESGHT & CEFAGE, Universidad del Algarve
(cmramos@ualg.pt)

RESUMEN

Los consumidores recurren cada vez más a los sitios webs y a los sistemas conversacionales, como la mensajería instantánea móvil (MIM) para recoger opiniones y críticas de otros a la hora de tomar decisiones sobre la compra de productos y servicios turísticos. Esto conlleva que este consumidor, a la hora de evaluar entre las distintas alternativas se encuentre ante un gran volumen de información. Bajo este contexto, los *chatbots* a través de MIM, se presentan como una solución para una toma de decisión acertada en función de sus preferencias gastronómicas permitiéndole filtrar la excesiva oferta de turismo gastronómico.

En este estudio se plantea abordar el uso y el comportamiento del consumidor turístico en la consulta de *chatbots* de recomendaciones gastronómicas. Para ello, se trabajará con la información obtenida a través de una encuesta online, con una muestra de 420 individuos en España aplicando técnicas de estadística descriptiva. Los resultados muestran que: (1) su uso está determinado por su instantaneidad, disponibilidad permanente y por el desconocimiento de la zona; y (2) sus recomendaciones gastronómicas son valoradas positivamente por el ajuste a las necesidades y preferencias de cada consumidor.

Keywords: Chatbots Gastronómicos, Consumidor, MIM (Mensajería Instantánea Móvil), Turismo.

1. INTRODUCCIÓN

Cada vez más los turistas usan Internet en sus viajes adquiriendo éste un papel muy importante (O'Connor, 2011). En este nuevo paradigma de la Web 2.0 los usuarios se convierten en las principales fuentes de difusión de la información online, generada a su vez por ellos mismos y permitiendo la divulgación boca a boca electrónica (*e-WOW*). A este tipo información se le denomina Contenido Generado por el Usuario (CGU) (Burgess *et al.*, 2009).

Las decisiones de compra de los turistas online están siendo influenciadas por las valoraciones y comentarios hechos por otros consumidores. Diversos autores (Borja *et al.*, 2002; Borja y Gomis, 2009; O'Connor, 2011) contemplan que específicamente este perfil de usuario turístico es influenciado durante la fase de pre-compra, la fase de la compra y la fase de la post compra, no sólo por las recomendaciones offline de amigos/familiares o canales tradicionales, sino mediante el entorno online: el *Word of mouth* (boca-oído) de los blogs, o sitios webs como *TripAdvisor* o las redes sociales como *Facebook*. De este modo, las recomendaciones extraídas de los medios sociales se convierten en un elemento clave de influencia para la evaluación de la información de los productos y servicios turísticos para la toma de decisión del usuario que desea su consumo (García, 2016; Cho y Fesenmayer, 2001; Buhalis, 2003; Buhalis y Law, 2008; Xiang y Gretzel, 2010; Hays *et al.*, 2012; Albacete, 2012; Burgess y Kerr, 2012; Roque y Raposo, 2013).

De esta manera, Internet ha posibilitado que los usuarios puedan transformarse en expertos o *influencers* sociales en un determinado asunto o producto en muy poco tiempo (Xiang y Gretzel, 2010). Asimismo, se manifiesta que el *e-Word Of Mouth* está cobrando cada vez más presencia en la toma de decisiones en el consumo turístico. El éxito de esta forma de comunicación se debe a que su información generada no persigue una finalidad comercial y, por tanto, ofrece mayor credibilidad para el turista potencial que está buscando información objetiva para evaluar sus alternativas.

El consumidor turístico, hoy en día, es consumidor y generador de recomendaciones a través de los medios sociales que permiten que dichos usuarios creen comentarios, intercambien experiencias, colaboren y ayuden a otros en su toma de decisión (Borja *et al.*, 2002; Xifra y Chias, 2008; Rosen, 2009). Estos medios basados en la participación y recomendaciones online convierten a un consumidor en *consumer* y *prosumer* al mismo tiempo ya que ofrecen mecanismos de participación directa. Se observa cómo el consumo turístico se está viendo influenciado por cómo estos consumidores están usando la tecnología móvil con consultas de información sobre el destino (Gasdia y Rheem, 2012; Salgado *et al.*, 2013; García, 2016).

Por otro lado, el uso en los últimos años de la mensajería instantánea móvil (MIM) como *WhatsApp*, *WeChat* o *Telegram*

está cambiando la forma de comunicación y mantenimiento de las relaciones con los demás, convirtiéndose estos sistemas conversacionales en la principal vía para la comunicación social. De hecho, se estima que llegue a convertirse en una plataforma de entretenimiento, comercio y trabajo (Wu y Lu, 2013). Su rápido crecimiento y alta adquisición convierten a la mensajería instantánea móvil en un medio idóneo para la difusión de información sobre productos y servicios turísticos.

Con esta investigación, se pretende conocer el uso y el comportamiento del consumidor turístico en el empleo de un chatbot gastronómico a través de un sistema conversacional por MIM, en concreto *WhatsApp* con el objetivo de identificar las razones principales de su utilización. Para ello se aborda, en primer lugar, una revisión de la literatura, se definen los objetivos y metodología. Finalmente se extraen los resultados y se concluye con las principales aportaciones de este trabajo científico.

2. MARCO TEÓRICO

La accesibilidad de los canales *Web 2.0* a través de cualquier dispositivo, y en particular a través del móvil, permiten una búsqueda directa e instantánea, eliminando las barreras geográficas y horarias en el momento de la necesidad. No obstante, en este contexto se echa en falta una respuesta inmediata ante cualquier consulta del consumidor relacionada con los productos y servicios turísticos. Actualmente la inmediatez de respuesta, que no de búsqueda, y la comunicación directa solo es posible a través de la mensajería instantánea móvil. De hecho, ya hay empresas turísticas que están adoptando estos sistemas conversacionales para relacionarse con sus clientes y atender sus cuestiones. Según la Asociación para la Investigación de Medios de Comunicación (AIMC, 2016), más del 57,5% de los usuarios utilizan de forma diaria aplicaciones móviles de mensajería instantánea, entre las que destacan *WhatsApp* con el 91,6% de cuota de mercado siguiéndole *Telegram* con un 16,8%. Estos estudios evidencian que los sistemas conversacionales a través de la MIM es una vía propicia para el recibo y envío de información turística.

2.1 Chatbots turísticos en sistemas conversacionales de MIM

Los sistemas conversacionales de mensajería instantánea móvil (MIM) como *WhatsApp* o *Facebook Messenger* permiten el envío de mensajes uno a uno a través de un *chat* como si estuvieras manteniendo una conversación frente a frente. Esta ventaja de mantener en tiempo real un diálogo con otra persona crea un nuevo escenario de comunicación para que las marcas interactúen con sus consumidores. La interfaz de estos canales a través de una conversación bidireccional admite interactuar de forma privada, personalizada y directa con cada cliente, bien a través de una comunicación hombre-máquina (Hill *et al.*, 2015), o bien persona a persona. La primera forma de comunicación consiste en implementar un *chatbot*, es decir, un software basado en inteligencia artificial que permite la comunicación con humanos, para que dé respuesta de manera automática a las peticiones de los consumidores (Shah *et al.*, 2016); mientras que la comunicación persona a persona (*peer to peer*), es aquella donde no existen procesos automáticos para dar respuestas a las necesidades del consumidor/cliente (AbuShawar y Atwell, 2016).

Las marcas pioneras que están empezando a implementar servicios para sus consumidores a través de sistemas conversacionales aplicaciones móviles de mensajería instantánea existentes o incluso están desarrollando aplicaciones móviles instantáneas conversacionales a través de un *chatbot* provienen del sector turístico cuyo objetivo es prestar mejor servicio a sus clientes.

En la tabla 1, se recogen los principales *chatbots* existentes que dan soporte al consumidor turístico en la mayoría de las etapas de la compra de los servicios gastronómicos.

Tabla 1 - Chatbots para consultas gastronómicas

Marca	Tipología MIM	Fase de consulta	Funcionalidad	Cobertura	Idioma
<i>Ask Vicente</i>	WhatsApp Facebook Messenger	Búsqueda Destino Posterior	Recomendación basada en: -Localización -Precio -Momento de consumo -Número de personas	Nacional (España)	Español Inglés
<i>Foursquare</i>	Slack Skype	Búsqueda Destino	Recomendación basada en: -Localización.	Internacional	Inglés
<i>E-8T</i>	Facebook Messenger	Búsqueda Destino	Recomendación basada en: -Localización. -Tipo de comida -Tipo de local -Tipo de cocina	Nacional (Singapur)	Inglés
<i>Kiki</i>	Facebook Messenger	Búsqueda Destino	Recomendación basada en: -Localización. -Sin localización Reserva en chat	Nacional (Japón)	Inglés Koreano Chino

<i>Milly</i>	Facebook Messenger	Búsqueda Destino	Recomendación basada en: -Opiniones de expertos -Tipo de comida -Eventos de la ciudad -reporte semanal	Local (Queens, Nueva York)	Inglés
<i>Paitbbar</i>	Facebook Messenger	Búsqueda Destino	Recomendación basada en: -Localización -Sin localización -Tipo de cocina Reservas en chat	Local (Lahore, Pakistán)	Inglés
<i>Surebot</i>	Facebook Messenger	Búsqueda Destino Posterior	Recomendación basada en: -Localización -Hashtags de comida de Instagram Redirige a la web site del restaurante para reservas.	Internacional	Inglés
Where bot	Facebook Messenger	Búsqueda	Recomendación basada en: -Localización	Internacional	Inglés

Fuente: elaboración propia a partir de www.botlist.com (2016)

Como se observa en la tabla 1, el 90% de este tipo de *chatbots* están implementados sobre Facebook Messenger. Dentro de este tipo de *chatbots* destaca *Ask Vicente*, por dos aspectos: (1) Su uso múltiple en sistemas conversacionales de MIM (*Facebook Messenger* y *WhatsApp*); y (2) la información que ofrece a los consumidores de turismo gastronómico en todas sus etapas para la toma de decisión en su ciclo de consumo turístico (búsqueda, destino y posterior).

2.2 Comportamiento del consumidor en el uso de sistemas de Contenido Generado por el Usuario

Los factores que influyen en el comportamiento de uso de plataformas que recogen Contenido Generado por el Usuario (CGU), como por ejemplo las redes sociales, son: actitud, confianza, entorno colaborativo, coste reducido, facilidad de uso, optimización de tiempo, atemporalidad, intención de uso, utilidad percibida.

Tabla 2 - Tipología de factores que influyen en el uso de sistemas de contenidos generados por el usuario

Tipología de factores de uso	Factores de Uso	Autores
<i>Confianza</i>	<i>Actitud</i>	(Casaló <i>et al.</i> , 2010).
	<i>Confianza</i>	(Chung y Buhalis, 2008; Bressler y Grantham, 2000; Filieri y Mcleay, 2013).
	<i>Entorno colaborativo</i>	(Wang y Fesenmaier, 2004b; Bressler y Grantham, 2000; Chung y Buhalis, 2008).
	<i>Intención de uso</i>	Wang <i>et al.</i> , 2002; Wang y Fesenmaier, 2004; Hsu y Lin, 2008; Parra <i>et al.</i> , 2011; Hsu y Huang, 2012.
<i>Relación calidad/precio</i>	<i>Coste reducido</i>	(Taño <i>et al.</i> , 2013; Binney <i>et al.</i> , 2003).
	<i>Optimización tiempo</i>	(Binney <i>et al.</i> , 2003).
	<i>Atemporalidad</i>	(Taño <i>et al.</i> , 2013).
<i>Aprendizaje</i>	<i>Facilidad de uso</i>	(Taño <i>et al.</i> , 2013; Meroño, 2005; Silva y Mendes, 2014).
	<i>Utilidad percibida</i>	(Huh <i>et al.</i> , 2009; Ryu <i>et al.</i> , 2009).

Fuente: Elaboración propia

Tal y como se observa en la tabla 2, se han agrupado la actitud, la confianza, el entorno colaborativo junto con la intención de uso dentro de la tipología general (1) confianza de la colectividad generada en cuanto a los contenidos generados, por otro lado, los factores de coste reducido, optimización de tiempo y atemporalidad se agrupan en (2) relación calidad/precio y el (3) aprendizaje, es decir, la mayor o menor dificultad que requiere usarlo, se encuentran los factores de facilidad de uso y utilidad percibida.

Analizada la literatura, no se encuentran autores que contemplen factores que influyen en el uso que realizan los consumidores turísticos de sistemas conversacionales en MIM como los *chatbots*. Por tanto, sería interesante observar si estos factores contemplados por los distintos autores para los sistemas conversacionales basados en CGU también son aplicables al comportamiento de los consumidores a la hora de usar los *chatbots* en la búsqueda de información turística gastronómica.

3. OBJETIVOS DE LA INVESTIGACIÓN

El objetivo general de esta investigación determinar el uso y comportamiento del consumidor turístico en la consulta de un *chatbot* a través de mensajería instantánea móvil, *WhatsApp*, para recibir recomendaciones gastronómicas. Para llevar a

cabo dicho objetivo general, se establecen los siguientes objetivos específicos:

- 1) Identificar las situaciones en las que el consumidor gastronómico acude al uso del *chatbot* de consultas de recomendaciones gastronómicas por el sistema conversacional *WhatsApp*.
- 2) Detectar la percepción que tienen estos consumidores de la información sobre las recomendaciones gastronómicas extraídas por el *chatbot* gastronómico.

4. METODOLOGÍA CIENTÍFICA

La metodología científica se aplica sobre el comportamiento del uso que los consumidores de turismo gastronómico hacen del *chatbot* denominado *Ask Vicente*, único sistema conversacional que está implementado en la MIM, *WhatsApp* (ver tabla 1). Los motivos que justifican el estudio sobre los consumidores de este *chatbot* gastronómico español son: (1) la penetración de *WhatsApp* en el mercado español ya que entre las aplicaciones móviles de mensajería instantáneas utilizadas por los españoles, *WhatsApp* supone el 92,8% según datos de AIMC, Marzo 2017; (2) la importancia del turismo gastronómico en España; y (3) porque es la único *chatbot* que contempla *WhatsApp* para abordar la tres fases de consulta de información por parte de los consumidores (antes, durante y posterior). Por dichas razones, nos centraremos en *Ask Vicente* y se analizarán cuáles son los factores que influyen en su uso.

Este estudio se aborda con una primera fase de consulta de fuentes secundarias que permite contextualizar los *chatbots* gastronómicos a nivel internacional y definir los principales factores de utilización de las plataformas de contenido generado por los usuarios. En una segunda fase, tal y como se muestra en la tabla 3, se aborda el trabajo de campo aplicando una encuesta online de preguntas cerradas y semicerradas sobre una muestra de 420 consumidores turísticos que utilizan el *chatbot* a través de *WhatsApp* para la consulta de recomendaciones gastronómicas en el territorio español, y que fueron tratadas con técnicas de estadística descriptiva. El ámbito de la investigación es España y el trabajo de campo fue realizado desde el 15 de Julio al 15 de octubre del 2016.

Tabla 3-Ficha técnica

Población de estudio	Usuarios de <i>WhatsApp</i> .
Ámbito geográfico	España.
Técnica de investigación	Encuesta online.
Tratamiento y análisis	Estadística Descriptiva.
Tipología de investigación	Cuantitativa.
Margen de Confianza	95%
Tamaño muestral	420 encuestados
Periodo de investigación	15 de Julio al 15 de Octubre de 2016.

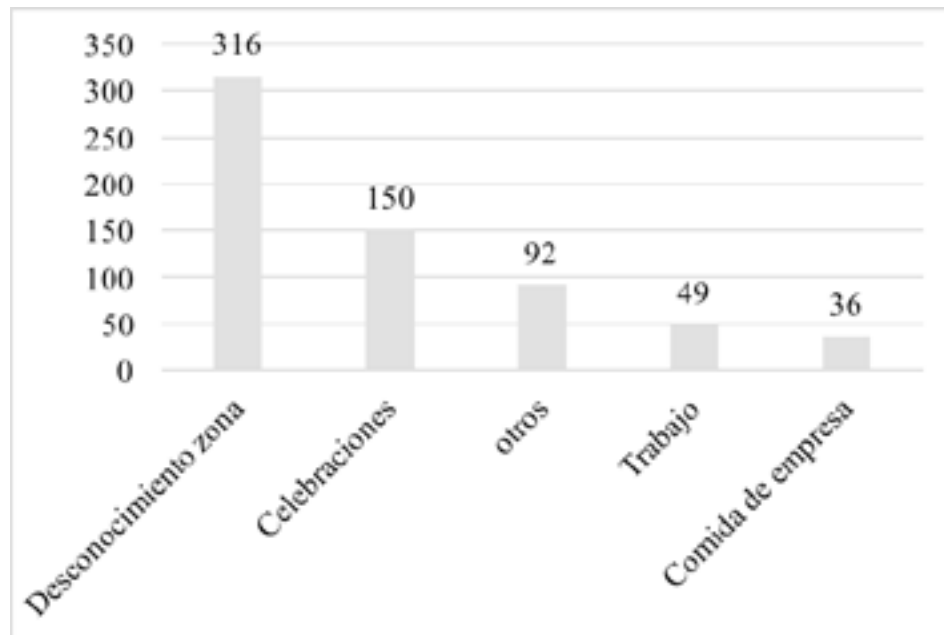
Fuente: Elaboración Propia

5. RESULTADOS DE LA INVESTIGACIÓN

Las situaciones en las que el usuario utiliza los *chatbots*, para obtener recomendaciones sobre gastronomía tal y como se muestra en la figura 1, principalmente sucede en los siguientes casos: en primer lugar, para cuando no se conoce la zona donde se encuentra; en segundo lugar, para buscar recomendaciones de lugares gastronómicos dónde realizar celebraciones; y por último, para incluir dichas recomendaciones gastronómicas en actividades de fin de semana o para solicitar una recomendación específica relacionada con un plato típico. No son relevantes los casos relacionados con: circunstancia de trabajo o comida de empresas, ambas muy relacionadas entre sí, siendo la primera cuando el usuario se encuentra en su horario laboral y la segunda por compromisos laborales, pero no obligatoriamente dentro de su jornada de trabajo.

Por tanto, las situaciones en las que dichos consumidores recurren más al servicio de *chatbot* de recomendaciones gastronómicas por *WhatsApp*, están motivadas por las consultas sobre la zona en la que se encuentra y para planificar celebraciones con el fin obtener información necesaria para reducir su incertidumbre (ver figura 1).

Figura 1 - Uso del chatbot gastronómico a través de la MIM WhatsApp



Fuente: Elaboración Propia

Las principales percepciones que tienen los consumidores sobre las recomendaciones gastronómicas del *chatbot* son principalmente (ver figura 2): (1) Dicho sistema permite la planificación de la comida en cualquier momento y lugar; (2) se encuentra disponible siempre y cuando se necesita; (3) y es un sistema rápido en el suministro de la respuesta. Estas tres primeras percepciones se relacionan con atributos funcionales más que emocionales. Respecto a las otras tres percepciones con menor valoración (diversión, agradable y entretenimiento), van relacionadas con la empatía que genera la interacción del *chatbot* gastronómico a través de *WhatsApp*.

Figura 2 - Percepción del uso del chatbot gastronómico por WhatssApp

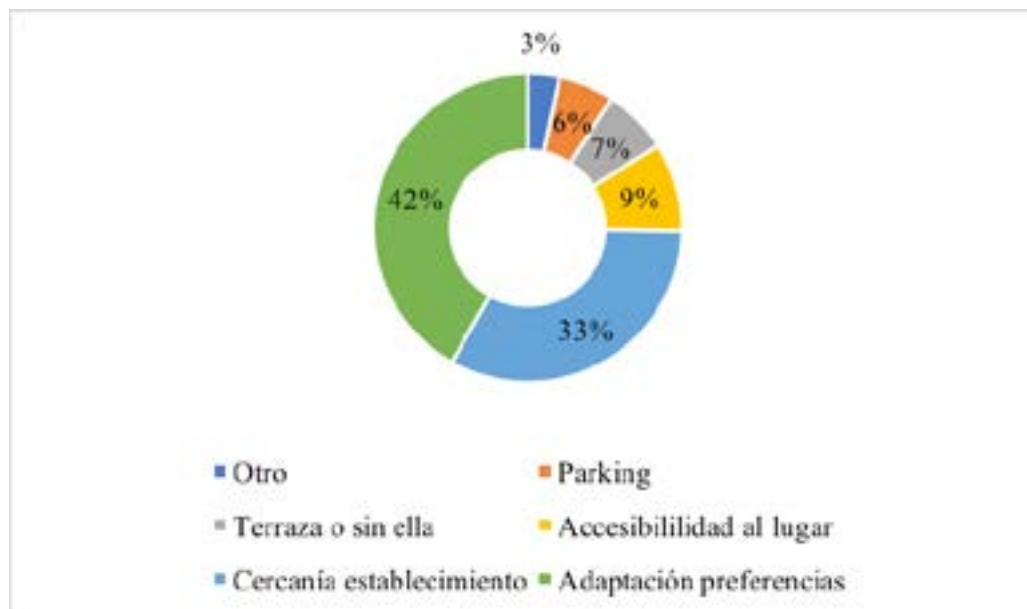


Fuente: Elaboración Propia

Como se observa en la figura 3, los factores que los consumidores valoran más para recibir recomendaciones gastronómicas por el sistema conversacional *Ask Vicente* son:

(1) La adaptación de la recomendación a sus preferencias (41%); (2) la cercanía al lugar donde los usuarios se encuentran a la hora de solicitar la recomendación gastronómica (34%). En menor porcentaje, se valoran los factores relacionados con la información extra del lugar gastronómico recomendado en relación a: (3) la accesibilidad al lugar recomendado (9%), (4) que posea terraza o no (7%), (5) y que tenga aparcamiento (*parking*) (6%). Esto indica que el factor más valorado por los consumidores a la hora de solicitar información al *chatbot* recomendador es la proximidad del establecimiento gastronómico.

Figura 3. Factores más valorados de las recomendaciones gastronómicas del chatbot



Fuente: Elaboración Propia

6. CONCLUSIONES Y DISCUSIONES

En esta investigación se observa cómo el comportamiento del uso que el consumidor de turismo gastronómico realiza de un *chatbot* gastronómico para las consultas sobre gastronomía está determinado por factores circunstanciales, por lo que se aprecia sobre todo las características funcionales de este sistema. Además de sus características relacionadas con casos de uso en momentos de ocio como son las celebraciones. Esto refleja que el consumidor que utiliza este tipo de sistema no solo es el turista, sino que también es aquel que sale a comer por ocio y su circunstancia condiciona el uso de este canal en momentos distendidos.

El consumidor de turismo gastronómico valora positivamente la disponibilidad permanente y su atemporalidad para cualquier consulta con la finalidad de planificar una comida a través del *chatbot*. Estos factores de uso en un sistema conversacional a través de un *chatbot* por *WhatsApp* coinciden con algunos de los factores del uso en plataformas de contenido generado por el usuario (CGU) para consultas de información turística. Además, este sistema conversacional por MIM es percibido como agradable, divertido y entretenido.

Este estudio revela el papel que juega para el consumidor su entorno cercano en la obtención de información y recomendaciones en este ámbito. Los resultados obtenidos evidencian que la posibilidad de diálogo y la inmediatez de respuesta que se genera a través de un sistema conversacional como es el de un *chatbot* por medio de *WhatsApp*, es una ventaja diferencial para ser utilizada en los próximos años en la consulta del turismo gastronómico.

Respecto a los tres aspectos más valorados por las consultas de recomendaciones gastronómicas a través del un *chatbot* por MIM son: (1) la adaptación a las preferencias del usuario, (2) la cercanía al lugar y (3) la accesibilidad. El comportamiento del consumidor en el uso de los *chatbots* gastronómicos se caracteriza en demandar recomendaciones según su geolocalización y para un momento puntual en el que desea cubrir su necesidad. Se vuelve a corroborar que un *chatbot* de recomendaciones gastronómicas a través del sistema conversacional de MIM ofrece la posibilidad no solo de la planificación para ir a un restaurante sino de cubrir el momento de la necesidad de inmediato y al instante a través de una conversación, sin tener que evaluar detenidamente la información generada por otros usuarios, como es el caso de los blogs, redes sociales o foros. (plataformas de CGU).

En esta investigación se observa que los factores que determinan el uso de un *chatbot* de recomendaciones turísticas por *WhatsApp* para la búsqueda de un restaurante cuando se realiza un viaje guarda relación con los factores que influyen en el uso de sistemas basados en el contenido generado por el usuario (CGU). Entre estos factores destacan la atemporalidad, es decir, la disponibilidad de consultar este tipo de canales sin limitaciones temporales o geográficas y la adaptación a las preferencias del consumidor para ofrecer recomendaciones según las indicaciones y necesidades.

Sin embargo, este estudio revela que existe un factor clave valorado por los consumidores en el uso *chatbot* gastronómico a la hora de recibir las recomendaciones gastronómicas que no aparece en la de los sistemas de CGU como es la inmediatez de respuesta. Esta ventaja, también permite que la implementación de un *chatbot* en sistemas conversacionales como la MIM sea una de las mejores opciones para la localización de una fuente inmediata de respuesta a la recomendación de interés solicitada por el consumidor de turismo gastronómico.

En esta investigación se infiere que el uso de un sistema conversacional como es el de un *chatbot* implementado en *WhatsApp* juega un factor decisivo en las recomendaciones gastronómicas.

En resumen, resulta relevante abordar nuevas investigaciones que estudien qué factores determinan el uso de *chatbots* en el turismo en general y estudiar su uso en las distintas etapas del ciclo de un viaje.

AGRADECIMIENTOS

Esta investigación ha sido posible gracias a la financiación de la Universidad de Málaga (UMA), Andalucía-Tech.

Esta investigación ha sido posible gracias a la colaboración de la empresa levelbots para el estudio de campo de *Ask Vicente*.

BIBLIOGRAFÍA

- AbuShawar, B., & Atwell, E. (2016). Usefulness, localizability, humanness, and language-benefit: additional evaluation criteria for natural language dialogue systems. *International Journal of Speech Technology*, 19(2), 373-383.
- Albacete, C.A.S. (2012) *Las tecnologías de la información y comunicación en el sector turístico: una aproximación al uso de las redes sociales*. Madrid: Universitaria Ramón Areces.
- Asociación para la Investigación de Medios de Comunicación (AIMC): Encuesta 19 navegantes en la red, marzo 2017: <http://www.aimc.es/>
- Binney, W., Hall, J., & Shaw, M. (2003). A further development in social marketing: application of the MOA framework and behavioral implications. *Marketing Theory*, 3(3), 387-403.
- Bressler, S. E., & Grantham, C. (2000). *Communities of commerce: Building internet business communities to accelerate growth, minimize risk, and increase customer loyalty*. McGraw-Hill Professional.
- Borja, L.; Andreu, J.C. & Bosch, R.C. (2002) *El Consumidor Turístico*. Madrid: ESIC Editorial.
- Borja S., L. & Gomis, J. M. (2009). *El nuevo paradigma de la intermediación turística*. Madrid: Ediciones Pirámide.
- Botlist: <https://botlist.co/>
- Buhalis, D. (2003) *E-Tourism: Information technology for strategic tourism Management*. Harlow: Financial Times - Prentice Hall. Pearson Education.
- Buhalis, D. & Law, R. (2008) Progress in Information Technology and Tourism.
- Burgess, L., & Kerr, G. (2012, June). Australian Traveller's Use of the Internet: Understanding Australian Online Planning and Booking Behaviour. In 8th Annual International Conference on Tourism (pp. 11-14).
- Burgess, S., Sellitto, C., Cox, C., & Buultjens, J. (2009, June). User-generated content (UGC) in tourism: Benefits and concerns of online consumers. In ECIS (pp. 417-429).
- Casaló, L. V., Flavián, C., & Guinalíu, M. (2010). Determinants of the intention to participate in firm-hosted online travel communities and effects on consumer behavioral intentions. *Tourism Management*, 31(6), 898-911.
- Cho, Y., & Fesenmaier, D. R. (2001). A new paradigm for tourism and electronic commerce: Experience marketing using the virtual tour. *tourism distribution channels: practices, issues and transformation*, 351-370.
- Chung, J. Y., & Buhalis, D. (2008). A study of online travel community and Web 2.0: Factors affecting participation and attitude. *Proceedings Enter2008*, 267-278.
- Filieri, R., & Mcleay, F. (2013). E-WOM and Accommodation: An Analysis of the Factors That Influence Traveler's Adoption of Information from Online Reviews. *Journal of Travel Research*, 53(1), 44-57.
- García, J. J. (2016). Estrategias de las empresas turísticas a través de dispositivos móviles. AECA: *Revista de la Asociación Española de Contabilidad y Administración de Empresas*, (113), 16-20.
- Gasdia, M. & Rheem, C. (2012). Mobile Hits the Mainstream: Leisure and Business Traveler Trends. PhoCusWright.
- Hays, S., Page, S. J., & Buhalis, D. (2013). Social media as a destination marketing tool: its use by national tourism organisations. *Current issues in Tourism*, 16(3), 211-239.
- Hill, J., Ford, W. R., & Farreras, I. G. (2015). Real conversations with artificial intelligence: A comparison between human-human online conversations and human-chatbot conversations. *Computers in Human Behavior*, 49, 245-250.
- Hsu, C.L. & Lin, J.C. (2008). Acceptance of blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation. *Information and Management*, 45, pp. 65-74.
- Hsu, C. H. C. & Huang, S. (2012) An extension of the theory of planned behavior model for tourists. *Journal of Hospitality & Tourism Research* 36(3): 390-417.
- Huh, H. J., Kim, T., & Law, R. (2009). A comparasion of competing theoretical models for understanding acceptance behavior of information systems in upscale hotels. *International Journal of Hospitality Management*, 28(1), 717-724.
- Meroño Cerdán, A. (2005): El correo electrónico en las PYMES para la comunicación y gestión del conocimiento. *Universia Business Review*, 1(5), pp. 70-79.

- O'Connor, P. (2011) An Analysis of the use of Facebook by International Hotel Chains (Comunicação apresentada no International Council on Hotel, Restaurant and Institutional Education – CHRIE) Conference, Denver, USA.
- Parra-López, E., Bulchand-Gidumal, J., Gutiérrez-Taño, D., & Díaz-Armas, R. (2011). Intentions to use social media in organizing and taking vacation trips. *Computers in Human Behavior*, 27(2), 640-654.
- Roque, V., & Raposo, R. (2013). Os Media Sociais como uma Ferramenta de Comunicação e Marketing no Turismo: uma análise das atividades online dos principais atores portugueses.
- Rosen, E. (2008) Buzz Marketing de Boca em Boca. Cascais: Gestãoplus.
- Ryu, M. H., Kim, S., & Lee, E. (2009). Understanding the factors affecting online elderly user's participation in video UCC services. *Computers in Human Behavior*, 25, 619 -632.
- Salgado Criado, J.; Bujarski, L. Y Merten, R. (2013), *European Online Travel Overview*, Ninth Edition, Phocuswright.
- Silva, M. M., & Mendes Filho, L. (2014). Intenção De Uso De Comentários De Viagem Online Na Escolha De Um Meio De Hospedagem: Fatores Influenciadores. *Revista Brasileira De Pesquisa Em Turismo*, 8(3), 419-434.
- Shah, H., Warwick, K., Vallverdú, J., & Wu, D. (2016). Can Machines Talk? Comparison Of Eliza With Modern Dialogue Systems. *Computers In Human Behavior*, 58, 278-295.
- Taño, D. G., Gidumal, J. B., Armas, R. J. D., & López, E. P. (2013). Antecedentes Del Uso De Los Medios Sociales Por El Turista: Motivación, Oportunidad Y Capacidad. *Cuadernos De Turismo*, (31), 153-173.
- Wang, Y. Y Fesenmaier, D.R. (2004b). Towards Understanding Members' General Participation In An Active Contribution To An Online Travel Community. *Tourism Management*, 25(6), Pp. 709-722.
- Wang, Y., Yu, Q., & Fesenmaier, D. R. (2002). Defining the virtual tourist community: implications for tourism marketing. *Tourism management*, 23(4), 407-417.
- Wu, J., & Lu, X. (2013). Effects of extrinsic and intrinsic motivators on using utilitarian, hedonic, and dual-purposed information systems: A meta-analysis. *Journal of the Association for Information Systems*, 14(3), 153.
- Xiang, Z., & Gretzel, U. (2010). Role of social media in online travel information search. *Tourism management*, 31(2), 179-188.
- Xifra, J & Chias, J. (2008) *Las Relaciones Públicas y el Marketing*. Barcelona: UOC.

STUDY OF FEMALE ENTREPRENEURSHIP. AN EMPIRICAL EVIDENCE IN THE MUNICIPALITY OF LEÓN IN NICARAGUA

Justa Pastora Amador Ruiz

National Autonomous University of Nicaragua, León
Department of Business Economics, Universidad Politécnica de Cartagena
(aj.briones@upct.es)

Antonio Juan Briones-Peñalver.

Faculty of Business Science, Universidad Politécnica de Cartagena
(justaamador4@gmail.com)

ABSTRACT

Women's entrepreneurship is one of the main challenges in economic growth. In this sense, within the context of creating new companies, it can be considered as one of the main mechanisms that contributes to achieve the desired wellbeing in society. Women's entrepreneurship reduces unemployment, increases innovation, improves competitiveness and favors economic growth significantly.

This article aims as analyzes the influence of the socioeconomic and psychosocial factors involved in female entrepreneurship. For this purpose, we used a sample of 101 women entrepreneurs in the municipality of León, Nicaragua. We applied Factor Analysis and Regression Analysis, in order to find out the relationship between the considered factors. Some results indicate that all variables considered have a significant influence on the probability of entrepreneurship. The capacity of entrepreneurial women increases when they have skills, knowledge and an early contact in the business world.

Keywords: Woman, Entrepreneurship, Socio-demographic and Psychosocial Factors.

1. INTRODUCTION AND OBJECTIVES

In recent years, there has been an increase of women participation in entrepreneurship within the business environment. A major challenge for any country is to be able to take the entrepreneurship to a higher development stage (Amorós, Guerra, Pizarro, & Poblete, 2006), this needs to be done in order to consolidate the activities, which imply a greater impact in terms of employment, greater possibilities to grow in innovation and transformation that contribute to greater economic growth, competitiveness, quality and increase in the scope of the enterprise (Acs & Amorós, 2008).

Undoubtedly, in Nicaragua, as in most developing countries, women entrepreneurs have undergone major changes in the last decades, such as their widespread incorporation in the workplace, the improvement in their education level and their participation in the different social and political fields.

In this context, the diversity of women entrepreneurs in the municipality of León, Nicaragua, is characterized mostly by informal enterprises. This situation forces women to explore new patterns of growth and economic development within their family nucleus and their communities, taking into account their regional differences. That is to say how cultural influences, ways of being and thinking as defined in the different regions of the country (at a general level and particularly in the municipality of León) shape different ways of understanding women entrepreneurship and entrepreneurial development.

Another aspect worth mentioning is the fact that women entrepreneurs lack the necessary knowledge to develop their businesses. For this reason, when they are affected by difficulties they face in the market, such as globalization challenges, the technological revolution, and localization; overcoming these challenges will allow them to achieve sustainable competitive advantages in order to surpass social inequality.

Governments and international economic organizations have promoted policies and programs aimed at encouraging initiatives led by women in business. Hence, the incentives provided often serve the purpose of recognizing entrepreneurial women as an important social phenomenon. In this sense, in the context of creating new companies, women entrepreneurship, can be considered as one of the main mechanisms that contributes to achieve the desired welfare for society in an important way (Carter & Shaw, 2006).

This study has a two-fold purpose. Firstly, to conduct a literature review of the different factors that explain the role of entrepreneurship to increase the dynamism in the economy from the women's point of view. Secondly, to analyze the attitudes toward entrepreneurship in the municipality of León and, to determine if these variables are encouraging the economic strengthening of the city and consolidating its investment initiative. Thus, the scientific interest of the present study is aimed at helping design more effective policies to promote entrepreneurship in cities and recommending ways of fostering favorable women entrepreneurs' attitudes and initiatives.

2. LITERATURE REVIEW AND CONCEPTUAL MODEL

During the last decades the role played by the entrepreneurial woman, has undergone a great transformation process in relation to the woman's social position. The magnitude of this change is reflected in significant areas including a series of practices related to learning, whether formal or informal. Such practices are adopted on an ongoing basis with the aim of improving knowledge, skills and competences (Cobo, 2012), key elements in stimulating the development of entrepreneurial activity to generate wealth and employment (Audretsch & Keilbach, 2004).

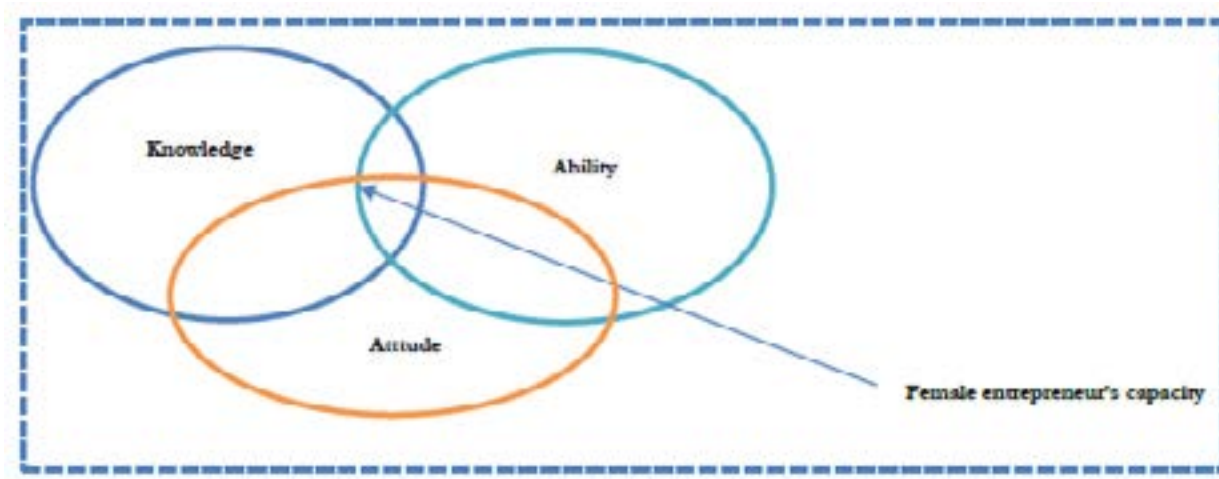
In order to understand the evolution and development of economy it is necessary to review the contributions that have been made in recent years regarding the concept of the entrepreneur. Nowadays, the focus of researchers is on the so-called entrepreneur or Schumpeterian entrepreneur, for his contribution to economic growth, both in social terms of employment generation and in social welfare (Rodríguez & Jiménez, 2005; Schumpeter, 1934), there is a broad spectrum of connotations in the field from different perspectives: economy, sociology and psychology. The creation of a sociological climate, for example, includes perceptions of what it is commonly understood or known as such, that it to say a socio-cultural environment that values and rewards entrepreneurship (Rodríguez, 1999). For instance, the presence of a woman's character, who constantly assumes the risk of success or failure in her daily life. This character gives her the ability to create innovative enterprises, without forgetting risk acceptance and stimulation of competition.

In the literature on business dynamics, there have been many studies that attempt to explain the approach associated with entrepreneurship to envision new business opportunities (Álvarez, Noguera, & Urbano, 2012; Brush & Gatewood, 2008), and the importance of knowledge to explain what knowledge is and how the success of female entrepreneurship is determined (Baron, 2006; Chen, Greene, & Crick, 1998). Based on this approach, entrepreneurship requires some personal variables that describe the particular perceptions of each individual, and how these have a significant impact on the competences and abilities to find different alternatives for solution and achievement of objectives (Arenius & Minniti, 2005), specifically, from a very general perspective, there is some consensus (in both developing and developed countries) that the need to seek greater compatibility between work and family is a predominant factor in women's entrepreneurial dynamics (Castiblanco, 2016; Shabbir & Di Gregorio, 1996).

This influence is also shown in the field of entrepreneurship highlighting the determining factors in the understanding of individual behavior differences (Brandstätter, 2011), as reflection of individual actions. Success depends on a set of conditions such as culture, education, information, available technology and social norms (Acs & Amorós, 2008; Carree, Van Stel, Thurik, & Wennekers, 2002), as well as other individual variables related to personality and ability (Wennekers, Stel, Thurik, & Reynolds, 2005). From the psychological approach, entrepreneurship depends largely on the disposition and willingness of individuals to initiate an independent business, the skills of women involved and the efforts for the necessary successful implementation (Kantis, 2004; Kantis, Angelelli, & Moori, 2004).

Among the individual variables, we find, in turn, the convergence of three basic elements of entrepreneurship (figure 1), those objective variables, **knowledge**, **skills** to know how to apply them, (aptitude) that can be acquired and developed and with another series of cognitive variables that relate to the way in which the female entrepreneur processes the information that comes from the environment **attitude (personal attributes)** and the perception she has of existing opportunities, her own abilities, and the risks inherent in the business.

Figure 1 represents the interrelation among the three factors:



Source: Own elaboration

One of the explanatory factors that try to measure business intentions is the attitude of the individual towards the behavior of the company. That is to say, personal evaluation positive or negative contributes to the intention to create a company is greater this behavior (Linan, 2008).

The capacity to pursue entrepreneurship is a concept little used in the psychological literature (Bird & Wennberg, 2016), however, the impact of the leader's intentions on skills and competencies is made up of the skills and aptitudes, knowledge and qualities of entrepreneurial women and result from the development of skills acquired throughout their lives from learning and experience (Bird, 1988).

Creativity is usually defined as “the ability” inherent to human beings. As defined by entrepreneurship, through creativity women are able to extract new forms of creativity and establish new relationships. This link to knowledge can be labeled as the capacity to create business knowledge (Lee, Florida, & Acs, 2004).

In this sense, Schumpeter (1934) considers that within economies that operate in a constant state of imbalance, the motivations of the individual act as drivers of business conduct, lies in technological, political, social, regulatory and other types that offer a continuous supply of new information about different ways of using resources to improve wealth (Shane & Venkataraman, 2000).

According to Drucker (1985), *creativity and innovation* are the specific instruments of entrepreneurs representing the way in which entrepreneurs exploit change as a previously non-existent opportunity (Verheul & Thurik, 2001), *creativity and innovation* involve an individual's intention of creating something new, the ideas to develop products / services, abilities to find solutions to their needs, and desires to continue to learn (Carter & Ram, 2003).

The successful entrepreneur, as Bandura (1986) explains, arises from a highly motivated person who believes he/she possesses skills, qualities and behavioral characteristics to perform his/her tasks, successfully (Amorós, 2011), important components associated with success are the initiative and optimism that usually emerge as a result of personal skills and creative and innovative abilities, which develop from the surrounding reality (Langowitz & Minniti, 2007).

The multifaceted and dynamic nature of entrepreneurial women has focused on different factors that explain their position in order to increase the dynamism in economy (De Bruin, Brush, & Welter, 2007), these factors can be distinguished. Firstly, the economic approach, aspects related to economic rationality (Álvarez & Urbano, 2013), roughly speaking it is argued that female entrepreneurship is due to their entrepreneurial capacity and is related to the performance of the company, sector or country (Anna, Chandler, Jansen, & Mero, 2000; Carter & Shaw, 2006), secondly, the psychological approach which states that the psychological traits are the determining factors of the entrepreneurial activity (Carter & Shaw, 2006). Finally, the sociological approach, which points out that the socio-cultural environment, conditions the decision to create a company (Alvarez, Urbano, & Amorós, 2012).

One of the entrepreneurship models to which more reference is made involves the entrepreneurial process, the entrepreneur's personality traits, and the environment in which the process is developed (Acs & Amorós, 2008; Alvarez, Urbano, & Amorós, 2012). Within the studies carried out, focused on the entrepreneur and her act of innovation, three main lines of research are recognized. These studies are based on the approaches that characterize female entrepreneurship, central object of this study:

2.1 Economic approach: Here we will consider among the demographic factors the variables age and education

From the point of view of the benefit to the entrepreneur (Veciana, 2007), indicates that this aspect has been object of study from its origins. The classic economic theories tend to incorporate aspects like “entrepreneur risk”, innovation, and leadership. The entrepreneurial nature, from the economic point of view, implies a unique continuous process that combines both the individual's internal factors (such as personality, values, objectives, etc) with the external factors such as resources allocation, and decision-making, (society, the government, economy, etc.). This combination helps some specific people (the entrepreneurs) to visualize opportunities that will eventually become projects likely to implement (Audretsch & Keilbach, 2004).

In the previous literature reviewed, socioeconomic factors, specifically the age variable, is a predictor commonly used to establish causes of success, (Castiblanco, 2016; Holienka, Jančovičová, & Kovačičová, 2016), asserting that the probability of pursuing entrepreneurship increases as the age of the person increases (Langowitz & Minniti, 2007), family and personal responsibilities increase the perception of business risk, implying that the probability of starting a new business peaks (Levesque & Minniti, 2006), as age increases and the number of women interested in starting a business decreases (Arenius & Minniti, 2005), there is no empirical evidence showing that age influences differently at the time of pursuing entrepreneurship (Holienska *et al.*, 2016).

Most research suggests that there should be a positive relationship in socio-demographic characteristics, since a society can benefit from women of all ages. In a business context, socio-demographic factors have been used in the characterization of entrepreneurial women (Castiblanco, 2016).

Based on these arguments, we propose the first hypothesis:

Hypothesis 1. The probability that a woman intends to pursue entrepreneurship: age has an effect on the intention to pursue entrepreneurship.

2.2 Education

Research on female entrepreneurship considers the educational level as a major human capital indicator. Given its nature, female entrepreneurship necessarily requires the development of certain capacities (Verheul & Thurik, 2001), and implies different knowledge base and information (Shane & Venkataraman, 2000), this difference, in turn, may explain that women with more training and experience are more likely to take advantage of their knowledge, contacts and capital saved (Bosma, Hessels, Schutjens, Van Praag, & Verheul, 2012), however, these same women are more reluctant to introduce innovations and technology into the market.

(Carter & Shaw, 2006), evidence this; in their review, they find that there is a great variety of ways to classify women's achievement, which involves the level of education and work experience. Veciana (1989), in turn, indicates in his study that

the entrepreneur's level of education is not decisive for the creation of companies. According to Bird & Wennberg (2016), the positive relationship between entrepreneurship and education, which has emerged in more developed countries, suggests that adopting a strategy would be a predominant factor in women's entrepreneurial dynamics (Arenius & Minniti, 2005).

On the other hand, the presence of women is almost a testimony in the construction of that activity where the skills required to establish a business are minimal and relatively easy to learn, focusing on trade and professional services (Pilková, Jančovičová, & Kovačičová, 2016).

Authors such as Angelelli & Llisterri (2003), Ejermo & Hansen (2015), Bills (2015), o Minniti & Naudé (2010), argue that structural problems in women's education also limit their access to technical training. This limitation may in turn affect their access to knowledge of new technologies, which can potentially benefit the development and growth of their enterprise. However, qualitative research carried out in Latin America show that most of the training courses offered are difficult to adapt to match women entrepreneurs' needs (Powers & Magnoni, 2010).

Hypothesis 2: Having an education exerts a positive effect on women who intend to pursue entrepreneurship

2.3 Psychological Approach. Among the factors, we will consider the variables related to perception of self-confidence (ability), family background, and knowledge of another entrepreneur

From a psychological perspective, some authors have attempted to understand the personality traits that define an entrepreneur and his/her decision-making processes (Robinson, Stimpson, Huefner, & Hunt, 1991), this approach implies a radical change from the economic approach, based on the methodological point of view (Veciana, 1999).

Empirical research that tries to determine the psychological characteristics in a regional or cultural scope evidences the existing differences between entrepreneurs and those who are not, and between those who succeed and those who do not, without exemption of uncertainty and risk and those who decide to develop their professional career (Veciana, 1999).

2.3.1. Abilities

According to Bandura and Walters (1977), the capacities and abilities arising from business practices largely explain their behavior and subjective character. This is based on the extent to which the entrepreneurial woman perceives the capacities she has herself, with the objective of achieving competitive advantage (Krueger, Reilly, & Carsrud, 2000).

(Anna *et al.*, 2000), consider that the perceived results of a woman's self-efficacy can improve when integrating into the local market, through a favorable environment in which she integrates that can be useful to differentiate her capacities. This new dimension implies for women the following capacities (1). Perceived capacity to recognize an opportunity, (2). Ability to generate ideas and (3). Ability to recognize, imagine and take advantage of the opportunity (this ability is referred to as competence). These abilities play an important role in the survival and growth of the company.

Hypothesis 3: The belief in having unique skills has a positive effect on women entrepreneurs

2.3.2. Family background

Family background plays a determining role in learning when making a decision to create a company where different effective components develop: solidarity, skills, habits and attitudes that are part of this conception, especially in business management (Gibb, 1987). The influence of an individual from the part of parents and/or people with a degree of closeness and affection is explained by mechanisms of social learning theory (Bandura & Walters, 1977), in many cases, more personal than operational support is required at the enterprise level (Noguera, Alvarez, Merigo, & Urbano, 2015).

In Latin America, evidence indicates that the educational system and family are not the most effective contexts for motivating and training entrepreneurs (Angelelli & Llisterri, 2003), researchers have not yet considered relevant how the family can trigger events that stimulate recognition of entrepreneurial opportunities (Aldrich & Cliff, 2003), although it is recognized that family members contribute to the formation of important values, such as the ability to work hard (Angelelli & Llisterri, 2003).

Hypothesis 4: Having a family background in entrepreneurship matters has a positive effect on the establishment of a company

2.4 Sociological approach

Among the factors, we will consider the variables related to perception of self-confidence (ability), family background, and knowledge of another entrepreneur.

The first studies under this approach appeared in the early twentieth century, and more systematically in the 1960s (Veciana, 1999), from a perspective that includes sociological and cultural elements. This approach starts from a broader analysis, considering that within creation of new enterprises the characteristics are acquired in terms of: personal experiences (family origin, education, previous occupational experience, lifestyle, class structure, etc.) and the environment in which the new enterprise will be developed (facilitator environment, corporate culture), (Graña, 2002).

2.4.1. Social Capital

A major number of businesses are aware that associativity might contribute as a way of spontaneous cooperation between small businesses. This constitutes a social capital in order to favor their economic growth and increase their competition.

In Latin America, (Mundial; & CEPAL, 2010), they analyzed in their empirical study the raise of women associations and how they play an important role in facilitating women's access to social capital. From literature to social capital, De Nieve and Briones (2009), distinguish three reasons that motivate the entrepreneurial activity: a) the economic, characterized by the exchange of resources or activities; b) the strategic, associated to the value produced in the networks, and, c). the social, based on the trust of the actors involved in the network.

On the other hand, the fact of understanding social capital as an entrepreneurial process (Aldrich, Zimmer, & Jones, 1986), might be a predicting variable in the probability of starting a business, as contact networks are important resources of knowledge and new ideas (Davidsson & Honig, 2003), as facilitators of female entrepreneurship, self-employed women examine their human and social capital (Langowitz & Minniti, 2007), this implies the existence of increased contacts to develop cooperation agreements in accordance with the discovery of opportunities (Ha & Bostjan, 2003) and may exert influence on the propensity to innovate and undertake entrepreneurial initiatives (Ortíz García & Millán Jiménez, 2015).

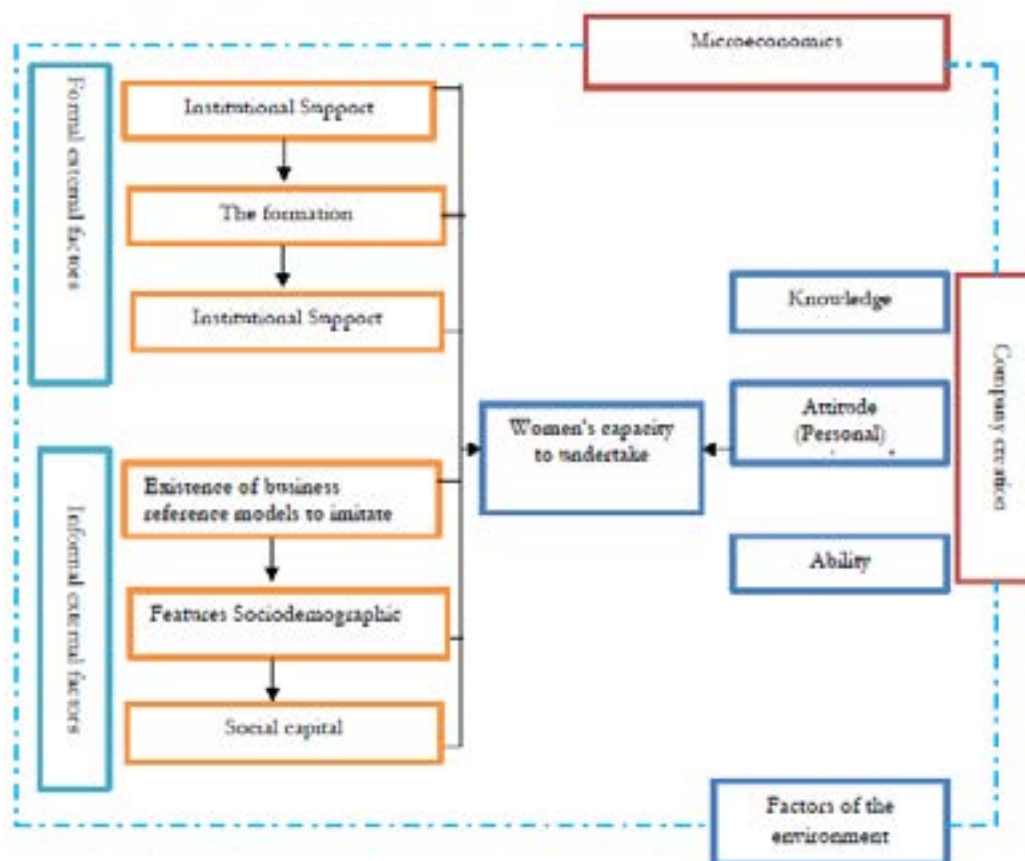
From another perspective, it has been pointed out that the usefulness of social contacts lies in information (Kim & Aldrich, 2005), as well as in networks as crucial elements to access financing, technology, commercial channels, as well as links with suppliers and investors (Aldrich *et al.*, 1986), at the same time, there is influence on women's self-confidence levels and, therefore, in their intention to be entrepreneurs (Ventura & Quero, 2013).

Empirical evidence indicates that women predominantly implement informal social networks (personal and close ties), (Ramos, Medina, Lorenzo, & Ruiz, 2010), both of which may be indicative of the existence of a network of entrepreneurial contacts that provides them with relevant social capital for the formation of their intention to pursue entrepreneurship. In their study, Ruiz & Cordura (2012), indicate that one of the factors that hinder women's initiative, are social networks. As an example, microenterprises, such as street vendors, often struggle to earn enough money, so that social networking and capital building are particularly important in developing new business contacts.

Hypothesis 5: Having agreements or alliances with companies of the industry, cause a positive effect on the interest to develop technology and innovation in the establishment of a company. Finally, it should be emphasized that the theoretical and empirical evidence show

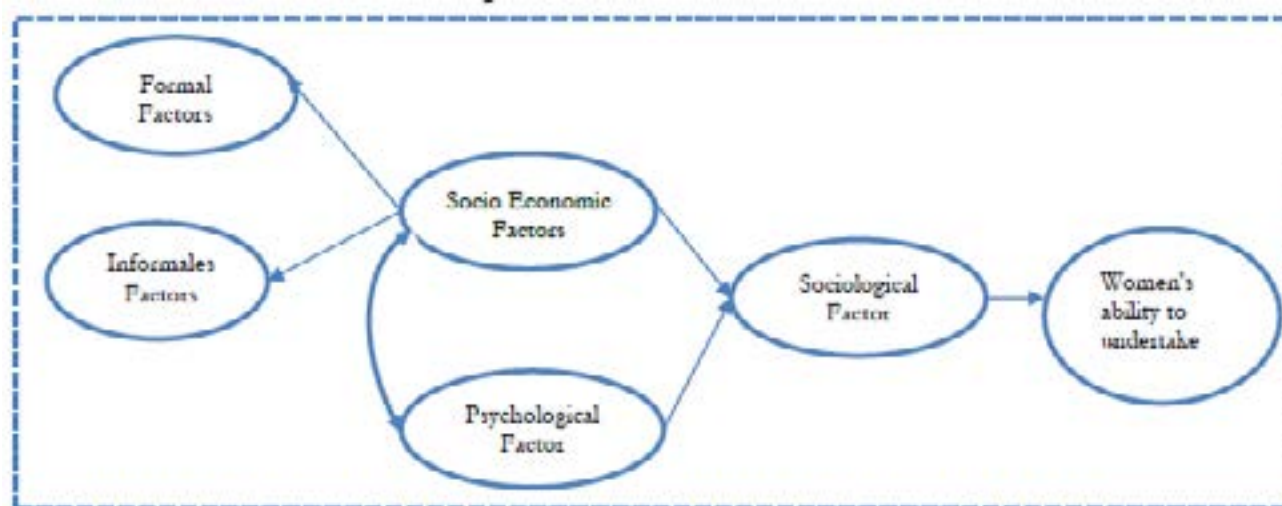
Finally, it should be emphasized that the theoretical and empirical evidence show certain tendencies about the type of entrepreneurship that women choose, the attitudes and motivations that drive them to pursue entrepreneurship or not, and their level of education. These aspects are framed to some extent within the factors identified in Figure 2.

Figure 2. Factors that [+] contribute and [-] affect the creation and development of the female entrepreneurship



Source: Authors elaboration

Figure 3. Theoretical model



Source: Authors elaboration

3. METHODOLOGY

3.1 Variables and Measurement

In order to measure our dependent variable, we focus on one item of the questionnaire applied through a personal survey in a field study. As support document, we used a self-administered questionnaire directed to businesses' owners. **Do you consider that lack of knowledge, lack of training, experience, and family responsibilities impose obstacles?** It is a dichotomous variable, which takes the value 1 for an affirmative answer and value 2 for a negative answer.

Regarding socio-demographic factors, to measure age we used a continuous variable that takes ages 25-34 in value 1, ages 35-44 in value 2 and ages 45-82 in value 3. For education, women with primary education are included in value 1, women who achieved secondary school level are included in value 2, and those who had higher education (bachelor degrees or graduate levels) are included in value 0.

Cognitive variables were measured through a Likert-type variable (values 1 to 7).

Regarding relational variables, they were also measured through a Likert-type variable (values 1 to 7)

4. EMPIRICAL STUDY

4.1 Sample

To test our model, the study population consists of entrepreneur women from the municipality of León, Nicaragua, with a sample of 101 women, with a confidence level of 95% and a standard error of 5%.

4.2 Analysis and Results

Before carrying out the relevant statistical analysis, it is necessary to ensure that adequate tools are being used to measure the concepts that we intend to measure. Therefore, we corroborated the reliability and validity of the scales used to measure each of the variables.

To measure reliability, Cronbach's alpha was used. In order to increase the values of the alpha coefficient, the criterion of item-total correlation was followed to determine if an item should be eliminated (Wang, 2003). The validity of each scale was checked by factorial analysis. With this analysis we tried to verify if each scale was measuring a single concept.

For all variables, Cronbach's alpha values were higher than the minimum recommended. All the items showed an item-total correlation higher than 0.3, so all the initial items were kept.

Before the factorial analysis, the suitability was determined using the Kaiser-Meyer-Olkin or KMO statistic and the Bartlett sphericity contrast. Satisfactory values were obtained for all variables, both for the KMO index and for the Bartlett test, so that the various factor analysis were carried out.

Table 1. Factor analysis for the variable Education. Rotated Components Matrix

	Factors					
	Education					
	Primary		Secondary		University	
	1	2	1	2	1	2
Primary and secondary education encourages creativity, self-sufficiency and personal initiative	,246	,804	,761	,201	,367	,695
The educational level in women entrepreneurs directly affects the degree of sophistication, the possibilities of innovation and the growth potential of the new enterprises	,897	,267	,285	,811	,703	,183
I believe that higher education has contributed to the strengthening and development of my leadership	,779	-,135	,583	,443	,784	,270
Universities and colleges provide quality preparation for the creation of new companies	-,688	,345	,718	-,024	,074	,890
Vocational training and continuing education systems provide quality preparation for new businesses establishments.	-,453	,762	,815	-,377	,677	,272
The educational level in women entrepreneurs affects the values transmitted by the family and social environment, and by entrepreneur models.	,126	-,632	,224	-,634	,727	,035
	KMO=0,460 $\chi^2=32,787$ p<0,005		KMO=0,582 $\chi^2=42,033$ p<0,000		KMO=0,803 $\chi^2=70,734$ p<0,000	

Source: SPSS development of the survey of female entrepreneurs

Extraction method: Principal component analysis. Rotation Method: Varimax Standardization with Kaiser.

In the case of the Education variable, using factorial analyzes, the results indicate that there are significant differences in the level of education; although it is important to note the differences in the level of education of primary women ($\chi^2=32,787$ p <0.005) ensures that the educational level directly affects the degree of sophistication. In those with secondary education ($\chi^2 = 42,033$ p <0,000), it affects the possibilities of innovation and the growth potential of the new enterprises. In the case of women with a higher formation ($\chi^2= 70,734$ p <0,000), their education has contributed to the strengthening and development of their leadership, which may be a disadvantage in relation to women who are not trained to pursue entrepreneurship in certain sectors (Brush, 1992). The first part of Table 1 clearly shows the predominance of female education related to their educational level, a fact that agrees with the arguments presented by the literature on this subject.

Table 2. Factor analysis for the variables Creativity and Innovation. Rotated Components Matrix

	Factors					
	Age					
	25 to 34		35 to 44		45 to 82	
	1	2	1	2	1	2
1. Women with the ability to generate ideas habitually are usually related to a greater creative talent.	,938	-,290	,559	,659	,728	,291
2. I have innovative ideas	,803	-,286	,772	-,418	,828	-,0.80
3. Ability to find solutions to your needs and desires through creative processes	,787	,490	,897	,276	,783	,408
4. The discovery of a new product/service	,413	,792	,902	,306	,223	,818
5. The development of a new production method	-,107	,859	,025	,923	,074	,846
	KMO=0,479 $\chi^2=44,049$ p<0,000		KMO=0,645 $\chi^2=52,775$ p<0,000		KMO=0,707 $\chi^2=94,387$ p<0,000	

Source: SPSS development of the survey of female entrepreneurs

Extraction method: Principal component analysis. Rotation method: Varimax Standardization with Kaiser.

In terms of socio-economic factors, the average age is 49 years. Table 2 shows the factorial analysis of the variables. We deduce that all the proposed variables that make Model 1 have a significant relation with the probability that the woman with personal abilities and creative and innovative capacities is a potential entrepreneur. Thus, as age (45 to 82) increases, it exerts a negative effect and this probability decreases ($\chi^2 = 94.387$ p <0.000). The analysis show that, when the age of the

entrepreneurial woman is in the group (25 to 34), ($\chi^2 = 44.049$ $p < 0.000$) within the creativity and innovation scale; this is a predictor that prevails in the first five items with greater intensity on initiative taking to generate ideas related with the skill through creative processes. For the entrepreneurial women in group (35 to 44), ($\chi^2 = 52.775$ $p < 0.000$), the probability of implementing their skills prevails. It seems that there is an age range acting an inhibiting barrier when women start a business. However, for entrepreneurial women with few creative abilities this barrier occurs at older ages, while entrepreneurs with creative abilities would have a greater “timeframe” to carry out their initiatives. These results confirm partly the proposed hypothesis (Castiblanco, 2016; Holienka *et al.*, 2016), that women entrepreneurs with a high level of education frequently require to start their entrepreneurial activities later.

Table 3. Factor analysis for the variable Role Model in the social context

Models with parents and friends	,783
Continue with a family tradition and entrepreneur friend	,717
Relatives experiences in entrepreneurship	,840
Business culture in the region	,655
Achieve a better social status	,844
Follow example of successful businesses directed by women	,735
KMO=0,784 $\chi^2=295,49$ $p < 0,000$	

Source: SPSS development of the survey of female entrepreneurs

In order to determine the minimum number of factors, a confirmatory factorial analysis is carried out in order to evaluate the reliability and validity of the measurement scales used in this investigation Table 3 presents the Beta Standardized coefficients that constitute a measure of the contribution of each variable to the predictive model. The higher values indicate that any change in the predictor variable may have a significant effect on the criterion variable; since statistics take values very close to 0.8, therefore none of them will be excluded.

The significance of the Barlett test ($\chi^2 = 295.49$ $p < 0.000$) and the KMO (.784) showed an adequate correlation between the items and a good sample adequacy respectively. An initial estimation of the model indicates that two elements explain the experience scales of family in entrepreneurship and experience of family in entrepreneurship. They showed significant values in their influential role on the variable role model in the social context, which shows that women entrepreneurs do not come from business households and the vast majority, do not have an early contact in the business world. This characteristic allows us to verify statements (Gibb, 1987), that family history plays a determining role in learning when making a decision to start a business and in many cases entrepreneurs require more personal than operational support at the corporate level (Noguera, Alvarez, Merigo, & Urbano, 2015). Consequently, the H3 hypothesis is also accepted.

Table 4. Factor analysis for the variable Results Agreement or Alliances with Companies

	Factors
Agreements or alliances with industry companies	,805
Agreements with a variety of participant businesses	,894
Agreements or alliances with providers, distributors and clients	,632
Agreements or alliances with public and private universities	,767
Alliance for joint production	,890
KMO=0,766 $\chi^2=303,64$ $p < 0,000$	

Source: SPSS development of the survey of female entrepreneurs

From the Factor Analysis model for the variable Results Agreement or Alliances with Companies, referring to the informal factor of the contact networks, it is evident that the scales indicate a correct approach of the factorial structure, given that statistics take very close values; therefore, none will be excluded. Subsequently, a relationship between the level of analysis and agreements with entrepreneurs was explored. The results indicate a significance of the Barlett test ($\chi^2 = 303,64$ $p < 0.000$) and the KMO (0.766). An initial estimate of the model indicates that to pursue entrepreneurship it is necessary to be surrounded by a business ecosystem. In this case it negatively affects entrepreneurship in the municipality of León. The beta exponential indicates that there is a statistical association between the level of analysis and the social capital factor. In the case of the municipality of León, female entrepreneurs are observed to practice strategies with suppliers, distributors and customers. As a result, being surrounded by a business ecosystem is determined by the confidence of the actors who participate in the network and are likely to increase the effectiveness in their businesses. The presence of women in the municipality of León, Nicaragua, is almost a testimony in the construction of those activities where the skills required to

establish a business are minimal and relatively easy to learn, concentrating on trade and professional services (Pilková *et al.*, 2016)

The results show that having entrepreneurial families, (both in innovation, as highly qualified personnel), acquiring a production system, incorporating new products in the market, and accessing and specializing in the market segment; are all factors that influence the independent variable in a positive way

Table 5 shows the results for logistic regression in order to predict the influence of entrepreneurial relatives as a control variable based on cognitive and socio-personal factors. It is observed that coefficient B differs significantly from 0; therefore, it is understood that it produces changes on the dependent variable indicating the inexistence of a relationship. Although no hypothesis was proposed, in the case of some authors who used this variable, we found out that having family entrepreneurs does exert an influence (Gibb, 1987; Veciana, 1989).

Table 5. Regression analysis of the effect of the independent variables on the results

	Has an Entrepreneurial Family
Independent Variables	
Research and Develop key technology [I+D+I]	0,24**
Has high-qualified staff in technology	0,20**
Acquire specialized production systems	-0,299
Incorporates new products and services into the market.	0,470***
Access and specialize in market segments	-0,156
	R ² corrected= 0,024

Source: SPSS development of the survey of female entrepreneurs

*p<0,05 ** p < 0,01 *** p < 0,000

On the other hand, hypothesis 3 proposed that cooperation influences innovation positively. The relationship between the two variables was analyzed (see Table 6), showing that, in the case of Age, Education and Skill, they positively influence innovation. Consequently, hypothesis 3 is accepted. However, in the businesses of the municipality of León, only those cases, in which women have a higher education result in a greater innovation. Therefore, hypothesis 3 is partially accepted.

Table 6. Regression analysis of the effect of Innovation

	SPAIN
Age	0,108*
Education	- 0,385***
Ability	0,062
	R ² corrected= 0,146

Source: SPSS development of the survey of female entrepreneurs

*p<0,05** p < 0,01 *** p < 0,000

Finally, hypothesis 5 suggested that social capital, in relation to the informal factor, can foster cooperation. The analysis in Table 6 confirm that education positively influences cooperation with both direct and indirect agents. Therefore, hypothesis 5 is also accepted. No practice of social capital results in greater cooperation with competition. Therefore, hypothesis 5 can only be partially accepted.

5. CONCLUSIONS

The present study has analyzed with empirical evidence the different factors that explain the position of entrepreneurial women to increase their dynamism in the economy in the municipality of León, Nicaragua. We tried to prove the three-dimensional conception of the construct, based on the economic, psychological and sociological defended by (Álvarez & Urbano, 2013), this influence of the three-dimensional conception globally incorporates, aspects related to economic rationality and the action of entrepreneurial women in the light of change. Two basic premises support and guide the research conducted. Firstly, socio-economic variables try to test the possible influence of entrepreneurial women's ability (Anna *et al.*, 2000; Wennekers, Stel, Thurik, & Reynolds, 2005), on psychological factors. Such factors determine the understanding of the processes (Alvarez, Urbano, & Amorós, 2012), that give rise to success in the implantation of the entrepreneurial woman's personality. Secondly, the socio-cultural environment can condition the decision to create a company (Alvarez *et*

al., 2012). In this sense, the perceptions of entrepreneurial skills have a very significant effect on the three motivational constructs considered (aptitude, ability and training).

As has been shown by factor analysis, given the relationship among these three elements they are interrelated, so that some empower others maintaining a common goal: women's attitude towards business behavior and self-efficacy. Self-perceived entrepreneurial skills are closely linked to this variable. However, business skills are measured by a list of very specific skills. In contrast, positive or negative attitudes that contribute to the intention to pursue entrepreneurship have been measured as an added sense of capacity or control. Therefore, the perception that these skills are owned traits strengthens the link with knowledge, which can be labeled as the ability to create business knowledge.

This research provides a first radiograph of entrepreneur women, identifying the central peculiarities of women's entrepreneurial spirit in the municipality of León, Nicaragua and in its companies.

From the results obtained, the average age is 49 years. In the factorial analysis, the variable age presented a highly significant effect with negative coefficient β in older women. This relationship increases as soon as it is introduced in the model of Creativity and Innovation, which leads us to interpret how age acts as an inhibiting barrier when starting a business.

If we take into consideration, the influence that education has according to our results, a high level of education requires social self-evaluation of entrepreneurship and it has a positive effect on the perception of skills. This finding may also be important for business policy in general, and specifically for education.

The direct influence of values on the antecedents of relatives in the intention to pursue entrepreneurship indicates aspects linked to the influence of a closer environment. Such environment comprises models of parents or friends, and follows examples of successful companies, affective elements that are influential on the assessment of entrepreneurship. This shows that entrepreneur women do not come from business households and the vast majority do not have an early contact in the business world. This characteristic makes it possible to verify that, due to the need to seek greater personal and family compatibility, ranging from genetics to education. It is a predominant factor in the entrepreneurial dynamic and there is no significant effect on the Role Model assessment.

Regarding the informal factor of the contact networks, it is evident that the lack of affiliation to mentors linked to business success and the cultural aspect indicates that entrepreneur women from León tend to build businesses "imitating" business models where the required skills to establish themselves are minimal and relatively easy to learn, concentrating on trade and professional services. This proves the statements by (Pilková *et al.*, 2016) therefore the development of skills such as opportunity, recognition, creativity, leadership, communication and innovation, are necessary for business success.

Finally, we believe that it should be analyzed the inclusion of specific contents in Education as well as the compatibility between work and family for the entrepreneurial spirit that explain the decline of its nature. The abilities of entrepreneur women are essential for understanding business processes. These contents would be a very important complement to visualize new business opportunities.

ACKNOWLEDGEMENTS

This paper is financed by: National Autonomous University of Nicaragua, León/ Polytechnic University of Cartagena (UCPT)/2017.

REFERENCES

- Acs, Z.J., & Amorós, J.E. (2008). Entrepreneurship and competitiveness dynamics in Latin America. *Small Business Economics*, 31(3), 305-322. doi: 10.1007/s11187-008-9133-y
- Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: toward a family embeddedness perspective. *Journal of Business Venturing*, 18. doi: 10.1016/s0883-9026(03)00011-9
- Aldrich, H., Zimmer, C., & Jones, T. (1986). Small business still speaks with the same voice: a replication of 'the voice of small business and the politics of survival'. *The Sociological Review*, 34(2), 335-356.
- Álvarez, C., Noguera, M., & Urbano, D. (2012). Condicionantes del entorno y emprendimiento femenino. Un estudio cuantitativo en España. *Economía industrial*, No. 383, 2012, págs. 43-52.
- Álvarez, C., & Urbano, D. (2013). Diversidad cultural y emprendimiento. *Revista de Ciencias Sociales (Ve)*, 19(1).
- Álvarez, C., Urbano, D., & Amorós, J. E. (2014). GEM research: achievements and challenges. *Small Business Economics*, 42(3), 445-465.
- Amorós, J. E. (2011). El proyecto Global Entrepreneurship Monitor (GEM): una aproximación desde el contexto latinoamericano. *Academia. Revista latinoamericana de administración*, (46), 1-15.
- Amorós, J. E., Guerra, M., Pizarro, O., & Poblete, C. (2006). Mujeres y actividad emprendedora en Chile. *Global Entrepreneurship Monitor*.
- Angeles, P., & Llisterri, J. J. (2003). *El BID y la promoción de la empresarialidad: lecciones aprendidas y recomendaciones para nuevos programas*. Inter-American Development Bank.
- Anna, A. L., Chandler, G. N., Jansen, E., & Mero, N. P. (2000). Women business owners in traditional and non-traditional industries. *Journal of Business venturing*, 15(3), 279-303.

- Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small business economics*, 24(3), 233-247.
- Audretsch, D., & Keilbach, M. (2004). Entrepreneurship capital and economic performance. *Regional studies*, 38(8), 949-959.
- Bandura, A., Freeman, W. H., & Lightsey, R. (1999). Self-efficacy: The exercise of control. *Journal of Cognitive Psychotherapy*, 13(2), 158-166.
- Baron, R. A. (2006). Opportunity recognition as pattern recognition: How entrepreneurs “connect the dots” to identify new business opportunities. *The Academy of Management Perspectives*, 20(1), 104-119.
- Bills, N. (2015). Education and Entrepreneurship in Amman, Jordan.
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of management Review*, 13(3), 442-453.
- Bird, M., & Wennberg, K. (2016). Why family matters: The impact of family resources on immigrant entrepreneurs' exit from entrepreneurship. *Journal of Business Venturing*, 31(6), 687-704.
- Bosma, N., Hessels, J., Schutjens, V., Van Praag, M., & Verheul, I. (2012). Entrepreneurship and role models. *Journal of Economic Psychology*, 33(2), 410-424.
- Brandstätter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. *Personality and individual differences*, 51(3), 222-230.
- Brush, C. G. (1992). Research on women business owners: Past trends, a new perspective and future directions. *Entrepreneurship: Theory and Practice*, 16(4), 5-31.
- Brush, C. G., & Gatewood, E. J. (2008). Women growing businesses: Clearing the hurdles. *Business Horizons*, 51(3), 175-179.
- Carree, M., Van Stel, A., Thurik, R., & Wennekers, S. (2002). Economic development and business ownership: an analysis using data of 23 OECD countries in the period 1976–1996. *Small business economics*, 19(3), 271-290.
- Carter, S., & Ram, M. (2003). Reassessing portfolio entrepreneurship. *Small Business Economics*, 21(4), 371-380.
- Carter, S. L., & Shaw, E. (2006). Women's business ownership: Recent research and policy developments.
- Moreno, S. E. C. (2016). Female entrepreneurship in a forced displacement situation: The case of Usme in Bogota. *Suma de Negocios*, 7(15), 61-72.
- Cobo, C. (2012). Competencias para empresarios emprendedores: contexto europeo. *Proyecto Avanz@: Competencias para la productividad de las Mipymes centroamericanas en la economía del conocimiento y la innovación*. Fundación Omar Dengo-IDRC-OIT/CINTERFOR.
- Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?. *Journal of business venturing*, 13(4), 295-316.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of business venturing*, 18(3), 301-331.
- De Bruin, A., Brush, C. G., & Welter, F. (2007). Advancing a framework for coherent research on women's entrepreneurship. *Entrepreneurship theory and practice*, 31(3), 323-339.
- DeNieves, C. & Briones, A.J. (2009). Las empresas de economía social y su relación con las instituciones: colaboración con la universidad en asuntos medioambientales. *CIRIEC-España, Revista de Economía Pública, Social y Cooperativa*(65), 85-111.
- Ejermo, O., & Hansen, H. K. (2015). How important are local inventive milieus: The role of birthplace, high school and university education. *Geoforum*, 65, 387-397.
- Gibb, A. A. (1987). Enterprise culture—its meaning and implications for education and training. *Journal of European industrial training*, 11(2), 2-38.
- Graña, F. M. (2002). Creación de empresas. Factores asociados al éxito emprendedor en cinco ciudades argentinas.
- Hoang, H., & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of business venturing*, 18(2), 165-187.
- Holienka, M., Jančovičová, Z., & Kovačičová, Z. (2016). Drivers of women entrepreneurship in Visegrad countries: GEM evidence. *Procedia-Social and Behavioral Sciences*, 220, 124-133.
- Kantis, H. Angelelli, P., & Moori, V. (2004). Desarrollo emprendedor. *América Latina y la experiencia internacional*, 35-198.
- Kantis, H. (Ed.). (2004). *Desarrollo emprendedor: América Latina y la experiencia internacional*. IDB.
- Kim, P. H., & Aldrich, H. E. (2005). Social capital and entrepreneurship. *Foundations and Trends® in Entrepreneurship*, 1(2), 55-104.
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of business venturing*, 15(5), 411-432.

- Langowitz, N., & Minniti, M. (2007). The entrepreneurial propensity of women. *Entrepreneurship theory and practice*, 31(3), 341-364.
- Lee, S. Y., Florida, R., & Acs, Z. (2004). Creativity and entrepreneurship: a regional analysis of new firm formation. *Regional studies*, 38(8), 879-891.
- Levesque, M., & Minniti, M. (2006). The effect of aging on entrepreneurial behavior. *Journal of Business Venturing*, 21(2), 177-194.
- Liñan, F. (2008). Skill and value perceptions: how do they affect entrepreneurial intentions?. *International Entrepreneurship and Management Journal*, 4(3), 257-272.
- Minniti, M., & Naudé, W. (2010). What do we know about the patterns and determinants of female entrepreneurship across countries? *The European Journal of Development Research*, 22(3), 277-293.
- BID y CEPAL (2010),“. *Cómo reducir las brechas de integración*”, *Nota de discusión de políticas, Tercera Reunión de Ministros de Hacienda de América y el Caribe, Lima, Perú, mayo*.
- Noguera, M., Álvarez, C., Merigó, J. M., & Urbano, D. (2015). Determinants of female entrepreneurship in Spain: an institutional approach. *Computational and Mathematical Organization Theory*, 21(4), 341-355.
- Ortiz, G. P., & Millán, J.A. (2012). Emprendedores y empresas. La construcción social del emprendedor. *Lan Harremanak. Revista de Relaciones Laborales*, (24).
- Pilková, A., Jančovičová, Z., & Kovačičová, Z. (2016). Inclusive Entrepreneurship in Visegrad4 Countries. *Procedia-Social and Behavioral Sciences*, 220, 312-320.
- Powers, J., & Magnoni, B. (2010). *Dueña de tu propia empresa: Identificación, análisis y superación de las limitaciones a las pequeñas empresas de las mujeres en América Latina y el Caribe*. Inter-American Development Bank.
- Ramos-Rodríguez, A. R., Medina-Garrido, J. A., Lorenzo-Gómez, J. D., & Ruiz-Navarro, J. (2010). What you know or who you know? The role of intellectual and social capital in opportunity recognition. *International Small Business Journal*, 28(6), 566-582.
- Robinson, P. B., Stimpson, D. V., Huefner, J. C., & Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship theory and practice*, 15(4), 13-31.
- Rodríguez, A. (1999). La lógica originaria del emprendedor [documento de investigación No. 382]. *Barcelona: IESE*.
- Rodríguez, C., & Jiménez, M. (2005). Emprenderismo, acción gubernamental y academia. Revisión de la literatura. *INNOVAR. Revista de Ciencias Administrativas y Sociales*, 15(26), 73-89.
- Ruiz, N.J., & Cordura, M, Alicia. (2012). Mujer y desafío emprendedor en España. Características y determinantes. *Economía industrial*, 383, 13-22.
- Schumpeter, J. A. (1934). The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle (1912/1934). *Transaction Publishers.—1982.—January*, 1, 244.
- Shabbir, A., & Di Gregorio, S. (1996). An examination of the relationship between women's personal goals and structural factors influencing their decision to start a business: The case of Pakistan. *Journal of Business Venturing*, 11(6), 507-529.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.
- Veciana, J. M. (1989). Características del empresario en España. *Papeles de economía española*, 39(40), 19-36.
- Veciana Vergés, J. M. (1999). Creación de empresas como programa de investigación científica. *Revista Europea de Dirección y Economía de la empresa*, 8(3), 11-36.
- Veciana, J. M. (2007). Entrepreneurship as a scientific research programme. In *Entrepreneurship* (pp. 23-71). Springer Berlin Heidelberg.
- Ventura Fernández, R., & Quero Gervilla, M. J. (2013). Factores explicativos de la intención de emprender en la mujer. Aspectos diferenciales en la población universitaria según la variable género. *Cuadernos de gestión*, 13(1), 127.
- Verheul, I., & Thurik, R. (2001). Start-up capital:” does gender matter?”. *Small business economics*, 16(4), 329-346.
- Wang, Y. S. (2003). Assessment of learner satisfaction with asynchronous electronic learning systems. *Information & Management*, 41(1), 75-86.
- Wennekers, S., Van Wennekers, A., Thurik, R., & Reynolds, P. (2005). Nascent entrepreneurship and the level of economic development. *Small business economics*, 24(3), 293-309

THE QUALITY OF LIFE AS PRESUPPOSED BY THE SOCIAL MANAGEMENT IN PUBLIC POLITICS

Rafael Alves de Araujo Castilho

Rafael Alves de Araujo Castilho, Centro Universitário Una, Belo Horizonte - MG
(rafael.castilho@prof.una.br)

Fernanda Carla Wasner Vasconcelos

Fernanda Carla Wasner Vasconcelos, Centro Universitário Una, Belo Horizonte – MG
(fernanda.wasner@prof.una.br)

ABSTRACT

In the contemporaneous society, the development of public politics that reach significant results and contribute with actions that promote quality of life turn out to be relevant. Thus, the aim of this study was to identify the results of social management applied to the quality of life in Brazilian environmental public politics. This literature review involves a qualitative approach, in descriptive nature, considering the Social Management elements: practices, democracy and citizenship formation, taking on account the confrontations against the social issue and the guarantee of universal human rights as possible promoters of quality of life. The results pointed the presuppositions of social management and the elements that promote quality of life are inseparable of the establishment and the application of environment politics, as exemplified in the Brazilian National Politics of Solid Wastes. Nevertheless, it can't be affirmed that this Politic represents the purpose of promoting an amplified quality of life for the concerned people, which affects the expected results for this public politic. Based on the presented results, it is questioned the relevance of the elements of social managements as promoters of quality of life and still need to be observed and considered for the improvement of the Brazilian politics.

Keywords: Social Management, Quality of life, Public Politics, Solid Wastes.

JEL Classification: D78

1. INTRODUCTION

According to Machado and Quaresma (2014), social management still crosses through its conceptual and methodological phase, nevertheless, it is evident the continuous search for the effective answers to the challenges such as the support for job opportunities and generation of employment, social participation and income distribution. It can be affirmed that these challenges maximize when confronted to the necessity of mediate the participation of different individuals interested in the “development”. It is in this context of reflection of subjects or of those presupposed in social management, taking on account the ones especially related to quality of life, that this study stands in order to realize a critical analyses of the National Politics of Solid Wastes (NPSW), instituted by the Law nº 12.305, from August 2, 2010.

This analyses justifies meanly when observing that one of the indissociable pillars of the sustainable development is the social one, and with its attributes and constructs capable of constructing new paradigms of analyses, reflection and actuation that, integrated to the rest of the pillars such as environmental, economic, political, and cultural the sustainability can really be developed.

For the development of this study, it was realized a review of literature using books and scientific periodicals with the aim of clarifying the concepts related to social management currently recognized, as well as how to identify the basic elements related to the constructs of quality of life. With the stratification of the elements that contribute to the analyses of social management in the NPSW, by the way of initiatives that promote quality of life, it will be analyzed the NPSW, instituted by the law nº 12.305, from August 2, 2010 and regulated by the decree nº 7.404, from December 23, 2010, looking for the identification of those requirements that establish initiatives or relative controls to the quality of life of the social actors highlighted on it. After realized this mentioned review of literature, the final considerations will be directed to the discussion about the relation between the attributes of the social managements focusing the aspects concerned to the quality of life and the requirements established in NPSW, checking if the policy considered these constructs of social managements and also raising a discussion about what are the possible unfolding of the analyzes realized in this study, that could feed new researches.

2. LITERATURE REVIEW

In the face of the diversity of discussions concerning to the concept of social management and their assumptions, it was verified the need to capture the perceptions of the authors of the subject, and in this case, Maia (2005) was highlighted whose concept of social management aligns in a consistent form with the elements of quality of life to be discussed.

Therefore, as an indicative concept of social management, Maia brings the followed approach.

We comprehend social management as a group of social processes with viable potential of emancipatory and transformer corporate development. It is supported by values, practices and democracy and citizenship formation, in the view of the confrontation of expressions of social matters, of the guarantee of universal human rights and the affirmation of the interests and public spaces as patterns of a new civilization. Construction rose in democratic pacts, in the local, national and worldwide fields; among the agents of the sphere of civil society, political and economic society, with the effective participation of citizens historically excluded of the processes of distribution of wealth and power (Maia, 2005, p. 15-16).

Considering this concept of social management presented above and its relation to the guarantee of the rights and the citizenship, this literature review proposed for this study will direct to debates concerning to the quality of life, highlighting approaches that add consistency to the perception of the quality of life with one of the elements of the initiatives that seeks to promote social management.

Herculano (2000), after approaching the considerations related to other authors, like Allard, Erikson, Sen and also contemplating in analyses the premises used in Scandinavian social indicators, he consolidates the convergence between the references that the wellbeing has as basic elements: the possibility of influence on decisions related to the collectivity and participate in the community life under a political perspective, and benefit from the past and the present collectivity community actions, which is relevant when analyzing an environmental policy, as it is shown in this article.

Herculano (2000) still contextualize quality of life joining the environmental issue to the other items measured by IDH (life expectation, literacy rate, years of schooling and Gross Domestic Product *per capita* - GDP/capita), proposing that quality of life represents:

The sum of the economic, environmental, scientific-cultural and political conditions collectively built and made available for that the individuals can realize their potentialities: include accessibility to the production and consumption to the means in order to produce culture, science and art, as well as presupposing the existence of mechanisms of communication, information, participation and affecting the collective destination through territorial management that guarantees cleaned water and air, environmental hygiene, collective urban facilities, healthy food and accessibility to urban natural mild areas, as well the preservation of natural ecosystems (Herculano, 2000, p. 22).

In addition, complementing the theoretic elements related to the conceptual debate of quality of life, it is possible to link it to the citizens basic need attendance in a reasonable political conception of justice, referred by Weber (2013, p. 207) as primary assets necessary for exercising the rights of citizens, the author underlines “the rights and fundamental freedoms”, “freedom of moving and free choice of occupation”, “the powers and prerogatives of occupation and liability positions”, “income and wealth” and “the social basis of self-respect”. It is important to highlight that the author develops the concept of justice as equity, and discusses about the concept of the dignity of the human person linked to the minimal goods satisfaction for that the individual would indeed be able to exercise citizenship. Therefore, the elements presented in this study can contribute to the analyzes of quality of life applied to the NPSW, taking on account that the quality of life is an insoluble condition to attend the citizens basic needs as the actors who really cooperate with the society they live in.

The delimitation of quality of life presented by Herculano (2000) and their relation with the ones presupposed by Weber maximize the dialogue between the elements of social management, quality of life and environmental management, enabling the advancing of this literature review with the purpose of analyze the essential legal requirements essential to the comprehension of the NPSW.

In progress to the theoretical dialogue up to here realized and starting with a legal contextualization needed for the introduction to the NPSW, respecting the requirements proposed in the Brazilian Federal Constitution of 1988 – FC/88, it is verified the outlining of the Brazilian Citizens social rights and that, for this study, turn out to be relevant some details that will be discussed as follow. Thus, objectively, the FC/88 defines its fundamental principles of citizenship, the dignity of the human person and de social values of work and of the free initiative among others, and also stablishing as one of the basic purposes of the Federative Republic of Brazil the eradication of poverty and marginality and the reduction of social and regional inequalities. This purpose mentioned is totally related to the purpose of this study.

On realizing other clippings that can also contribute for the elaboration of this study, the art. 5.º, subsection XIII of FC/88 presents the right of freedom to exercise any job, profession or craft, once attending the professional qualifications established by the law, condition related to the requirements that will be presented on NPSW.

The FC/88 also highlights in its art. 6.º that “education, health, food, job, home, transport, leisure, security, social security, protection to maternity and infancy, helpless assistance, on the constitution form are social rights”. Then, the art. 7.º the FC/88 presents the relation of rural and urban workers wrights, besides others that focus on the improvement of social conditions as the social rights to be guaranteed.

On proceeding, it was underlined the relation between environment and quality of life established by FC/88, art. 225.º in its referred chapter of environment, pointing out that, “everyone has the right to an ecologically balanced environment, which is an asset for common use by people and essential for a healthy quality of life, imposing to the Public Power and to the collectivity the duty of defend and preserve them for the present and future generations”, and in the §1.º, subsection V from the same article, it attributes to the Public Power the control of production, commercialization and employment of technics, methods and substances that bring risk to life, to the quality of life and to the environment.

This relation between environment and quality of life presented in the lines of FC/88 is exploited by a group of environmental politics, defined on federal sphere, that has as purpose operationalize the application of the rights and deeds established and defined in the Federal Constitution. However, among various environmental policies the purpose of this article is the NPSW instituted by the law 12.305/2010, and when realizing a review of the established requirements in its contempt it can't let be apart its principles and objectives, once they guide the main line of politics, so, according to the art. 6.º of the law, they are principles of NPSW.

- I the prevention and precaution;
- II the polluted payer and the protector recipient;
- III the systemic vision, in generation of solid wastes, that consider the environmental varieties, social, cultural, economic, technological and of public health;
- IV sustainable development;
- V the eco-efficiency through the compatibility between the supply, at competitive prices, of goods and qualified services which satisfy the human necessities, bring quality of life and reduce the environmental impact and consumption of natural resources at a level, at least, equivalent to the capacity of sustainability estimated for the planet;
- VI the cooperation between different spheres of Public Power, the business sector and the other segments of society;
- VII the responsibility shared by the products cycle of life;
- VIII the recognition of reusable and recyclable solid waste as an economic good and of social value that generates job and income and promotes citizenship;
- IX the respect for local and regional diversities;
- X the society right to information and social control;
- XI the reasonability and the proportionality. (BRASIL, 2010)

In the art. 7.º of the law 12.350/2010 are presented the objectives of NPSW in which are highlighted those that present a more effective connection with the constructors of social management previously discussed, and quoted as follows:

- a) "protection of the public health and of the environmental quality", considering that public health is a society right;
- b) "encouragement to the recycling industry, in the view of fomenting the use of raw material and input derived from recyclable and recycled materials", which can offer opportunities to individuals and groups involved in this subject.
- c) "integrated management of solid wastes" that could promote a favorable environment to the participation and raise more discussions about the process.
- d) "articulation between the spheres of the public power, together with the business sector, with the view of financial and technical cooperation for an integrated management of solid wastes."
- e) "continuous technical capacitation in the fields of solid wastes", also allowing qualification for job and social inclusion.
- f) "integration of collectors of reusable and recycled materials in actions that involve the shared responsibility for the products cycle of life", which directly represents and an objective strictly related to the concepts of social management presented in this study.

Once going deeper into the requirements of NPSW as public policy, it is possible to identify the emancipation of stated and cities to the action and guided development concerning to solve the matter of managing the solid wastes. The law 12.305/2010 also foresee how one of its instruments, the social control, defined in its art. 3.º, subsection VI as the "set of mechanisms and procedures that guarantee information and participation to society in processes of formulation, implementation and evaluation of public politics related to solid wastes", and it is also defined by the law that the integrated management of solid waste may consider the social, political, economic, environmental and cultural dimension, besides defining the reversible logistic as an instrument of economic and social development.

Other points that can be attributed to social management and the quality of life applied to the NPSW are in the clipping of its art. 6.º in which it highlights the systemic vision principle in waste management considering the environmental, social, cultural, economic, technological and of public health variations, and still the recognition of the reusable and recyclable solid waste as a good of social value, job and income generator and citizen promoter.

In the operationalization of NPSW it can be foreseen that the Ministry of Environment (ME) will elaborate one NPSW with the horizons of 20 years that should minimally contemplate, among other contents, according to art. 15.º of NPSW, subsection V, the "targets to eliminate and recover dumping trash, associated to social inclusion and to the economic emancipation of the collectors of reusable and recyclable materials", which is also contemplated in the minimal content previewed for the States Plans of Solid Waste (SPSW). Still referring the NPSW, this one proposes the use of the mobilization process and the social emancipation, by means of public audiences and consults, to its elaboration.

Face to the social elements treated in the NPSW, it turns out interesting, to enrich the proposal discussion, the presentation of one extract of the Universal Declaration of Human Rights of 1948 that in its art. 25.º establishes that:

Everyone has the right to a standard of living adequate for the health and wellbeing of himself and of his family, including food, clothing, housing, medical care and essential social services, and also the right to security in event

of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control (UNESCO, 1998, p. 5).

In the perspective presented by the Universal Declaration of Human Rights it is verified the Brazilian alignment, as a country committed with this cause, and it can be stated in the art. 79.º of FC/88, where it is instituted the Fund to Combat and Eradicate Poverty (FCEP), with the objective of enabling the access to dignified levels of subsistence to all Brazilians, by the implementation of “supplementary actions of nutrition, home, habitation, education, health, family income reinforcement, and other programs of relevant social interest directed to increase the quality of life”.

However, besides NPSW searches for the involvement and establishment of premises concerning to social include, for example, by the means of social control and considering the collectors in its objectives and the constructs of the plains in the NPSW and SPSW, it can't be affirmed that, objectively, the instruments proposed by NPSW establish, in a solid way, actions that promote the social emancipation of the people interested in the results of this policy, considering that social emancipation, according to Lima and Pereira (2015), would be one of the main targets of social management, that this year it searches for observing its application in a systemic environmental politics. So, the presented clippings up to now, have as the major target, underline efficiently, the evidences related to social management considered in PNSW, with no intention of exhaust the subject nor to identify all the presence points of the social manage included in the law or to establish a paradigm affirming that social management, in fact, has being promoted by NPSW.

The purpose of presentation and interrelationship of this group of clippings is to search for a more effective delimitation of the minimum parameters of quality of life that the legal framework, corroborated with the approaches of the referred authors, could make social management tangible, under the perspective of quality of life related to the guarantee of the basic rights, the human rights and of the minimal consumption goods needed to support the rights of citizenship.

3. FINAL CONSIDERATIONS

Considering that the constructors of social management and the promoter element of citizens quality of life used as references in this study, it is possible to affirm that in NPSW are presented the presuppositions of social management and the elements that search for promoting quality of life, as promoting the participation of the interested groups by the means of social control and the systemic vision in wastes management, considering the social variance in integrated form with environmental variances, socials, cultural, economics, technological and of public health. However, it can't be affirmed that this one has, in an objective and structural manner, the purpose of promote quality of life extended to its various holders, because the policy limits to underline the social actor, “the collector”, front his exposition to a group of social vulnerabilities that has relevant role to effect the application of principals and objectives of policy, which turns out to be one important actor to be considered in the instruments that were instituted by policy, as the state and municipal plans of solid wastes and the development of cooperatives and collectors associations.

In order to reach the objective proposed by this study, two lines of analyzes were necessary, being the first of them the verification of the constructors of social management described in this literature review that were presented in the NPSW, considering that the social management is a process that needs to be developed by public policies. The other line of analyses the intends to verify whether in the requirements, instruments and tools proposed by the NPSW and the legal requirements correlated are considered as the necessary elements for that the social management develops in integrated form together with the others purposes of the law, as the environment, the economic and the political.

However, when analyzing the law 12.305/2010 it is possible to find elements directly related to the constructors of social management and, among these elements, it can be pointed the social control as a form of participation of the interested parts, as the law considers as the principle of systemic vision in the manage of wastes the environmental, socials, economics, technologic, and public health varieties. The law still recognizes reusable and recyclable solid wastes as a good of social value, job and income generator and citizenship promoter, which is objectively an element that represents the necessary goods to promote the quality of life of the referred group, for its vulnerability, nevertheless it is immature to affirm that the assumptions of a social management, under the perspective of quality of life, be strongly integrated and present to the NPSW and its instruments.

The performed analyses, even incomplete, of the main elements of social management and of the quality of life in the NPSW, evidences that it can be considered that the constructors of social management are present as relevant elements for the success of an application as a legal instrument. It is valid to affirm that this study did not intent to make an evaluation of the unfoldings and of the application of the instruments defined by NPSW so, this study represents a test for targeting more further studies related to the comprehension of the proceedings related to the promotion of quality of life as how an insoluble element of social management is, in fact, being promoted by the instruments established in the environmental policy allowing this integration to contribute, by significant means, to the parts interested in this instruments.

Finally, besides the presented limitation, it generates a great challenge and expectation that the instruments defined in the art. 8.º of PNSW be capable of develop and operate as the necessary conditions to directly or indirectly guarantee the quality of life to the citizens involve to the proposal themes in NPSW, those who are not explicitly highlighted in politics, as the street cleaners, the communities placed around dumps and landfills, the employers of recyclable industries, the ones that live in regions devoid of waste collection and others, searching for the guarantee of human dignity, their basic rights and the necessary goods for their citizenship. Therefore, the tutoring and monitoring of the effectivity of the referred instruments can constitute opportunities for new studies.

REFERENCES

- Brasil. (1988). *Constituição da República Federativa do Brasil, de 5 de outubro de 1988*. Accessed in 05th of January 2017, on the Web site of: Palácio do Planalto: http://www.planalto.gov.br/ccivil_03/Constituicao/Constituicao.htm.
- Brasil. (2010). *Lei nº 12.305, de 2 agosto de 2010*. Institui a Política Nacional de Resíduos Sólidos; altera a Lei no 9.605, de 12 de fevereiro de 1998; e dá outras providências. Brasília: DOU de 03/08/2010.
- Herculano, S. (2000). A qualidade de vida e seus indicadores. In: Herculano, S.; Porto, M. F. de S.; Freitas, C. M. de (Orgs.), *Qualidade de Vida e Riscos Ambientais*. EdUFF. Niterói.
- Lima, M.; Pereira, J. R. (2015). O perfil do gestor Social no Brasil. *Revista NAU Social*, 6 (10): 119-132.
- Machado, L.; Quaresma, A. G. (2014). A Gestão Social na prática acadêmica do Programa de Pós-Graduação em Gestão Social, Educação e Desenvolvimento Local do Centro Universitário UNA. *Revista NAU Social*, 5(8): 107-118.
- Maia, M. (2005). Gestão Social - Reconhecendo e construindo referenciais. *Revista Virtual Textos & Contextos*, 4(1): 1-18.
- Minayo, M. C. S.; Hartz, Z. M. A.; Buss, P. M. (2000). Qualidade de vida e saúde: um debate necessário. *Ciência & Saúde Coletiva*. 5 (1): 7-18.
- Pereira, E. F.; Teixeira, C. S.; Santos, A dos. (2012). Qualidade de vida: abordagens, conceitos e avaliação. *Rev. bras. educ. fís. Esporte*. 26 (2): 241-250.
- Unesco. (1998) Declaração Universal dos Direitos Humanos. Adotada e proclamada pela resolução 217 A (III) da Assembleia Geral das Nações Unidas em 10 de dezembro de 1948. Brasília: Representação da Unesco no Brasil. Accessed in 04th of January 2017, on the Web site of: UNESCO: <http://unesdoc.unesco.org/images/0013/001394/139423por.pdf>.
- Weber, T. (2013). A ideia de um “mínimo existencial” de J. Rawls. *Kriterion*. 54 (127): 197-210.

THE AZOREAN-MADEIRAN (I)MIGRATION OF MIDDLE OF THE EIGHTEENTH CENTURY AND THE PROCESS OF OCCUPATION AND SPATIAL ORGANIZATION OF THE SANTA CATARINA ISLAND, SOUTHERN OF BRAZIL

Desidério Batista

University of Algarve, Faculty of Sciences and Technology; CHAIA/UÉ; Cidadhiss-UFSC
(dbatista@ualg.pt)

ABSTRACT

This paper aims to contribute to the study of the role of Azorean-Madeiran (i)migration in the socio-spatial formation process of the Santa Catarina island, southern coast of Brazil. In order to approach the study of the marks and cultural traits of Portuguese origin, inscribed in the insular landscape, the focus was understand your influence on the settlement, the urban and rural habitat, and military and traditional architecture. It was within the scope of Portuguese colonial expansion in South America that the geostrategic importance of the Santa Catarina Island determined its effective occupation, fortification and settlement. The historical process of (trans)formation of its landscape was marked in an expressive way by the culture of the Azorean and Madeiran settlers, and their descendants, from the middle of the eighteenth century. In methodological terms, the research crossed the written and documentary information, with the cartographic analysis and the data obtained in the field work, in the sense of creating bases to support (re) interpretation of the Portuguese heritage in that territory. This study revealed that the circumstances of the environment and the influence of Portuguese culture determined the idiosyncrasy of insular society, giving them characteristics that help to better understand certain aspects of their territorial and architectural culture.

Keywords: Santa Catarina Island, Azorean-Madeiran (i)migration, Socio-spatial Formation, Urbanism.

JEL Classification: R580

1. INTRODUCTION

The main objective of this paper is to present the first conclusions of the preliminary study on the influence of Azorean - Madeira (i)migration of middle of the 18th century on the historical process of occupation and spatial organization of the Santa Catarina island, southern Brazil. This study is based on the integrated reading of settlement, urbanism and architecture and aims to contribute to the recognition of the marks of Portuguese culture in the process of socio-spatial formation of the Island, and in the different expressions of built heritage: military architecture, Religious architecture, domestic architecture and “industrial” architecture in its landscape context.

In methodological terms, the research combined the interpretation of cartography and ancient iconography with historical and documentary sources, and its crossing with the fieldwork developed in the last quarter of 2016, such as the financial support of the Foundation for Science and Technology (SFRH/BSAB/114620/2016), in the scope of prospecting of the Portuguese heritage on the Island.

Was used a research methodology based on an interdisciplinary and multi-scalar approach that crossing the written and documentary information, with the cartographic analysis and the data obtained in the field work, in the sense of creating bases to support the (re) interpretation of the Azorean legacy in the island. Although in the context of the Portuguese colonial world, the Santa Catarina island was only later of interest object and permanent occupation, its strategic location between Rio de Janeiro and Rio de la Plata would determine the role and importance it had in the delimitation and defense of this region, in the inventory and exploitation of its resources in favor of the Portuguese Crown. It will be essentially within this framework of intentions and in establishing support points for the exploration of the southern region of Brazil up to the present border between Argentina and Uruguay, which is inscribed the historical process of construction and transformation of the landscape of Santa Catarina Island.

The colonization of the Island and the mainland frontier territory is strongly marked by the cultural traces of populations of Portuguese origin. At first, still in the seventeenth century, it was based on contingents of Portuguese residents and/or their descendants, from the village of S. Vicente, on the São Paulo coast, which retained ancient cultural features of mainland Portugal (Furlan, 2015). And, in the second period, the complete occupation of the Island, between 1748 and 1756, counted on the (i) migration of about 6,000 Portuguese North Atlantic islanders (Piazza, 1988), with strong cultural peculiarities. The Portuguese occupation of the southern Brazilian territory up to the *Rio de la Plata* highlights the tendency towards the litoralisation of settlement and the establishment of a placement based on a system of agro-marine activities directly supported by maritime commerce at a distance. This study aims to identify and characterize the historical territorial matrix associated with (i) the migration of Azorean and Madeiran settlers as basis of the occupation and spatial organization of the Brazilian Island.

2. THE ROYAL EDICT OF THE MIDDLE OF 18TH CENTURY AND THE SCHEDULED COLONIZATION PROCESS

The process of occupation and organization of the island territory followed the instructions and guidelines defined by the Royal Provision of August 9, 1747 and publicized by the Edict. This document, also known as “Silva Paes Regiment” (1st Governor of the Santa Catarina Captaincy), framed the displacement and accommodation of Azorean and Madeiran couples on the Island, based on the *usucapio* law through the registration of concessions of lands to those who live and work (Oliveira and Salomon, 2010). The colonization and settlement of the Island was marked out and regulated by the aforementioned document, the rules of which constitute a veritable landscape planning manifesto, contemplating premises concerning the configuration of both urban and rural space.

The Royal Provision comprises the integrated conception of the island territory contemplating the definition of the characteristics of the site of the settlements implantation, their dimensioning and “norms for their urban design”, and uses *sesmaria* and *baldio* [waste ground] as fundamental mechanisms in the scope of the process of space occupation and land exploitation. The territorial structure that supports it is based on an orthogonal mesh with a *quarto de legoa em quadro* [quarter of a league in square] (Cabral, 1950) assuming the public space or collective lands as common good associated with each village and the “small property” as essential socio-spatial criterion in the division and distribution of land by Azorean owners. This set of rules and its spatialization, with appropriate adaptations to the geography and the ecology of the place, establish a model of territorial occupation that is the origin of a historical territorial structure that, associated with urban and rural space, still exists today (Reis, 2012).

The island’s planned settlement was thus based on the deeply intricate relationships between the villages, the sea and the countryside, and their location is preferentially situated along the small coastal plains near sheltered sites, namely in the north and south bays, and in Lagoa da Conceição. This option is directly related to the possibility of developing a socio-economy based on a system of complementary activities associated with the exploitation of land and sea resources supported by the trade of the surplus in relations with the vast region where it is integrated.

The beginning of the occupation and territorial organization of the Island precedes the date of the said Royal Provision in the context of the coastal colonization of the Brazilian extreme south, which comprised from the north to the south the phased foundation of different settlements along the coast. In a first time, the towns of Nossa Senhora da Graça do Rio de S. Francisco do Sul, in 1645; Nossa Senhora do Desterro (on the Santa Catarina Island) in 1651; Santo António dos Anjos da Laguna, in 1676 (Piazza, 1970) and Colónia do Sacramento (on the left bank of the River Plate) in 1680.

Figure 1. The coastal colonization of the Brazilian extreme south



Secondly, in the 1740s and 1750s, the occupation and strategic organization of the space, both on the continental and island lines, consolidated with the implantation “... of one of the most expressive defensive systems ever built in Brazil” (Tonera and Oliveira, 2015) through the construction of four fortresses and the densification of the urban network. The royal document framed the founding of the villages of Nossa Senhora do Rosário de Enseada de Brito in 1750, S. Miguel da Terra Firme and S. José da Terra Firme, both in 1751, on the continent front the Island, and in the Island the foundation of Nossa Senhora da Conceição da Lagoa, in 1750, Nossa Senhora das Necessidades e de Santo António, in 1755, and Santa Ana da Armação, in 1772. A strategy that, at a later time, coinciding with the first decades of the nineteenth century, included the foundation, in insular territory, of the settlements of Nossa Senhora da Lapa do Ribeirão, in 1809, or S. João do Rio Vermelho and S. Francisco de Paula Of Canasvieiras, in 1834 and 1835, respectively, in addition to the urban expansion of the settlements previously founded.

342

From its reading it is understood that the ecological structure of the landscape constituted by the great diversity of natural ecosystems (mountainous system, water system, dune system, lagoon system, etc.) overlapped the cultural structure constituted by the human settlements and the different buildings, and also by the agricultural production spaces. To the ecological and cultural structures of the landscape were added the mobility structure that joined the sea route (between points of the continent and the Island and between points of this) the terrestrial route through a network of dirt roads, conforming a unique historical landscape with strong character and pronounced identity (Batista, 2017).

To the general cartography of the Island is added as essential element for the reading and analysis of the process of socio-spatial formation, considering the marks and the Portuguese cultural traces that are inscribed in it, the plans and drawings of *Villa Capital de Santa Catharina*, 1774, of the marshal Diogo Funk, and of the fortifications and respective surroundings, by different Portuguese military engineers, dating from the last decades of the eighteenth century and beginning of the nineteenth century.

Figure 4. Planta da Villa Capital de Santa Catharina, 1774

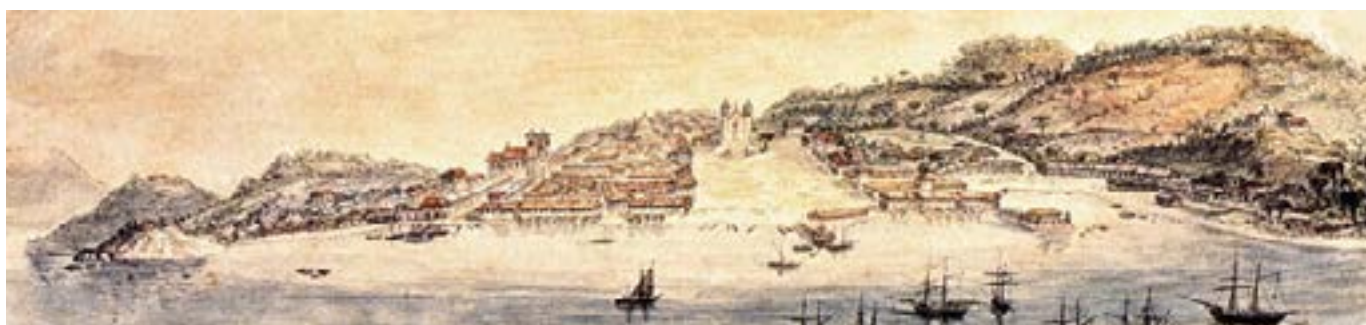


Source: Veiga, Eliane V. 2010. Florianópolis: Memória Urbana. Florianópolis: FFC Publicações, 159, mapa 3

The urban reading using the Plant of the old Vila do Desterro (present Historical Center of Florianópolis) confirms a regular mesh polarized either by the wide and sloping square marked by the presence of the church, as by the port that determines the orientation of the orthogonal and tight chess of the streets (Peluso, 1953, 1981), associated with an urban model of Hispano-Portuguese origin that is adopted from the 16th century in colonial America and became a rule in the process of scheduled settlement of the Santa Catarina Island (Filho, 1997). The rational model that underlies it is also common either to the spatial pattern of military buildings and communication routes, and to the implantation of both structures through perfect adaptation to the geography and ecology of the place.

To this set of essential cartographic elements is added another one associated to the iconographic representation of the Island landscape, fundamentally of the said village in its territorial context, developed in the same period, by artist-travelers.

Figure 5. Panoramic view of the ancient Vila do Desterro, de 1827, by Debret



Source: Berger 1984, 201

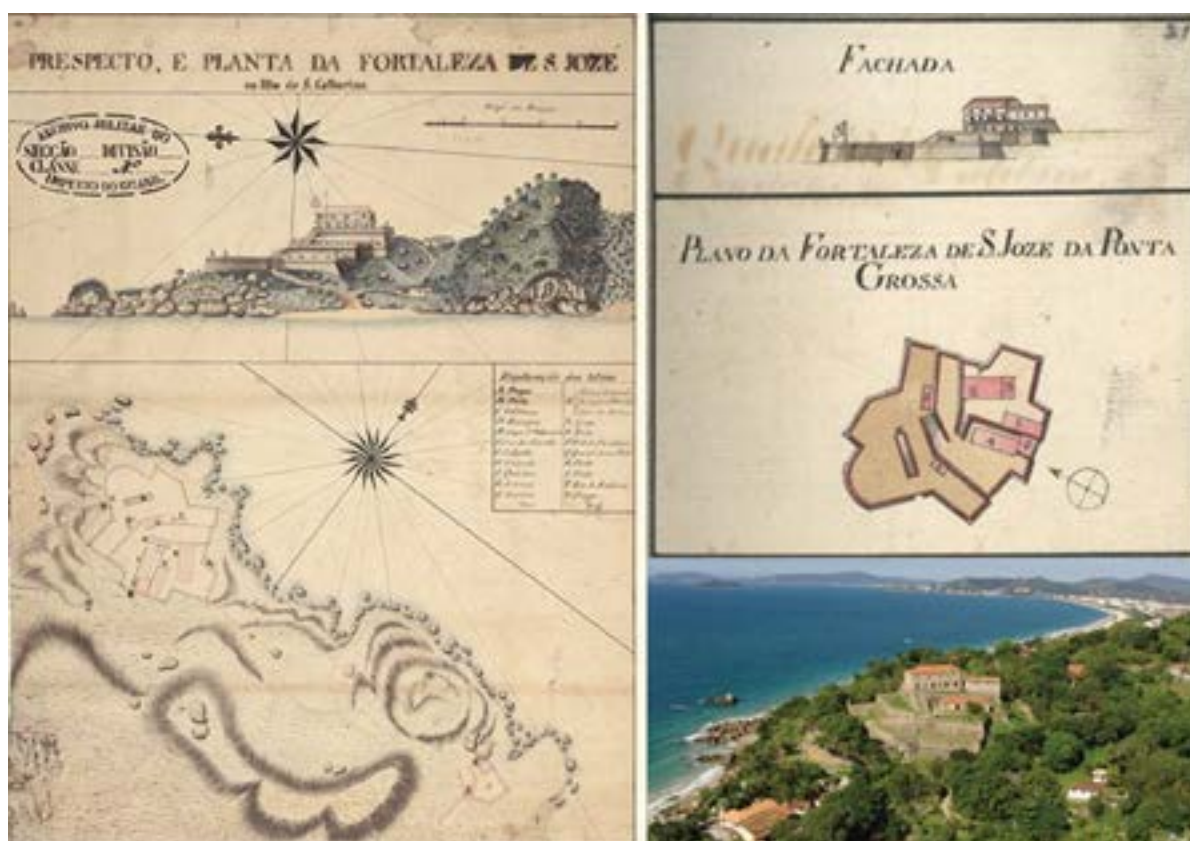
From its analysis, and as a main contribution to the reading of the Island landscape transformation (Makowiecky, 2010), namely of its capital, we consider the existence of a model of occupation and territorial organization based on the specific understanding of the coastal landscape, and was, as it was mentioned, on the basis of the process of settlement, exploration and defense of the insular territory and the continental territory. From the present cartographic and iconographic analysis, and from the field work carried out in view of the integrated and systemic understanding of the historical process of colonization of the Island, we are make the mapping and characterization of the main foundational settlements, of the built structures and associated complementary elements with socio-economic and political-military functions as fundamental bases for the development of the island territory.

4. THE HISTORICAL PROCESS OF SOCIO-SPATIAL FORMATION OF THE ISLAND: SETTLEMENT, URBANISM AND ARCHITECTURE

The mapping of the historical-geographical synthesis associated with the urban and rural heritage of Azorean and Madeiran origin constitutes a primordial register for the understanding of the permanencies, absences and changes registered in the landscape within the evolutionary process of organization of the Island territory. In this sense, it was considered the study, although a summary, of the different themes associated to the distribution and organization of the defensive system and the foundational urban system in its relationship with the road system, both terrestrial and maritime; and to the characterization of the domestic architecture and “industrial” architecture in its interdependence with the agricultural parceling and the traditional agro-marine economy.

Prior to the arrival of the Portuguese settlers a defensive system was installed with the objective of protecting the island territory, the populations that would come to inhabit it, and the navigation routes. The fortifications built in a rational spatial pattern, merge architecture and landscape through the careful selection of the site of implantation, strict adaptation to top-morphological characteristics, and the use of building materials from the site. From this resulted different typological solutions (Tonera and Oliveira, 2015) that, through the specific understanding of the landscape, have enhanced it, enhancing its singularities and attributes, constituting, today, as a whole, a landscape and patrimonial reference in the scope of the Portuguese heritage in the Island. The techniques and constructive systems used include the predominance of stone and lime masonry (from shells), both on the walls of fortifications and on the walls of buildings, complemented by other local materials such as wood spans, roofs and floor) and clay (in the production of half-cane roofing tiles).

Figure 6. Blueprints and aerial photography of S. Joze fortress



Source: Tonera, R.; Oliveira, M.M. 2015

As part of the process of occupation and organization of the island area, based on the (i)migration of thousands of Azorean and Madeiran people, the urban and socioeconomic development of the island expresses the organized implantation of settlements as centers of civil and religious power (Várzea, 1985; Reis, 2012) with the aim of promoting the social and territorial cohesion. The different settlements of Azorean origin associated to the programmed concentrated settlement show in their configuration an urban model (whose bases are defined by the Royal Provision, although its pre-existence) marked by the presence of a large outer space corresponding to the Square or Public Garden, that relates spatially and visually the church, located in a dominant point and oriented mainly to the west, with the sea and the fishing port, replicating, some variables of the historical Portuguese urban matrix.

Figure 7. Schematic diagram of the Edict Royal norms, 1747. A-Church; B-Square; C-Houses; D-Ocean; E-Collective area

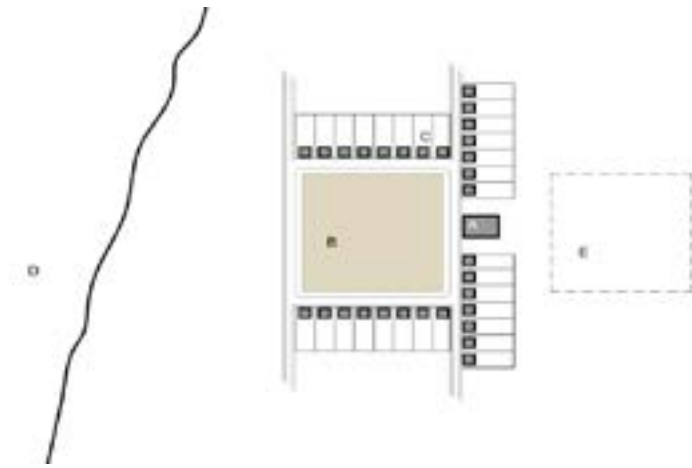


Figure 8. Application of the Edict Royal urban model to the urban plan of Ribeirão da Ilha. A-Church; B-Square; C-Houses; D-Ocean; E-Collective area



On the other hand, there is a scattered occupation associated with land parceling, the small and long plots of land, supported by a network of secondary roads with which the agricultural houses are related, still perceptible in different areas of the Island. In one case, as in another case, the more or less diffuse disposition of the houses seems to make it difficult to recognize the limits of the settlements, since there is no in the local vocabulary, as in the Azores, the term village, replacing it by parish (administrative district) as a territorial constituency polarized by the church, although in the Santa Catarina Island this arises linked to the clearly identifiable foundational nucleus.

To the deeply intricate relationships of the foundational settlement with the land but also the sea, is added the deep religiosity of Portuguese (i)migrants that is materialized in the presence of churches, chapels and “altars”, marking indelibly the Santa Catarina landscape like da Azorean and Madeiran landscape. It is, in this sense, that the two main types of settlement identified are associated with the urban habitat and the rural habitat respectively, evidencing both the Portuguese (Azorean-Madeiran) origin of the architectures: religious, domestic and “industrial”, important material expressions of the North-Atlantic island culture that are at the base of the strong identity of the South American Island landscape.

Figure 9. Examples of different architectural expressions



In the approach to the study of the Island architecture we considered the scarce existing bibliography and the fieldwork that privileged themes associated with the interrelationship between architecture and landscape such as implantation, volumes and construction processes and materials. It is not intended to elaborate a typological system for framing the traditional architecture of Santa Catarina Island, but rather a systemic reading of the “Luso-Macaronesian culture” influence from the analysis and characterization of issues that seem to highlight the similarities constructive, typological and formal between the islands of the North and South Atlantic (Batista, 2017). In this sense, from a constructive point of view, the domestic architecture of the Santa Catarina Island is broadly in the tradition of the Portuguese continental and insular house. Stone houses and wooden houses synthesize, to a certain extent, essential aspects of the architectures of the lands of origin, denoting the contribution and influence of all those who crossed the Atlantic towards Brazil, although with reinterpretations adjusted to the circumstances of the environment.

As for stone masonry houses, three fundamental “types” (without excluding the possibility of others) were identified, with volumes of one and two stories, and inclined roofs of two and four-water roofs: the linear house, the square house and the complex two-story house.

The linear house, generally of a single floor and predominantly asymmetrical gable roof, presents, similarly to its Azorean congener, dimensions that vary in lengthwise direction as a function of the number of compartments, while maintaining a constant width. On the other hand, the square house or “*casarão*” (common designation in the Brazilian Island), of a floor and four waters, denotes the more wealthy origin of its owner and it forms a domestic space of unequal facades but all with great profusion of spans in which the facade parallel to the street / road often does not have a door, appearing implanted on an expressive base that raises the entry level on one of the side facades, accessing the house through a small outside staircase. In both cases, the rhythm of the façades, the predominantly lining the walls with lime, the use of colors such as ocher, blue or gray around doors and windows and the double hung windows, denounce the influence of the Portuguese architectural culture. This is also felt in formal and compositional details such as the traditional roofs with half-cane tile and the double eaves. Finally, complex two-story houses, such as in the Azores, associated to medium-sized rural properties or a more wealthy urban population, are less frequent but undeniably expressive and notorious in the landscape. They correspond to dwellings of greater dimension and structural complexity and internal organization.

Figure 10. Fundamental typologies of domestic architecture



If in the stone houses the use of wood is complementary, and can appear in the structure, although in a rudimentary way, as in the interior of the roof or in partition walls, in wooden houses, this locally abundant material is associated with an architectural expression equally characteristic of the Lusitanian presence on the Island, with strong influence of the popular architecture of the Madeira Island.

On the other hand, among the presence and variety of constructions related to Azorean-Madeiran productive activities, flour and spirits mills houses (*atafona* or *engenho*) stand out because of their importance to a recent past in the local economy, or because they constitute an inestimable brand of Portuguese inheritance and a trace of the collective identity of the Santa Catarina Island. The production of cassava flour merges the indigenous tradition with the Azorean-Madeiran in an adaptation of the *atafona* to the milling process of the animal traction “mill” (ox or cow), also associated by Madeiran influence to the production of molasses and sugar cane brandy or *cachaça* from the distillation of sugar cane, completed with the use of the traditional alembic (Batista, 2017).

5. CONCLUSION

The study revealed that the cultural landscape of the Santa Catarina Island, with “Luso-Brazilian feature,” is the result of a process of spatial organization resulting from the policy of the Portuguese Crown in the exploration and defense of the South American territory by the effort of some thousands of islanders of Azorean-Madeiran origin.

The programmed foundational settlement associated with simultaneous work on land (agro-livestock, horticulture) and at sea (artisanal fishing, “whales industrial fishing”), and the religiosity of Portuguese (i)migrants materialized in the expressive presence of churches, marks indelibly the Santa Catarina landscape, with similarities to the Portuguese islands landscape.

The urban habitat and the rural habitat show, in spite of recent changes, the Portuguese-Azorean-Madeiran origin of the domestic architecture (stone houses and wooden houses) and the “industrial” architecture (*engenhos* of flour and sugar cane), which with adaptations to the matrix landscape are at the base of the landscape identity of the Santa Catarina Island. Will be in the permanence of this material cultural heritage in its relation with the immaterial dimension and in the perpetuation of the singularity of places that, from the history of an inherited reinterpreted in the present landscape, we can will be (re) constructed a landscape for the future.

ACKNOWLEDGMENTS

This work had financial support of the Foundation for Science and Technology (SFRH/BSAB/114620/2016).

REFERENCES

- Batista, D. (2017). Contributo para o estudo da influência da cultura portuguesa no processo histórico de construção e transformação da paisagem da Ilha de Santa Catarina, no sul do Brasil. In J. Fariña and P. Fidalgo (eds.), *O estudo e a construção da Paisagem como problema metodológico*. Instituto de História Contemporânea da Universidade Nova de Lisboa. Lisboa.
- Cabral, O. R. (1950). Os Açorianos: contribuição ao estudo do povoamento e evolução econômica e social de Santa Catarina. In H. S. Fontes (ed.) *Anais do Congresso de História Catarinense*. Imprensa Oficial. Florianópolis.
- Furlan, O. (2015). *FranklinCascaes. O fantástico na Ilha de Santa Catarina*. editora ufsc. Florianópolis. ISBN: 978-85-328-0607-9.
- Filho, D. V. (1997). Igreja Matriz da Antiga Vila de São Miguel. In A. L. Coutinho, *São Miguel da Terra Firme: 250 anos (1747-1997)*. Grupo Arcos. Biguaçu.
- Makowiecky, S. (2010). Ilha de Santa Catarina, séculos XVIII e XIX – Artistas viajantes e o estranhamento da paisagem. *19^o e 20^o*, vol. V, n.4: 57-78.
- Oliveira, H. P. and Salomon, M. (2010). *A Decadência de Santa Catarina*. editora ufsc. Florianópolis. ISBN: 978-85-328-0494-5.
- Peluso, V. (1953). *Tradição e plano urbano: as cidades portuguesas e alemãs no Estado de Santa Catarina*. Comissão Catarinense de Folclore. Florianópolis. ISBN: 978-85-328-0137-3.
- Peluso, V. (1981). *Estudos de Geografia Urbana de Santa Catarina*. Editora UFSC e Secretaria de Estado da Cultura e do Esporte. Florianópolis. ISBN: 978-85-328-0279-3.
- Piazza, W. (1970). *Atlas Histórico do Estado de Santa Catarina*. Departamento de Cultura da Secretaria de Educação e Cultura. Florianópolis. ISBN: 978-85-0175-3.
- Reis, A. (2012). *Ilha de Santa Catarina permanências e transformações*. editora ufsc. Florianópolis. ISBN: 978-85-328-0627-7
- Tonera, R. and Oliveira, M. (2015). *As Defesas da Ilha de Santa Catarina e do Rio Grande São Pedro em 1786 de José Correia Rangel*. 2th edition, editora ufsc. Florianópolis. ISBN: 978-85-328-0720-5.
- Várzea, V. (1985). *A Ilha*. Lunardelli. Florianópolis. ISBN: 978-85-328-0299-3.

THE DIFFERENT DIMENSIONS OF URBAN PUBLIC SPACE AND ITS INFLUENCE ON DESIGNING PLANS AND PROJECTS OF URBAN RESTRUCTURING

Elsa Duarte

Centro de História da Arte e Investigação Artística
(eduarte@live.com.pt)

ABSTRACT

The present paper is related with the current investigation on the influence of the different public space dimensions on designing plans and projects of urban restructuring. The relevance of this study is due to, the need of creation and development of sustainable and resilient urban spaces, mainly when it comes to intervention in pre-existing run-down urban areas or in process of degradation, for which ought to consider rehabilitation, requalification and urban restructuring. Within this approach, should be adopted planning models focused on revitalization of these areas, considering in a more integrating way the four public space dimensions:

- The sociological dimension, which includes as disciplinary subjects, sociology, anthropology and psychology;
- The economic and political dimensions;
- The urban and architectural dimension, which is made up from disciplinary areas of architecture and urbanism;
- The ecological and environmental dimension, that integrates as disciplinary areas, ecology and landscape architecture.

In this perspective, it is essential to adopt an inclusive and global view on the system of collective spaces in the city, that connect fundamental aspects of each knowledge area, with the aim to design urban plans that embrace an interdisciplinary principle, based on the identity of the place and in the idiosyncrasy of the population that inhabits it.

Keywords: City, Public Space, Dimensions, Intervention, Holistic View.

JEL Classification: R580

1. INTRODUCTION

Currently the majority of the population lives on big metropolitan areas and a large percentage of those lives in social, clandestine or illegal genesis districts, which shows up unmistakable signs of degradation both social and structural, as demonstrate through an ONU reports referring to 2016.

In the face of this reality, becomes urgent the action and intervention towards rehabilitation, requalification and restructuring, improving the quality of the urban environment and the population quality of life.

Therefore, the new urban planning models should focus on revitalization of those areas, considering in an integrated way all four urban public space dimensions: sociological dimension, economic e political dimension, urban and architectural dimension, ecological and environmental dimension.

In order to that to be possible, is necessary de adoption of integrated intervention strategies, which through a global and comprehensive view over the city collective space systems, could articulate and connect the fundamental aspects of each one of the different knowledge areas, associated with those different dimensions, based on the principle of the interdisciplinary.

The present paper aims to contribute for the study of the different urban public space dimensions considering the influence that those different disciplinary fields might to exert into the design of plans and projects of urban restructuring. The integrative and interdisciplinary production of the urban and metropolitan design for both social and environmental run-down residential areas, assume the urban restructuring project not only as “a form of intervention in the existing urban tissue that aims to introduce new structural elements of an urban settlement or of an urban area” (Decreto-regulamentar n.º9/2009), but as an holistic and inclusive form of intervention within the city, that connect and combines in a more effectively way the different dimensions that characterizes it. For that reason firstly, it is necessary to identify the different urban public space dimensions in its interrelation with socio-economics, anthropology, urbanism and ecology, among others. As a result of this, it is presented in this paper a brief study, which integrates and sums up the contribution of those different disciplinary fields as a base for the definition of an alternative urban planning model associated to the establishment of multifunctional and resilient urban spaces enhancers of a better quality of urban life.

2. THE DIFFERENT DIMENSIONS OF URBAN PUBLIC SPACE AND THE FOUR DISCIPLINARY FIELDS

The different dimensions of urban public space are disciplinary related to knowledge areas that have it as a study object and intervention. The public space system is characterized by being fundamentally sociological, political, urban and environmental. Thus is justified in the context of urban intervention the study of such dimensions allowing to a

multidisciplinary work team in a rational and conscious way, the design of different plans and projects through the analysis and understanding of the historical processes of construction and transformation of the site, delivering future scenarios generating identify and sustainable urban spaces, that promotes social and territorial cohesion.

The public space, as “the total area, in principle exterior and not edified, of free access and collective use” (Brandão, 2002), has been influenced by several factors that influence its morphology and consequently its design. Such factors are inherent to the dimensions of the public space which are presented in four major groups since it is understood that collective use spaces correspond not only to “places of passage, distraction and of ephemeral and fleeting sociability”, but most of all to “territories were a substantial part of the meetings and interactions between subjects take place, as well as their symbolic relationship with the city” (Fortuna *et al.*, 1998/1999). It is considered four essential dimensions of to the urban public space, with which distinct knowledge areas are related in a profoundly intricate way:

- The sociological dimension, which includes as disciplinary subjects, sociology, anthropology and psychology;
- The economic and political dimensions;
- The urban and architectural dimension, which is made up from disciplinary areas of architecture and urbanism;
- The ecological and environmental dimension, that integrates as disciplinary areas, ecology and landscape architecture.

Currently, the contemporary paradigm is related to the recognition and awareness of the existence of different disciplinary fields such as Urban Ecology and with the increasing concern to promote sustainable areas (both environmental, social and economically) within our cities. So it is a priority to “achieve sustainable development by establishing a balanced and harmonious relationship between social needs, economic activities and the environment” (Convenção Europeia da Paisagem, 2004). Therefore it is fundamental to identify, characterize and understand in a comprehensive and relational way, the processes that caused damaged urban areas and consequently damaged collective use spaces, so that through the adoption of a global and inclusive vision on the aspects and procedures that operate and intervene on the city, could take place as a principle of intervention, the interdisciplinary approach, based on the identity of the place and the idiosyncrasy of the population that inhabits it.

Such as various authors stands to, (Serdoura, 2007; Cordeiro *et al.*, 2008; Jackson, 2011), the different typologies of public spaces are distinguished by the sort of relationship that they establish with the edified tissue and the urban mesh, as well as, by the sort of utilization that they provide or the way in which their appropriation is made, considering the interpersonal relations established by them.

2.1 Sociology, Anthropology and Psychology

The social dimension of the urban public space is related to the disciplinary scope of Sociology, Anthropology and Psychology in a profound and intricate way. In these subjects, it is important to know beside some other factors, the connections that the habitant or the visitant/citizen establishes with the public spaces, how (re)act and the importance that whole public space represents for him. Considering the collective space as a privileged space for the exercise of citizenship, it is essential to analyse the concepts of place and “non-place”, through the way how populations relate to each other and how they appropriate and relate to the collective space. So according to this, the identification and understanding of psychological and sociocultural factors among others, must be considered in the urban planning process, based on the assumption that this process must be guided by the respect for the collective identity and character of the place.

The place is assumed as the set of physical and social characteristics with which are established special and social relations, such as feelings of belonging to the place (Schulz, 1979; Augé, 1994; Magalhães, 2001; Speller, 2005). If the public space is the reflexion of all past actions and those change the relation citizen-space, is the identity and idiosyncrasy of the population that inhabits it that must be studied and considered in the process of the urban plan and project design, as a key element for the reestablishment of urbanity and cohesion and social inclusion. On the opposite side, the concept of “non-place” refers to a space without identity, although it does not cease to be a “practiced space”, because it ends up fulfilling a certain function, even though it does not stimulate feelings of belonging, nor it is a historical space and/or have an (id) entity of its own (Augé, 1994).

It is the physical and social characteristics of space that represents its *genius loci*, being the place identity that causes feelings of appropriation and bound to it (Schulz, 1979; Rossi, 2001; Speller, 2005; Silvano, 2001). Those feelings of belonging and bind to the place, might be expressed in the most varied ways which reinforces the need to be considered the user-space relationship in the process of spatial production, namely in its application to urban restructuring plans that focus on spaces with highly marked characteristics. As Filomena Silvano (2001) refer on her study, “according to Lefebvre’s perspective; conceive the space presuppose representing it from a certain system of signs”. In this sense, it is fundamental in the context of that process, to map the very relation that the human being establishes with the urban environment, knowing that it is altered according to the time of the day and the cognitive-emotional and sensorial stimuli that are produced (Duarte, 2013).

Cities suffer processes of urban diffusion, fragmentation and privatization, leading to uses, functions and social segregation. They are also the reflexion of changes both cultural and social, which lead to the morphological modification of public spaces in cities (Borja *et al.*, 2003; Innerarity, 2006). The public space systems thus as a fundamental role as a structuring element of the urban tissue and as a promoter of “urbanity”, shall adapt to what are the real needs of social groups in the intervention areas, improving their organization and health conditions (Machado, 2005; Menezes, 2005; Cordeiro *et al.*, 2005).

Regarding to the public space typologies and to its social and cultural requirements for its design, it should be considered that the “public space defines the quality of the city because it is an indicator of the urban life quality and the quality of citizenship of its inhabitants (Duarte, 2013). So ought to be designed multifunctional areas related with environmental and patrimonial protection (green corridors, urban woods, botanical gardens, cultural parks), to food production (urban orchards,

urban agriculture), and recreation and leisure (sports parks, parks and gardens), socially useful and safe, economically viable and ecologically sustainable. For that reason, it is fundamental to consider that “the urban design should be thought as a whole and not as separated parts in which the edification is part of a project and the public space part of another, without creating an union between the edified and non-edified space” (Aragonés *et al.*, 1998; Duarte, 2013).

The present dimension of the public space system, demands on the scope of the planning process the integration of several functions and users (groups and social classes, age groups, ethnic group, etc.) in order to instil feelings of security and belonging, considering it, as a motivator of different social and cultural encounters and interactions, which is a crucial aspect for an inclusive and socially just contemporary city (Duarte, 2013).

2.2 Politics and Economy

Changes in economics paradigms and urban policies oblige to the city design model and its public space, to recognize the project of urban and landscaping requalification as activating elements of the improvement of socioeconomic quality of the urban region. The adopted urban policies over time are connected to planning options that affected the relations established between society and territory, reflecting its consecutive economic and environmental conditions. For instance, the economic pressure exerted on industrial areas which in turn directly influence demography in a given urban context. On the one hand, there is a significant increase of the under-privileged social classes, which is the basis of the creation of illegal genesis residential quarters in an attempt to deal with the high housing demand. On the other hand, when there is a decline and abandonment of a certain industrial activity, is experimented the abandonment of urban districts which were once urban centres are now authentic *brownfields* that punctuate our cities.

As Nuno Portas (2003) refer, “in the same way that the economy underlines the growth and spatial and social order transformations, it is also related to the environmental values, which in a certain way contemplate the spatial and social order in the same sphere of action, as it happens in public space, through which it is intended that cities start to assume good urban environment and quality of life features. Therefore, starts to be adopted new intervention policies in public space, providing in addition to the characteristics that promote recreational and leisure activities, characteristics associated with production, thus helping to convert unused yet adequate spaces for agricultural production into horticultural parks in urban centres”. The political-economic dynamics have a great influence on the forms of occupation of the public urban space. For instance, the road and transport systems that have been influencing the design and progress of cities, leads to overvaluation of this use, serving as an excuse to the abandon of small commerce due to lack of parking spaces. However, this element cannot be neglected because they are the ones who linked different spaces of the city and support the population movements. For that reason, mobility has an important role in the construction of new landscapes (Portas *et al.*, 2002; Brandão, 2008).

Portas, N. *et al.* (2013), consider that the “established city is a palimpsest of overlapping (layered) memories that limit the possibilities of transforming their obsolete areas or fill urban voids, giving the current consensus on preservation of patrimonial and/or environmental values, that are no longer limited to classified perimeters, expanding to the impacts nature on functional (tertiary) or social (gentrification) modifications”. Although, it is considered that the refereed conditions, according to a new standard of urban policies and space design should be taken into consideration as opportunities and/or as support of new intervention plans to combine these factors with the characteristics of the intervention areas, within a comprehensive and dynamic space view.

The public space as a common good is associated “to the usufruct of which area we are all entitled” (Brandão, 2005), so that new urban and socioeconomic policies for projects and plans of urban restructuring might have as their main purpose, the revitalization of rundown areas, allowing the improvement of quality and urban image, promoting processes of humanization and social well-being. In order to that, such policies should be based on the following parameters (Duarte, 2013):

- Avoid phenomena of gentrification and social exclusion and acknowledge that “conventional responses do not work”. In this sense, Miguel Lashayas (2015) refer that “a typology of more contextualized intervention should be adopted more and more, connecting the local people and using the available community resources”(Lashayas, 2015);
- Rethink the revitalization of historical centres, reinforced by the trend of patrimonialisation of the identity and economic sectors expansion in the areas of tourism as a monoculture;
- The commercial urbanism and intervention on void and/or rundown residential parks, in the attempt to reverse the crises of small commerce, the escape of the resident population or the physical and social damage of critical districts;
- The revitalization of building and assemblies made obsolete, particularly on water fronts and other places of strong symbolic value, adjustable to “projects of excellence”, with a strong visibility and social impact;
- The sudden attention given to “public space”, after the changes induced by the car and the new urban experiences, etc. That seems to have “positive effects (in addition to the functionality itself) on the self-esteem and the calculation of the advantages by the present “actors”, the street-to-street economic revive and the image of the Local Administration” (Portas *et al.*, 2003). The core of this assumption is the recognition shared by several authors of the most varied areas of knowledge that the public space acts as a structuring element and of support to buildings, public equipment, the road system, etc.

2.3 Architecture and Urbanism

The urbanistic dimension is related with the disciplinary fields of architectures and urbanism. It is in this group that the analysis carried out will allow to evaluate the physical conditions of the space, looking for urban planning parameters that the public space system should contemplate.

In order to analyse the importance of public space for the present dimension, it is important to know and identify the

main city problems associated with urban transformations, envisioning new urban principles to adopt in the process of designing urban restructuring project plans.

The urbanisation process had suffered some major modifications over the years, highlighting the XIX century, in which “the distinction between public and private was formalized, in order to guarantee the existence of collective spaces and the diversity of functions and shared uses that could be developed there” (Borja *et al.*, 2003). During the XX century is witnessed the setback of what was established in XIX century, public space is no longer recognized as an element that gives “shape and sense to the whole city as a key linking element between the edified system and the public spaces system, losing its fundamental functions” (Borja *et al.*, 2003). Finally, it is now recognized the importance of public space, its multiple functions and capabilities. The city a place of communication, goods transition, services, information and emotions is a highly changeable element (Choay, 2004; Lynch, 2009). It is possible to identify different cities (Gehl *et al.*, 2002): the “traditional city” corresponding to historical and vernacular places, in which spaces of encounter, commerce and circulation continue to coexist in balance; the “invaded city”, where individual uses such as traffic appropriate the territory in detriment of other urban space uses; the “abandoned city” were the anthropological place and sociability disappeared; and finally the “recovered city”, where great efforts are made to find a new balance between uses of the city as a place of encounter, commerce and circulation”.

It is on this last city “typologies” that is focused the present study, since it is considered urgent to adopt a new planning model that includes the different typologies of collective use spaces and recognizes the system of public spaces as a structural element that gives sense to the urban mesh, responding to the needs of the population that uses it and respecting the memory of the place, but looking into the future. Recognizing the lack of quality public spaces and its intended the “recover the culture of the public space” (Borja *et al.*, 2003) looking for reverse, the urban standardization and homogenization processes in force recognized by Rem Koolhaas (2002), as a “generic city”, in other words, the “city recognized only with a functional purpose, according to the present needs, losing the connection to the memory and identity of the space and its population”.

The present city is the result of mutations resulting from the alteration of organizational models that came across according to the architectural principles, intentions and needs of each time line. As well as to the changed notion of time and distance, which lead to the progressive displacement of the population from the city centres to the periphery. However, this change of the city occupation and the importance given to the public space is due to multiple factors. Yet in the course of urban transformation, new urban challenges arises which are materialize essentially in the design of the public space, understood as a meeting space between people, and of representation of the city (Santos, 2015; Arroyo, 2011; Pérez-Gomez, 1996; Brandão, 2002; Portas, 2005) meaning that is transversal to all areas of knowledge considered.

In view of the above considerations it is proposed that the main guidelines to be adopted in the scope of public space design have to include the following premises:

- “The current public space has to be thought out and built for who inhabits it and has to produce balanced functions between public and private places. Is the public space that decides the density and design and the private that develops it, cede ground and builds” (Duarte, 2013);
- Facing the current urban challenges its key the adoption of a perspective that defends the need of “produce city, regenerating the old centres and creating new centres at the metropolitan scale, ensuring mobility, accessibility, visibility of each one of the city areas keeping and building a multipurpose urban mesh by its uses and population in which the public space is the structural element” (Brandão *et al.*, 2000);
- It is up to the coordinator of the project/urban plan, to understand that the challenge ahead, does not correspond only to a conceptual and formal question, but goes beyond this, and also concerns the interpretation of factors of different order, for which should be adopt competent and innovative strategies and programmatic considerations that includes, both urbanization and landscape, the individual with the society, patrimony with the contemporary, “establishing the *continuum natural* into the urban environment, valuing the reunion of men with nature and with themselves (Pérez-Gomez, 1996; Brandão, 2003; Fadigas, 2007);
- As an intervention strategy, “the urban planning and intervention projects in the public space should be open to public participation by all stakeholders, contributing to the adoption of mended solutions and options for the democratization of urban life” (Duarte, 2013). This process might be directed in various ways, but must to be taken in consideration that the target audience to inquirer has to inhabit it and or, uses it daily, because they are ones that will potentially give to the designer a greater knowledge of the area to intervene, assessing their problems and potentialities (Quick *et al.*, 2012);
- It is important to experience spaces, similar to the user experience, walking through them and to know them, allowing the designer to make more informed decisions regarding the intervention strategies to be developed (Careri, 2002);
- The urban plan/project must include “the built and public space connection, carefully defining areas of housing and public utilities integrated in a consistent way with the collective space design, valuing the human scale. Thus it is possible to provide more humanized spaces, which provide neighbourhood relations, spaces that induce feelings of security and of vigilance and care by the user in relation to the space” (Duarte, 2013);
- A careful social, physical and environmental integration must be developed, ensuring mobility and accessibility for all, through a good system of pedestrian, clickable and, or road courses, associated with a public transportation network ensuring connections between planned spaces and the remaining urban system” (Duarte, 2013).

2.4 Landscape architecture and Ecology

The Landscape Architecture as an integrative formation and synthesis of knowledge and eminently practical profession, bases its intervention on the global, relational and interdisciplinary evaluation of space, taking into consideration all the

approaches mentioned, its principles, concepts and intervention strategies” (Duarte, 2013), with the aim of generating socially cohesive, economically dynamic and environmentally balanced public spaces that contribute to guarantee urban sustainability at a global level.

Whereas the need to revitalize degraded urban areas, is based on the articulation of the concepts and strategies associated with the different dimensions identified, it is considered in the present investigation the “need to formulate a new model of landscape intervention, based on the reconciliation between society and nature” (Batista *et al.*, 2015), in which the “landscape project arises from the meeting between the recognition of the sites and their natural and cultural values and the social, cultural and technical energies that can be added to the historical memory of communities and places. The same would be saying that, in the context of urban and landscaping (re)design, the first requirement in order to maintain and enhance the identity and character of a landscape as a presupposition of contemporary intervention, will be not enforce functional and formal logics (in the socio-economic, cultural, symbolic, ecological contexts), exogenous and strange models and development rhythms averse to the natural and cultural spirit of the place, grounding the reasons for the cultural and landscape identity that should guide the project process” (Batista *et al.*, 2013).

Today the main challenge is to change “from a system that exploits technological development for pure profit to another that aims to make sustainable cities. And that demands fundamental changes to the human behaviour towards the public power exercise, in commerce, architecture and urban planning” (Haughton *et al.*, 1994). Since the urban landscape is the result of pressures exerted of the most varied order and dimension, it is important to consider that the “landscape is for that reason, faced as a multifaceted, complex and dynamic in permanent mutability reality, as a result of the interaction between natural and cultural systems” (Batista *et al.*, 2015). It should be understood that the territory integrates varied landscapes, be they urban, rural and industrial, among others and that the cities themselves enclose representative fragments of these distinct sorts of landscape, gifting spaces with great potential in the promotion of urban life quality and sustainable urban development, reaching the urban environmental balance (Magalhães, 2001).

The importance of nature in urban areas is linked to the idea of *continuum natural* as a coherent and continuous system of green spaces throughout the city (Cabral, 1993). This key idea to urban ecological structures assumes public green spaces as being “the most important, because through them people find in the city a natural environment at the man’s scale” (Cabral, 1993). In this sense, public spaces such as streets, roads, squares, parks, among other typologies, reflect the process of adapting culture to the environment (Serdoura, 2007; Jackson, 2011). Reason why they are considered fundamental structural elements, through those the urban system ought to be organized, as a reflexion of history and culture of a population, enclosing in itself meanings concerned to each user and social group.

However, the urban public spaces system is associated with a multiplicity of functions (Telles *et al.*, 1996; Magalhães, 2001): the biodiversity growth in the city and they are responsible for a range of ecosystem services essential to the biological balance and bioclimatic comfort; as an urban infrastructure they are support of recreational and leisure activities contributing to the promotion of social welfare, both physical and psychological. They are elements of interest and aesthetic value, that gave priority to the human scale and to the proportion of the built volumes and the pleasantness of the urban environment. Therefore, due to the different functions and benefits associated with vegetation and green spaces, it is considered fundamental that the Portuguese municipalities promote the elaboration of green structure plans provided in the existing legislation.

The approach to urban restructuring plans should envision a global vision of the territory that considers the urban areas, just like the landscape in which is inserted, undertakes processes of morphological alteration and occupation. So the public space should be drawing and thought-out according to the requirements imposed by the inclusion of urban ecology information, by the conversion of recreational and leisure spaces into production spaces, for instance, as it is the case of urban gardens, with the intention of the restoration of the *continuum natural* in the city.

The conquest of empty spaces for the practice of urban agriculture, for all classes, has a unifying element of contemporary society, responds to a paradigm shift at the socio-economic level, where there is a search for a healthy and sustainable food, based on the ransom of the urban-rural interrelation, introducing sustainable and resilient spaces in urban areas, paying contribute to the improvement of the quality of life in the city (Reynolds *et al.*, 2016; Haughton *et al.*, 1994; Hough, 1998). The new agricultural areas in urban context are one of the best uses to be implemented in empty or featureless unstructured spaces, once they immediately improve the urban image and constitute a mean of promoting territorial cohesion and social interaction. Within the new plans and projects of urban restructuring, the urban public space must be perceived considering its capacity of mutability and adaptation to the new realities and requirements of the different dimensions that characterizes it, and of the deeply intricate relationships established between them.

3. FINAL CONSIDERATIONS

In the contemporary city, social housing districts or illegal genesis neighbourhoods set the habitat of a high percentage of urban population. In this context, the improved quality of the urban environment and urban life is connected to the requalification of public spaces. The multidimensionality and multifunctionality of these spaces requires as principle of intervention the principle of interdisciplinarity, within the framework of plans and/or projects of urban restructuring. The summed up study of the different dimensions of the urban public space, considering the concepts and strategies adopted by the different disciplinary fields, revealed the need for a new planning model and urban design, which through a holistic and integrated view, connect and embodies them establishing resilient landscapes and spaces. This is why, the urban reconstruction of those spaces ought to be based on an intervention sustainable plan in all its dimensions and adjusted to the local reality, with the giving respect to the history of the place as well as the idiosyncrasy of the population that inhabits it. The new plans must provide urbanity, multifunctional spaces able to deliver security, and feelings of neighbourhood and

belonging. Although, the network of urban public spaces should be integrated and value the municipal ecological structure by re-establishing the *continuum natural*. The urban public spaces design must be thought from the user's point of view, for that reason the participation of the population throughout the project process is fundamental in the sense that is through the local community that it is possible to know the local reality in its different dimensions: economic, sociocultural, urban, environmental.

The structure of urban public space have to serve as a matrix for the built structure, with which must harmonize trying whenever possible to privilege the human scale, contribute to increasing the culture diversity and biodiversity and privilege types of spaces that promote urban living and quality of life to favour territorial cohesion and social inclusion.

REFERENCES

- Aragonés, J. e Américo, M. (1998). *Psicologia Ambiental*. Ediciones Piramide. Madrid. 1998. ISBN 843 681 2182.
- Arroyo, J. (2011). Espaço público. Territórios, acciones y conflictos. In: L. Assen de Oliveira e G. P. e Rossetto, A M e Do Amaral e Silva, *A arquitetura da cidade contemporânea: centralidade, estrutura e políticas públicas*. UNIVALI. Itajaí.
- Augé, M. (1994). *Não-lugares - Introdução a uma antropologia da sobremodernidade*. Bertrand Editora. Venda Nova. ISBN 972 250 5807.
- Batista, D. e Matos, R. (2013). A dimensão patrimonial e identitária da paisagem: a história do lugar como fundamento da intervenção urbana e territorial contemporânea. Acedido a Citação: 18 de Março de 2017, no website: *Repositório da Universidade de Évora*: <http://hdl.handle.net/10174/10036>. dspace.uevora.pt/rdpc.
- Batista, D. e Matos, R. (2015). Das Ideias de paisagem e de jardim: compreender e (re)construir o lugar - do passado para o futuro. In: Carlos Terra, Jeanne Trindade e Andrade Rubens. (eds.), *Revista Leituras Paisagísticas: teoria e práxis. n.º5*. Grupo RIO LTDA. Rio De Janeiro.
- Borja, J. and Muxi, Z. (2003). *El espacio público: ciudad y ciudadanía*. Electa. Barcelona. ISBN 847 794 9042.
- Brandão, F. M. (2003). *Avaliação da Qualidade do Espaço Público Urbano. Proposta Metodológica*. Lisboa : Fundação Caloust Gulbenkian - Fundação para a Ciência e Tecnologia, 2003. ISBN 972 311 0008.
- Brandão, P. (2008). *A identidade dos lugares e a sua representação coletiva. Bases de orientação para a conceção, qualificação e gestão do espaço público*. Direção-Geral do Ordenamento do Território e Desenvolvimento Urbano, Série Política de Cidades. Lisboa. ISBN 972 856 9433.
- Brandão, P. (2005). Apocalípticos - Integrados. Notas de “pensamento paralelo” sobre o espaço público e economia, e sobre alguns novos tipos de espaços públicos. In: Divisão de Edições e Artes Gráficas Laboratório Nacional de Engenharia Civil. *Cadernos edifícios n.º4 - Humanização e vitalização do espaço público*. Laboratório Nacional de Engenharia Civil, Divisão de Edições e Artes Gráficas. Lisboa.
- Brandão, P. and Antoni, R. (2000). *Espaço Público e Interdisciplinariedade*. Centro Português de Design. Lisboa. ISBN 972 944 5117.
- Brandão, P. (2002). *O Chão da Cidade - Guia de avaliação do design do espaço público*. S. Centro Português do Design. Lisboa. ISBN 978 972 944 5194.
- Cabral, F. C. (1993). *Fundamentos de Arquitectura Paisagista*. 2ª ed. Instituto da Conservação da Natureza. Lisboa. ISBN 972 775 1237.
- Careri, F. (2002). *Land & Scape Series: Walkscapes - El andar como prática estética*. Gustavo Gili. Barcelona. ISBN 842 521 8411.
- Choay, F. (2004). El reino de lo urbano y la muerte de la ciudad. In: Ángel Martín Ramos (eds.), *Lo urbano en 20 autores contemporáneos*. Universitat Politècnica de Catalunya, SL. Barcelona.
- Cordeiro, G. and Vidal, F. (2008). *A Rua - Espaço, Tempo, Sociabilidade*. Livros Horizonte. Lisboa. ISBN 978 972 241 6085.
- Cordeiro, M. and Queiroz, T. (2005). A cidade, a criança e a aúde, contributos para uma mudança de paradigmas. In: Divisão de Edições e Artes Gráficas Laboratório Nacional de Engenharia Civil, *Caderno Edifícios n.º4 - Humanização e vitalização do espaço público*. Laboratório Nacional de Engenharia Civil, Divisão de Edições e Artes Gráficas. Lisboa.
- Decreto Regulamentar n.º9/2009*. D.R. I Série. 104. 2009.
- Decreto-Lei n.º4/2005*. I Série - A. 31, s.l. : Diário da República, 14-2-2005.
- Duarte, E. (2013). *As diferentes dimensões do espaço público urbano e a sua influência no desenvolvimento de um projeto de reestruturação urbana: o caso dos bairros Trindade e Monarquina em Setúbal*. Dissertação de Mestrado em Arquitectura Paisagista, FCT, Universidade do Algarve.
- Fadigas, L. (2007). *Fundamentos Ambientais do Ordenamento do Território e da Paisagem*. Edições Sílabo. Lisboa. ISBN 978 972 618 4560.
- Fortuna, C., Ferreira, C. and Abreu, P. (1998/1999). Espaço público urbano e cultura em Portugal. *Revista Crítica de Ciências Sociais - 20 anos de teoria social*. 52/53.

- Gehl, J. and Lars, G. (2002). *Novos Espaços Urbanos*. Gustavo Gili. Barcelona. ISBN 978 842 521 9078.
- Haughton, G. and Hunter, C. (1994). *Sustainable Cities*. Regional Studies Association. London. ISBN 185 302 2349.
- Hough, M. (1998). *Naturaleza y Ciudad*. Gustavo Gili. Barcelona. ISBN 842 521 632x.
- Innerarity, D. (2006). *O Novo Espaço Público*. Teorema. Lisboa. ISBN 978 972 695 9069.
- Jackson, J. (2011). *Las carreteras forman parte del paisaje*. Editorial Gustavo Gili. Barcelona. ISBN 978 842 522 4034.
- Koolhaas, R. (2002). *Rem Koolhaas - Conversas com estudantes*. Gustavo Gili. Barcelona. ISBN 842 521 8985.
- Lashayas, M. (2015). Cuadro 7. Sobre del proyecto ETXEBERRI. In: Juan Subirats e Ángela García Bernardos, *Innovación social e políticas urbanas en España. Experiencias significativas en las grandes ciudades*. Icaria editorial, s.a. Barcelona.
- Lynch, K. (2009). *A Imagem da Cidade*. Edições 70. Lisboa. ISBN 978 972 441 4119.
- Machado, P. (2005). O desencontro urbano. Questões geracionais na humanização da cidade. In: Divisão de Edições e Artes Gráficas Laboratório Nacional de Engenharia Civil. *Caderno edifícios n.º4 - Humanização e vitalização do espaço público*. Laboratório Nacional de Engenharia Civil, Divisão de Edições e Artes Gráficas. Lisboa.
- Magalhães, M. (2001). *A Arquitetura Paisagista - morfologia e complexidade*. Editorial Estampa. Lisboa. ISBN 972 331 6862.
- Menezes, M. (2005). Espaço público urbano e práticas sócio culturais de uso, sua apropriação e representação. In: Divisão de Edições e Artes Gráficas Laboratório Nacional de Engenharia Civil, *Cadernos edifícios n.º4 - Humanização e vitalização do espaço público*. Laboratório Nacional de Engenharia Civil, Divisão de Edições e Artes Gráficas. Lisboa.
- Pérez-Gomez, A. (1996). Espacios intermedios. In: Ignasi Solà-Morales e Xavier Costa, *Presente y futuros. Arquitectura en las ciudades*. Comitè d'Organització del Congrés UIA Barcelona. Barcelona
- Portas, N. et al. (2002). Políticas Urbanas. *Políticas urbanas - Documentos de apoio ao colóquio sobre políticas urbanas, organizado pela Fundação Caloust Gulbenkian*. Fundação Caloust Gulbenkian. Lisboa.
- Portas, N. (2005). *Os Tempos das Formas*. Departamento Autónomo de Arquitetura da Universidade do Minho. Guimarães. ISBN 972 998 2201.
- Portas, N. et al. (2003). *Políticas Urbanas - Tendências, estratégias e oportunidades*. Fundação Caloust Gulbenkian. Lisboa. ISBN 972 311 061X.
- Quick, K. et al. (2012). Designing Public Participation. *Public Administration Review*. 1, 2012, Vol. 73: 23-34.
- Reynolds, K. and Cohen, N. (2016). *Book Review Forum - Beyond the Kale: Urban Agriculture and Social Justice Activism in New York City*. Acedido a 28 de Fevereiro de 2017, no web site Academia.edu: <https://www.academia.edu/people/search?utf8=%E2%9C%93&q=Beyond+the+Kale%3A+Urban+Agriculture+and+Social+Justice+Activism+in+New+York+City>.
- Rossi, A. (2001). *A Arquitetura da Cidade*. Edições Cosmo. Lisboa. ISBN 972 762 1260.
- Santos, M. (2015). *Los valores comunitarios reflejados en el espacio público*. Universidad De Lasalle - Facultad de Arquitectura. Bajío.
- Schulz, C. (1979). *Genius Loci - Towards a phenomenology of architecture*. Rizzoli. New York. ISBN 084 780 2876.
- Serdoura, Francisco (2007). As Dimensões do Espaço Urbano Público. *Artitextos*. 05: 149-155.
- Silvano, Filomena (2001). *Antropologia do Espaço - Uma Introdução*. Celta Editora. Oeiras. ISBN 972 774 0995.
- Speller, G. M. (2005). A Importância da vinculação ao lugar. In: L. Soczka. *Contextos Humanos e Psicologia Ambiental*. Fundação Calouste Gulbenkian. Lisboa.
- Telles, G. R. and Pessoa, F. (1996). *Portugal, Paisagens e Espaços Naturais*. Clube Comercial do Livro - Edição e Comércio de Livros a Crédito Lda. Alfragide. ISBN 972 970 0303.

A PAISAGEM SONORA DE ÉVORA NO SÉCULO XVII: PERSPECTIVAS A PARTIR DA ACTIVIDADE MUSICAL DAS INSTITUIÇÕES RELIGIOSAS DA CIDADE

Luís Henriques
CESEM/Universidade de Évora
(luiscfhenriques@gmail.com)

RESUMO

A ideia de uma paisagem sonora do espaço urbano foi uma das várias áreas que se desenvolveram a partir de uma ideia mais alargada do que hoje é chamada paisagem cultural. Esta ideia de cartografar sons urbanos a partir de uma perspectiva histórica foi desenvolvida na Península Ibérica com um projecto que envolveu as cidades andaluzas de Sevilha e Granada. Os objectivos principais por detrás destes projectos são, para além da cartografia do maior número possível de eventos, a organização destes eventos através de várias plataformas interactivas (websites, aplicações, etc.) que permitem ao utilizador seguir várias experiências musicais que já não existem ou que foram transformadas durante o tempo. Em Évora, um projecto deste tipo encontra-se em desenvolvimento, que foca os arquivos musicais da cidade, nomeadamente a Catedral e a Biblioteca Pública, que albergam as fontes musicais da cidade e dos conventos e mosteiros dos arredores. Esta comunicação analisa a paisagem sonora histórica de Évora no século XVII, com uma visão geral das instituições religiosas da cidade a partir da perspectiva da sua actividade musical, que eram de longe os mais numerosos centros musicais da cidade neste período. Esta paisagem sonora inclui os sinos das igrejas, instrumentos musicais (nomeadamente os órgãos) e o canto das Horas nestas instituições.

Palavras-chave: Évora, Paisagem Sonora, Século XVII, Música Sacra.

1. INTRODUCTION

A ideia de uma paisagem sonora, geralmente circunscrita a determinado espaço urbano partindo de uma perspectiva histórica, é algo que tem despertado a atenção da Musicologia nos últimos anos. Este estudo tem-se desenvolvido a partir da noção generalizada de paisagem cultural, nomeadamente, da associação e relação entre vários elementos implantados em determinado espaço, tendencialmente urbano, onde relações deste tipo são mais facilmente detectáveis e estão mais documentadas. A paisagem cultural é estudada quase maioritariamente de um ponto de vista antropológico, uma vez que advém da acção humana. Porém, não afastando a componente antropológica, que está na sua essência, o conceito de paisagem sonora parte, não só do Homem em si, mas também num percurso inverso; do ambiente acústico em que o som é ouvido para o indivíduo que o produziu.

O conceito de paisagem sonora desenvolveu-se sobretudo a partir dos escritos do compositor canadiano Raymond Murray Schafer na década de setenta (Schafer, 1977). Este autor referiu vários elementos fundamentais presentes na paisagem sonora, dividindo-os em dois grandes grupos: por um lado os sons naturais, incluindo os vocalizos animais, o som dos efeitos atmosféricos e outros elementos naturais e, por outro, os sons decorrentes da acção humana através da composição musical, *sound design* ou outras actividades do quotidiano como a conversação, trabalho, e sons produzidos de forma mecânica resultantes da tecnologia industrial (Schafer, 1993: 9-10). Para o presente estudo interessam os sons decorrentes da acção humana, tendo a composição e a interpretação musical (quer por meio da voz, o instrumento natural por excelência, ou através do uso de instrumentos musicais) como os meios produtores e a sua integração na paisagem sonora sacra de Évora no século XVII.

No caso concreto da Península Ibérica, o conceito de paisagem sonora foi abordado a partir de uma perspectiva histórica através do projecto que envolveu as cidades de Sevilha e Granada como casos completos enquanto centros de actividade musical, estando o trabalho realizado nas duas cidades disponível no sítio *Paisajes sonoros históricos de Andalucía (c.1200-c.1800)* (<http://www.historicalsoundscapes.com>). Neste campo destacam-se os estudos realizados por Juan Ruiz Jiménez para Granada e Sevilha, focando a vivência musical urbana de ambas as cidades durante o século XVI. A cidade de Sevilha tem sido o foco de outros estudos relativamente à sua paisagem sonora nos séculos XVI e XVII. Estes têm incidido não só sobre a actividade de instituições religiosas, como é o caso da Sé, mas também sobre as redes de relações entre as várias instituições aí instaladas. Aqui é importante salientar os trabalhos sobre a presença da música nas procissões realizadas pela cidade, nomeadamente no dia dos defuntos (2 de Novembro) na Sé de Sevilha (Jiménez, 2014) e também na festa do Corpo de Deus – conhecida em Espanha como *El Corpus* – uma das procissões de maior importância na vida cívica da cidade (Pellicer, 2016). Foi ainda realizado um estudo sobre a paisagem sonora nesta cidade no tempo de Miguel de Cervantes, tendo como elementos centrais o a actividade do compositor Francisco Guerrero, abrangendo-a numa perspectiva global e estabelecendo um roteiro sonoro ilustrando o percurso do escritor pela urbe espanhola (Jiménez, 2016).

No caso do projecto das cidades andaluzas foi traçada uma metodologia assente em bases cartográficas musicais, ou seja, um levantamento do maior número de eventos musicais que ocorreram dentro do perímetro urbano de cada cidade entre os séculos XIII e XIX. Estes eventos foram seguidamente agrupados por temas de forma a formarem roteiros, incluídos numa base de dados online e uma aplicação para dispositivos móveis, recursos claramente vocacionados para o turismo cultural. A

produção de recursos interactivos, embora primeiramente direccionada para a utilização turística, possui ao mesmo tempo a abrangência e profundidade suficientes para constituir um importante ponto de partida para o estudo de carácter científico, sobretudo no que diz respeito à análise do desenvolvimento e relação entre os vários centros de actividade musical dentro de um determinado perímetro urbano e as relações destas instituições com centros de outras cidades.

No caso de Évora, esta cidade tornou-se num importante centro musical durante o século XVI, devendo muita dessa primazia à actividade das instituições religiosas fundadas no perímetro urbano desde a Idade Média. Nas primeiras décadas do século XVI, durante o bispado do Cardeal D. Afonso e, sobretudo, durante o primeiro período do arcebispado do Cardeal D. Henrique, Évora consolidou-se como um dos principais centros produtores de música, não só devido à actividade das instituições musicais da cidade, mas também enquanto centro de ensino e preparação de músicos para outras instituições portuguesas e estrangeiras, nomeadamente espanholas e das colónias do Novo Mundo.

Desta forma, a Sé constituiu-se como a instituição central da cidade no que à actividade musical diz respeito. A sua centralidade deveu-se sobretudo à Capela e à Clastra (local do ensino da música) e também ao Colégio dos Moços do Coro. Aqui, percebe-se que para além da existência da Capela, instituição de prática musical por excelência, encontrava-se também organizado um sistema para o ensino da música, produzindo músicos, não só para o serviço da Catedral, como também para assumirem semelhantes cargos em outras instituições (Alegria, 1973: 4-5). É este sistema, herdado do século XVI, que se observa durante os séculos XVII e XVIII.

A Capela da Sé como irá ser conhecida no século XVII, encontra-se presente na documentação da Catedral a partir da segunda década do século XVI. É sobretudo durante o bispado do Cardeal D. Afonso e a presença do compositor e teórico de origem espanhola Mateus d'Aranda que, tanto a actividade musical da capela, como o ensino da música irão incorporar-se na estrutura organizativa da Sé. Todavia, isto não quer dizer que esta estrutura já não estivesse montada na Sé (como seria natural) desde a Idade Média. Porém, tal não constituiu um factor de tal forma determinante que proporcionasse a preocupação no seu registo escrito em qualquer documento da Catedral. Ocuparam o cargo de mestre de capela da Sé ao longo do século XVII Manuel Rebelo (1590s-1647), António Rodrigues Vilalva (1647-1678) e Diogo Dias Melgaz (1678-1700). Destes mestres apenas sobrevivem algumas obras de Manuel Rebelo e largo número de obras de Diogo Dias Melgaz, na sua maioria copiadas no século XVIII (Alegria 1973: 127).

No caso da Clastra (referente ao ensino da música), este nome advém do primeiro local onde os moços do coro eram ensinados, mais concretamente, na Capela do Fundador do Claustro. Em 1552 foi criado o Colégio dos Moços do Coro enquanto instituição de ensino da música, funcionando primeiramente no edifício da antiga Sé que tinha também servido como casa do Senado da cidade, e, ameaçando ruína, mudaram-se para os antigos celeiros do Arcebispo, atrás da casa do Cabido, onde hoje se localiza a Biblioteca Pública de Évora (Alegria, 1973: 54). O Colégio manteve-se nestas instalações até pelo menos ao início do século XVIII, altura em que foi construído o edifício anexo à Sé, sendo a instituição para aí transferida no tempo do Arcebispo D. Simão da Gama (Alegria, 1973: 89-90). Vários foram os músicos que ocuparam o cargo de mestre da Clastra durante o século XVII, geralmente durante curtos espaços de tempo. O primeiro que surge é António Pinheiro (1604-1608), seguindo-se Domingos Martins e Diogo Dias de Vilhena até à década de vinte. Por essa altura, Manuel Rebelo assumiu estas funções (1620s-1633), que acumulava com o cargo de mestre de capela, assim como o seu sucessor, António Rodrigues Vilalva (1633-1642). Bento Nunes Pegado ocupou o cargo em meados do século (1642-1663) e Diogo Dias Melgaz assumiu-o a partir de 1663, conjuntamente com o cargo de mestre de capela (Alegria, 1973: 127).

Desde a primeira metade do século XVI que os moços do coro, após completarem os estudos musicais no Colégio, eram mandados estudar no Colégio do Espírito Santo. Esta instituição Jesuíta, fundada pelo Cardeal D. Henrique em 1559, tinha como principal função o ensino humanístico, remetendo para um plano secundário qualquer prática musical, nomeadamente o canto dos ofícios diários, tarefa da qual a Ordem estava isenta. Todavia, o Colégio do Espírito Santo desempenhou um papel central na educação dos músicos do Colégio dos Moços do Coro, proporcionando-lhes uma sólida formação humanística que, conjugada com um superior ensino do cantochão, polifonia e composição, não só os transformou em artistas de alta qualidade, como também em teólogos e filósofos. Porém, a relação entre os dois colégios não se desenvolveu sem incidentes, como é referido através do queixume enviado pelo Cabido da Sé ao Reitor do Colégio do Espírito Santo a 5 de Julho de 1611. Neste, o Reitor é alertado para o comportamento indisciplinar dos estudantes do Colégio, que se haviam introduzido na Clastra da Sé, perturbando as aulas dos moços do coro. Ordenava ainda o queixume que se trouxesse um livro de cantochão para fora da capela (do Fundador do Claustro) para que os estudantes pudessem cantar e que alguns, conhecidos, ficassem dentro da capela, porém, afastados dos moços. A advertência final alerta para o aprisionamento no Aljube dos estudantes que continuassem o comportamento indisciplinar (Alegria, 1997: 100).

À Sé de Évora, segue-se a Igreja de Santo Antão no respeitante à importância da sua actividade musical. Situada na actual Praça do Giraldo, local central da cidade, foi mandada construir em meados do século XVI pelo Cardeal D. Henrique. Esta igreja manteve uma importante actividade musical devido à sua colegiada e também por ser igreja anexa à Sé no respeitante a benefícios. Encontra-se aqui como mestre de capela nas últimas duas décadas do século XVI o antigo mestre da capela privativa do Cardeal D. Henrique, Manuel Mendes, que também ocupava o cargo de mestre da Clastra da Sé (Alegria, 1973: 41). Esta igreja possuía desde 1380 um vigário e seis beneficiados com obrigação de coro, ou seja, tinham obrigação de cantar os vários ofícios do Dia Litúrgico e as Missas (Fonseca, 1728, 218). No início do século XVIII possuía dez beneficiados e um reitor, todos com obrigação de coro (Costa, 1708: 423).

A Igreja de São Tiago data do tempo do Rei D. Manuel estando implantada na freguesia do mesmo nome, a qual sofreu obras profundas durante o século XVII. No final de seiscentos era servida por um prior, um cura e oito beneficiados com obrigação de coro (Fonseca, 1728: 217). Apesar de possuir uma comunidade eclesiástica mais numerosa que a Igreja de Santo Antão, não se conhecem relações musicais significativas com a Sé ou de igual importância ao templo da Praça do Giraldo. O mesmo ocorre com a Igreja de São Mamede, na respectiva freguesia, de fundação medieval e fachada quinhentista mas que, tal como a de São Tiago, também sofreu profundas intervenções artísticas durante o século XVII. Esta igreja possuía

em meados do século XVI (e, possivelmente também durante o século seguinte) um prior, dois beneficiados simples, dois beneficiados com “a cura das almas” e um capelão, todos com obrigação de coro (Fonseca, 1728: 219), mantendo este número de clérigos ainda no início do século XVIII (Costa, 1708: 422).

O grupo de igrejas associadas às freguesias de Évora encerra com a Igreja de São Pedro, uma das freguesias mais antigas da cidade. Esta igreja localizava-se na actual Rua Diogo Cão. Em 1840, após a extinção das ordens religiosas, foi transferida para o Convento de S. Francisco, sendo demolido o edifício por estar arruinado, do qual actualmente apenas sobrevive o pórtico de estilo gótico (Beirante, 1995: 97). De acordo com o Padre Francisco da Fonseca (1728: 217) a igreja teria um prior que sustentaria um capelão cura. Refere ainda o padre Jesuíta os vários priores da igreja desde 1330 que, pelos títulos (Cardeais, Bispos, Cônegos), terá constituído um cargo de prestígio e influência dentro da hierarquia eclesiástica da cidade, uma vez que o Priorado era colação do Arcebispo de Évora, sucedendo-se “muytos outros Priores de grande gradação, e literatura” (Fonseca, 1728: 217). Nesta igreja tinham sido instituídos seis benefícios pelo Bispo D. Giraldo Domingues no tempo do Rei D. Dinis, os quais, “à imitação das Collegiadas rezaõ devotamente no Coro” (Fonseca, 1728: 217). Esta situação em termos do número de clérigos aparece confirmada no início do século XVIII pelo Padre António Costa, que refere ainda a reedificação da Igreja em 1702 pelo Arcebispo D. Fr. Luís da Silva (Costa, 1708: 423).

Encontram-se ainda espalhadas praticamente por toda a cidade igrejas de menor dimensão e inúmeras ermidas de cuja actividade musical pouco ou nada se conhece. Estas manteriam uma celebração irregular dos vários ofícios, destacando-se certamente com maior importância musical as festividades dos santos a que estavam dedicadas ou outros santos de particular devoção. Este é o caso da Igreja de S. Vicente, dedicada aos irmãos mártires Vicente, Sabina e Cristeta, onde a festa da celebração do seu martírio, realizada a 27 de Outubro, certamente estaria revestida de um carácter mais nobre, uma vez que era paga a expensas da Câmara da cidade. Também pode ser encontrado nesta igreja um altar lateral dedicado a Nossa Senhora da Vitória mandado construir pela Confraria do mesmo nome, instituída após a Batalha do Salado. Extinta no tempo de Filipe II, foi restaurada durante o arcebispado de D. Alexandre de Bragança que, certamente, também reavivou todo o cerimonial musical em torno desta festa (Fonseca 1728: 223-224).

A outra grande tipologia de instituições religiosas diz respeito aos conventos. Partindo da quantidade e diversidade de instituições deste tipo que se instalaram dentro das muralhas da cidade desde a Idade Média, albergando comunidades masculinas e femininas, consegue-se traçar uma série de relações, quer ao nível das suas orientações litúrgico-musicais, como também nas zonas envolventes à sua localização. Algumas zonas da cidade possuíam uma forte concentração de instituições religiosas, como é o caso da área envolvente ao Colégio do Espírito Santo, com o Colégio de Nossa Senhora da Purificação, o Convento de Santa Mónica, a Igreja de S. Mamede e o Convento de S. João Evangelista nas proximidades. O efeito sonoro gerado pela actividade musical quotidiana destas instituições nas ruas circundantes teria certamente algum impacto em quem se deslocasse através desta zona da cidade.

Estas comunidades mantinham uma actividade musical regular, sobretudo, através do cantochão para as várias horas do Ofício Divino e para as várias missas celebradas durante o dia. Apesar da escassez de documentação musical, assim como de referências nas fontes históricas, é de assumir que nos conventos fosse também interpretada polifonia, embora em menor escala quando comparada com as igrejas seculares da cidade, uma vez que na natureza destas comunidades estaria o cantochão. O estudo da prática polifónica nos conventos intramuros é praticamente inexistente na actualidade. Porém, no estudo realizado a partir das fontes do Mosteiro de S. Bento de Cástris, uma comunidade feminina cisterciense nos arredores da cidade, verificou-se que o termo canto d'órgão (como é designada a polifonia nas fontes da época) começa a ser referido no início do século XVIII (Conde 2009: 382), encontrando-se obras polifónicas, embora em reduzido número, da primeira metade do século XVI. Trata-se do motete *Adjuna nos Deus* e de duas secções de um Credo a quatro vozes do compositor e mestre de capela da Sé Mateus d'Aranda (P-EVp Cód. CLI/1-9d e P-EVad Mús. Lit. n.º 32).

No interior das muralhas predominaram as casas do ramo masculino e feminino das ordens Franciscana, Agostiniana, Dominicana e do Carmo. No século XVII, os ritos destas ordens encontravam-se já muito próximos do Rito Romano praticado nas igrejas seculares da cidade, mais breve que os das ordens monásticas (geralmente comunidades retiradas para locais isolados, como é o caso da Ordem de Cister), o que lhes permitiu uma fácil implantação nos centros urbanos. Encontram-se, assim, numerosas casas franciscanas na cidade. Para além do Convento de São Francisco, de fundação medieval, existem ainda os conventos femininos de freiras clarissas fundados durante o século XVI de Nossa Senhora da Graça, de Santa Helena do Monte Calvário e do Salvador do Mundo, fundado na primeira década do século XVII. A Ordem Agostiniana estava representada no centro urbano com o Convento de Nossa Senhora da Graça e o convento feminino de Santa Mónica, aos quais se juntará no século XVII o Convento de Nossa Senhora das Mercês de frades agostinhos descalços (também conhecidos como frades grilos). O Convento de São Domingos de Évora foi uma das primeiras casas desta ordem a ser fundada em Portugal e uma das primeiras instituições conventuais de Évora. Para além deste convento ainda existiam os conventos femininos de Nossa Senhora do Paraíso, fundado em 1430, e o de Santa Catarina de Sena, da primeira metade do século XVI (Fonseca, 1728: 348-399). De acordo com o inventário realizado após a sua extinção em 1897, o Convento de Nossa Senhora do Paraíso possuía uma importante colecção de livros de coro iluminados desde o século XV (conservados actualmente no Arquivo Nacional – Torre do Tombo), o que pressupõe ter existido uma intensa e regular actividade musical nesta instituição (Frazão, 1998). O Convento do Paraíso, destruído no início do século XX, localizava-se na actual Rua de Mendo Estevens, muito próximo do Convento de Nossa Senhora do Carmo.

Este convento de frades carmelitas calçados, localizado junto à Porta de Moura, teve uma história atribulada durante o século XVII. A Ordem do Carmo chegou a Évora por volta de 1531, durante o bispado do Cardeal D. Afonso, estabelecendo-se primeiramente numa zona extramuros entre a Porta de Avis e a Porta da Lagoa na Ermida de São Tomé. O Convento fundado em torno desta ermida floresceu durante o século XVI e primeira metade do XVII através de importantes legados, entre os quais se destaca o de Rui Dias Cotrim, que permitiu a sua construção a partir de 1532 (Fonseca, 1728: 357). Foi este um dos conventos que se viram no centro das acções militares durante o cerco de Évora pelas tropas de D. João de

Áustria em 1663, durante a Guerra da Restauração, que havia sido ocupado pelos sitiados não resistindo, porém ao assédio dos espanhóis (Menezes, 1698: 518). Os frades abandonaram o respectivo convento, refugiando-se em casas que possuíam na Praça do peixe (actual Praça de Sertório), recusando a oferta feita por D. João de Áustria do Palácio dos Condes de Santa Cruz para sua residência (Fonseca, 1728: 358). Em 1666 D. Afonso VI ofereceu-lhes o Palácio dos Duques de Bragança para residência, tendo lançado a primeira pedra do convento da Porta de Moura a 6 de Janeiro de 1670. Em 1691 foi sagrada a Igreja do convento, onde terá sido cantado o extenso ofício da Dedicção da Igreja (Fonseca, 1728: 358).

Outra comunidade religiosa que foi também alvo de incursões por parte das tropas de D. João de Áustria, sendo palco dos assédios às muralhas da cidade, foi o Convento de Nossa Senhora dos Remédios, de frades Carmelitas Descalços, localizado imediatamente à saída da Porta de Alconchel. As tropas espanholas alojaram-se no convento e, entre este, o da Cartuxa e o do Carmo prepararam-se para assediar as muralhas da cidade com artilharia (Menezes, 1698: 518). De acordo com o Padre Francisco da Fonseca, o então prior Fr. José do Espírito Santo recusou-se a abandonar o convento na iminência da sua ocupação pelas tropas espanholas. Assim, deixou-se ficar com o resto da comunidade que os espanhóis “entrando no Convento achou o Prior, e Religiosos em oração no Coro com tanta paz, e serenidade, que assombrou” os invasores (Fonseca, 1728: 380). Por esta descrição se depreende que a comunidade terá mantido a sua rotina diária perante o perigo eminente, estando muito provavelmente a cantar alguma das Horas do Ofício a quando do arrombamento das portas do convento.

Este convento de carmelitas descalços foi uma das instituições fundadas em Évora no início do século XVII, apesar haver referência à presença deste ramo reformado da Ordem do Carmo na cidade nas duas últimas décadas do século XVI. Aqui viveu durante pelo menos duas décadas (c.1606-162?), Fr. Simão dos Anjos, músico e compositor do qual muito pouco se sabe em termos biográficos. Ainda está por confirmar a afirmação de que terá estudado com Manuel Mendes na Clastra da Sé de Évora, assim como parece também duvidosa a afirmação da sua profissão na Ordem de S. João Evangelista (Stevenson, 2017). No fundo musical da Biblioteca Pública de Évora existe um pequeno motete para o Domingo de Ramos, *Pueri Hebraeorum vestimenta* (P-EVp Cód. CLI/1-3), que possivelmente poderá datar do período em que permaneceu neste convento. Também neste convento foi sepultado a 12 de Março de 1700 o compositor e mestre de capela da Sé de Évora, Diogo Dias Melgaz, que falecera na sua casa da Rua do Espírito Santo (Alegria, 1973: 86).

Para além da prática de música vocal referida até este momento, encontra-se ainda na Évora do século XVII música instrumental realizada nas instituições religiosas da cidade, como prática autónoma ou integrada na prática vocal. Os primeiros instrumentos musicais que têm maior impacto na paisagem sonora de Évora no século XVII são os sinos. Tendo em conta que cada igreja teria pelo menos dois sinos – um maior e outro mais pequeno – é possível perceber o impacto sonoro que estes instrumentos teriam em certas zonas da cidade de maior concentração de igrejas. É esse o caso do espaço envolvente entre o Convento de S. Francisco e a actual Praça do Giraldo. Este é um local de grande concentração de igrejas, com o Convento de Nossa Senhora da Graça, Igreja de São Vicente, Igreja de Santo Antão e Igreja de São Tiago e, mais afastados os Conventos do Salvador, de Santa Clara e Nossa Senhora das Mercês. Nas torres sineiras destas instituições, apesar de em alguns casos terem ocorrido transformações profundas na sua configuração, encontram-se espaços para três ou mais sinos. O tipo de toques e utilização destes instrumentos surge regulado nos regimentos e ordinários de cada uma das comunidades religiosas. Em geral, o sino maior seria tocado para as cerimónias mais importantes do Dia Litúrgico, nomeadamente a Missa de Terça ou o ofício de Matinas.

O sino menor seria destinado a ocasiões de menor importância. Porém, ocasiões como a celebração de funerais ou festividades importantes na vida litúrgica de cada comunidade exigindo que os sinos dobrassem, quase certamente existiriam mais que dois desses instrumentos em utilização. Actualmente poder observar-se, a título de exemplo, o caso dos conventos agostinianos de Nossa Senhora das Mercês e Nossa Senhora da Graça que, embora já desprovidos dos respectivos instrumentos, podem lançar pistas importantes relativamente ao número de instrumentos. No primeiro caso, a torre sineira possui apenas dois espaços, o que pressupõe que nela apenas existissem dois instrumentos. No segundo caso, a torre sineira possui três espaços, o que aponta para a existência de um terceiro instrumento. Em ambos os casos as torres sineiras estão destacadas do corpo da igreja, apenas fornecendo suporte para os instrumentos, o que também pressupõe que estes não fossem de grande dimensão dada falta de robustez da respectiva torre. Pelo contrário, no caso da Sé – o edifício religioso mais importante da cidade – encontram-se duas torres perfeitamente integradas na fachada da igreja. Para além de possuírem vários espaços para pelo menos meia dúzia de instrumentos, a sua robustez estrutural permitia também a instalação de instrumentos de grande dimensão, proporcionais à importância do templo no contexto urbano.

A Sé surge novamente como instituição central no respeitante à prática instrumental na cidade. Ao longo do século XVII são numerosos os músicos instrumentistas ao serviço da Catedral. Em 1651, encontra-se uma folha de pagamento a 19 músicos na Sé. Entre estes contam-se o mestre de capela, António Rodrigues Vilalva, o mestre da Clastra, Bento Nunes Pegado, e o reitor do Colégio, Manuel Cid, assim como dois organistas, sete cantores, dois sacabuxas, um charamela, um harpista, e ainda dois músicos que tocavam baixão e charamela e corneta, fagote e charamela respectivamente (Alegria, 1973: 74-75). Durante o período em que Diogo Dias Melgaz ocupou o cargo de mestre de capela esta instituição era composta por seis cantores, um sacabuxa, um harpista, dois organistas e, novamente, dois músicos que tocavam baixão e fagote e um músico que tocava baixão e charamela (Alegria, 1973: 78).

Apesar de numerosas, estas folhas de pagamento parecem não reflectir a totalidade dos músicos ao serviço da Catedral. Os oito moços do Coro não surgem representados, assim como os restantes clérigos ao serviço da Catedral e com obrigação de coro, que não seriam remunerados através do serviço da Capela. Também não surge muito provavelmente a contratação de músicos para serviços pontuais, como é o caso particular de Diogo Rodrigues de Mesas. Este músico era cantor na Capela da Sé, mercador na Praça do peixe e Procurador-Geral do Assento colocou três filhas no Mosteiro de S. Bento de Cástris, Isabel Maria da Silva, Luísa Helena e, mais tarde, Catarina Francisca. Em 1657, as três filhas de Diogo de Mesas foram alvo de processo inquisitorial, possivelmente no seguimento de processo levantado contra o pai, sendo que também alguns dos

sete filhos morreram no cárcere da Inquisição ou em autos-de-fé (Projecto Orfeus, 2015).

Relativamente aos órgãos, estes instrumentos possuem uma importância particular devido às suas características únicas. Estas assentam sobretudo no facto de grande parte destes instrumentos, dado o seu tamanho, estarem fixos nos locais para onde foram construídos, apesar de circular em números instrumentos de pequena dimensão (chamados positivos ou portativos), que seriam transportados nos espaços interiores de cada instituição e, muito possivelmente, também entre várias igrejas da cidade. O primeiro órgão que se destaca é, evidentemente, o órgão quinhentista da Sé de Évora pela sua antiguidade, uma vez que terá sido construído em meados do século XVI pelo organeiro e organista Heitor Lobo, a mando do Cardeal D. Henrique. O órgão da Sé constitui, de longe, o mais bem estudado instrumento deste tipo da cidade. Os instrumentos que existiram nas outras instituições religiosas de Évora durante o século XVII ainda carecem de um estudo aprofundado que possa revelar, quer pontos de confluência entre estilos de construção, estabelecendo redes de influência organológica entre estas instituições, como também factores de ordem interpretativa, relacionando os instrumentos com determinados eventos histórico-musicais. Uma consequência para o facto de ainda hoje não se conhecer muito sobre os órgãos seiscentistas de Évora foi a intensa construção e alteração de instrumentos deste tipo durante o século XVIII. Para isso contribuiu certamente a presença em Évora do organeiro italiano Pascoal Caetano Oldovino que instalou uma oficina na cidade, realizando obras profundas em praticamente todos os instrumentos que hoje se conhece e nos quais também se inclui o órgão quinhentista da Sé.

Apesar dos dados documentais não transmitirem informação detalhada sobre a actividade musical das instituições religiosas de Évora, consegue-se perceber, embora de forma incompleta, que estas igrejas e conventos foram centros de produção regular de música. Tendo como base a prática do cantochão, comum e em uso nestas instituições, este repertório seria cantado diariamente nas várias horas do Ofício e no próprio e ordinário das Missas celebradas durante o Dia Litúrgico. Seguidamente, encontram-se algumas instituições, como a Sé e a Igreja de Santo Antão, com um volume de prática musical bastante assinalável onde, para além do cantochão, encontram-se numerosas referências relativamente a uma actividade musical polifónica e a permanência nestas instituições de músicos e compositores que assegurariam essa mesma prática, através do canto, do órgão e outros instrumentos, o que tornou a cidade de Évora num dos importantes centros musicais portugueses entre os séculos XVI e finais do século XVIII.

REFERÊNCIAS

- Alegria, José Augusto. (1973). *História da Escola de Música da Sé de Évora*. Fundação Calouste Gulbenkian. Lisboa.
- _____. (1997). *O Colégio dos Moços do Coro da Sé de Évora*. Fundação Calouste Gulbenkian. Lisboa.
- Beirante, Maria Ângela. (1995). *Évora na Idade Média*. Fundação Calouste Gulbenkian. Lisboa.
- Conde, Antónia Fialho. (2009). *Cister a Sul do Tejo: O Mosteiro de S. Bento de Cástris e a Congregação Autónoma de Alcobaca (1576-1776)*. Edições Colibri. Lisboa.
- Costa, António Carvalho da. (1708). *Corografia Portuguesa e Descrição Topográfica do famoso Reyno de Portugal*. Tomo II. Na Officina de Valentim da Costa Deslandes. Lisboa.
- Fonseca, Francisco da. (1728). *Evora gloriosa*. Officina Komarekiana. Roma.
- Frazão, Maria Luísa. (1998). *Iluminura renascentista do convento de Nossa Senhora do Paraíso de Évora*. Tese de Mestrado. Faculdade de Letras, Universidade de Lisboa.
- Jiménez, Juan Ruiz. (2014). Música y ritual en la procesión del día de defuntos en la catedral de Sevilla (ss. XIV-XVII). *Medievalia*. 17: 243-277.
- _____. (2016). Miguel de Cervantes en la Sevilla de Francisco Guerrero, un paisaje musical compartido. In: *El Libro de la 55 Semana de Música Religiosa de Cuenca*. Ediciones de la Universidad Castilla la Mancha. Cuenca.
- Menezes, Luís de. (1698). *Historia de Portugal Restaurado*. Tomo II. Na Officina de João Galraão. Lisboa.
- Pellicer, Clara Bejarano. (2016). Los músicos en la festividade del Corpus de Sevilla: Entre la baja Edad Media y el Renacimiento. *Anuario de Estudios Medievales*. 46(2): 651-687.
- Projecto Orfeus. 2015. *Isabel Soares (Isabel Maria da Silva)*. Acedido em: 28 de Abril de 2017, em: Projecto Orfeus: <http://www.orfeus.pt/historia.php>
- Schafer, Raymond Murray. (1977). *The Tuning of the World*. Alfred A. Knof. Nova Iorque.
- _____. (1993). *The Soundscape: Our Sonic Environment and the Tuning of the World*. Destiny Books. Rochester.
- Stevenson, Robert. 2017. *Anjos de Gouvêa, Simão dos*. Acedido em: 28 de Abril de 2017, em: Grove Music Online: <http://www.oxfordmusiconline.com/>

EVALUATION OF CUSTOMERS SATISFACTION IN HYPERMARKETS: THE IMPACT OF NATIONAL CULTURE AND SERVQUAL DIMENSIONS

Cláudia Miranda Veloso

UNIAG; Instituto Politécnico de Bragança; Universidade de Aveiro
(claudiamiranda@ipb.pt; cmv@ua.pt)

Paula Odete Fernandes

UNIAG; Instituto Politécnico de Bragança; NECE
(pof@ipb.pt)

Daniel Margaça Magueta

Universidade de Aveiro
(dmagueta@ua.pt)

ABSTRACT

The importance of the retail industry for the Portuguese economy coupled with the criticality of the retailing market for its growth and the relationship between service quality and effectiveness of business deliver the motivation for this study. The aims of this research focus on the intend to develop a methodology for assessing the impact of service quality in hypermarkets of Bragança city on customer satisfaction and behavioural intentions and to specifically comprehend a conceptual model to analyse if (1) the national culture directly influences the perceived service quality (in the five dimensions of SERVQUAL) and indirectly contributes to customer satisfaction and (2) this impacts directly on the intent to return and recommend services and if the intention to return directly influences the recommendation of services. This research is of particular importance to the literature retailing and practitioners, once there are few studies in this field applied to the Portuguese hypermarkets retailing.

Keywords: Customer Satisfaction, Modern Retail Industry, Service Quality, National Culture.

JEL Classification: M10, M31

1. INTRODUCTION

Globalisation, strong competition, instable consumer demands and changes both in economic, technological and political systems force enterprises to learn faster and to adopt themselves to environmental changes (Ginevičius and Gudačiauskas, 2004). Some of the fastest growing sectors of the global economy are related to the focus on customer satisfaction. In a period of economic recession, remarkable performance will depend on those retailers who are able to create customer loyalty by answering to consumer demand (Ghosh, Tripathi and Kumar, 2010). Furthermore, customer needs and buying patterns have altered enormously. To meet several needs, enterprises to adopt customer-oriented marketing strategies and differentiated to rise a competitive advantage in the market, which allows them to stand out in the competition (Ko, Kim, Kim, and Woo, 2007). Additionally Ko *et al.* (2007) advocate that improved relationships with consumers can main to better customer loyalty, retention, effectiveness and profitability. Consequently, it is central to make a durable, strong and consistent relationship with customers in today's competitive society. Presently, providing quality of service is seen as the way to remain competitive in markets where global competition and technology have turned products and services into commodities (Nadiri and Gunay, 2013).

The retail industry is not indifferent to customer loyalty and satisfaction with the service. Although most customers do not immediately associate a commercial surface with a service, the service is one of the main tools in obtaining consumer satisfaction and loyalty (Yuen and Chan, 2010). Continued aggressive promotion based in price, such as the creation of coupons, temporary discounts, and others, while widely used, often have a minimalist effect on company results, as they tend to attract the wrong customers, and this does not always mean profit (Sirohi, McLaughlin and Wittink, 1998). Somewhat, the retail store must find a way to differentiate itself so it can stand apart from other retailers and drive more consumers to its store. Service quality is one way to accomplish this. Retailers need an efficient way to assess the service quality of their store (Simmers and Keith, 2015). However, the focus on customer retention in this area of business is one of the right strategies to generate profits (Sirohi, McLaughlin and Wittink, 1998). Loyalty is an important step in ensuring that consumers perform something that is beneficial to the firm, whether through purchase or simple word of mouth (WOM). It is believed that satisfaction is a consequence of the quality of the service, and guaranteeing it, increases the likelihood of involving the customer and loyalty. Several studies have shown that there is a positive relationship between quality of service and consumer loyalty (Yuen and Chan, 2010).

In a highly competitive industry, as is the retailing sector, it is critical that organizations have a good knowledge of the

business aspects that are important to their customers (Yuen and Chan, 2010). Only with a deep understanding, is it possible to respond positively to the expectations of customers regarding the services offered. To this extent, the strategy for creating competitive advantage resides in providing a high quality of service which results in satisfied customers (Shemwell, Yavas and Bilgin, 1998) and customer retention (Callan and Kyndt, 2001), dimensions which are essential for the survival of the retail industry.

Nevertheless, various authors have evaluated the relation between culture and service quality, in other words, how cultural dimensions influence perceived service quality and customer satisfaction (Furrer, Liu and Sudharshan, 2000; Nguyen, Cao and Phan, 2015; Tanvir, Hussain and Janjua, 2011; Veloso and Monteiro, 2013). This is so because customers of different nationalities perceive service quality in different ways, due to cultural and environmental differences (Wen, Qin and Blankson, 2012). For this reason, cultural differences have to be considered in a study which evaluates service quality (Laroche, Ueltsch, Abe, Cleveland and Yannopoulos, 2004).

From the review of literature on quality, it has been found that research efforts are concentrated on defining and measuring quality in the manufacturing sector. Since service quality is an elusive concept, there is considerable debate in relevant literature concerning which is the best way to conceptualize this phenomenon. Although an all embracing definition of service quality is not yet possible, definitions of service quality proposed by researchers revolve around the idea that it is the result of the comparison customers make between their expectations about service and their perceptions of the way the service has been performed (Grönroos, 1984; Parasuraman, Zeithaml and Berry, 1985, 1988). If service quality is to be improved, it must be reliably assessed and measured. According to the SERVQUAL model (Parasuraman, Zeithaml and Berry, 1988), service quality can be measured by identifying the gaps between customers' expectations of the service to be rendered and their perceptions of the actual performance of the service.

Several authors have studied the relationship between perceived service quality and customer satisfaction (Al Khattab and Aldehayyat, 2012; Chiou, Droge and Hanvanich, 2002; Cronin and Taylor, 1992; Ekinci, Dawes and Massey, 2006; Jamal and Naser, 2002; Mohsin and Locker, 2009; Zaibaf, Taherikia and Fakharian, 2013; Zhang and Prybutok, 2005), confirming that service quality is an important antecedent of satisfaction. In this regard, Dabholkar, Thorpe and Shepherd (2000) argue that traditionally, most researchers conclude that customer satisfaction resulting from a particular experience of consumption, leads to an evaluation/attitude about the quality of service over a period of time. However, the reverse situation has stood out as the most relevant.

According to a recent meta-analysis, only a few outcomes of satisfaction have been investigated in the satisfaction literature (Szymanski and Henard, 2001). These outcomes are reflected in customer behaviour, the intention to return and WOM recommendation (Word-of-Mouth communication intention). Several researchers suggest that behavioural loyalty is the most powerful outcome of consumer satisfaction (Ekinci, 2001). Additionally, Oh (1999) confirms that customer satisfaction positively and significantly influences the return intention and WOM recommendation. As customers are nowadays more concerned with service quality received, it is of value to study the effect of service quality on customer loyalty (Yuen and Chan, 2010).

In the Portuguese retail industry, few research has been undertaken to directly evaluate the relationship between service quality, customer satisfaction and behavioural intentions. In this context, the main objective of this paper is to propose a methodology that allows for the examination of the antecedents and consequences of customer satisfaction, in retailing sector of Bragança. We specifically intend to present a conceptual model which aims to assess whether the national culture and perceived service quality promote customer satisfaction, intention to return and recommendation of services.

Although the quality of service in the retail industry has been extensively researched internationally (Dabholkar *et al.*, 2001; Das *et al.*, 2010; Durvasula and Lysonski, 2010; Khare *et al.*, 2010; Martinelli and Balboni, 2012; Mahfooz, 2014; Minh and Huu, 2016; Nadiri and Gunay, 2013; Simmers and Keith, 2015; Tang *et al.*, 2015; Yuen and Chan, 2010; Yu and Ramanathan, 2012), there has been little research done in Portugal to examine service quality as an antecedent of satisfaction and behavioural intention of customers in the Portuguese retail industry. The choice of this topic is due to the need for retailers to properly understand whether the service meets customer perceptions in the different dimensions of SERVQUAL, contribute to their satisfaction and behavioural intention (intention to return and recommend services), since they are determinant variables in maximizing profit, market share, and return on investment (Hackl and Westlund, 2000).

This research is particularly important for retail managers (survival and growth of retail companies), politicians (wealth creation, economic growth, etc.) and for the development of the literature in the Portuguese retail industry. In this paper, after this present introduction, a review of the main literature on customer satisfaction and their behavioural intention is made, then we propose the conceptual model and research hypotheses, ending with the presentation of the methodology and the contribution of the research.

2. THEORETICAL BACKGROUND

2.1 National Culture, Service Quality, Consumer Satisfaction and Behavioural Intentions

Hofstede (1990a) defined national culture as a system of values and beliefs learned during childhood. National culture is defined by Laroche *et al.* (2004, p. 62) as “patterns of thinking, feeling, and acting that are rooted in common values and societal conventions”. Hofstede (1990b) suggests five dimensions of national culture: power distance, individualism, masculinity, uncertainty avoidance and long-term orientation. Various authors have verified that cultural dimension is related to the way customers perceive the service provided (Furrer *et al.*, 2000; Mattila, 1999; Nguyen, Cao and Phan, 2015; Tanvir *et al.*, 2011; Veloso and Monteiro, 2013). Moreover, according to Tanvir *et al.* (2011, p. 1242) “cultural dimensions and service quality dimensions are interrelated”.

Service quality has assumed a major role both in public and private institutions, as an indispensable requirement to the costumers' satisfaction. There are two basic ways to define quality: one from the viewpoint of the service provider and the other from the costumers' perspective. The quality from the customer's perspective is the main objective of this study because it reorients the retail managers to the customer's needs. Firstly, it should be noted that the measurement of service quality is an important area of academic and scientific interest, which has assumed special prominence after the contribution of various authors (Parasuraman *et al.*, 1985). These authors, who represent the American school, have designed an instrument for measuring quality of service, called SERVQUAL. Initially, the proposed model incorporated 10 dimensions of quality (tangibility, reliability, responsiveness, professionalism, courtesy, credibility, security, access, communication and customer understanding). However, these dimensions were revised and subsequently reduced to five (Parasuraman *et al.*, 1988). The dimensions of courtesy, credibility, security, competence and communication have led to a new dimension: assurance, while the dimensions of understanding/knowing customers generated the dimension of empathy. A Parasuraman *et al.* (1988) suggested the following definitions for the five dimensions:

- Tangibles: Physical facilities, equipment and appearance of personnel;
- Reliability: Ability to perform the promised service dependably and accurately;
- Responsiveness: Willingness to help customers and provide prompt service;
- Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence;
- Empathy: Caring, individualized attention the firm provides its customers.

SERVQUAL measures service quality from the customer's perspective of customer perceptions, through the amplitude of the discrepancy that exists between the expectations and perceptions of customers. Cronin and Taylor (1992) view that the validity of the use of expectations in the SERVQUAL model was called into question when consumers had no well-formed expectations and developed the SERVPERF scale which consists of the same 22 "items" of SERVQUAL, although centered only in measuring consumer perceptions regarding the quality of service. Despite the criticisms of SERVQUAL (Buttle, 1996; Cronin and Taylor, 1992), it remains the most widely used theoretical framework for measuring the quality of services so that, in the literature there are numerous studies that apply the SERVQUAL scale to assess quality of services across physical (Donnelly, Hull and Will, 2000; Mukherjee and Nath, 2005) and in digital environments (Wang and Tang, 2003; Kuo, 2003). Despite the diversity of studies in many fields, this study will be applied to the physical environments of hypermarkets in Bragança, city of Portugal.

Customer satisfaction is the outcome of the customer's perception of the value received in a transaction or relationships, where value equals perceived service quality, compared to the value expected from transactions or relationships with competing vendors (Blanchard and Galloway, 1994; Heskett, Sasser and Hart, 1990; Zeithaml, Parasuraman and Berry 1990). According to Gundersen, Heide and Olsson (1996), the crucial point of customer satisfaction is to identify the important attributes, considered by customers as their needs and expectations. As Valdani (2009) points out, enterprises exist because they have a customer to serve. The key to customer satisfaction lies in identifying and anticipating customer needs and especially in being able to satisfy them. Enterprises which are able to rapidly understand and to satisfy customers' needs, make greater profits than those which fail to understand and satisfy them (Barsky and Nash, 2003; Dominici and Guzzo, 2010). In order to be successful, especially in the service industry, managers must concentrate on retaining existing customers by implementing effective strategies towards customer satisfaction and loyalty, since the cost of attracting new customers is higher than the cost of retaining existing ones (Dominici and Guzzo, 2010). On the other hand Bennett and Rundle-Thiele (2002) argued that for customers to escalate their loyalty, their perceived value of the good or service presented need be at par with reality, forming an integral part of the corporate aims of the organization. Additionally Sirdeshmukh *et al.* (2002) reported that customers' satisfaction has close relationship to brand loyalty as well as service quality. Analogous claim is presented by Hoq and Amin (2010), who postulated that customer satisfaction is the emotional tendency of a customer towards repurchase of products and services offered by a retail store. In order to be successful, especially in the retail industry, managers must concentrate on retaining existing customers by implementing effective strategies towards customer satisfaction and loyalty, since the cost of attracting new customers is higher than the cost of retaining existing ones (Dominici and Guzzo, 2010).

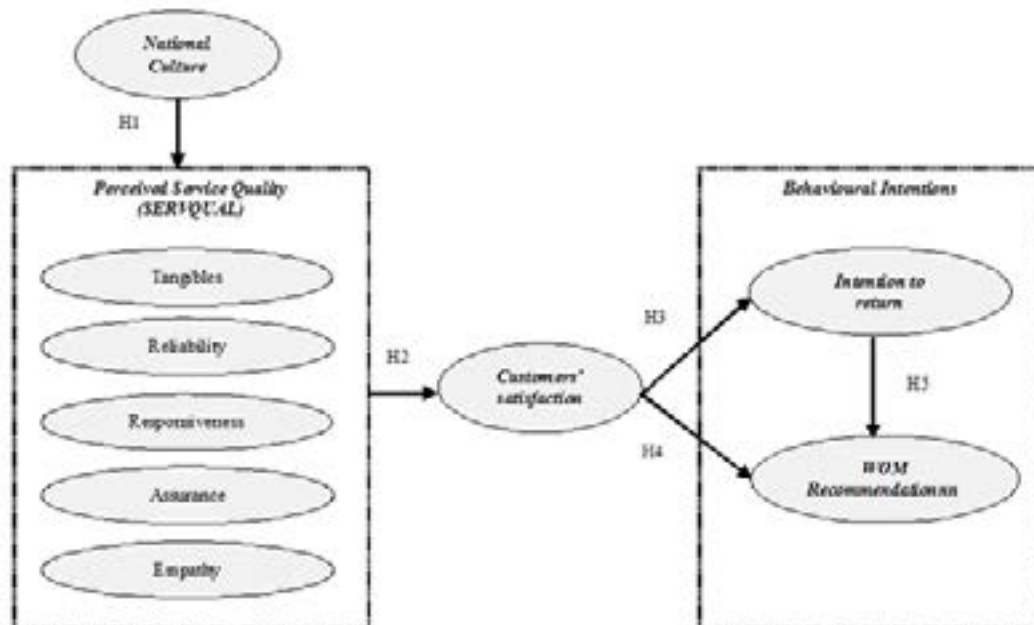
The literature suggests behavioural intentions as a construct which permits the evaluation of customer loyalty (Yang and Peterson, 2004). These are behaviours related to the intention to repurchase and even to the intention of recommending the product/service (Clemes *et al.*, 2008; Lai and Chen, 2011; Sumaedi *et al.*, 2012; Yuen and Chan, 2010; Zeithaml *et al.*, 1990). Some studies developed in service industry have found the positive relationship between perceived service quality and loyalty (De Ruyter and Van Birgelen, 1998; Wong *et al.*, 1999). Customers frequently develop an attitude toward purchasing based on a prior service experience or, still, this attitude can also be influenced by previous information, based on the image of the retail in the market and even by word of mouth (WOM recommendation). With reference to the previous conception, customer loyalty has been usually defined as occurring when customers repetitively buying goods or services over time and retain positive attitudes towards the enterprise delivering the goods or services (Yuen and Chan, 2010). Service providers are increasingly developing loyalty, as they consider that it helps to rise income, and leads to largest market share, effectiveness and profitability (Al-Wugayan, Pleshko, and Baqer, 2008). In this sense, behavioural intentions can be define as the customer's judgment about the likeliness to repurchase in this firm or the willingness to recommend the firm to others. We conceptualize behavioural intentions as a higher-order construct consisting of (1) positive word of mouth (Boulding, Kalra, Staelin, & Zeithaml, 1993), (2) willingness to recommend (Parasuraman *et al.*, 1991), and (3) intentions to continue buying from a particular service provider (Bowen and Shoemaker, 1998). Based on previous definition, behavioural intention in this study may be described as a stated likelihood to repurchase in the hypermarkets in the North of Portugal and to recommend the hypermarkets to family, friends and others in the future. Research has established the many benefits of behavioural intention, such as making it a tendency for retailers to follow, as well as developing and maintaining a loyal

customer base (Yuen and Chan, 2010). There is also ample evidence of the influence of service quality on behavioural intentions, a huge body of research has demonstrated the significant relationship between service quality and customers' behavioural intentions (Parasuraman *et al.*, 2005; Sousa and Voss, 2010). According to Chaudhuri and Holbrook (2001), behavioural intentions, and not attitudinal intentions, can be related to increased market share. Zeithaml *et al.* (1996), compiled a list of specific positive behavioural intentions, included loyalty, switching intentions, willingness to pay more, external response, and internal response. In a multi-industry study, the authors later provided evidence of the significant effect of perceived service quality on customers' favourable behavioural intentions, such as repurchase, tendency to say positive things and recommend the company (Zeithaml, Berry and Parasurama, 1996). In addition, Cronin and Taylor (1992), find a favourable association between service quality and repurchase intentions. Also, Zeithaml *et al.*, (1996) and Fullerton (2005), find a positive relationship between service quality and behavioural intentions. Moreover, preceding research has demonstrated associations between service quality and particular dimensions of behavioural intentions, like as Parasuraman *et al.* (1988), find a favourable relationship between service quality and willingness to recommend the firm, and Boulding *et al.* (1993), find a positive correlation between service quality and repurchase intentions, saying positive things, and willingness to recommend. Several authors point out that customers may not necessarily buy the greater quality service and that there may be other factors that define consumer choice, such as satisfaction (Wang *et al.*, 2004; Ryu and Han, 2010). Therefore, we expect customers who perceive the quality of the service as high to be more likely to demonstrate intentions, and we again believe that this relationship will hold regardless of the buyers' collectivist orientation. Loyal customers are main assets to firms, they make proportionally more purchases at their 'first choice' store than customers who shift (Knox and Denison, 2000). Usually, great service quality leads to customer loyalty, as it increases customer confidence towards and satisfaction with the company. It is supposed that positive perceptions of service quality enhances the possibility of customers being dedicated in supporting the company and developing and strengthening loyalty behaviour (Yuen and Chan, 2010).

3. CONCEPTUAL RESEARCH MODEL AND HYPOTHESES

In according this theoretical background, the aim of this study can see in Figure 1, propose a model that consists of five major constructs: National Culture, Service Quality, Customer Satisfaction and two Levels of Behavioural Intentions (Intention to return and WOM recommendation).

Figure 1. Conceptual model



The hypermarkets managers should focus their attention on customer service quality evaluation as they must have actual knowledge that the service quality perceived by the client meets their expectations, as contended by Parasuraman *et al.* (1985, 1988). Based on these assumptions the purpose of this study is to examine whether the perception of the services provided in the different dimensions of SERVQUAL, exceeds the customer expectations.

However, the main objective of this study is to test the conceptual model shown in Figure 1, which includes four research hypotheses, as explained below.

The literature suggests that national culture constitutes an important construct in the study of service quality since it influences the perception of the quality of the service provided (Tanvir *et al.*, 2011; Furrer *et al.*, 2000). In this study we intend to, as have Furrer *et al.* (2000), who evaluated the impact of national culture on perceived service quality, test the following hypotheses:

H₁: The customers' national culture influences the perceived service quality

H_{1.1} – The customers' national culture influences the perception of the tangibles service

H_{1.2} – The customers' national culture influences the perception of the reliability service

H_{1.3} – The customers' national culture influences the perception of the assurance service

H_{1.4} – The customers' national culture influences the perception of the responsiveness service

H_{1.5} – The customers' national culture influences the perception of the empathy service

The relationship between service quality and satisfaction has not been consensual in the literature as several authors argue that, on the one hand, both concepts are identical, while others consider them as distinct (Dabholkar, 1995; Dabholkar *et al.*, 2000; Oliver, 1993). According with Dabholkar (1995), while evaluation of service quality is essentially cognitive, for its part, satisfaction integrates both cognitive and affective components. This author claims that these two concepts are distinct for recent consumers of a product. However, in the long run, the affective dimension tends to be blurred and to that extent, the concepts tend to overlap. Meanwhile, Ngobo (1999) also reinforces the distinction between perceived quality and satisfaction level of the three dimensions. Assuming that these two concepts are distinct, a question that immediately arises relates to the order of their occurrence in the mind of the consumer and as such, the causal relationship between them. In this regard Dabholkar *et al.* (2000) argues that, most investigators traditionally hold that consumer satisfaction results from a particular consumer's experience of a service which leads to an evaluation/attitude on the overall quality of service over a given period of time (Parasuraman *et al.*, 1988). Recently, however, the reverse situation has stood out as the most relevant. This position is particularly evidenced by Oliver (1993) who suggested that the quality of service should be an antecedent of consumer satisfaction irrespective, of the experiential or the time factor. Similarly, Cronin and Taylor (1992) analysed the effect of these concepts in both directions and concluded that the quality of service perceived exerts a greater impact on customer satisfaction than otherwise. Recently, several authors have considered service quality as an important antecedent of satisfaction (Ekinici *et al.*, 2008; Zhang and Prybutok, 2005; Chiou *et al.*, 2002; Saleh and Ryan, 1991). Most studies assessing the relationship of service quality on customer satisfaction demonstrate the existence of a statistically significant level in studies of the retail industry. In line with this, and based on SERVQUAL, the following hypotheses are proposed in the present study.

H₂: The quality perceived by the customers has a positive influence on their satisfaction.

H_{2.1} – The higher the tangibility, the greater the degree of the customers' satisfaction.

H_{2.2} – The higher the reliability, the greater the degree of the customers' satisfaction.

H_{2.3} – The higher the assurance, the greater the degree of the customers' satisfaction.

H_{2.4} – The higher the responsiveness, the greater the degree of the customers' satisfaction.

H_{2.5} – The higher the empathy, the greater the degree of the customers' satisfaction.

In reviewing the literature, we have found that marketing services have extensively researched behavioural attitudes (e.g. Andreassen and Lindestad, 1997; Bobbitt and Dabholkar, 2001; Dabholkar, 1996; Zeithaml, Parasuraman and Berry, 1996). Several concepts have been examined as antecedent factors of behavioural intentions, such as service quality (Brown, Churchill and Peter, 1993; Zeithaml *et al.*, 1996) and satisfaction (Andreassen and Lindestad, 1997; Oliver, 1999). According to Liang and Zhang (2011, p. 156), "*it is generally believed that satisfaction leads to repeat purchases and positive WOM recommendations*", assuming that if customers are satisfied with a product/service, they are more likely to continue to purchase it, and are more willing to spread positive WOM. Thus, we propose our third and fourth hypotheses:

H₃: Customer satisfaction positively influences intentions to return.

H₄: Customer satisfaction positively influences WOM recommendations.

According to Nadiri and Hussain (2005, p. 471), "service quality promotes customer satisfaction, stimulates intention to return, and encourages recommendations". Oh (1999) found a positive and significant relationship between intention to return and WOM recommendations. In this study we intend to also propose this relationship and the following hypothesis:

H₅: Intentions to return positively influences WOM recommendations.

4. METHODOLOGY

A questionnaire was designed as the survey instrument, which were included all the constructs of the proposed model. The questions in the questionnaire were based on a review of the literature in the area of the retail industry, described above in the theoretical background. This study was applied to customers from of hypermarkets of Bragança during the months of February and March 2017. It was used a non-probabilistic sampling using convenience technique. The questionnaires were distributed online and the answers came from several cities of the district of Bragança. Also some questionnaires were distributed in the near the exit of the hypermarkets of Bragança. In this study, respondents were required to fill out a three-page three sections. The first section consisted of a standard demographic profile of respondents. The second section contained the characterization of purchase process. The last section includes the statements of dimensions and

their sub dimensions. The measurement items to measure primary and sub-dimensions of service quality were adapted from several researchers (Chen *et al.*, 2011; Cronin and Taylor, 1992; Dabholkar *et al.*, 1996; Wu *et al.*, 2011) and a series of items focusing on the behavioural intentions, customer satisfaction and national culture, which were adapted on the basis of several researchers' results (Furrer *et al.*, 2000; Mattila, 1999; Nguyen, Cao and Phan, 2015; Tanvir *et al.*, 2011; Wu, 2013; Yu and Ramanathan, 2012; Yuen and Chan, 2010; Zeithaml *et al.*, 1996). Respondents were asked to use a five-point Likert-type scale (where 1 = "strongly disagree" and 5 = "strongly agree") to record their perceptions. Construct reliability will be assessed by using the Cronbach's alpha coefficient.

For the descriptive analysis it will use absolute and relative frequency tables. The Spearman correlation coefficient will be used to measure the intensity of the linear correlation between variables. Multiple linear regression will be used in order to estimate models that could identify the determinants of the behaviour of the variables under analysis. The significance level of 5% will be assumed. Additionally, to test the causal relationship between different constructs, we will use the structural equation model, given that the theoretical model includes the complex relationships between latent variables measured with different items that are presented simultaneously as independent and dependent variables.

5. FINDINGS AND CONTRIBUTION OF RESEARCH

The customer satisfaction and the customer loyalty process allows for significantly increased revenue from hypermarkets by obtaining sales growth and a better return of investments. With this in mind, the manager retail needs to know the real customer service needs and expectations, so that the service is tailored to the customer's satisfaction, in order to retain them and attract potential new customers.

Thus, this study proposes to develop and analyse a conceptual model that aims to explain the relationship between national culture, perceived service quality, customer satisfaction and behavioural intentions (intentions to return and WOM recommendation).

Based on research conducted in bibliographic data bases, we have identified a gap in the literature about the hypermarkets in Portugal, which relates to the knowledge of the factors affecting customer satisfaction and behavioural intention. It is hoped that this research will contribute to the development of the literature, politicians (wealth creation, economic growth, etc.) and managers of hypermarkets (the survival and growth of hypermarkets retailing). From a practitioners' point of view, the understanding of the factors that influence customers' satisfaction and behavioural intentions, on the one hand, may contribute to the retail manager's development when establishing strategies and contribute to the improvement of services provided by the hypermarkets and consequently increase profit, market share, and improve return on investment (Hackl and Westlund, 2000).

Findings are expected to report high levels of perceived quality and significant relationship between retail service quality dimensions and customer satisfaction and yet we expected to prove that the cultural dimensions and service quality dimensions are interrelated (Tanvir *et al.*, 2011; Furrer *et al.*, 2000). Furthermore we will try to show like as Furrer *et al.* (2000) also have demonstrated, that the relationships between cultural dimensions and the relative importance of the dimensions of service quality can provide useful insights for how firms should allocate resources in different cultural groups. We have shown that the relative importance of the service quality dimensions varies from one culture to another. Retail service providers need to recognize the importance of service quality dimensions in order of their significance, and implement appropriate strategy for competitive advantage over domestic and international players competing for share of an expanding consumer base (Mahfooz, 2014).

This present study will enrich the literature about cultural influences on service quality to measure individual-level cultural dimensions and by focusing on overall service quality expectations in the context of the retailing industry of Portugal which receives little attention from scholars. We will hope that the culture values show a quite good match with Hofstede's national culture scores. Furthermore, this study similar the research developed by Nguyen *et al.* (2015) will extend prior research by identifying the most influential factor within four cultural orientations that predict service quality expectations.

Furthermore to the theoretical contributions, the research findings will have practical implications for retailing modern, namely: the modern retail store should carefully segment their targeted customers given that service quality expectations differ across individuals in a country; moreover, in order to reduce customers' uncertainty about services and supermarkets should be implemented informational interventions. Also, it is believed that customer relationship management should be considered as this helps to reinforce customers' belief that they and retail modern stores are carefully linked as a group, at the same time the employees should deal with customers' complaints and solve their problems in an effective manner to enhance hypermarkets' power. These contributions could increase customers' satisfaction and their loyalty to hypermarkets (Nguyen *et al.*, 2015).

The study results will help retail stores owners and managers to recognize and prioritize the primary and sub-dimensions of service quality. Retailing management should realize that the significance customers accentuate is based on each of the primary and sub-dimension of service quality. Moreover, retail management should structure their infrastructure, processes, operations and resource allocation in terms of the relative importance of the service quality dimensions to their target at specific customers. Simultaneously, the retail managers should dedicate special attention to the national culture, because we will expect that study will show such as several studies have verified that cultural dimension is related to the way customers perceive the service provided is related.

REFERENCES

- Al Khattab, S. A., & Aldehayyat, J. S. (2012). Perceptions of Service Quality in Jordanian Hotels. *International Journal of Business and Management*, 6 (7), 226-233.
- Al-Wugayan, A., Pleshko, L. P., & Baqer, S. M. (2008). An investigation of the relationships among consumer satisfaction, loyalty, and market share in Kuwaiti loan services. *Journal Of Financial Services Marketing*, 13(2), 95-106.
- Andreassen, T., & Lindestad, B. (1997). Customer loyalty and complex services, the impact of corporate image on quality, customer satisfaction and loyalty for customers with varying degrees of service expertise. *International Journal of Service Industry Management*, 4, 1-33.
- Barsky, J., & L., N. (2003). Customer satisfaction: applying concepts to industry- wide measures. *The Cornell Hotel and Restaurant Administration Quarterly*, 44 (4), 173-183.
- Bennett, R., & Rundle-Thiele, S. (2002). A comparison of attitudinal loyalty measurement approaches. *The Journal of Brand Management*, 9(3), 193-209.
- Blanchard, R., & Galloway, R. (1994). Quality in Retail Banking. *International Journal of Service Industry Management*, 5 (5), 5 – 23.
- Bobbitt, L., & P.A., D. (2001). Integrating attitudinal theories to understand and predict use of technology-based self-service: The Internet as an illustration. *International Journal of Service Industry Management*, 12 (5), 423 – 450.
- Boulding, W., Kalra, A., Staelin, R., & Zaithaml, V. A. (1993). A dynamic process model of service quality: From expectations to behavioral intentions. *Journal of Marketing Research*, 30(1), 7-27.
- Bowen, J. T., & Shoemaker, S. (1998). Loyalty: A strategic commitment. *Cornell and Hotel Restaurant Administration Quarterly*, 39(1), 12-25.
- Brown, T. C., & Peter, J. (1993). Improving the measurement of service quality. *Journal of Retailing*, 69 (1), 127-139.
- Buttle, F. (1996). SERVQUAL: review, critique, research agenda. . *European Journal of Marketing*, 30 (1), 8–32.
- Callan, R. J., & Kyndt, G. (2001). Business travellers' perception of service quality: a prefatory study of two European city centre hotels. *International Journal of Tourism Research*, 3 (4), 313-323.
- Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty. *Journal of Marketing*, 65(2), 81-93.
- Chen, C.-F., & D., T. (2007). How destination image and evaluative factors affect behavioral intentions? *Tourism Management*, 28, 1115–1122.
- Chiou, J. D., & Hanvanich, S. (2002). Does customer knowledge affect how loyalty is formed? *Journal of Service Research*, 5 (2), 113-124.
- Clemes, M. D., Gan, C., Kao, T. H., & Choong, M. (2008). An empirical analysis of customer satisfaction in international air travel. *Innovative Marketing*, 4, 50-62.
- Cronin, J., & Taylor, S. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing*, 56(3), 55-68.
- Cronin, J., & Taylor, S. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing*, 56 (3), 55-68.
- Dabholkar, P. (1995). The convergence of customer satisfaction and service quality Evaluations with increasing customer patronage. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 8, 32-43.
- Dabholkar, P. (1996). Consumer evaluations of new technology-based self-service operations: an investigation of alternative models. *International Journal of Research in Marketing*, 13 (1), 29-51.
- Dabholkar, P. A., Thorpe, D. I., & Rentz, J. O. (2001). A measure of service quality for retail stores: scale development and validation. *Journal of the Academy of Marketing Science*, 24 (1), 3-16.
- Dabholkar, P. S., & Thorpe, D. (2000). A comprehensive framework for service quality: An investigation of critical conceptual and measurement issues through a longitudinal study. *Journal of Retailing*, 76 (2), 139-173.
- Das, A., Kumar, V., & Saha, G. C. (2010). Retail service quality in context of CIS countries. *International Journal of Quality & Reliability Management*, 27(6), 658-683.
- De Ruyter, M., & Van Birgelen, M. W. (1998). Consumer ethnocentrism in international services marketing. *International Business Review*, 7(2), 185-202.
- Dominici, G., & Guzzo, R. (2010). Customer satisfaction in the hotel industry: a case study from Sicily. *International Journal of Marketing Studies*, 2(2), 3-12.
- Donnelly, M. H., & Will, V. (2000). Assessing the quality of service provided by market research agencies. *Total Quality Management*, 11 (4/6), S490-S500.
- Durvasula, S., & Lysonski, S. (2010). Diagnosing service quality in retailing: the case of Singapore. *Journal International Business and Entrepreneurship Development*, 5 (1), 2-17.

- Ekinci, Y. (2001). The validation of the generic service quality dimensions: an alternative approach. *Journal of Retailing and Consumer Services*, 8 (6), 311-324.
- Ekinci, Y. D., & Massey, G. (2008). An extended model of the antecedents and consequences of consumer satisfaction for hospitality service. *European Journal of Marketing*, 42 (1/2), 35 –68.
- Fullerton, G. (2005). The impact of brand commitment on loyalty to retail service brands. *Canadian Journal of Administrative Sciences*, 22(2), 97-110.
- Furrer, O., Liu, B. S.-C., & Sudharshan, D. (2000). The relationships between culture and service quality perceptions: basics for cross-cultural market segmentation and resource allocation. *Journal of Service Research*, 2 (4), 355-371.
- Ghosh, P., Tripathi, V., & Kumar, A. (2010). Customer expectations of store attributes: A study of organized retail outlets in India. *Journal of Retail and Leisure Property*, 9 (1), 75 – 87.
- Ginevičius, R., & Gudaciauskas, R. (2004). Brand valuation model. *Journal of Business Economics and Management*, 5 (3), 143-153.
- Grönroos, C. (1984). A Service Quality Model and its Marketing Implications. *European Journal of Marketing*, 18 (4), 36–44.
- Gundersen, M. H., & Olsson, U. (1996). Hotel guest satisfaction among business travelers: what are the important factors? . *The Cornell Hotel and Restaurant Administration Quarterly*, 37 (2), 72-81.
- Hackl, P., & Westlund, A. (2000). On structural equation modeling for customer satisfaction measurement. *Total Quality Management*, 11 (4/5/6), S820–S825.
- Heskett, J. S., & C.W.L., H. (1990). *Breakthrough Service*. New York: The Free Press.
- Hofstede, G. (1990a). Measuring organization cultures: a qualitative and quantitative and quantitative study across twenty cases. *Administrative Science Quarterly*, 35 (2), 286-316.
- Hofstede, G. (1990b). Managerial culture and work-related values in India. *Organization Studies*, 11 (1), 106.
- Hoq, M. Z., & Amin, M. (2010). The role of customer satisfaction to enhance customer loyalty. *African Journal of Business Management*, 4(12), 2385-2392.
- Jamal, A., & Naser, K. (2002). Customer satisfaction and retail banking: an assessment of some of the key antecedents of customer satisfaction in retail banking. *International Journal of Bank Marketing*, 20 (4), 146 – 160.
- Khare, A., Parveen, C., & Rai, R. (2010). Retailer behavior as determinant of service quality in Indian retailing. *Journal of Retail & Leisure Property*, 9 (4), 303-317.
- Knox, S. D., & Denison, T. J. (2000). Store loyalty: Its impact on retail revenue. An empirical study of purchasing behaviour in the UK. *Journal of Retailing and Consumer Services*, 7(1), 33-45.
- Ko, E., Kim, S. H., Kim, M., & Woo, J. Y. (2007). Organizational characteristics and the CRM adoption process. *Journal of Business Research*, 61(1), 65-74.
- Kuo, Y.-F. (2003). A study on service quality of virtual community websites. *Total Quality Management*, 14 (4), 461-473.
- Lai, W., & Chen, C. (2011). Behavioral intentions of public transit passengers: The roles of service quality, perceived value, satisfaction and involvement. *Transport Policy*, 18(2), 318-325.
- Laroche, M., Ueltschy, L. C., Abe, S., Cleveland, M., & Yannopoulos, P. P. (2004). Service quality perceptions and customer satisfaction: Evaluating the role of culture. *Journal of International Marketing*, 1 (2), 58-85.
- Lewis, R., & Booms, B. (1983). The Marketing Aspects of Service Quality. In U. (eds) (Ed.), *Emerging Perspectives on Services Marketing* (pp. 25-8). Chicago: American Marketing Association.
- Liang, R., & Zhang, J. (2012). The effect of service interaction orientation on customer satisfaction and behavioral intention: the moderating effect of dining frequency. *Asia Pacific Journal of Marketing and Logistics*, 24 (1), 153-170.
- Mahfooz, Y. (2014). Relationship between Service Quality and Customer Satisfaction in Hypermarkets of Saudi Arabia. *International Journal of Marketing Studies*, 6 (4), 10-22.
- Martinelli, E., & Balboni, B. (2012). Retail service quality as a key activator of grocery store loyalty. *The Service Industries Journal*, 32(14), 2233-2247.
- Mattila, A. S. (1999). The role of culture and purchase motivation in service encounter evaluations. *Journal of Services Marketing*, 13 (4/5), 376–389.
- Minh, N. V., & Huu, N. H. (2016). The relationship between service quality, customer satisfaction and customer loyalty: an investigation in Vietnamese retail banking sector. *Journal of Competitiveness*, 8 (2), 103-116.
- Mohsin, A., & Lockyer, T. (2009). Consumer perceptions of service quality in luxury hotels in New Delhi, India: a exploratory study. *International Journal of Contemporary Hospitality Management*, 22 (2), 160-173.
- Mukherjee, A., & Nath, P. (2005). An Empirical Assessment of Comparative Approaches to Service Quality Measurement. *Journal of Services Marketing*, 19 (3), 174-184.

- Nadiri, H., & Gunay, N. (2013). An emperical study to diagnose the outcomes of customers' experiences in trendy coffee shops. *Journal of Business Economics and Management*, 14 (1), 22-53.
- Nadiri, H., & Hussain, K. (2005). Perceptions of service quality in North Cyprus hotels. *International Journal of Contemporary Hospitality Management*, 17 (6/7), 469-480.
- Ngobo, P. (1999). Decreasing returns in customer loyalty: does it really matter to delight the customers? . *Advances in Consumer Research*, 26, 469-476.
- Nguyen, T., Cao, T., & Phan, T. (2015). Cultural Influences on Overall Service Quality Expectations: Evidence from Vietnamese Customers. *Asian Social Science*, 11 (25), 151 – 159.
- Oh, H. (1999). Service quality, customer satisfaction, and customer value: A holistic perspective. *International Journal of Hospitality Management*, 18 (1), 67-82.
- Oliver, L. (1999). Whence consumer loyalty? . *Journal of Marketing*, 63 (4), 33-44.
- Parasuraman, A. Z., & Berry, L. (1985). A conceptual model of service quality and its implications for future research . *Journal of Marketing*, 49 (1), 41-50.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1991). Refinement and reassessment of the SERVQUAL scale. *Journal of Retailing*, 67(4), 420-450.
- Parasuraman, A., Zeithaml, V., & Berry, L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Parasuraman, A., Zeithaml, V., & Malhorta, A. (2005). E-S-QUAL: a multiple-item scale for assessing electronic service quality. *Journal of Retailing*, 64(1), 12-40.
- Ryu, K., & Han, H. (2010). Influence of the quality of food, service, and physical environment on customer satisfaction and behavioural intention in quick-casual restaurants: moderating role of perceived price. *Journal of Hospitality & Tourism Research*, 34(3), 310-329.
- Saleh, F., & Ryan, C. (1991). Analysing service quality in the hospitality industry using the SERVQUAL model. *Services Industries Journal*, 11 (3), 324-343.
- Shemwell, D. J., Yavas, U., & Bilgin, Z. (1998). Customer-service provider relationships: an empirical test of a model of service quality, satisfaction and relationship-oriented outcomes. *International Journal of Service Industry Management*, 9 (2), 155-168.
- Simmers, C., & Keith, N. (2015). Measuring retail store service quality: the disparity between the retail service quality Scale (RSQS) and Comment Cards. *International Academy of Marketing Studies Journal*, 19 (2), 117-126.
- Sirdeshmukh, D., Singh, J., & B., S. (2002). Consumer trust, value, and loyalty in relational exchanges. *The Journal of Marketing*, 66(january), 15-37.
- Sirohi, N., McLaughlin, E. W., & Wittink, D. R. (1998). A model of consumer perceptions and store loyalty intentions for a supermarket retailer. *Journal of Retailing*, 223 - 245.
- Sousa, R., & Voss, C. (2010). The impacts of e-service quality on customer behavior in multi-channel e-services. *Total Quality Management & Business Excellence*, 23(7/8), 769-787.
- Sumaedi, S., Bakti, I., & Yarmen, M. (2012). The empirical study of public transport passengers' behavioral intentions: the roles of service quality, perceived sacrifice, perceived value, and satisfaction (case study: paratransit passengers in jakarta, indonesia). *International Journal for Traffic and Transport Engineering*, 2(1), 83-97.
- Szymanski, D., & Henard, D. (2001). Consumer satisfaction: a meta-analysis of the empirical evidence. *Journal of the Academy of Marketing Science*, 29 (1), 16-35.
- Tang, Y., Stanworth, J., Chen, W., Huang, S., & Wu, H. (2015). Toward a measure of Chinese hypermarkt retail service quality. *Total Quality Management*, 26 (3), 327-338.
- Tanvir, M. S., Hussain, A., & Janjua, S. (2011). A Remedy based Concept: Impact of Encounter Service, Culture and Employees Training on Customers Satisfaction of Hospitality Industry. *Interdisciplinary Journal of Contemporary Research in Business*, 3 (2), 1237-1247.
- Valdani, E. (2009). *Cliente & Service Management*. Milan: Egea.
- Veloso, C., & Monteiro, A. (2013). Determinants of customers satisfaction and behavioural intentions in the luxury hotels: the impact of national culture and SERVQUAL dimensions. In J. Santos, F. Serra, & P. Águas, *Strategies Tourism Organizations and Destinations*. Algarve, Portugal: TMS Conference Series. ISBN: 978-989-8472-41-0.
- Wang, Y., & Tang, I. (2003). Assessing Customer Perceptions of Website Service Quality in Digital Marketing Environments. *Journal of End User Computing*, 15 (3), 14-31.
- Wang, Y., Lo, H., & Yang, Y. (2004). An integrated framework for service quality, customer value, satisfaction: Evidence from China's telecommunication industry. *Information Systems Frontiers*, 6(4), 325-340., 6(4), 325-340.

- Wen, C., Qin, H., R., P. V., & Blankson, C. (2012). The role of national culture on relationships between customers' perception of quality, values, satisfaction, and behavioral intentions. *Quality Management Journal*, 19 (4), 7-23.
- Wong, A., Dean, A., & White, C. (1999). The impact of service quality on customer loyalty in the hospitality industry. *International Journal of Customer Relationship Management*, 2(1), 81-89.
- Wu, H. (2013). An empirical study of the effects of service quality, perceived value, corporate image and customer satisfaction on behavioral intentions in the Taiwan quick service restaurant industry. *Journal of Quality Assurance in Hospitality & Tourism*, 14 (4), 364-390.
- Wu, J., Lin, Y., & Hsu. (2011). An empirical analysis of synthesizing the effects of service quality, perceived value, corporate image and customer satisfaction on behavioral intentions in the transport industry: a case of Taiwan high-speed rail. *Innovative Marketing*, 7 (3), 83-100.
- Yang, Z., & Peterson, R. T. (2004). Customer perceived value, satisfaction, and loyalty: The role of switching costs. *Psychology & Marketing*, 21(10), 799-822.
- Yu, W., & Ramanathan, R. (2012). Retail service quality, corporate image and behavioural intentions: the mediating effects of customer satisfaction. *The International Review of Retail, Distribution and Consumer Research*, 22 (5), 485-505.
- Yuen, E. F., & Chan, S. S. (2010). The Effect of Retail Service Quality and Product Quality on Customer. *Journal of Database Marketing & Customer Strategy Management*, 17(3), 222-240.
- Zaibaf, M. T., & Fakharian, M. (2012). Effect of perceived service quality on costumer satisfaction in hospitality industry: Gronroos' service quality model development. . *Journal of Hospitality Marketing & Management*, 22 (5), 409-504.
- Zeithaml, V., Berry, L., & Parasurama, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31-46.
- Zeithaml, V., Parasuraman, A., & Berry, L. (1990). *Delivering Quality Service*. New York: The Free Press.
- Zhang, X., & Prybutok, V. (2005). A Consumer Perspective of E-Service Quality. *IEEE Transactions on Engineering Management*, 52 (4), 461-477.

COD-NATIONS: TRADE OF AN EXPANDING COMMODITY

Trond Bjørndal^{a,b}

^aNTNU - Norwegian University of Science and Technology - Aalesund, Faculty of International Business, Norway
^bSNF - Centre for Applied Research at NHH, Helleve 30, N-5045 Bergen, Norway
(trond.bjorndal@snf.no)

Jorge Ramosc

cCIEO - Research Centre for Spatial and Organizational Dynamics, University of Algarve, Portugal
(jhramos@ualg.pt)

Amalie Tusvika

^aNTNU - Norwegian University of Science and Technology - Aalesund, Faculty of International Business, Norway
(amalie.tusvik@outlook.com)

ABSTRACT

In Norway, with its long coast, the fishing industry is a powerful engine in the economy. One of Norway's main fish resources is the Atlantic cod (*Gadus morhua*), which is in the top-10 list of the most harvested wild species in the world. The Norwegian people have traded cod since the time of the Vikings and the products are still important in fish exports. Adequate management of cod is very important to ensure future sustainability. On the other hand, in Portugal documented interest in dried and salted cod dates back to the 15th century, i.e., since the discoveries. At that time, cod was an important source of protein, easy to preserve if dried or/and salted and Portugal is still a cod consuming nation. However, as a coastal country, with high biodiversity, but no cod, Portugal needs to import this product, as traditional dried and salted cod remains an important commodity. Yearly consumption of cod per capita (over 60kg) and is the most demanded seafood product in Portugal. This raises questions: why are these eating habits still maintained? What does Norway gain by fuelling the demand for cod? What are the mutual benefits?

Keywords: Atlantic Cod, Import-export, Norway, Portugal.

JEL Classification: Q21, Q22

1. INTRODUCTION

The importance of cod as a commodity lies not only in historical roots, but also in the particular features that can be found in this fish species (Perdikaris and McGovern, 2007). The capacity to acquire and store protein safely during long and arduous voyages in rough seas was not easy, but was facilitated by cod (Fagan, 2008).

In 1000AD Leif Erikson discovered territories in North America giving them the name Vinland (land of vineyards) and there is evidence for a Norse settlement in L'Anse aux Meadows located in the Northern tip of Newfoundland (Canada) (Ingstad and Ingstad, 2000). It is generally believed that the discovery was enabled by early navigators remaining close to the coast where there was an abundance of Atlantic cod that was easy to catch. This fish species had another useful characteristic; it was easy to preserve using open air drying methods (Outram, 2003). Around five centuries later (in 1497), John Cabot in the service of King Henry VII sailed in a caravel named Matthew from Bristol (England) to North America (Morison, 1986). There is evidence that Matthew's crew were astonished by the proliferation of cod, which could even be caught using with fishing baskets (Pringle, 1997). A few years later other groups such as the Basques (Kurlansky, 2000) and the Portuguese (Cole, 1990) were able to reach those fish rich waters and use first salt as a means of preservation and later drying (Andrieux, 2009). Support for the latter comes from evidence of a Portuguese settlement in the Azores islands who were fishing towards the north and may by chance have reached the coast of Newfoundland (Abreu-Ferreira, 1998).

The historical evidence described above demonstrates that cod fisheries have been in existence since those times and this activity that has enabled trade between countries (O'Rourke and Williamson, 2002). Cod has been a sought after commodity that is highly imperishable and flexible in terms of provisioning (Pálsson, 1998). Atlantic cod (*Gadus morhua*) is confined to only the northern hemisphere and can be found in the relatively shallow waters of the Atlantic Ocean (Fig. 1) (Neat *et al.*, 2006); it is nonetheless, an important trade commodity for several countries (Anderson, 2003). Northern countries such as Iceland, Denmark, the UK, Norway and Russia among others have specialised fleets dedicated to cod fishing (Parker and Tyedmers, 2015).

The present study aims to use relevant literature to explore the reasons for the expansion of cod as a commodity with particular reference to Norway as a producer, Portugal as a consumer and more recently also as a processor. It is our objective to investigate the cultural reasons associated with trade in salted and dried cod commodities. Other issues will also be explored, such as the reasons for this trade to reach large markets such as Brazil.

Figure 1 – Atlantic cod (*Gadus morhua*) distribution. Colours represent probabilities of occurrence (reddish means higher occurrence whereas yellowish means lower occurrence)



Source: Fishbase (available from: <http://fishbase.org/>)

2. MATERIAL AND METHODS

In the present study, a twofold approach was used, following data collection methods described by Robson (2002). First, the position of Atlantic cod in terms of catches was investigated, using either European or domestic databases (Norway and Portugal) and data concerning the general term “cod” and the relationship between the two countries. Second, additional supporting information came from scientific literature concerned with a socio-economic perspective on “cod” and the trade or other relationship between Norway and Portugal.

The second approach involved a search for information in the literature for relevant terms: the method used was based on a search of scientific databases for “Atlantic cod”. The tool Google Scholar was used for this to search for articles published in English in peer-reviewed journals within five of the most important scientific editorial groups: (1) Elsevier, (2) Springer, (3) Wiley-Blackwell, (4) Taylor & Francis and (5) SAGE Publications. These groups have together published more than half of all academic papers in worldwide peer-reviewed literature.

In addition, a further 9 additional key-terms related to “Atlantic cod” were also chosen in conjunction with the main search term. A wild-card character was used – asterisk (*) – to substitute one or more characters in each of the key-terms. The following key-terms were used with the wild-card (Table 1).

Table 1 – Key-terms searched in the scientific literature

Key-term	Searched and excluded items
Norw*	for Norway, Norwegian
Port*	for Portugal, Portuguese, excluding all other words
Expor*	for export, exports, export-import
Impor*	for import, imports, import-export, excluding importance and important
Cod*	for cod, except code and related words such as: codify, codified, codification
Gad*	for <i>Gadus morhua</i> , gadoid fish, gadoids
Klip*	for klipfish, klipfish or Klippfisk (a term used to designate cod)
Trad*	for trade, trading, excluding all other words such as traditional, or derived
Seaf*	for seafood, sea-food

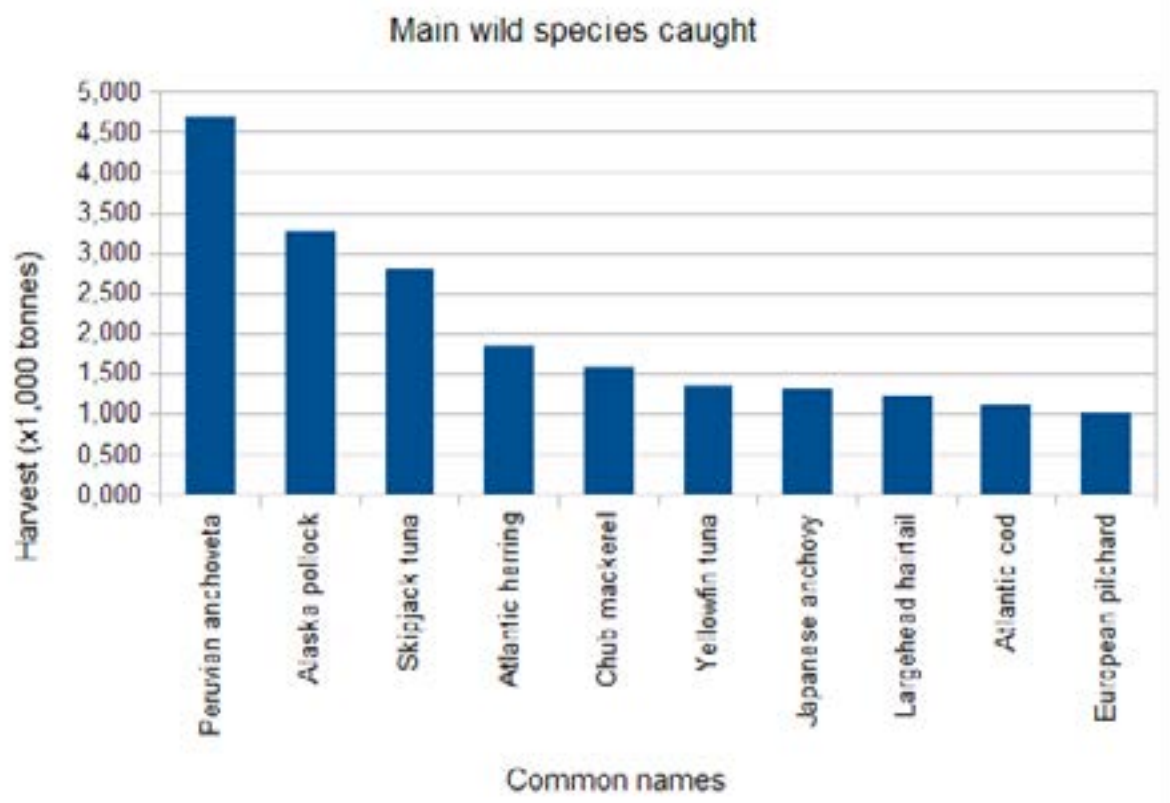
A decision was made to limit the number of key search terms in order to provide focus for the study. Several other terms could have been used, but this would be at the expense of going on a more subjective track. Instead, it was used the addition of terms in order to refine the search in each of the editorial group engines (e.g. key-term 1 + key-term 2 + key-term 3).

Apart from peer reviewed scientific literature, recent grey literature was also used. This choice can be justified as such literature is relevant for the subject of cod trade between Norway and Portugal.

3. RESULTS

The results concerning the position of cod fisheries worldwide can be seen in Figure 2. Atlantic cod (*Gadus morhua*) is in the top-10 list of the most harvested wild species in the world attesting to the importance of this fish resource.

Figure 2 – Top ten of the world's largest wild harvested fish species



Source: FAO (2017)

In terms of the key search terms for the main editorial groups, these turned up much relevant literature for the purpose of this study. This can be seen when the search is narrowed to include six terms at a time: “Norway” + “Portugal” + “Export” + “Import” + “cod” + “trade” (Table 2). Within the five editorial groups, the range of the combined terms varied between 14 and 92.

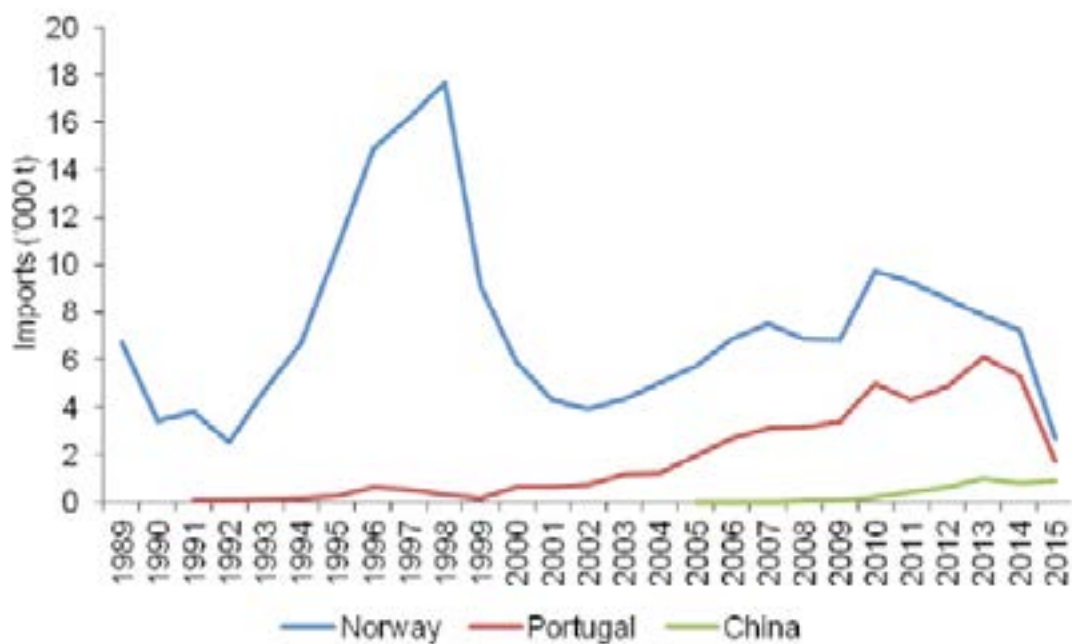
Table 2 – Results of the key-terms searched in scientific literature published by five of the main editorial groups.

Editorial group	Elsevier	Springer	Wiley	T&F	Sage
Total articles	5,500,000	4,980,000	3,860,000	2,310,000	1,830,000
“Norway” “Portugal”	24,100	29,700	14,600	13,000	5,100
“Norwegian” “Portuguese”	2,980	3,850	2,410	2,320	851
“Norway” “Portugal” “Export” “Import”	2,310	3,180	1,450	1,190	470
“Norwegian” “Portuguese” “Export” “Import”	166	320	146	145	58
“Norway” “Portugal” “Export” “Import” “cod”	79	102	48	58	14
“Norway” “Portugal” “Export” “Import” “cod” “trade”	57	92	42	57	14

Source: Google Scholar (accessed in 31, March, 2017, in: <https://scholar.google.pt/>).

Based on the literature, cod imports for the last two decades or so have increased in Lusophone countries such as Brazil (Fig. 3) and more recently to Angola.

Figure 3 – Salted and dried shares for imported cod



Source: Ministry of Development Industry and Foreign Trade of Brazil (2015). Adapted from Bjørndal *et al.* (2016)

4. DISCUSSION

4.1 Main reasons for cod consumption in Portugal

By the late 1400s, some European fishermen adopted the salt-based curing methods developed by the Basques. In Portugal, salted cod became a staple food that was affordable for all levels of society (Arvela, 2013). The literature shows that in southern European countries, with particular focus on Portugal, Atlantic cod became an important commodity for several reasons mainly related to the cultural context and has become part of everyday eating habits (Albala, 2003). Probably the most relevant reason that dates back several centuries until today (with some evolutionary changes), is that in Catholic countries, particularly during fasting periods that preceded Christmas (Advent) and Easter (Lent), cod was viewed as an alternative to red meat (Dickie, 2008). Even today, during holy-days, such as Christmas Eve dinner and Easter Sunday lunch, when the extended family meets, dishes using cod are compulsory for most (Delamont, 2002). For the Portuguese, cod became an essential trading commodity within the former Empire reaching all continents (Lessa, 2008).

4.2 Cod: context changes in supply and steady demand

4.2.1 The main changes

In Portugal during the *Estado Novo* dictatorship cod fisheries were an activity that involved several people, particularly men, that worked in the long distance fisheries. Soon after the Carnation Revolution the cod fleet positioned over the offshore waters of Newfoundland began to be dismantled (Coelho *et al.*, 2011). This was due internal changes, but also to international conjunctures such as a reduction in access to long distance fisheries. In a volte-face, Portugal joined in 1986 the then European Economic Community (EEC) and gained some extra access to Canadian waters as a result of a third party agreement (Hutchings and Myers, 1995). This renewed access to cod waters lasted only a few years, and by 1992 the cod stocks off Canadian Atlantic waters started to collapse (Myers *et al.*, 1997). A moratorium was put in place for an unspecified time until stocks recovered (Bundy and Fanning, 2005). As a result, the price of cod increased dramatically (Bjørndal *et al.*, 2016). This put some pressure on cod stocks, but other trade opportunities appeared (Lynghjem and Breivik, 2015). Cod resources have been since subjected to great pressure and research including stock assessments to help with their preservation has been effectively carried out (e.g. Eide *et al.*, 2003; Arnason *et al.*, 2004; Kjesbu *et al.*, 2014).

4.2.2 Norway as the alternative cod supplier

By late 1990s, Norway was able to manage sustainable cod management stocks in its waters. It also increased its cod aquaculture from experimental pilots to an attempt at industrial level production, although this was not very successful (Brown *et al.*, 2003; Rosenlund and Halldórsson, 2007). By the year 2000, Portugal started to import not only dried and salted cod, but also fresh cod from Norway. The cod processing industry in Portugal began to process not only for the domestic market, but also to overseas as a result of a higher demand particularly in Brazil and to some extent also in Angola. In Brazil, this was a result of better economic prospects and in Angola, this was due to a combined set of factors such as increased purchasing power for the people and the large number of Portuguese immigrants arriving in Angola as a result of deteriorating economic conditions in Portugal (Lorentzen *et al.*, 2016).

4.3 Cod supply

4.3.1 Cod distribution

Cod has specific characteristics: it can only be found in cold waters, it is relatively large and is easy to catch (Hardie *et al.*, 2008). All these characteristics are important factors for the success of this species as a trade commodity.

Norway pursues an 820,000 km² EEZ with plenty of large areas of cold and shallow waters on the continental shelf. As a result, it is one of the countries where Atlantic cod (*Gadus morhua*) has a higher probability of being found. Catches from this species have been subjected to international quota agreements (Jakobsen, 1987). On the other hand, Portugal pursues a 1,730,000 km² EEZ, located in comparatively milder water temperatures and a deeper continental shelf. The consequence of these features is that the probability of finding Atlantic cod is very low (Dulvy *et al.*, 2005).

4.3.2 Comparative importance of exports

The bulk of Norwegian exports is composed of few sectors. Fish, either fresh, chilled or frozen is the raw material related to the third most important economic activity sector in Norway and accounts for circa 7% of its exports, being only surpassed by machinery (second place reaching 9%) and the main activity sector which is related to the oil and gas industry (Nystrand, 2011; Eurostat, 2017). Fishing and aquaculture are among the main and most important economic activities in Norway.

In comparison, Portugal has no highly dominating economic activity sector in export, but electric and cabling is slightly ahead accounting for around 15% of all exports. It is followed closely by machinery (13.1%) and forestry related products such as pulp, paper and cork (13%). The most important sector where seafood products are included is in the canning and other processed seafood products, accounting for less than 1% of all exports (Eurostat, 2017). Fishing and aquaculture are not among the main economic activities in Portugal (*op. cit.*).

4.4 Cod trade between Norway and Portugal

4.4.1 Norway

Norway is among the largest fish and seafood producer worldwide (Anderson, 2003). Fish catches reached 2,135 thousand tonnes in 2014. In addition, 1,332 thousand tonnes were produced through aquaculture in 2014, roughly 10% more than the total EU production. In terms of consumption, each Norwegian consumes around 44kg/fish per year. In total, the domestic market for Norway reaches around 220 thousand tonnes of seafood consumption per year (Eurostat, 2017).

With its long coast, the fishing industry in Norway is a powerful engine of the economy (Soma *et al.*, 2014). Notwithstanding, due to its relatively high latitudinal position, the Norwegian coast is not very diversified in terms of fish species. One of the main fish resources is Atlantic cod (*Gadus morhua*), which is in the top-10 list of the most harvested wild species in the world (Higgins *et al.*, 2010). The Norwegians have traded dried and salted cod since the Vikings and fish products are still important exports.

4.4.2 Portugal

In comparison, in terms of production, Portugal catches reached 177 thousand tonnes in 2014. Fish and other seafood reared in aquaculture settings amounted to 11 thousand tonnes in 2014. These figures are roughly half of production in the Czech Republic and two-thirds of that of Hungary where both countries have no coast and low fish consumption (Eurostat, 2017). Thus, the Portuguese are avid seafood consumers. Each Portuguese consumes in a year over 62kg/fish, putting them at the top of the world's consumer list. As a result of high domestic demand of around 700 thousand tonnes of seafood consumption per year, the country has to rely heavily on imports (*op. cit.*).

Being a coastal country, with high biodiversity, but no cod, Portugal needs to import this product as traditional dried and salted cod. This staple food remains an important commodity and Portugal is still a cod consuming nation (Bjørndal *et al.*, 2016). Cod represents a significant part of yearly consumption per capita (over 60kg), being the most demanded seafood product in Portugal (Bjørndal *et al.*, 2015). As a result, and due to the EU tariff regime, a fish processing industry dedicated to these products is protected and encouraged.

4.4.3 Comparative trade

Gadoids are part of the fishing sector that alone accounts for \$1.08 billion (2015). This is one of the major economic sectors in Norway where cod, saithe, haddock and other groundfish species are marketed as clipfish (dried and salted), being part of an important sub-sector of the fishing and processing industry (Haugnes, 2010). Around 41% of these clipfish goes to the Portuguese market. In terms of fish and other seafood production and consumption, Norway has a positive balance of trade of around 3,247 tonnes/year. In comparison, Portugal presents a negative balance of trade of 512 tonnes/year. The most consumed seafood in Portugal is cod or similar gadoids (Almeida *et al.*, 2015). Salted cod and clipfish are imported mainly from Norway (Fjørtoft and Nystrand, 2016). Both salted and frozen cod imported to Portugal are used in the processing industry for clipfish production.

Fjørtoft and Nystrand (2016) pinpoint an important aspect related to Norwegian clipfish, which still is as an attractive commodity to the Portuguese. However, importers tend to choose salted cod instead of clipfish. This may jeopardize the successfully traded brand *Bacalhan da Noruega* from a consumer perspective.

4.5 Reasons for the Portuguese ‘cod addiction’

The question that arises is why are the Portuguese eating habits so reliant on cod. In the literature, a large number of reasons are cited, which can be broadly split into two groups: 1) the preservation process, and 2) appealing texture with low rate of waste.

4.5.1 Cod preservation process

An important characteristic of cod is the ease with which individual fish can be preserved through drying and salting, enabling it to be kept long term in good condition. These techniques not only preserve cod, but also improve the taste. The low fat content means effective preservation, preventing bacteria developing and contamination of the edible parts. These facts help explain why cod has been a staple food throughout history (Wicklund and Lekang, 2016). Later, refrigeration and freezing techniques were developed and used in the preserving of cod (Evans, 2015). While consumption in Portugal may eventually be considered idiosyncratic (Cardoso *et al.*, 2013), the reasons above help explain why cod is the main seafood product to be consumed there.

4.5.2 Cod texture and low waste

Cod has an appealing texture and little is wasted as after gutting most of the body and head are used in human consumption (Næss and Haneckzo, 2013). In Portuguese cuisine, the process of curing cod is important as after this process the whole cod can be cut into three or eventually four main parts: the steak (prepared by boiling or grilling); the loin (which is the thickest part and is oven baked or boiled); the scraps (usually shredded) and the tail (used in a similar way to the scraps). The faces, cheeks and tongues from the heads are used in by-products. (Fjørtoft and Nystrand, 2016), (these are colloquialisms and do not correspond exactly to their common meaning). Thus, cod contains a high percentage of edible parts and little waste is produced (Anderson and Dalley, 2000; Hardie *et al.*, 2008). These are the main reasons why cod has become a staple food in Portuguese cuisine, even being known as *Fiel amigo* - a faithful or loyal friend (Sobral and Rodrigues, 2013).

Texture in clipfish is so important that in Portugal it is common to sell cod as a generic product, without a brand, only labelling it as being cured using traditional Portuguese methods. These traditional methods are used not only for cod, but also for other gadoids, creating a large range of colours, sizes, smells and tastes. Consumers are allowed to touch and smell clipfish before they buy it.

4.5.3 A flexible and multicultural cuisine with endless recipes

A large number of dishes can be prepared using the different cuts from salted and dried cod (Sobral, 2012). In traditional Portuguese cuisine there is a common claim that there are 1,001 recipes that use salted and dried cod. These often feature other common ingredients such as onion, olive oil and potatoes, which are tantamount to compulsory in Portuguese cuisine. Even with these common ingredients, the way of slicing or mashing potatoes or onions and the harvest of the olive oil are sufficient to differentiate some recipes (*op. cit.*). There are also ingredients that appear in other individual recipes. Among these are coconut milk, lard and saffron which are used to make cod chutney. Battered cod is used for some recipes with shredded cod (Sobral, 2008) and some dishes are named after the person who created it (e.g., *Bacalhau à Brás*, *Bacalhau à Gomes de Sá*, *Bacalhau à Zé do Pipo*). Many cod dishes were created in the Northern coastal part of Portugal, and among them the *Bacalhau à Gomes de Sá* has been popularized in Brazil, particularly due to the large number of inhabitants of Northern Portuguese descent (Coelho, 2004). Cod chutney is quite common in certain parts of Asia, particularly Goa, Daman and Diu in India and Macau in China, influenced by Indo-Portuguese gastronomy (Ansaldó, 2010). More recently, the *Bacalhau à Brás* - a cod dish originally created in a very typical Lisbon quarter, the *Bairro Alto* - has been in high demand among tourists. Its success has resulted in a Spanish version and it can also be found in Macau (Kammen, 2009).

4.6 An expanding ‘cod addition’

4.6.1 Multiple consumers

Due to cultural links with Portugal, particularly in Christmas and Easter Catholic traditions, Brazil has become also a cod loving nation (Maranho, 2010). Consumption has increased during recent decades, as have imports (Simonard-Loureiro and da Costa, 2016).

A similar demand has occurred in Angola, where this rose during the late 2000's as a alongside increased purchasing power (Egeness and Pleym, 2015). One of the main reasons for the rise in demand may be related to the recent emigration of Portuguese people to Angola (Queirós, 2010).

4.6.2 Fuelling cod consumption

Norway gains from encouraging regular cod consumption, particularly through the generic name of salted and dried ‘cod’ – clipfish, including not only *Gadus morhua*, but also other gadoid species. This phenomenon may have resulted from the collapse that occurred in 1992, and the need to increase consumption of other gadoid species (Link *et al.*, 2009).

There is a surplus of cod production in Norway, and the increasing demand for cod in Portuguese speaking countries, benefits its trade. Portugal also benefits; although it needs to import the raw material (cod) from Norway, it has a specialised processing industry that transforms cod into products required elsewhere (Pettersen and Myrland, 2016). Tightening mutual trade agreements between Norway and Portugal seems beneficial for both countries. Mutual trust is important because Norway is seen to be a high quality cod producer, and Portugal has demonstrated that it is not only a highly demanding

consumer, but also an efficient processor capable of supplying the extended Lusophone gastronomic culture associated with nostalgia and memorabilia, i.e., knowledge from past generations that is maintained in the present (Bourdain, 2010).

5. CONCLUSIONS

We found that the Portuguese are not only avid consumers of seafood both in the past and now, but also that they are 'addicted to cod' and that the flexibility and history apparent in the curing process of this fish species as well as a widespread and rich cuisine are major factors in the expansion of demand for cod. The label Norwegian cod together with Portuguese traditional curing methods create a high standard of food quality much appreciated by consumers. The close cultural connections between Brazil and Portugal has influenced the former when it comes to the consumption of cod, not only at Christmas and Easter, but also on other occasions. Norway as a strategic cod supplier, being particularly active after the collapse of Newfoundland cod stocks, may gain economic advantage from other, newer markets such as Brazil and Angola. There are without doubt mutual benefits to be had from trading Atlantic cod as a commodity.

ACKNOWLEDGMENTS

This paper is financed by National Funds provided by FCT - Foundation for Science and Technology through project UID/SOC/04020/2013. The authors are grateful to Paula Rice for her valuable revision of the text.

REFERENCES

- Abreu-Ferreira, D. (1998). Terra Nova through the Iberian looking glass: The Portuguese-Newfoundland cod fishery in the sixteenth century. *Canadian Historical Review*, 79(1), 100-117.
- Albala, K. (2003). *Food in early modern Europe*. Greenwood Publishing Group.
- Almeida, C., Karadzic, V., & Vaz, S. (2015). The seafood market in Portugal: Driving forces and consequences. *Marine Policy*, 61, 87-94.
- Anderson, J. M. (2003). *The international seafood trade*. Elsevier.
- Anderson, J. T., & Dalley, E. L. (2000). Interannual differences in hatching times and growth rates of pelagic juvenile cod in Newfoundland waters. *Fisheries Research*, 46(1), 227-238.
- Andrieux, J. (2009). Portuguese fishermen in Newfoundland. The Portuguese in Canada: diasporic challenges and adjustment, 61-76.
- Ansaldo, U. (2010). Identity alignment and language creation in multilingual communities. *Language Sciences*, 32(6), 615-623.
- Arnason, R., Sandal, L. K., Steinshamn, S. I., & Vestergaard, N. (2004). Optimal feedback controls: comparative evaluation of the cod fisheries in Denmark, Iceland, and Norway. *American Journal of Agricultural Economics*, 86(2), 531-542.
- Arvela, A.P. (2013). *Sitting at the table of nation: narratives of bacalhau, the Portuguese national dish (Doktoravhandling)*. School of Social Sciences, Media and Communication, University of Wollongong, Australia.
- Bjørndal, T., Lappo, A., & Ramos, J. (2015). An economic analysis of the Portuguese fisheries sector 1960–2011. *Marine Policy*, 51, 21-30.
- Bjørndal, T., Brasão, A., Ramos, J., & Tusvik, A. (2016). Fish processing in Portugal: An industry in expansion. *Marine Policy*, 72, 94-106.
- Bourdain, A. (2010). *A cook's tour: in search of the perfect meal*. Bloomsbury Publishing USA.
- Brown, J. A., Minkoff, G., & Puvanendran, V. (2003). Larviculture of Atlantic cod (*Gadus morhua*): progress, protocols and problems. *Aquaculture*, 227(1), 357-372.
- Bundy, A., & Fanning, L. P. (2005). Can Atlantic cod (*Gadus morhua*) recover? Exploring trophic explanations for the non-recovery of the cod stock on the eastern Scotian Shelf, Canada. *Canadian Journal of Fisheries and Aquatic Sciences*, 62(7), 1474-1489.
- Cardoso, C., Lourenço, H., Costa, S., Gonçalves, S., & Nunes, M. L. (2013). Survey into the seafood consumption preferences and patterns in the Portuguese population. Gender and regional variability. *Appetite*, 64, 20-31.
- Coelho, M. P., Filipe, J. A., Ferreira, M. A. M., & Lopes, R. J. (2011). Socio-economics of Portuguese cod fisheries: past, present and perspectives for the future. *International Journal of Latest Trends in Finance and Economic Sciences*, 1(3).
- Coelho, V. A. (2004). A Europa e as Europas. A grande emigração europeia, 1840–1930. Coimbra, Artur F. (Eds.), *Migrações: história, economia e encontro de culturas*. Fafe, Câmara Municipal; p.21–48. [In Portuguese].
- Cole, S.C. (1990). Cod, God, country and family: the Portuguese Newfoundland cod fishery. MAST. *Maritime Anthropological Studies*, 3(1): 1–29.

- Delamont, S. (2002). *Appetites and identities: an introduction to the social anthropology of western Europe*. Routledge.
- Dickie, J. (2008). *Delizial: The epic history of the Italians and their food*. Simon and Schuster.
- Dulvy, N. K., Jennings, S., Goodwin, N. B., Grant, A., & Reynolds, J. D. (2005). Comparison of threat and exploitation status in North-East Atlantic marine populations. *Journal of Applied Ecology*, 42(5), 883-891.
- Egeness, F. A., & Pley, I. E. (2015). Klippfisk til Angola. Muligheter og utfordringer for norsk klippfisk i det angolanske markedet. Faglig sluttrapport. [In Norwegian]
- Eide, Arne, Frode Skjold, Frank Olsen, and Ola Flaaten (2003). Harvest functions: the Norwegian bottom trawl cod fisheries. *Marine Resource Economics*, 18 (1): 81-93.
- EUROSTAT (2017). Statistics explained. Fishery statistics. Available from: http://ec.europa.eu/eurostat/statistics-explained/index.php/Fishery_statistics
- Evans, J. (2015). Emerging refrigeration and freezing technologies for food preservation. *Innovation and Future Trends in Food Manufacturing and Supply Chain Technologies*, 175.
- Fagan, B. (2008). *Fish on Friday: feasting, fasting, and the discovery of the New World*. Basic Books.
- FAO (2017). Fisheries and aquaculture department. Available from: <http://www.fao.org/fishery/en>
- Fjærtøft, K. L. and Nystrand, B. T. (2016). PRODUKT- OG MARKEDSUTVIKLING FOR KLIPPFISK I PORTUGAL. Rapport nr. MA 16-07. Norges forskningsråd – prosjekt nr. 233840. Møreforskning AS. [In Norwegian]
- Hardie, D. C., Renaud, C. B., Ponomarenko, V. P., Mukhina, N. V., Yaragina, N. A., Skjæraasen, J. E., & Hutchings, J. A. (2008). The isolation of Atlantic cod, *Gadus morhua* (Gadiformes), populations in northern meromictic lakes—a recurrent arctic phenomenon. *Journal of Ichthyology*, 48(3), 230-240.
- Haugnes, S. E. (2010). Consumers in Industrial Networks: a study of the Norwegian-Portuguese bacalhau network.
- Higgins, R. M., Danilowicz, B. S., Balbuena, J. A., Daniélsdóttir, A. K., Geffen, A. J., Meijer, W. G., ... & Schreiber, A. (2010). Multi-disciplinary fingerprints reveal the harvest location of cod *Gadus morhua* in the northeast Atlantic. *Marine Ecology Progress Series*, 404, 197-206.
- Hutchings, J. A., & Myers, R. A. (1995). The biological collapse of Atlantic cod off Newfoundland and Labrador. The North Atlantic fisheries: successes, failures, and challenges. Island Institute Studies, Charlottetown, Prince Edward Island. Canada, 37-94.
- Ingstad, H., & Ingstad, A. S. (2000). *The Viking Discovery of America: The Excavation of a Norse Settlement in L'Anse Aux Meadows, Newfoundland*. Breakwater Books.
- Jakobsen, T. (1987). Coastal cod in northern Norway. *Fisheries Research*, 5(2-3), 223-234.
- Kammen, D. (2009). Fragments of utopia: Popular yearnings in East Timor. *Journal of Southeast Asian Studies*, 40(02), 385-408.
- Kjesbu, O. S., Bogstad, B., Devine, J. A., Gjøsæter, H., Howell, D., Ingvaldsen, R. B., ... & Skjæraasen, J. E. (2014). Synergies between climate and management for Atlantic cod fisheries at high latitudes. *Proceedings of the National Academy of Sciences*, 111(9), 3478-3483.
- Kurlansky, M. (2000). *The Basque history of the world*. Random House.
- Lessa, C. (2008). Nação e nacionalismo a partir da experiência brasileira. *Estudos Avançados*, 22(62), 237-256. [In Portuguese]
- Link, J. S., Bogstad, B., Sparholt, H., & Lilly, G. R. (2009). Trophic role of Atlantic cod in the ecosystem. *Fish and Fisheries*, 10(1), 58-87.
- Lorentzen, G., Egeness, F. A., Pley, I. E., & Ytterstad, E. (2016). Shelf life of packaged loins of dried salt-cured cod (*Gadus morhua* L.) stored at elevated temperatures. *Food Control*, 64, 65-69.
- Lynghjem, A., & Breivik, H. K. (2015). Country of origin and the effect on consumers' purchase intention of Norwegian salted cod: a study of the Spanish market.
- Maranhão, M. F. (2010). Duas partes do Império: São Paulo e Pernambuco na dinâmica do abastecimento interno da América portuguesa entre os anos de 1580 e 1720. *Angelus Novus*, (1), 53-76. [In Portuguese]
- Morison, S. E. (1986). *The great explorers: The European discovery of America*. Oxford University Press on Demand.
- Myers, R. A., Hutchings, J. A., & Barrowman, N. J. (1997). Why do fish stocks collapse? The example of cod in Atlantic Canada. *Ecological Applications*, 7(1), 91-106.
- Næss, A., & Haneczko, A. (2013). *Towards market oriented value chain: challenges in Norwegian cod fisheries*. (Master's thesis, Norwegian University of Life Sciences, Ås).
- Neat, F. C., Wright, P. J., Zuur, A. F., Gibb, I. M., Gibb, F. M., Tulett, D., ... & Turner, R. J. (2006). Residency and depth movements of a coastal group of Atlantic cod (*Gadus morhua* L.). *Marine Biology*, 148(3), 643-654.

- Nystrand, B. T. (2011). Value chain analysis of dried and salted cod From Norway to Portugal. Aalesund Norway: Aalesund University College.
- O’rourke, K. H., & Williamson, J. G. (2002). When did globalisation begin? *European Review of Economic History*, 6(1), 23-50.
- Outram, A. K. (2003). Comparing levels of subsistence stress amongst Norse settlers in Iceland and Greenland using levels of bone fat exploitation as an indicator. *Environmental Archaeology*, 8(2), 119-128.
- Pálsson, G. (1998). The virtual aquarium: commodity fiction and cod fishing. *Ecological Economics*, 24(2), 275-288.
- Parker, R. W., & Tyedmers, P. H. (2015). Fuel consumption of global fishing fleets: current understanding and knowledge gaps. *Fish and Fisheries*, 16(4), 684-696.
- Perdikaris, S., & McGovern, T. H. (2007). Cod Fish, Walrus, and Chieftains. In *Seeking a Richer Harvest* (pp. 193-216). Springer US.
- Pettersen, I. K., & Myrland, Ø. (2016). A cod is a cod, but is it a commodity?. *Journal of Commodity Markets*, 3(1), 70-75.
- Pringle, H. (1997). Cabot, cod and the colonists. *CANADIAN GEOGRAPHIC*, 31(30).
- Queirós, J. (2010). Recent Economic Performance and Changing Configurations of Workforce Mobility in Northwest Portugal: Social Consequences of Unemployment and the Rise of Youth Emigration. In *Youth on the Move* (pp. 95-106). VS Verlag für Sozialwissenschaften.
- Robson, C. (2002). Real world research: a resource for social scientists and practitioner. *Adapting Open Innovation in ICT Ecosystem Dynamics* References Real World Research: A Resource for Social Scientists and Practitioner, 270.
- Rosenlund, G., & Halldórsson, Ó. (2007). Cod juvenile production: research and commercial developments. *Aquaculture*, 268(1), 188-194.
- Simonard-Loureiro, H. M., & da Costa, L. A. (2016). O verdadeiro bacalhau na gastronomia. *Nutrição Brasil*, 14(4). [In Portuguese]
- Sobral, J. M. (2008). Cozinha, nacionalismo e cosmopolitismo em Portugal (séculos XIX-XX). *Itinerários: A Investigação nos 25 Anos do ICS*. [In Portuguese]
- Sobral, J. M., & Rodrigues, P. (2013). O “fiel amigo”: o bacalhau e a identidade portuguesa. *Etnográfica. Revista do Centro em Rede de Investigação em Antropologia*, 17(3), 619-649. [In Portuguese]
- Sobral, V. (2012). As minhas receitas de bacalhau: 500 receitas. *Casa das Letras*. [In Portuguese]
- Soma, K., Ramos, J., Bergh, Ø., Schulze, T., van Oostenbrugge, H., van Duijn, A. P., ... & Stenberg, C. (2014). The “mapping out” approach: effectiveness of marine spatial management options in European coastal waters. *ICES Journal of Marine Science: Journal du Conseil*, 71(9), 2630-2642.
- Wicklund, T., & Lekang, O. I. (2016). Dried Norse Fish. In *Traditional Foods* (pp. 259-264). Springer US.

GENDER RELATIONS WITHIN THE SOCIAL STRATIFICATION IN FEMALE EMPLOYMENT IN RURAL INDIA

Sanghamitra Kanjilal-Bhaduri

Department of Economics, University of Calcutta, India

(bhaduri.sanghamitra@gmail.com)

ABSTRACT

The paper has presented an empirical picture of labour market inequalities for women and the inequalities outside, within the framework of overlapping social stratification in rural India. Analysis is based on secondary data, where the emphasis is not only on measurement of quantitative variables, but also on the interactions between various qualitative, socio-economic and socio-cultural variables. Main finding of the present study is that the participation of women in labour force varies across economic classes, social groups, religions, regions and the rural urban divide. Factors determining labour supply decisions of women are different from those of men. Interconnectedness of female employment with other social parameters which are outside the realm of the standard labour market analysis gets highlighted in the study.

Keywords: Gender Relation, Female Labour Force/Work Force Participation, Social Hierarchy.

JEL Classification: J16, J21

1. INTRODUCTION

The notion of 'work' and 'employment' for women is complex. While economic factors predominantly determine a man's participation in employment, the reasons why women work, or do not work or whether they work part-time or full-time can be diverse and are often rooted in a complex interplay of economic, social, cultural and personal factors.

In India, as in other parts of the world, fewer women participate in employment as compared to men both in urban and rural areas. But more women work as compared to men. This is the backdrop against which this paper analyses issues, such as, what gender relations emerge in employment under overlapping class, caste and community identity (religious groups) and finally how such gendering of work has many significant and related consequences.

Rural women have less access than men to productive resources, services and opportunities, such as land, livestock, financial services and education. Numerous studies underscore the social costs of rural women's lack of education and assets, linking it directly to high economic costs: wasted human capital and low labour productivity that stifle rural development and progress. To understand women's work status in India's rural areas and to examine the nature of women's employment, data from large scale National Employment-Unemployment Surveys is analysed in the present study.

Theoretically, female labour supply is often modelled using the framework of the time allocation model (Becker, 1965), which states that women make their labour supply decisions not only considering leisure and labour trade-offs, but also home-based production of goods and services (including caring for children)¹. Seminal work done by Goldin (1995) explored the U-shaped relationship between female labour supply and the level of economic development across countries. Initially, when the income level is low and the agricultural sector dominates the economy, women's participation in the labour force is high, due to the necessity of working to provide for consumption of goods and services. As incomes rise, women's labour force participation falls, only to rise again when female education levels improve and consequently the value of women's time in the labour market increases. This process suggests that, at low levels of development, the income effect of providing additional labour dominates a small substitution effect, while as incomes increase; the substitution effect starts dominating².

The key contribution of this paper is that it explores the dimensions of women's participation; both within the labour market and outside, across socio-religious and socio-economic groups. The interface of class, caste and religion (community identity) with labour market outcomes of women has been explored and it is seen how specific attention to social and cultural variables has relevance for discussions on women's employment (Neetha, 2013). The importance of explicitly drawing distinctions between class, religious and caste categories in the analysis of female employment pattern is highlighted in the paper. The novelty of this study is that it uses a detailed and very large Indian household survey dataset conducted by the National Sample Survey Office (NSSO). Stylised facts from the data are presented in a later section.

1.1 A History of Gender Relationships

There are two levels at which women and men interact with each other: there are large-scale, more impersonal gender relations and intimate gendered relationships (Holmes, 2008). At the large-scale level women as a social group are compared to men as a social group. Concerns at that level are with general patterns in how the two groups are positioned in relation

¹ Hence the need to consider participation of women workers in activities which are outside the production boundary and officially considered as being 'out of labour force'.

² The income effect is the change of hours of work of an individual with respect to a change in family income. The own-substitution effect is the change in hours of work of an individual with respect to change in their wage, holding income constant.

to each other within society. The usual framework employed to understand gender relations is the common sociological framework of social stratification and the associated inequalities.

'Social Stratification' refers to the different layers within a society, the hierarchies organised around different groups. The major forms of stratification occur around class, caste, ethnicity or religion and gender. Women's social position has historically been and continues to be one of disadvantage. A lot of research has been done on gender inequalities which mention that women typically have worse jobs, get less pay and are likely to be poorer. Continuity of women's relative disadvantage has been the focus of much research particularly through the 1980s and 1990s. There has also been a growing emphasis on complexity and diversity. Much of empirical research demonstrates that major continuities of inequality still confront women in the labour market (Arber & Ginn 1995; Hakim 1996; Rubery *et al.* 1999). Gender relations which operate at a large-scale level (studied in the paper) impact gendered relations which are at a more personalised and intimate level.

1.2 Conceptualising Continuities and Changes of Gender Relations in Employment

Research regarding gender relations in work and family has been evolving over recent decades (Irwin, 2005). Initially continuities in inequalities were focused but this has given way to recent concern with complexity and diversity. Researchers are now trying to understand how change in gendered employment patterns connects to change in social organisation more widely. There has been a shift in the system of gender relations over the twentieth century, resulting in a change of the pattern of inequality between men and women. Hence a need to develop and apply an intersectional approach to gender analysis has been emphasised by the International Labour Organisation (ILO). Recent research thus focuses more on issues of diversity, complexity and contextual specificities in the reshaping of gender relations within the hierarchies of class, caste, social and religious groups.

1.3 The Challenge

Women constitute 40 per cent of the global workforce. Their active engagement in productive employment contributes to faster economic growth and its long-term sustainability. Despite the breakthrough made in advancing towards gender equality in the world of work during the last few decades, women continue to be over-represented in more precarious, informal, less remunerated and unpaid work than men. This is largely due to the slow progress in social change in many societies (like in India), burden of unpaid care work that mostly women continue to undertake, and gender blindness of macroeconomic and development policies.

Understanding women's work is a complex issue in India and the world over, as the determinants relating to women's work and employment are qualitatively different from those of male workers (Beneria, 1982). Women's labour force participation is determined by class, caste, religion, marital status and other socio-cultural norms which operate at multiple levels in society. These norms restrict women's mobility and access to formal employment. They push women to take up non-wage employment or remain out of labour force (Thomas, 2012; Das, 2006; Sethuraman, 1998; Ghosh, 2009; Desai and Jain, 1994).

Women are primarily responsible for household duties and reproductive activities. Due to the unpaid nature of women's work and the definition of economic activity, women's labour force participation remains statistically under-reported (Chaudhary and Verick, 2014). The decline in women's economic activity is a cause for concern as women are valuable resources and as it implies a decline in their well-being. Women's employment is a critical factor in their progression towards economic independence and is also considered as an indicator of their overall status in society (Mammen and Paxson 2008). The gender gap in employment has macroeconomic implications as well.

2. RESEARCH OBJECTIVE

A major gap in the existing literature is the limited attention paid to the representation of class (as proxied by Landownership) and of Caste. Class considerations have been represented in the form of technological change in agricultural methods (Da Costa & Venkateshwarlu, 1999) or in the form of income classes of the household as represented by monthly per capita expenditure. But the idea that land ownership is a form of wealth which decides the economic class of the household has yet to be exploited in studies. Land holding size from National Sample Survey (NSS) data has been used as one of the many determinants of female labour force participation in studies before but the stratification of social hierarchy in terms of land ownership has been attempted³ few and far between. Ownership of land being a historically important indicator of wealth of the households and hence a socio-economic determinant, especially in rural India, warrants a detailed study of its effects on the labour supply decisions of women workers, i.e on female employment. To try to fill in the existent gaps in the literature this paper has the following objectives:

- a) To present a disaggregated analysis of female employment across class, caste and religious identities in rural India
- b) Investigate the causal relationship between socio-economic and socio-religious determinants of female work force participation.
- c) Establish the effectiveness of intersectionality in determining female work force participation.

The social stratification of class has been done by considering 'economic class' which in rural areas is well delineated by the land ownership of the respective households. Greater amounts of land imply higher social positioning and hence a privileged position. Amount of land owned is a strong class stratifier in rural India. Hence the idea of taking up land as one of the causal variable. As female labour is not decided by any single factor but rather by an interplay of various

³ A study by Gita Sen and Chiranjib Sen (1985) has studied the female employment pattern with respect to unpaid work within the land holding sizes of the households.

factors so the concept of intersectionality has been utilised. Introduction of the interaction terms brings in the concept of 'Intersectionality' (Grenshaw, 1989). It enables the present study to consider three dimensional axes at one point of time.

The axes of observation are;

- 1) landownership class
- 2) socio-religious group (interaction terms of social groups and religions), and
- 3) interaction terms (of land ownership and socio-religious groups)

The extent of female participation in the labour market is determined in India by a nexus of class/caste hierarchy and norms of patriarchal ideology. In a hierarchical society based on patrilineal-patrilocal families, the location of the family in the caste/class hierarchy would determine the level and forms of female work participation (Bardhan, 1985). This observation encouraged a look into the behaviour of female work-participation of the different socio-religious groups in India. These groups have been constructed from NSS data, which gives the position of the household in the socio-religious ladder. Interaction of these socio-religious groups and land ownership has given the position of the household in the class or socio-economic ladder. Econometric estimation and analysis of the impact of these interaction terms on the work participation of female workers has enabled the study to make certain conclusions about the behaviour of female labour supply. It has provided an insight into the employment aspects of women workers belonging to various land ownership classes of the different socio-religious groups. The need for such a study was felt as there are differences in inheritance and asset ownership legislations among the various social and religious groups in India.

3. DATA AND METHODS

The data used for analysis in this paper were collected as part of the all India quinquennial survey on Employment-Unemployment by National Sample Survey Office (NSSO). The NSSO carries out all India household survey programme about Employment and Unemployment every 5 years called the quinquennial rounds of Employment and Unemployment Survey (EUS). A nationwide enquiry is conducted to generate estimates of various characteristics pertaining to employment and unemployment and Labour Force characteristics at the National and State levels. Information on various facets of employment and unemployment are collected through a schedule of enquiry (Schedule 10) adopting established concepts, definitions and procedures. Based on the data collected during the entire period of survey, estimates pertaining to employment-unemployment in India along with various characteristics associated with them are presented in the reports.

NSSO employs three different methods of determining the activity status of the persons. The first method identifies the Usual Principal Activity Status (called 'Usual Principal Status', UPS) of a person by using a reference period of 365 days preceding the date of survey. A person is considered as being in the Work Force⁴ if he/she is gainfully employed for a major part of the preceding 365 days. The second method considers a reference period of one week (current weekly status) and the third method considers each day of the week (current daily status)⁵. Our study is based on Usual Principal Status (UPS). In the usual status approach, the broad activity status of a person viz. employed, unemployed and 'not in labour force' is decided by major time criterion.

Using employment data from the quinquennial rounds of the National Sample Survey (NSS), several papers/reports have examined the employment situation in India (Dev, 2002; Ghose, 2004; Masood and Ahmad, 2009; Srivastava and Srivastava, 2010; Majumder, 2011; Mehrotra *et al.*, 2012; Shaw, 2013). A major conclusion from these studies is the fact that there has been a marked slowdown in employment growth in the year 2011-12 and that this slowdown is more marked for female employment, both in urban as well as rural areas. These studies provide an insight into a neglected area – the female labour supply process in India (Dasgupta and Goldar, 2005).

While mainly economic factors determine a man's participation in employment, the forces that influence a woman's participation are many and diverse and include demographic, reproductive, social, religious and cultural factors. Hence, the decision to participate in the labour force is influenced by women's individual preferences and/or those of her household, family circumstances. The probability of participating in the labour force is thus modelled as a function of several explanatory variables split into categories: individual characteristics, household characteristics, social characteristics and regional characteristics. The existing literature (e.g. Klasen and Pieters, 2012; World Bank, 2012) suggest that important determinants of participation in India can be education (human capital endowment), family income, socio-economic and cultural factors, access to resources (skills and capital), labour market regulations, and infrastructure. The paper has thus tried to estimate the proximate determinants of the probability of labour force participation for women in rural areas, in section 3.1. The impact of the significant variables is explored. Stratification is done based on class and hence sub group regressions have been performed for the land ownership classes separately, in section 4. An effort has been made to highlight the significant determinants of the different economic classes. The varying importance of the determinants throws light on the interconnected nature of female employment. It is clearly established that only economic variables are not the deciding factors for female labour force participation. A host of other factors work in unison, as is seen in figure 3.1 below.

⁴ (i) WORK FORCE PARTICIPATION RATE (WFPR) or WORKER POPULATION RATIO (WPR) is defined as the number of persons/person-days employed per thousand persons/person-days.

(ii) LABOUR FORCE PARTICIPATION RATE (LFPR) is defined as the number of person/person days in the labour force per 1000 persons/person days. It is the economically active population which supplies labour for production and hence includes both 'employed' and 'unemployed' persons.

⁵ The NSSO has, over time, developed and standardised measures of employment and unemployment. Four different estimates of the Labour Force and Work Force are obtained based on the 3 approaches adopted in the survey for classification of the population by activity status viz: Usual Status, Current Weekly Status And Current Daily Status. These Are:

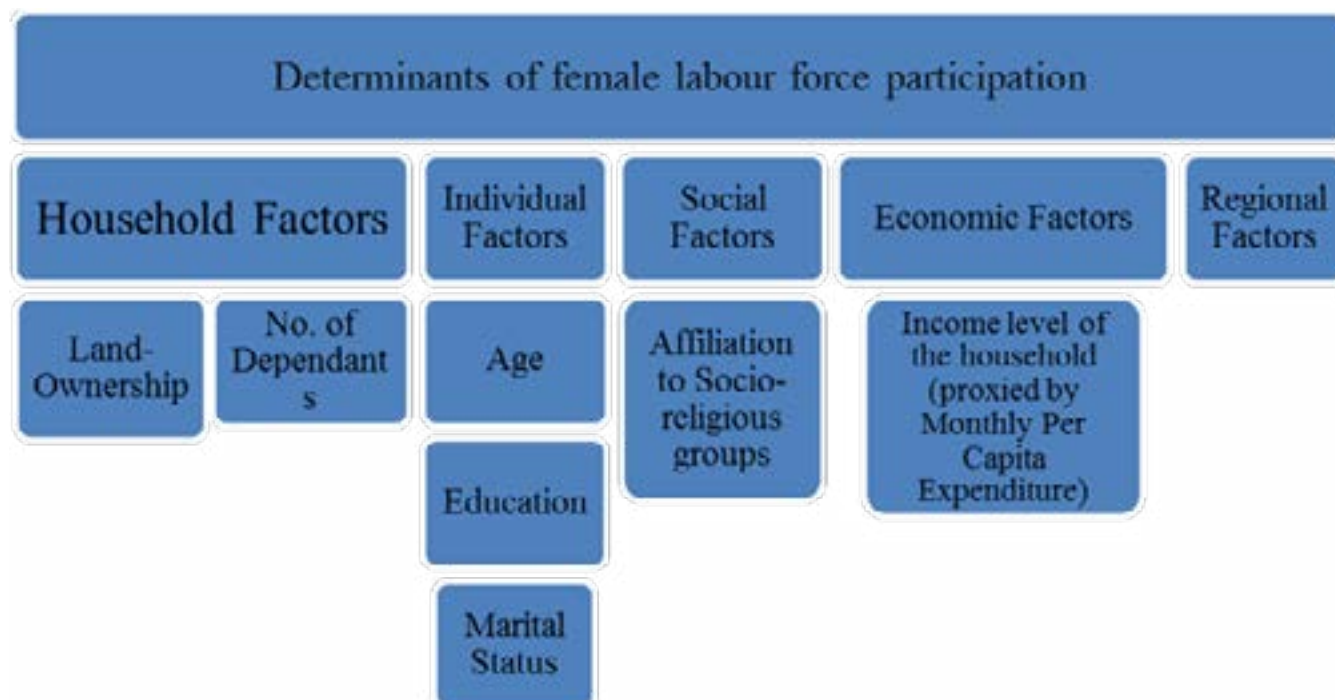
(i) Number of persons in the labour/work force according to the 'Usual Status' (ps) i.e by considering usual principal activity only.

(ii) Number of persons in the labour/work force according to the 'Usual Status' (ps+ss) i.e. by considering usual principal and subsidiary activity together.

(iii) Number of persons in the labour/work force according to the 'Current Weekly Status' approach &

(iv) Number of persons in the labour/work force according to the 'Current Daily Status' approach

Figure 3.1 : Flowchart showing the determinants of female labour force participation for the year 2011-12 (68th Round) at a glance



3.1 Data arrangement in the paper and methods used

The main data set used in the study is Unit Level Data from the NSSO 68th Round for the year 2011-12, extracted from Schedule 10. Logistic regressions have been performed as the dependent variable takes up a binary value. Independent variables are either categorical or continuous. All the statistical work has been done using the software Stata, version 12. Central Sample has been used throughout the study. Data arrangement being very specific to the sections which deal with the various aspects of the analysis of female employment issues have been explained in detail in the respective sections.

Exact definitions of the variables used for the analysis in this section and the descriptive statistics are presented in Table 3.1 and the logistic regression results are given in Table 3.2. A snapshot of the determinants used in the regression analysis has been provided by the flow chart (figure 3.1).

Table 1: Descriptive Statistics of the Independent Variables

Independent Variables	Description	Proportional Representation
Age	Categorical Variable	
15-29	yes=1, no=0 Reference	29.08%
30-44	yes=1, no=0	23.46%
45-59	yes=1, no=0	15.43%
Marital Status	Categorical Variable	
Never Married	yes=1, no=0 Reference	41.15%
Currently Married	yes=1, no=0	53.35%
Widowed	yes=1, no=0	5.15%
Divorced Separated	yes=1, no=0	0.34%
Education	Categorical Variable	
Illiterate	yes=1, no=0, Reference	23.70%
Below Primary	yes=1, no=0	18.72%
Primary and Middle	yes=1, no=0	32.66%
Secondary and Higher secondary	yes=1, no=0	18.66%
Graduate & Above(diploma)	yes=1, no=0	5.62%
Households with Children(age<=5yrs)	in numbers, Continuous Variable	36.31%
Households with Elderly(age>=65yrs)	in numbers, Continuous Variable	23.20%
Land-Ownership	Categorical Variable	

Landless	yes=1, no=0, Reference	0.22%
Marginal Owners	yes=1, no=0	50.20%
Small Owners	yes=1, no=0	31.68%
Large Owners	yes=1, no=0	17.89%
MPCE Quartile	Categorical Variable	
Lowest Quartile	yes=1, no=0, Reference	29.82%
Second quartile	yes=1, no=0	28.58%
Third quartile	yes=1, no=0	23.72%
Fourth (highest) quartile	yes=1, no=0	15.88%
Social Group	Categorical Variable	
ST	yes=1, no=0, Reference	16.74%
SC	yes=1, no=0	16.58%
OBC	yes=1, no=0	39.64%
Others	yes=1, no=0	27.03%
Religion	Categorical Variable	
Hindu	yes=1, no=0, Reference	74.68%
Muslim	yes=1, no=0	12.87%
Other-Religion	yes=1, no=0	12.45%
Regions	Categorical Variable	
East	yes=1, no=0, Reference	10.66%
West	yes=1, no=0	10.09%
Central	yes=1, no=0	29.16%
North	yes=1, no=0	16.56%
South	yes=1, no=0	18.02%
North-East	yes=1, no=0	15.50%

Author's calculation.

Source: NSSO 68th Round Unit Level Data, 2011-12.

3.2 Dependent Variable

The dependent variable in logistic regression analysis, participation in labour force, is a dummy variable with value=1 if 'in the labour force' and value=0 if 'not in the labour force'

It is important to note that the data on women's labour force participation in developing countries have been highly criticized as resulting in serious omission of women's work due to undercounting (Jain and Banerjee, 1985; Hirway, 2002). Much of this criticism has come from Indian feminists who have worked extensively with the National Sample Survey Office to develop more nuanced measures of women's work including questions on non-remunerative activities that are often encompassed under domestic chores such as farm work and looking after livestock (Das and Desai, 2003).

3.3 Independent Variables

The independent variables of importance and interest are:

- 1) Land ownership [coded as three dummies indicating marginal land owners (0.001-0.40 hectares), small land owners (0.40-2.00 hectares) and large landowners (>2.00 hectares) with landless households being the reference category],
- 2) Caste (coded as three dummies for Schedule Castes, OBCs, Others with Schedule Tribe being the reference category)
- 3) Religion (coded as two dummies for Muslims and Other-Religions with Hindus as the reference categories).
- 4) Several important control variables indicating demographic characteristics of the individual (age, educational level, marital status) and the household (dependence level, income level⁶), regional dummies have been incorporated in the model.

⁶ As NSSO does not provide data on income of the households hence, following normal standard the data on monthly per capita consumption level of the household has been considered.

Table 2: Logit Estimates (Odds-Ratio) of the determinants of labour-force participation of women workers, 15-59 years, Usual Principal Status

Independent Variables	Female Workers (15-59 years)
	1=In Labour Force 0= Out of Labour Force
Age (Ref:15-29 years)	
30-44	4.22***(0.05)
45-59	3.81***(0.05)
Marital Status (Ref: Never Married)	
Currently Married	8.53***(0.11)
Widowed	10.11***(0.24)
Divorced Separated	22.22***(1.51)
Education (Ref: Illiterate)	
Below Primary	0.48***(0.00)
Primary and Middle	1.03***(0.01)
Secondary and Higher secondary	1.10***(0.01)
Graduate & Above(diploma)	2.26***(0.04)
Households with Children(age<=5yrs)	0.99(0.00)
Households with Elderly(age>=65yrs)	0.72***(0.00)
Land-Ownership (Ref: Landless)	
Marginal Owners	0.82***(0.04)
Small Owners	1.00(0.05)
Large Owners	1.08(0.05)
MPCE Quartile (Ref: Lowest Quartile)	
Second quartile	0.94***(0.01)
Third quartile	0.82***(0.01)
Fourth (highest) quartile	0.62***(0.00)
Social Group (Ref: ST)	
SC	0.76***(0.01)
OBC	0.66***(0.01)
Others	0.57***(0.00)
Religion (Ref: Hindu)	
Muslims	0.90***(0.01)
Other-Religions	1.02**(0.01)
Regions (Ref: East)	
West	1.44***(0.02)
Central	0.83***(0.01)
North	1.08***(0.01)
South	1.59***(0.02)
NorthEast	0.98*(0.01)

Ref. implies reference category; *** implies significance at 1%, ** implies significance at 5%, * implies significance at 10% level. The figures given in the parenthesis are the robust standard errors. Source: NSSO 68th Round, 2011-12.

3.3.1 Observations

Regression results from table 3.2 can be interpreted in the following manner:

- 1) Older women in the age group of 30 to 59 years have greater probability of participating in the labour force (with women in the age group 30 to 44 being more probable than the ones in the age group 45 to 59) than women in the

age group of 15 to 29 years. This is because after 30s women generally have reduced reproductive responsibilities. In many households, the elder kids take care of the younger ones when the mother goes out to work.

- 2) Care work is always the responsibility of the female hence it is seen that if the household has children less than five years' age or elders above the age of 65 years then the probability of labour force participation lowers significantly.
- 3) For marital status, with 'never married' status being the reference category it is noticed that there is a significantly higher probability of female workers participating in the labour force. Odds ratios are the highest for 'divorced separated' category, highlighting the distress push that such women face which forces them in the labour market⁷.
- 4) Education level of the individual has a significant positive impact on labour force participation. An increase in the education level of the woman causes a higher probability of labour force participation.
- 5) Economic class of the household can either be proxied by the land-ownership or by the monthly per capita expenditure⁸.
 - As the land-ownership of the household increases the probability of labour force participation increases but results are not significant. If the amount of land owned is an indication of the wealthiness of the household then our hypothesis is that with an increasing ownership of land, probability of participation should be less⁹. But results show that there is an increasing probability of participation. This proves that there is some other element which is influencing the labour supply decision of female workers. It will be brought to light in a later section where the participatory process has been explored under the overlap of socio-economic and socio-religious factors influencing female labour supply decision.
 - With an increase in the income of the household the probability of labour force participation of the female worker lowers¹⁰.
- 6) Social groups and religion have a significant effect and results show that there is a lower probability of participation among SCs, OBCs, Others and Muslims.
- 7) Regions present a varied picture with West, North and South showing a higher probability of participation compared to Central and North-East.

Our study seeks to bring forth the gender relations in employment under the social hierarchies. As such a process works under the social stratification of class, caste, gender and religion so in the next section sub group regressions for the different land-ownership classes have been performed to see the determinants which are affecting participation of women in labour force.

4. ECONOMIC CLASS AS A DETERMINANT OF RURAL FEMALE EMPLOYMENT

In this section an effort has been made to elucidate the factors which play an important role in female labour supply decisions in the 68th round, 2011-12. Such an exercise has been performed within the stratification of the economic class. Separate sub group regressions have been run for each land-ownership class to verify if the deciding factors are different for each of the class. For each land-owning class, it seen that a host of varying factors are significant in determining the probability of participation for the women workers. What has also been endeavoured is to check if there is a uni-dimensionality in these factors. The results have established the significant role of multi-dimensionality through the interplay of social, cultural and demographic factors.

Table 4.1: Results (Odds-Ratio) of logistic regression for women workers (15-59 years), 2011-12 according to Usual Principal Status

Independent Variables	1=InLabForce 0=Not in LabForce	1=InLabForce 0=Not in LabForce	1=InLabForce 0=Not in LabForce	1=InLabForce 0=Not in LabForce
	LANDLESS	MARGINAL LANDOWNERS	SMALL LANDOWNERS	LARGE LANDOWNERS
Age (Ref: 15-29)				
30-44	3.23(0.4)***	4.76(0.07)***	3.46(0.08)***	3.94(0.10)***
45-59	2.80(0.48)***	4.23(0.07)***	3.45(0.09)***	3.29(0.09)***
Marital Status (Ref: Never Married)				
Currently Married	6.15(1.02)***	7.06(0.12)***	12.15(0.35)***	10.07(0.30)***
Widowed	8.47(2.58)***	9.95(0.31)***	10.22(0.51)***	10.74(0.60)***
Divorced/ Separated	5.43(0.05)**	18.59(1.64)***	18.07(2.99)***	42.34(6.22)***

⁷ Similar regressions have been carried out for urban area and the odds-ratio for Divorced and Separated women is positive but not so high. It is 6.40(0.52)***. The results have not been published to economise on space.

⁸ The study considers land ownership only, as it is in the rural backdrop and because of the fact that the stratification according to class has been defined in terms of land ownership. Sub group Regressions have been run for mpee classes in rural and urban areas though, but the results have not been published.

⁹ It maybe due to the 'stigma effect' as mentioned by Goldin (1995) in the U-Hypothesis.

¹⁰ 'Income Effect' as mentioned by Neff *et al.* (2012) and Rangarajan *et al.* (2014)

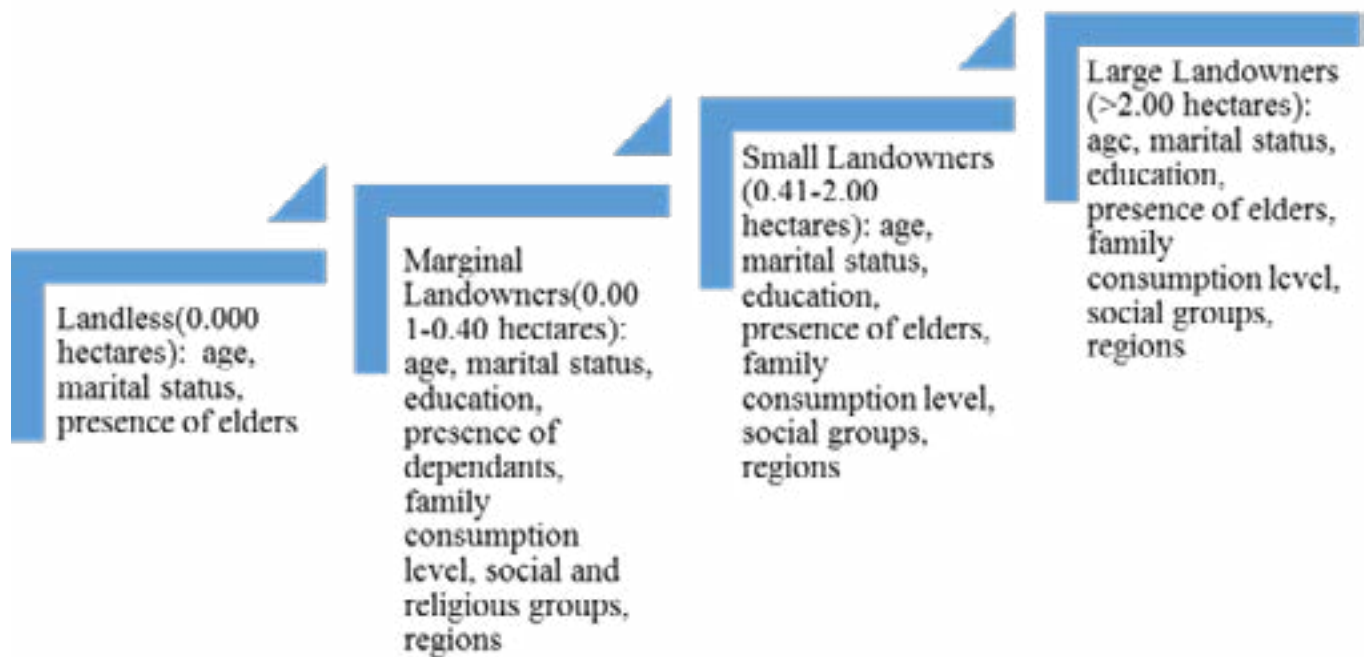
Education (Ref: Illiterate)				
Below Primary	0.30(0.05)***	0.499(0.00)***	0.51(0.01)***	0.44(0.01)***
Primary and Middle	0.92(0.14)	1.08(0.01)***	1.08(0.02)***	0.89(0.02)***
Secondary and Highersecondary	0.83(0.14)	1.156(0.02)***	1.27(0.03)***	0.90(0.02)***
Graduate & above (diploma)	2.68(0.5)***	2.45(0.06)***	2.15(0.09)***	2.06(0.08)***
Households with children (<=5 years)	0.98(0.06)	0.98(0.00)***	1.00(0.01)	0.99(0.01)
Households with elderly (>=65 years)	0.61(0.07)***	0.69(0.00)***	0.79(0.01)***	0.71(0.01)***
MPCCE Quartile (Ref: Lowest quartile)				
Second Quartile	1.17(0.21)	0.93(0.01)***	0.99(0.02)	0.92(0.02)***
Third Quartile	0.99(0.18)	0.80 (0.01)***	0.83(0.02)***	0.84(0.02)***
Fourth (highest) Quartile	0.71(0.14)***	0.58(0.01)***	0.64(0.01)***	0.71(0.02)***
Social Group (Ref:ST)				
SC	1.05(0.24)	0.79(0.01)***	0.65(0.02)***	0.76(0.03)***
OBC	0.80 (0.17)	0.67(0.01)***	0.59(0.01)***	0.70(0.02)***
Others	0.68(0.13)*	0.57(0.01)***	0.51(0.01)***	0.60(0.02)***
Religion (Ref: Hindu)				
Muslims	0.81(0.11)	0.94(0.01)***	0.72(0.02)***	1.00(0.03)
OtherReligions	1.46(0.27)**	1.09(0.02)***	1.02(0.03)	0.88(0.03)***
Regions (Ref: East)				
West	0.97(0.20)	1.30(0.03)***	1.65(0.06)***	1.58(0.06)***
Central	0.48(0.11)***	0.81(0.01)***	0.95(0.03)	0.83(0.03)***
North	0.77(0.17)	0.97(0.02)	1.51(0.05)***	1.03(0.04)
South	1.19(0.28)	1.44(0.03)***	2.17(0.07)***	1.57(0.06)***
NorthEast	0.72(0.15)	0.93(0.02)***	1.18(0.04)***	1.01(0.04)

Ref. implies reference category; *** implies significance at 1%, ** implies significance at 5%, * implies significance at 10% level. The figures given in the parenthesis are the robust standard errors. Source: NSSO 68th Round, 2011-12.

4.1 Snapshot of the important determinants

Below, a summary of the determinants which are significant in female labour force participation for women belonging to the four categorised land-ownership classes has been provided

Figure 4.1: Significant determinants of female labour force participation for the different land-ownership classes



From Figure 4.1 it is evident that the interconnectedness of social and economic factors play a very important role in determining female labour supply. Gender relations being created in the employment process are not in favour of women. While employment issues in India centrally focus around the category of gender, by mentioning quantitative levels of female employment, the issues of patriarchy, domestic subordination, biological determinism, reproductive norms etc. are not taken into consideration¹¹. These are often informed by the cross-linkages with identities of class and caste. These categories often overlap with gender. The importance of intersectionality has been established which leads us to our next econometric specification.

5. FEMALE WORK FORCE PARTICIPATION UNDER THE OVERLAP OF CLASS, CASTE AND RELIGION

A lot has been studied about the different determinants of female labour supply process in the Indian Economy along a single axis. Studies on female employment need to delve more into the overlap (McBride *et al.*, 2014) of the axes of class, caste and religious identities and the cross linkage of the variables in influencing the decision of female labour supply. This section has tried to focus on this aspect. Economic class has been proxied by land-ownership, caste and religious identities have been proxied by creating socio-religious groups from NSS data¹². Wealth being a stock concept, its availability with the households should affect the decision of the family to send their women folk to work. This would be applicable not only for the current generation but for future as well as the past generations also. So, there would be an intergenerational aspect to this particular determinant of female labour supply. The present section, however, has focussed only at the effect on the present generation of women workers in the 68th Round for the year 2011-12.

5.1 Model and Variables

5.1.1 Total no. of observations in the 68th Round= 4,56,999 individuals

This includes both males and females in rural as well as urban areas. For this specific study only females have been considered and then the data set reduces to 2,23,195 persons. An attempt is made to analyse the employment behaviour of female workers, so the data set consists of working age females in the age group 15-59 years. Now the data set consists of 1,42,776 persons. After adjusting for work-force participation of female workers in rural areas the final data-set is 90,230 persons.

5.1.2 Dependent Variable : $\{P(1,0)\}$ is a categorical one, with binary outcome, where participation is either in workforce or not.

For considering Work-Participation of Female Workers (in the age group of 15-59 years) in the Usual Principal Activity Status the data has been arranged in the following manner:

- 1) Usual Principal Activity Status code 81¹³ (as per NSSO schedule) has not been taken into consideration as that will give us the Labour Force estimate but we are considering Work-Force participation only.

¹¹ <http://vle.du.ac.in/mod/book/print.php?id=13454&chapterid=29812>

¹² Appendix A

¹³ Did not work but was seeking and/or available for work-Upa81

- 2) Usual Principal Activity Status code 91¹⁴(attending educational institutions) has been considered 'out of labour force'(as per NSSO directive),
- 3) Usual Principal Activity Status codes [(92¹⁵,93¹⁶), (94,95,97¹⁷)] have not been taken into consideration as they do not enable us to define work-participation as gainful employment. {These codes describe activities which are not remunerable or done for gainful purposes}
- 4) An observation needs to be made here: Although Upa21¹⁸ defines unpaid family worker yet we have considered it in Work Participation because as landownership increases there is a greater representation of working age women in the family who work as unpaid family labour. Most of the unpaid agricultural (on owned farms) or non-agricultural (in own household enterprise) work is done by female workers of the household. Taking Upa21 into consideration or leaving it out of the definition of Work Participation changes the econometric results for the different socio-religious groups.

Work-Participation= Usual Principal Activity Status [(11¹⁹+12²⁰)+21]+31²¹+[(41²²+51²³)]

Final size of the dataset= 90230(observations). Over this data set describing and testing of the hypotheses is done using the Binary Logit framework.

5.1.3 Independent Variables:

1) Land Ownership:

Is a categorical variable where the classes considered are:

- Land1 = Landless Households (landownership 0.000 hectares), (yes=1; no=0)
- Land2 = Marginal Landowners (ownership 0.001-0.40 hectares), (yes=1; no=0)
- Land3 = Small Landowners (ownership 0.41-2.00 hectares), (yes=1; no=0)
- Land4 = Large Landowners (ownership >2.00 hectares), (yes=1; no=0)

This concept of creating land-ownership categories has also been used by the following researchers in their papers:

- a) P.K. Bardhan (1979); where he has considered three main classes viz, Landless labourers, Small farmers (holdings<2.5 acres) and Large farmers (holding>2.5 acres)
- b) Supriya Garikipati (2006); where she has classified men and women labourers using 'labour class ranks' developed by Bardhan (1979) and DaCorta & Venkateshwarlu (1999). It is based on Roemer's (1982) system and gives three labour classes: Pure Labourers, Labour Plus and Small Farmers.

2) Socio-Religious Groups²⁴ :

NSSO disaggregates data on the basis of social groups and religions. The following socio-religious groups have been created to get a detailed picture of the behaviour of workforce participation.

- Hindu-Others(H-O), (yes=1; no=0)
- Hindu-SC(H-SC), (yes=1; no=0)
- Hindu-ST(H-ST), (yes=1; no=0)
- Muslims(M), (yes=1; no=0)

Other-Religions(Othr-Relgns), (yes=1; no=0) [Includes Christianity-3,Sikhism-4, Jainism-5, Buddhism-6, Zoroastrianism-7, Others-9]²⁵

(3) Interaction Terms:

To get a further disaggregated picture of the work-force participation behaviour of the socio-religious groups, interaction terms of landownership and the socio religious groups have been created in the following manner:

- Lasrg11= Hindu-Others who are landless, (yes=1; no=0)
- Lasrg12= Hindu-SCs who are landless, (yes=1; no=0)
- Lasrg13= Hindu-STs who are landless, (yes=1; no=0)
- Lasrg14= Muslims who are landless, (yes=1; no=0)
- Lasrg15= Other-Religions who are landless, (yes=1; no=0)

¹⁴ Attended educational institution-Upa91

¹⁵ Attended domestic duties only-Upa92

¹⁶ Attended domestic duties and was also engaged in free collection of goods(vegetables, roots, firewood, cattle-feed, etc.), sewing, tailoring, weaving, etc. for household use-Upa-93

¹⁷ Rentiers, Pensioners, Remittance recipients etc.-Upa94, Not able to work due to disability-Upa95, Others(including begging, prostitution, etc.)-Upa97

¹⁸ Worked as helper in h.h enterprise (unpaid family worker)-Upa-21

¹⁹ Worked in h.h. enterprise (self-employed): own account worker -Upa11

²⁰ Employer-Upa12

²¹ Worked as regular salaried/ wage employee -Upa31

²² Worked as casual wage labour: in public works -Upa41

²³ Worked as a casual wage labour In other types of work -Upa51.

²⁴ Refer Appendix A.

²⁵ The steps involved in creating the socio-religious groups have been detailed out in Appendix A.

Lasrg21= Hindu-Others who are marginal landowners, (yes=1; no=0)
 Lasrg22= Hindu-SCs who are marginal landowners, (yes=1; no=0)
 Lasrg23= Hindu-STs who are marginal landowners, (yes=1; no=0)
 Lasrg24= Muslims who are marginal landowners, (yes=1; no=0)
 Lasrg25= Other-Religions who are marginal landowners, (yes=1; no=0)
 Lasrg31= Hindu-Others who are small landowners, (yes=1; no=0)
 Lasrg32= Hindu-SCs who are small landowners, (yes=1; no=0)
 Lasrg33= Hindu-STs who are small landowners, (yes=1; no=0)
 Lasrg34= Muslims who are small landowners, (yes=1; no=0)
 Lasrg35= Other-religions who are small landowners, (yes=1; no=0)
 Lasrg41= Hindu-Others who are large landowners, (yes=1; no=0)
 Lasrg42= Hindu-SCs who are large landowners, (yes=1; no=0)
 Lasrg43= Hindu-STs who are large landowners, (yes=1; no=0)
 Lasrg44= Muslims who are large landowners, (yes=1; no=0)
 Lasrg45= Other-Religions who are large landowners²⁶, (yes=1; no=0)

The Model can be expressed as follows:

Logit x = +

Where x is the probability that an individual participates in workforce;

Logit x= ln

(i=1,2,...,k) are the predictor variables, is the intercept and s are the regression co-efficients.

Table 1: Odds ratios explaining female participation (68th Round)

Model1		
Land-Classes	Wfpr (with UPA21)	Wfpr (without UPA21)
Landless ¹	Ref	Ref
Marginal LandOwner	0.99(0.08)	0.99(0.08)
Small LandOwner	1.04(0.08)	0.88(0.07)
Large LandOwner	1.07(0.01)	0.94(0.07)
Model2		
Socio-religious grps		
Hindu-STs ²	Ref	Ref
Hindu-Others	0.82(0.02)***	0.85(0.02)***
Hindu-SCs	0.82(0.03)***	0.93(0.03)**
Muslims	0.64(0.03)***	0.70(0.02)***
Other-Religions	0.72(0.03)***	0.75(0.02)***
Model3		
Interaction Terms		
<i>Hindu-Others</i>		
Landless	Ref	Ref
Marginal	1.02(0.08)	1.01(0.08)
Small	1.08(0.08)	0.93(0.08)
Large	1.12(0.08)	0.96(0.08)
<i>Hindu-SCs</i>		
Landless	Ref	Ref
Marginal	1.07(0.09)	1.11(0.09)
Small	1.11(0.09)	1.02(0.09)
Large	1.04(0.09)	0.95(0.09)
<i>Hindu-STs</i>		

²⁶ See Appendix B for the creation of the interaction terms.

Landless	Ref	Ref
Marginal	1.30(0.12)***	1.32(0.12)***
Small	1.2(0.09)	1.01(0.09)
Large	1.30(0.10)	1.00(0.10)
<i>Muslims</i>		
Landless	Ref	Ref
Marginal	0.85(0.07)**	0.82(0.07)**
Small	0.77(0.06)***	0.69(0.06)***
Large	0.95(0.08)	0.89(0.08)
<i>Other-Religions</i>		
Landless	Ref	Ref
Marginal	0.93(0.07)	0.90(0.07)
Small	0.96(0.07)***	0.88(0.07)***
Large	0.93(0.08)	0.87(0.08)*

Note: 1&2 are reference categories because they have lowest representation in sample. Ref. implies reference category; *** implies significance at 1%, ** implies significance at 5%, * implies significance at 10% level. The figures given in the parenthesis are the robust standard errors. Source: NSSO 68th Round, 2011-12.

5.2 Observations

The results of the micro decision making process (table 5.1) as evident from the binary choice model are explored. The model uses land (categorised as marginal, small and large), socio-religious groups (categorised as Hindu-Others, Hindu-SC, Hindu-ST, Muslims and Other Religions), interaction terms of land and socio-religious groups and sector (categorised as rural and urban) as the causal variables.

5.2.1 Model 1

Economic class is not a significant variable in determining whether the women worker will take part in work-force or not.

- 1) Women workers belonging to marginal landowning households have a lower probability of working.
- 2) Those from small and large landowning have a greater probability of taking part in work force.
- 3) There is no inverse relationship between land-ownership classes and female work-force participation implying that the 'income effect' is not at work in the year 2011-12.
- 4) This is mainly due to the presence of Unpaid home based work (Upa21) because when binary logit without including this kind of work in the definition of work participation is performed then results show that there is an inverse relation between the two variables. The tables showing both the regression results have been presented.
- 5) As the ownership of land increases there is a lower probability of women workers working when the 'unpaid work'(Upa21) done by women workers is not considered, but once this work is taken into consideration the work force participation increases with increase in land ownership size.
- 6) This is a representation of the fact that for female workers the decision to participate in work force is not a simple function of economic or social or demographic or cultural factors. There are elements beyond these determinants which must be factored in to get the actual scenario.
- 7) The forces at play in determining whether a women worker will provide labour supply are varying in both the rounds. This proves the fact that unlike for male, female labour force participation is an interplay of a myriad factors. The interconnectedness of female labour is clearly brought out from the results.

Asset ownership laws are varied among the different socio-religious groups in India. To study the impact of such differences we have studied female work-participation behaviour among the various socio-religious groups.

5.2.2 Model 2

We consider Hindu-STs (Schedule tribes who are Hindus) as the reference category for the next section of study involving socio-religious groups as they are least represented in the sample.

- 1) Women workers from Hindu-Others, Hindu-SCs, Muslims (considering Mus-STs, Mus-SCs, Mus-Others and Mus-OBCs) and Other-Religions have a significantly lower probability of taking part in work-force participation, irrespective of the presence or absence of non-remunerative work done on own farm or household enterprise (Upa21) in both the rounds. This proves the importance of caste as a variable in determining the trend of female labour supply. We notice similar results for both the rounds.
- 2) Thus, in the social stratification of class and caste, in the 68th round, class loses its significance and the composition of work done by the women worker gains more importance.

5.2.3 Model 3

The overlap of economic class, caste, religion and gender is studied with the concept of intersectionality by looking at the impact of the interaction of land and socio-religious groups on female work participation. Results are as follows:

- 1) The logistic regression results for Hindu-Others show that women workers belonging to marginal, small and large landownership households have a greater probability of working. Presence of land as a productive asset, which is a form of wealth, is not affecting work participation favourably, i.e. there is no inverse relationship between landownership and Female Work Force Participation Rate among this socio-religious group. This is again due to the presence of 'unpaid work (Upa21)' in the definition of work participation. Although we are not clear yet, about the ownership rights of the available land with the households so we have assumed that the women workers have the same right to ownership as their male counterparts.
- 2) For Hindu-SCs and Hindu-STs, the results show that women workers from marginal, small and large landowning households have a greater probability of working. This is irrespective of whether we are considering Upa21 or not. So the overlap of class, caste and religion determine the employment relations for women workers. An increase in wealth is not affecting the work participation decision favourably.
- 3) For Muslims and Other-Religions too the lower probability of work force participation by women workers, both in case of the presence or absence of Upa21 again reiterates the fact that the Overlap plays an important role in decision making.
- 4) Thus, interconnectedness of economic and social variables play a strong role in determining female work force participation whereas economic variables are stronger in determining male work force participation²⁷.

6. CONCLUSION

Main finding of the present study is that the participation of women in labour force varies across economic classes, social groups, religions, regions and the rural urban divide. Labour force participation is the outcome of both the supply-side factors and the demand for labour. Factors determining labour supply decisions of women are different from those of men. Interconnectedness of female employment with other social parameters which are outside the realm of the standard labour market analysis gets highlighted in the study. This is responsible for creating puzzling trends and patterns in employment data. It is also responsible for the gender gap in labour force and workforce levels. Social and religious background is an important determinant of labour market participation for both men and women. Relative influence of social and religious background is much higher for females (Neetha, 2013). The differences in male and female participation rates, controlling for demographic variables and education is partly explained by this peculiarity of female employment. In fact, women belonging to different social, cultural and religious backgrounds exhibit varying participation rates in the activity statuses enumerated by NSS data. This fact has been corroborated in the paper, where econometric analyses have revealed that women belonging to different socio-economic and socio-religious groups have varying participation rates in the workforce. Large anecdotal evidence suggests that female behaviour in labour market is dramatically affected by their and their household's religious beliefs (Pastore and Tenaglia, 2013). Results of this study depict that socio-religious groups are significant determining factors for work force participation. So, the determinants which are significant for female employment are not on a single axis of consideration, they are always intertwined and manifest themselves along multiple axes. Hence, the gender relations emerging in the employment process are not always in favour of women. It is evident that majority of women in rural areas are subjugate to such relations, i.e. they cannot participate in the labour/work force independent of the relations. Women must decide to participate in the labour/work force within the boundaries of the gender relations which are created in the households or the work place.

Multiple layers of the society are referred to as 'Social Stratification'. The paper has presented an empirical picture of labour market inequalities for women and the inequalities outside, within the framework of such overlapping stratification in rural India. Analysis is based on secondary data, where the emphasis is not only on measurement of quantitative variables, but also on the interactions between various qualitative, socio-economic and socio-cultural dimensions which have an implication on female participation in the labour force. Clear and significant results are obtained when the interaction between landownership categories and socio-religious groups are taken into consideration. The multi dimensionality of the data provides a definite pattern of the employment of women workers within the gender relations created thereof.

BIBLIOGRAPHY

- Arber, S. and Jay Ginn. (1995), "Connecting Gender and Ageing: A Sociological Approach", Open University Press.
- Bardhan, K. (1985), "Women's Work, Welfare and Status: Forces of Tradition and Change in India", *Economic and Political Weekly*, Vol. 20, No. 50 (Dec. 14, 1985), pp. 2207-2220.
- Bardhan, Pranab. K. (1979), "Labor Supply Functions in a Poor Agrarian Economy", *American Economic Review*, Vol.69, No.1, pp 73-83.

²⁷ As a robustness check similar exercises have been performed for male workers (15-59 years). It has been found that class plays an important role in the decision-making process of male labour supply. Caste and composition of work do not have a significance. Overlap does not bring about any changes in the decision-making process. Results have not been published to economise on space.

- Becker, Gary. S. (1971), "The Economics of Discrimination", The University of Chicago Press (Second Edition), Chicago and London.
- Becker, Gary. S. (1981), "A Treatise on the Family", Harvard University Press, Cambridge.
- Beneria, L. (1995), "Toward a greater integration of gender in economics", *World Development*, Vol. 23, No. 11, November 1995, Pages 1839-1850.
- Beneria, L. (1999), "The Enduring Debate over Unpaid Labour." *International Labour Review*, Vol. 138, No. 3, pp 287-309.
- Beneria, L and Gita Sen. (1981), "Accumulation, Reproduction, and 'Women's Role in Economic Development': Boserup Revisited", Chicago Journals, *Signs*, Vol. 7, No. 2, Development and the Sexual Division of Labor (Winter, 1981), pp. 279-298.
- Chaudhary, R and Sher Verick. (2014), "Female labour force participation in India and beyond", *ILO Asia-Pacific Working Paper Series*.
- Crenshaw, Kimberle (1989). "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics". The University of Chicago Legal Forum, Vol. 140, pp 139-167.
- Da Corta, L and Davuluri Venkateshwarlu. (1999), "Unfree relations and the feminisation of agricultural labour in Andhra Pradesh, 1970-95", *The Journal of Peasant Studies*, Vol. 26, 1999, Issue 2-3, "Rural Labour Relations in India".
- Das, Maitreyee. B. (2006), "Do traditional axes of exclusion affect labour market outcomes in India?", *Social Development Papers*, South Asia Series, No. 97, Washington DC, World Bank.
- Das, Maitreyee. B. and Sonalde Desai. (2003), "Why are Educated Women Less Likely to be Employed in India? Testing Competing Hypotheses", *Social Protection Discussion Papers Series*, No. 0313, Social Protection Unit, Human Development Network, The World Bank.
- Das, S. *et al.* (2015), "Women workers in India: Why so Few Among so Many?", *IMF Working Paper*, WP/15/155, March 2015.
- Desai, S. and Jain, D. (1994), "Maternal employment and changes in family dynamics: The social context of women's work in rural South India", *Population and Development Review*, Vol. 20, No. 1, pp. 115-136.
- Dev, Mahendra. S. (2000), "Economic Reforms, Poverty, Income Distribution and Employment", *Economic and Political Weekly* Vol 35, No.10, (Mar 4-10,2000), pp 823-835.
- Gaddis, I. and Stephan Klasen.(2012), "Economic Development, Structural Change and Women's Labor Force Participation : A Re-Examination of the Feminization U Hypothesis". University of Gottingen, Germany, www.unisg.ch/~media/Internet/Content/Dateien/.../SEW/.../2012/Klasen_Paper.ashx
- Garikipati, S. (2008), "Agricultural wage work, seasonal migration and the widening gender gap: evidence from a semi-arid region of Andhra Pradesh", *The European Journal of Development Research*, Vol. 20, 2008, Issue 4: "India's Semi-Arid Rural Economy: Livelihoods, Seasonal Migration and Gender"
- Ghose, Ajit. K. (2004), "The Employment Challenge in India", *Economic and Political Weekly*, Vol. 39, No.48, (Nov 27-Dec 3, 2004), pp 5106-5116.
- Ghosh, J. (2009), "Never Done and Poorly Paid: Women's Work in Globalising India", *Signs*, Vol. 37, No. 1 (September 2011), pp. 247-251, The University of Chicago Press Journals.
- Goldin, C. (1995), "The U-Shaped Female Labor Force Function in Economic Development and Economic History", *Working Paper No. 4707*, NBER, Cambridge, Mass.
- Hakim, C. (1996), "Key Issues in Women's Work: Female Heterogeneity and the Polarisation of Women's Employment", The Athlone Press Limited, London and Atlantic Highlands, NJ.
- Hirway, I. (2002), "Employment and Unemployment Situation in 1990s: How Good Are NSS Data?", *Economic and Political Weekly*, Vol. 37, No. 21 (May 25-31, 2002), pp. 2027-2036.
- Holmes, M. (2008), "Gender and Everyday Life The New Sociology", December, Routledge, <https://books.google.co.in/books?isbn=1134098324>, pp-60.
- ILO (2008), "Women, gender and the informal economy: An assessment of ILO research and suggested ways forward", *Working Paper ILO*, March, 2008.
- Irwin, S. (2005), "Reshaping Social Life", Routledge, November 14, 2005, <https://books.google.co.in/books?isbn=1134301383>, pp 70-71.
- Jain, D. and Nirmala Banerjee. (1985) (eds). "Tyranny of the Household", Delhi: Shakti Books.
- Gujarati, D. N. (3rd Edition), "Basic Econometrics", Chapter 16.
- Jain, D. and Nirmala Banerjee. (1985) (eds). "Tyranny of the Household", Delhi: Shakti Books.

- Majumder, R. (2011), "Female Labour Supply in India: Proximate Determinants", *MPRA Paper No.43250*, September.
- Mammen, K. and Christina Paxson.(2000), "Women's Work and Economic Development", *Journal of Economic Perspectives*, Vol. 14, No. 4, pp 141-164.
- Masood, T. and Ahmad. Mohd. Izhar. (2009), "An Econometric analysis of Inter-State Variations in Women's Labour Force Participation in India", *mpira.ub.uni-muenchen.de*.
- McBride, A. *et al.* (2014), "Intersectionality: are we taking enough notice in the field of work and employment relations?", *Work Employment & Society*, September 8, 2014, doi: 10.1177/0950017014538337
- Mehrotra, S. *et al.* (2012), "Creating Employment in the Twelfth Five-Year Plan", *Economic and Political Weekly*, May 12, 2012, VOL XLVII No. 19.
- Neetha, N. (2013), "Inequalities Reinforced? Social Groups, Gender And Employment", *Occasional Paper No.59*, January 2013, Centre For Women's Development Studies.
- Neff, D *et al.* (2012), "The Puzzling Decline in Rural Women's Labor Force Participation in India: A Reexamination", *GIGA Working Papers*, No. 196, May 2012.
- NSSO. 2011-12. Employment and Unemployment Situation in India, 68th Round, Report No.554. Ministry of Statistics and Program Implementation, Government of India
- Pastore, F and Simona. Tenaglia. (2013), "Ora et non Labora? A Test of the Impact of Religion on Female Labor Supply", *IZA DP No. 7356*, April 2013.
- Rangarajan, C. *et al.* (2014), "Developments in the Workforce between 2009-10 and 2011-12", *Economic and Political Weekly* June 7, 2014, Vol XLIX, No.23.
- Roemer, J. E. (1982), "A General Theory of Exploitation and Class", Harvard University Press, <https://books.google.pt/books?isbn=0674344405>
- Rubery, J, *et al.* (1999). "Women's Employment in Europe:Trends and prospects". London and New York: Routledge.
- Sen, G and Chiranjib Sen. (1985), "Women's Domestic Work and Economic Activity: Results from the National Sample Survey", *Economic and Political Weekly*, Vol. 20, No. 17.
- Sethuraman, S.V. (1998), "Gender, informality and poverty: A global review", *ILO Working Paper*, (Geneva, ILO).
- Shaw, A. (2013), "Employment Trends in India-An Overview of NSSO's 68th Round", *Economic and Political Weekly* October 19, 2013, Vol XLVIII, No.42.
- Srivastava, N and Srivastava, R (2010), "Women, Work and Employment Outcomes in Rural India", *Economic and Political Weekly* July 10, 2010, Vol XLV No. 28.
- Thomas, J.J. (2012), "India's labour market during the 2000s: Surveying the changes", *Economic and Political Weekly*, Vol. 47, No. 51, pp. 39-51.
- World Development Report, (2012), "Gender Equality and Development"

APPENDIX A

Creation of the Variable 'Socio-religious group'

National Sample Survey (NSS) provides data for

- 1) Social Groups, Codes for which are as follows: ST=1, SC=2, OBC=3, Others=9
- 2) Religion, Codes for which are as follows: Hindu=1, Muslims=2, Others=3

Socio-religious groups created in the thesis:

Hindu-Others (including OBC): This group consists of individuals who are Hindus and belong to Others (non SC, ST and OBCs i.e the upper castes) and OBC social category. This group may be classified as elite because the representation of Others outweighs that of OBCs in this sample. The very small sample size of OBCs among Hindus has encouraged this step of considering them with the Others group, to avoid the problem of micro-numerosity.

Hindu-SC: This group of individuals are Hindu Scheduled Castes

Hindu-ST: They are Hindu Scheduled Tribes. Their representation is the least in the sample and hence this group has been considered as the reference categories in econometric estimations.

Muslims (including Muslim-ST, Muslim-SC, Muslim others and Muslim-OBC): The entire Muslim sample with respect to the different social groups (SC, ST, OBC and Others) is included in this group.

Other-Religion (including Christianity, Sikhism, Jainism, Buddhism, Zoroastrianism, Others): We have clubbed the Other-Religions and considered them as a single group to avoid problems of micro-numerosity.

Proceeding through trial and error final coding in the thesis is;

Religion	Hindu (H)	Muslim (M)	Others
	5	8	9

Social-Groups	ST	SC	Others+OBC
	1	2	3,9

Author's Calculation

Socio-Religious Groups= religion*socio-religious group

=> Hindu-Others (including OBC) = (5*3), (5*9) =15, 45

=> Hindu-SC=10

=> Hindu-ST=5

=>Muslims (Mus-ST, Mus-SC, Mus-Others, Mus-OBCs)= 8, 16, 24, 72

=> Other-Religions (Others-ST, Others-SC, Others-Others, Others-OBC)= 9, 18, 27, 81

APPENDIX B

Interaction term=land-ownership class*socio-religious group

Dummy variables for land classes:

Land1 = Landless Households (landownership 0.000 hectares), (yes=1; no=0)

Land2 = Marginal Landowners (ownership 0.001-0.40 hectares), (yes=1; no=0)

Land3 = Small Landowners (ownership 0.41-2.00 hectares), (yes=1; no=0)

Land4 = Large Landowners (ownership >2.00 hectares), (yes=1; no=0)

Dummy variables for socio religious groups:

Socrg1= Hindu-Others (H-O) , (yes=1; no=0)

Socrg2= Hindu-SC (H-SC), (yes=1; no=0)

Socrg3= Hindu-ST (H-ST), (yes=1; no=0)

Socrg4= Muslims (M), (yes=1; no=0)

Socrg5= Other-Religions (Othr-Relgns), (yes=1; no=0)

Creation of the interaction terms

Lasrg11=land1*socrg1= Hindu-Others who are landless

Lasrg12=land1*socrg2= Hindu-SCs who are landless

Lasrg13= land1*socrg3= Hindu-STs who are landless

Lasrg14=land1*socrg4= Muslims who are landless

Lasrg15=land1*socrg5= Other-Religions who are landless

Lasrg21=land2*socrg1= Hindu-Others who are marginal landowners

Lasrg22= land2*socrg2= Hindu-SCs who are marginal landowners

Lasrg23= land2*socrg3= Hindu-STs who are marginal landowners

Lasrg24= land2*socrg4= Muslims who are marginal landowners

Lasrg25=land2*socrg5= Other-Religions who are marginal landowners

Lasrg31= land3*socrg1= Hindu-Others who are small landowners

Lasrg32= land3*socrg2= Hindu-SCs who are small landowners

Lasrg33=land3*socrg3= Hindu-STs who are small landowners

Lasrg34=land3*socrg4= Muslims who are small landowners

Lasrg35= land3*socrg5= Other-religions who are small landowners

Lasrg41= land4*socrg1= Hindu-Others who are large landowners

Lasrg42= land4*socrg2= Hindu-SCs who are large landowners

Lasrg43= land4*socrg4= Hindu-STs who are large landowners

Lasrg44=land4*socrg4=land4*socrg4 Muslims who are large landowners

Lasrg45=land4*socrg5= Other-Religions who are large landowners.

TRABAJAR POR PROYECTOS EN EDUCACIÓN PRIMARIA: UNA EXPERIENCIA DESDE CIENCIAS

Manuel-Jesús Hermosín-Mojeda

Universidad de Huelva, Facultad de Ciencias de la Educación
(manuel.hermosin@dedu.uhu.es)

Inmaculada Gómez-Hurtado

Universidad de Huelva, Facultad de Ciencias de la Educación
(inmaculada.gomez@ddcc.uhu.es)

Cinta Prieto-Medel

Universidad de Huelva, Facultad de Ciencias de la Educación
(cinta.prieto@alu.uhu.es)

ABSTRACT

Nuestra intervención describe una experiencia sobre el trabajo por proyectos en Educación Primaria y detalla el proceso de enseñanza-aprendizaje realizado en el aula de manera integrada. En este estudio describiremos los principios que justifican el trabajo por proyectos, sus características, las fases de desarrollo y los tipos de actividades que hemos realizado en el tercer Ciclo de Ed. Primaria.

El proyecto –ecosistemas– abarca diferentes contenidos: Los elementos de estos espacios –bióticos / abióticos–, los climas, los animales en peligro de extinción, acciones beneficiosas y perjudiciales y paisajes e, incluso, los textos descriptivos.

Los contenidos se trabajan en grupos cooperativos donde el alumnado (protagonista de su propio aprendizaje) parte de sus intereses individuales y los comparte grupalmente, todo ello, desde una actitud investigadora: Detección y análisis del conocimiento previo, desarrollo de competencias en la realización de actividades que se relacionan con un problema/pregunta motivadora y una producción final donde el estudiante expone los aprendizajes adquiridos.

Finalmente, reflexionaremos sobre los resultados de esta práctica innovadora, mostrando imágenes del proceso y de las exposiciones del alumnado donde el papel de la familia es activo.

Valoraremos tanto las limitaciones y desventajas de llevar este enfoque al aula como las oportunidades y ventajas que nos aporta.

Keywords: Trabajo por Proyectos, Ciencias, Educación Primaria, Multidisciplinariedad.

JEL Classification: I21

1. INTRODUCCIÓN

“Project Work is a learning experience which aims to provide students with the opportunity to synthesize knowledge from various areas of learning, and critically and creatively apply it to real life situations. This process, which enhances students’ knowledge and enables them to acquire skills like collaboration, communication and independent learning, prepares them for lifelong learning and the challenges ahead”.¹

En un mundo cada vez más globalizado es necesario que nos planteemos que el acceso a la información y la comunicación es cada vez, siguiendo este planteamiento, igualmente globalizado. La información científica, que antes se encontraba en manos de las instituciones, se compartimentaba en las diferentes disciplinas académicas y se almacenaba en soportes tradicionales –como los libros–, ahora se ha transformado sustancialmente, sobre todo tras la aparición de internet y, más recientemente, de las redes sociales que comparten el conocimiento. La escuela ha sido la encargada de transmitir el conocimiento científico a las jóvenes generaciones y, en cierta forma, ha mantenido –adaptada en mayor o menor medida a las edades de los niños–, la tradición de la compartimentación del conocimiento y la forma tradicional de acceder a él.

Los tiempos han cambiado y desde hace mucho tiempo “hacia finales de los años sesenta del siglo XX, se cristalizó un movimiento de científicos y académicos europeos a favor de la interdisciplinariedad como modo de superar la excesiva especialización del conocimiento, en busca de un abordaje de los problemas complejos y en pro de la integración del saber”. (Uribe Mallarino, 2012) Esta situación descrita para el ámbito científico no puede ser obviada por la escuela, sobre todo cuando la educación que se pretende está fundamentada en competencias y no tanto en disciplinas. La irrupción de la teoría de las inteligencias múltiples ha hecho que la visión tradicional de inteligencia adoptada por la escuela esté siendo cambiada, ya que “el mismo currículum para todos los alumnos en el cual todas las personas aprendían de la misma manera y el que no aprendía acorde con lo programado fracasaba en el sistema o era expulsado de éste” (Castro Solano, 2002) no puede ser un referente en la actual sociedad.

¹ Ministry of Education of Singapore. Recuperado el 12/04/17 de: <https://www.moe.gov.sg/education/programmes/project-work>

Desde la incorporación de las competencias básicas en educación, tras la aparición del informe sobre el proyecto liderado por la OCDE denominado DeSeCo (Definición y Selección de Competencias)², allá por 2003, la forma de enseñar y aprender en la escuela ya no debe responder a la manera tradicional. En otras palabras “saber sumar, restar, multiplicar y dividir ya no es suficiente para que un alumno de primaria supere con éxito una evaluación matemática. Si este alumno no es capaz de aplicar estas operaciones a un contexto real de la vida cotidiana, no habrá conseguido desarrollar una de las competencias básicas a las que se orienta el aprendizaje de esta área de formación y por tanto no habrá alcanzado los objetivos de aprendizaje de la asignatura”. (Mateo Villodres, 2010)

Por los motivos expuestos, en el trabajo por proyectos “los alumnos llevan a cabo un amplio proceso de investigación para responder a una pregunta compleja, a un problema o a un cambio. Los alumnos tienen autonomía y capacidad de decisión en el desarrollo de los proyectos. Al mismo tiempo, estos tienen que ser planeados, diseñados y elaborados para conseguir que los alumnos aprendan los contenidos básicos, trabajen las competencias del siglo XXI (como por ejemplo la colaboración, la comunicación y el pensamiento crítico) y creen productos y presentaciones de calidad. En el aprendizaje por proyectos lo más importante no es el producto o resultado final sino el proceso de aprendizaje y profundización que llevan a cabo los estudiantes”. (Pereira Baz, 2014)

El motivo que generó el trabajo por proyectos, en esta ocasión, fue una visita que realizamos a un ecosistema con motivo del Día Mundial de los Humedales (2 de febrero), a propuesta de las actividades para centros educativos que organiza la Consejería de Medio Ambiente y Ordenación del Territorio de la Junta de Andalucía llamadas “Mi marisma, mi escuela”. Previa a la visita, técnicos en Medio Ambiente de la Consejería llevaron a cabo una charla informativa sobre el tema en nuestro colegio, de tal manera que a través de diferentes actividades y juegos, los alumnos pudieron convertirse en exploradores de los espacios naturales para llevar a cabo, al día siguiente, una visita a un ecosistema de marisma cercano a la ciudad de Huelva. Tras la visita, en muchos de los alumnos surgieron preguntas e intereses sobre cómo profundizar en lo que habían visto y continuar investigando algo más.

Nosotros, con esta experiencia, hemos querido llevar a cabo una combinación de estrategias de aprendizaje que facilitaran el desarrollo de competencias, al mismo tiempo que fomentaran la autonomía de los alumnos y la atención a los diferentes ritmos de aprendizaje, a la vez que respondíamos a los intereses de la mayoría de los estudiantes que mostraron su interés en profundizar algo más en estos temas.

2. EL TRABAJO POR PROYECTOS

Importantes autores como Beane (2005)³ o Tann (1991) han definido el trabajo por proyectos o tópicos como “Enfoque centrado en las preocupaciones de los niños, que los involucra de manera activa en la planificación, presentación y evaluación de una experiencia dialogada de aprendizaje”. (Tann, 1991, p. 16)

Sergio Tobón, por su parte, considera que un proyecto es “un conjunto de actividades sistemáticas y elaboradas que se ejecutan para resolver un problema que puede ser una pregunta, una necesidad de aplicar un método para solucionar una dificultad, crear un producto, valorar una metodología de trabajo o el probar una hipótesis”. (Tobón, 2006, p. 1)⁴

Aunque también puede definirse como un “conjunto de diversas actividades relacionadas entre sí que sirven a una serie de intenciones u objetivos educativos. En un sentido amplio, se trata de proponer a los niños/as que se impliquen en la realización de proyectos que respondan a su interés y que tengan sentido para ellos”. (Benítez Sillero, 2008) Para ello, debe ser el profesorado el que busque proyectos que respondan a los contenidos y objetivos deseados en relación con lo que los alumnos propongan y estén en consonancia con los contenidos que se pretenden tratar a lo largo del curso. Situaciones cotidianas o experiencias de los alumnos individualmente o como grupo, pueden servir de motivo generador del trabajo por proyectos.

Así, el trabajo por proyectos “aplicado en los cursos, proporciona una experiencia de aprendizaje que involucra al estudiante en un proyecto complejo y significativo, mediante el cual desarrolla integralmente sus capacidades, habilidades, actitudes y valores. Se acerca a una realidad concreta en un ambiente académico, por medio de la realización de un proyecto de trabajo. Estimula en los estudiantes el desarrollo de habilidades para resolver situaciones reales, con lo cual se motivan a aprender; los estudiantes se entusiasman con la investigación, la discusión y proponen y comprueban sus hipótesis, poniendo en práctica sus habilidades en una situación real. En esta experiencia, el estudiante aplica el conocimiento adquirido en un producto dirigido a satisfacer una necesidad social, lo cual refuerza sus valores y su compromiso con el entorno, utilizando además recursos modernos e innovadores”.

Para nosotros, el trabajo por proyectos es un método que eleva toda la esencia del significado de la didáctica escolar.

2.1 ¿Cuál es su fundamentación?

Francisco Pozuelos (2007, p. 23ss) nos responde a la pregunta ¿Por qué trabajar con proyectos de trabajo? de manera concisa y clara a raíz del contexto, de los recursos, la diversidad, la teoría/práctica, el currículum integrado, la democracia y la fundamentación resumida del beneficio tanto a estudiantes como a docentes: El trabajo por proyectos «abre la escuela al entorno», «incorpora materiales y fuentes de información diversos», «integra diversidad cultural y personal», se aprende y se hace un proceso y un producto, «se trabaja con variados tipos de conocimientos y saberes», permite «una enseñanza como diálogo», «presenta el currículum con sentido y significado» para los alumnos y «promueve el desarrollo y capacitación profesional» para el maestro. Además, el trabajo por proyectos “contribuye a convertir la clase en un espacio de comprensión

² Dominique S. Rychen, Laura H. Salganik (eds.) (2003): Key Competencies for a Successful Life and a Well-Functioning Society. OCDE/Hogrefe. ISBN: 9780889372726

³ BEANE, J. A. (2005). La integración del currículum. Madrid, Morata.

⁴ Recuperado el 3/IV/17 de: http://cife.org.mx/biblioteca/doc_download/metodos_de_trabajo_por_proyecto.pdf.

y conocimiento compartido”. (Ramos García, 1999, p. 57)

Este tipo de metodología revela una mejora en el aula y su productividad, potenciando aspectos relevantes del proceso de enseñanza-aprendizaje [Tomado de: (Blumberg & Michael, 1992); (Norman & Schmidt, 1992) y otros] como los siguientes:

- El desarrollo de habilidades de autoaprendizaje.
- La adquisición de estrategias generales de solución de problemas mediante la solución de problemas concretos dentro de una disciplina.
- Una mejor selección y uso más frecuente de los materiales de aprendizaje (libros, fotocopias, internet, etc.), con mayor autonomía.
- Aprendizaje de habilidades sociales y personales mediante el trabajo en pequeños grupos. (Robinson, 1993)
- Permite aprendizajes en profundidad y en especial, una mejor comprensión, integración y uso de lo aprendido.
- Ayuda a desarrollar no sólo aptitudes intelectuales, sino también sociales, personales y afectivas que inciden positivamente sobre el rendimiento.
- Familiariza e implica al alumno en situaciones de su práctica profesional.
- Se da tanta importancia a los conocimientos como a los procesos de adquisición.
- Promueve un procesamiento más estratégico y recuerdo de la información a medio y largo plazo.
- A través de la práctica en la resolución de problemas, fomenta la capacidad de solución de problemas de distintos tipos y, sobre todo, estimula una actitud activa hacia la exploración y la indagación.
- Por su carácter multidisciplinar, permite la integración de conocimientos de diferentes campos disciplinares.
- El trabajo habitual, que el estudiante debe realizar de forma autónoma desde el principio (aunque debidamente apoyado y guiado por sus tutores y profesores) le lleva a aprender a aprender, resaltando el papel activo del aprendiz. (Glaser, 1990)
- Autonomía del estudiante. (Barrows & Tamblyn, 1980)
- Aumenta la motivación de los estudiantes.

2.2 ¿Cuáles son sus características?

Benítez Sillero (2008, p. 4) destaca seis características:

- 1) Los temas parten de propuestas o intereses. No se provocan si no que surgen. No tiene por qué elegirlo el niño.
- 2) Se tiene en cuenta tanto lo que sabe cómo lo que quiere saber el alumnado.
- 3) La programación debe ser abierta e ir modificándose en función de cómo evolucione.
- 4) Los tiempos son flexibles y aproximados.
- 5) Los errores se valoran positivamente para que los vivan y aprendan de ellos.
- 6) El proyecto es un fin en sí mismo y no una excusa para impartir contenidos.

Por su parte, Francisco Pozuelos (2007, p. 32) afirma que el Proyecto de trabajo tiene un proceso organizado a través de una tradición innovadora que aborda el currículum partiendo de temáticas relevantes. Considera que está abierto a la participación, a la vez que integra conocimientos diversos y permite una evaluación formativa. Además, añade otras particularidades como las raíces (el legado) bien asentado, lo interesante que resulta para el alumnado y lo significativo que es culturalmente, lo flexible que puede llegar a ser, la oportunidad de conseguir un protagonismo compartido que se apoya a su vez en el proceso y busca resultados dando respuestas fundamentadas a cuestiones importantes.

2.3 ¿Cómo llevarlo a cabo? 5 fases de desarrollo de un proyecto

Cuando se implanta el trabajo cooperativo, debemos tener en consideración que hay, según Guzmán Casas (2009, p. 43s) y Bottoms & Webb (1998)⁵ distintas fases o etapas que deben seguirse para garantizar dicho proceso:

- 1) “*Elección del tema* por parte de los alumnos a partir de las propuestas del docente o de las propuestas de los propios alumnos. En esta metodología es especialmente importante la elección del tema por parte de los alumnos ya que de esta forma podrán elegir problemáticas o inquietudes que les interesen y que conlleven un significado para ellos por lo que su motivación y su interés hacia el trabajo será mayor. Es importante definir un listado con los participantes de cada grupo y su rol dentro del mismo dando la misma importancia y peso a todos los miembros por igual. Resumiendo con Pozuelos Estrada (2007, p. 36) el tema debe ser interesante para el alumnado, relevante a nivel social y pertinente en cuanto al currículum básico.
- 2) *Detección de ideas previas* para conocer lo que los alumnos saben realmente del tema en cuestión. De esta forma el docente se hace una idea del nivel de conocimiento de los alumnos y los propios alumnos realizan su autoevaluación inicial y se dan cuenta del punto del que parten.
- 3) El docente trabaja con los alumnos para *definir los objetivos y el desarrollo del trabajo* en sí mismo que se espera conseguir. Los alumnos deben conocer estos objetivos así como la forma en la que van a ser evaluados por parte del docente y los estándares de calidad y los criterios que debe cumplir el proyecto realizado. También debe existir una descripción y un propósito del proyecto, el docente debe dejar claro de qué manera deben desarrollar los alumnos el problema planteado, proporcionarles técnicas y herramientas para ello. Se deben presentar también una serie de reglas e instrucciones para desarrollar el proyecto como los tiempos y las metas a corto plazo. Básicamente encontramos estas subtareas en la Elaboración del Plan de Trabajo:
 - a) Finalidades y objetivos didácticos.

⁵ Citados en ScolaTIC: Metodología trabajo por proyectos cooperativos. Recuperado el 15/IV/17 de: https://www.scolartic.com/liferaylms-portlet/scorm/10154/10180/8c8bc533-8bdd-4a33-bf59-a43358474609/contenidos/recursos/Metodologia_trabajo_por_proyectos_cooperativos.pdf

- b) Selección y organización de los contenidos.
 - c) Organización del tiempo, el espacio y los recursos.
 - d) Relación de actividades.
 - e) Confección de guías de observación.
 - f) Colaboración con las familias o difusión al resto de la comunidad educativa.
- 1) En la fase de *investigación* los alumnos desarrollan su trabajo, han de tenerse en cuenta los recursos, los tiempos y los espacios empleados donde es especialmente interesante y útil el uso de nuevas tecnologías, por ejemplo.
 - 2) En la última fase se desarrolla la *evaluación* que debe ser continua pero también tangible y tener en cuenta los resultados. También es importante que el trabajo realizado se exponga y sea conocido por todos los alumnos, a la vez que permanezca accesible en todo momento.”

2.4 ¿Cuál es el papel del maestro?

En el trabajo por proyectos es interesante analizar el rol del maestro. Romera Morón y Martínez Cárdenas (2009) no dudan en afirmar que “el docente, cuando trabaja por proyectos, ocupa un papel de escucha activa hacia el alumnado, observando, a través de lo que dice y de lo que hace, qué es lo que le interesa y así alimentar su deseo de aprender y sin desaprovechar las ocasiones que se presenten dentro y fuera de la escuela”.

Vemos que el rol del profesor cambia, no solo en su actividad y su rutina, también en su actitud, su manera de actuar en clase, su forma de evaluar y de planificar. La toma de decisiones ya no solo depende de lo que viene en los programas oficiales o cómo organizan los contenidos los diferentes libros de texto o recursos. Antes bien, los materiales curriculares se ponen al servicio de lo que los alumnos desean aprender. Actualmente, con las nuevas tecnologías, esta labor es mucho más interesante ya que “el docente:

- Debe actuar como facilitador, proporcionando a los alumnos recursos y asesoría a medida que realizan sus investigaciones, dejando que los alumnos recopilen y analicen la información, hagan descubrimientos e informen sobre sus resultados.
 - Está a cargo de la clase. Posee la autoridad y tiene la responsabilidad final por el currículo, la instrucción y la evaluación.
 - Busca reunir toda la clase para aprender y discutir una situación específica (tal vez inesperada) que un alumno o un equipo de alumnos ha encontrado.
 - Utiliza las herramientas y la metodología de la evaluación, y debe enfrentar y superar el reto que impone el que cada alumno construya un nuevo conocimiento en lugar de estar estudiando el mismo contenido de los demás alumnos”.
- (Coria Arreola, 2011, p. 6s)

Las metas, por lo tanto, también muestran un cambio significativo: “El docente ya no tiene como objetivo único o principal estimular la adquisición de contenidos de su disciplina, sino promover el desarrollo de habilidades como el pensamiento complejo y crítico, la cooperación, el liderazgo, la comunicación, la creatividad, el trabajo pluridisciplinar y la toma de decisiones”. (Font Ribas, 2004)⁶

González Gil (2008) trata las funciones del tutor en el aprendizaje basado en proyectos —que aunque para varios autores⁷ no es igual que el trabajo por proyectos, podemos usar algunas de sus características porque son comunes—, diciendo que éstas “van a depender básicamente de dos factores, por un lado, la experiencia del grupo en el trabajo ABP y por otro, de la fase ABP en la que se esté trabajando”.

Lógicamente, cuando el grupo de trabajo sea «novato» o se encuentre en las primeras sesiones del trabajo por proyectos, la función del tutor será más directiva y presencial que cuando dicho grupo ya esté habituado a trabajar con esta metodología (Iglesias, 2002, p. 9).⁸ Progresivamente, el tutor ejercerá una labor menos directiva y dejará que sea el alumno quien adopte un rol más activo. En los últimos cursos de la Educación Primaria, por ejemplo, los alumnos gozarán de materiales de apoyo y control de su trabajo que les servirán para organizarse y autorregularse.

El segundo factor que determinará las funciones del tutor será la fase de la dinámica del trabajo por proyectos que se esté desarrollando. Si bien “no existe una única forma para implementar un proyecto, las experiencias, los materiales, la información, el contexto, son los elementos que delimitan el desarrollo y conclusión que presentarán; sin embargo, es muy importante que se tenga claro el objetivo que se desea cumplir, para que el proyecto se planee y se complete de manera efectiva. Tanto los profesores como los alumnos deben hacer un planteamiento que explique los elementos esenciales del proyecto y las expectativas que se persiguen”. (Coria Arreola, 2011, p. 3)

Además, Sola Ayape (2005)⁹ asume que en el trabajo por proyectos los profesores pueden actuar también como expertos, proporcionando información especializada. Sin embargo, no hay que olvidar que su papel en el proceso es el de modelador y guía pero “sin decir demasiado a los alumnos” ni alentar o imponer soluciones.

Las recomendaciones que propone el Instituto Tecnológico y Estudios Superiores de Monterrey (2003, p. 23) para lograr un buen desempeño en la función del tutor del trabajo por proyectos o el ABP son las siguientes:

- “Sentirse y comportarse como un miembro más del grupo.
- No llevar la dirección del grupo con base en sus propias opiniones, por el contrario, facilitar la dinámica del mismo.
- Asegurarse de que los temas y objetivos de aprendizaje analizados y discutidos queden claros para todos los alumnos.

⁶ Véase también: (Monterrey, S.A., Instituto Tecnológico de Estudios Superiores, 2003); (Morales Bueno & Landa Fitzgerald, 2004).

⁷ Véase: Larmer, J., Ross, D. & Mergendoller, J. R. (2009) PBL Starter Kit. California: Buck Institute for Education.

⁸ Véase también: (Monterrey, S.A., Instituto Tecnológico de Estudios Superiores, 2003)

⁹ Citado en: Open courseware. Equipo Docente en ABP. Facultad de Psicología. Universidad de Murcia. Recuperado el 4/III/17 de: <http://ocw.um.es/cc-sociales/la-metodologia-de-aprendizaje-basado-en-problemas/material-de-clase-1/tema-5.pdf>

- En el momento de hacer cualquier intervención se debe considerar si el comentario ayuda a los alumnos a aprender por sí mismos.
- Ayudar a los alumnos a enfocar los temas centrales de su discusión en lugar de tratar todo tipo de temas al mismo tiempo.
- Recordar a los alumnos de forma periódica lo que se está aprendiendo de tal manera que valoren la experiencia, se recomienda que la intervención sea específica y con ejemplos”.

En definitiva, ser un director o guía del aprendizaje de sus alumnos para que ellos, a la vez que aprenden contenidos, adquieran destrezas que les permiten adquirir competencias y capacidades.

2.5 ¿Cómo es el aprendizaje de los alumnos?

Para Vergara Ramírez (2016, p. 37) “el aprendizaje es una herramienta que permite situarnos en un contexto determinado, dentro de una comunidad específica, y se inserta en un momento preciso –se sitúa en un momento concreto de nuestra historia personal-. Nada que incumpla estas condiciones tiene demasiada oportunidad de permanecer en nuestra memoria. Sin embargo, la enseñanza tradicional parece obstinarse en experimentar modelos que incluyen estos elementos y sigue basada en la transmisión de contenidos estáticos, descontextualizados y ajenos a las personas que aprenden”.

En el trabajo por proyectos partimos de la base de que el contenido que se pretende trabajar está generado desde los propios intereses de los alumnos. De tal manera, al partir de esta situación inicial, como hemos visto antes, los alumnos se sitúan en un momento concreto y en un contexto favorable a adquirir inconscientemente los contenidos, en los que los aspectos emocionales contribuyen a que se adquieran de una forma permanente.

El fin principal es que los alumnos estructuren los conocimientos de forma significativa y de manera autónoma, es decir, como hemos visto con la menor intervención del adulto posible y.

Con esta estrategia de trabajo por proyectos, Trabucco, Benhayón, Fridzon y Weisleder (2006, p. 6) buscan que “los estudiantes no sólo obtengan conocimientos de la materia, sino que también se conviertan en aprendices auto-dirigidos que desarrollen habilidades para la resolución de problemas, las mismas que podrán aplicar en cursos futuros y en sus carreras profesionales”.

2.6 ¿Qué objetivos se buscan?

H. S. Barrows (1986) estableció una serie de objetivos para cualquier versión de ABP o trabajo por proyectos:

- 1) “Estructurar el conocimiento para utilizarlo en contextos clínicos. A pesar de esta formulación clínica, no resulta difícil entender que se trata de orientar el trabajo a construir el conocimiento que hay que poner en práctica, es decir, el conocimiento funcional (en la acepción de Biggs, 1999) característico de cada profesión.
- 2) Desarrollar procesos eficaces de razonamiento clínico. De nuevo enunciado en términos médicos, se refiere a las actividades cognitivas necesarias en el campo profesional de referencia (resolución de problemas, toma de decisiones, generación de hipótesis, etc.).
- 3) Desarrollar destrezas de aprendizaje autodirigido. Nos estaríamos refiriendo a estrategias de aprendizaje, y, de forma especial, de naturaleza metacognitivas o de autodirección, centradas en lo que hace el aprendiz en contextos nuevos (Biggs, 2005)
- 4) Motivación para el aprendizaje. El hecho de que la propuesta de trabajo sitúe a los estudiantes en el contexto de un problema desafiante, que requiere su participación inmediata y que debe explorar de forma auto-dirigida aumenta de forma sustancial la motivación de los estudiantes, que superan la actitud pasiva característica de las aulas tradicionales.
- 5) Desarrollar la capacidad para trabajar en grupo con los compañeros (Biggs, 2005), lo que implica también otras capacidades como la comunicación, la confrontación constructiva de ideas y puntos de vista o la atención a los procesos del propio grupo.”

2.7 ¿Cómo es la evaluación del trabajo por proyecto?

Como se ha adelantado al hablar de las fases del trabajo por proyectos, en la quinta fase de su desarrollo, la evaluación es procesual, continua pero valorando a su vez los resultados y productos finales. Para ello, las exposiciones son una tarea que permite no calificar, si no evaluar lo aprendido, dando accesibilidad, si es posible a todos los alumnos.

Según Dochy, Segers y Sluijsmans (1999), la evaluación debe ir más allá de la medida de la reproducción del conocimiento, ya que las pruebas tradicionales no son apropiadas para formas de aprendizaje que se refieren a la resolución de problemas, la construcción de significados por parte del estudiante y el desarrollo de estrategias para abordar nuevos problemas y tareas de aprendizaje. Es necesario, por tanto, que la evaluación incremente el uso de diversos tipos de elementos para cuya solución los estudiantes tengan que interpretar, analizar, evaluar problemas y explicar sus argumentos.

Por su parte, García Sevilla (2008) da respuesta a cómo evaluar el ABP o el trabajo por proyectos: “Los múltiples propósitos del ABP traen como consecuencia la necesidad de una variedad de procedimientos de evaluación que reflejen los objetivos perseguidos en su totalidad. Por lo tanto, se recurre, por supuesto, a exámenes escritos, pero también prácticos, mapas conceptuales, evaluación de pares, evaluación del tutor, presentaciones orales e informes escritos”.

Considerando que todos deben estar implicados en la evaluación, esta puede “convertirse en una herramienta fundamental para el tutor en el proceso de aprendizaje por varios motivos. Por un lado, puede ayudarle a fomentar el espíritu de equipo para que todos los miembros del grupo funcionen como un todo con un único objetivo, alcanzar el éxito. Por otro lado, la evaluación individual permite a los alumnos reconocer las áreas de conocimiento o las habilidades en las que muestra mayor

deficiencia y les ofrece la posibilidad de corregirlas y mejorarlas (Parikh, McReelis, & Hodges, 2001) así como estimular el crecimiento profesional desde el principio de sus estudios hasta su vida laboral (Dolmans, Van Lwijk, Wolfhagen y Scherpbier, 2006)".¹⁰

A lo largo de las experiencias de trabajo por proyectos se implementan diferentes documentos de autoevaluación, coevaluación, heteroevaluación, desde un punto de vista sumativo y procesual.

3. EXPERIENCIA DE AULA: PROYECTO “ECOSYSTEMS”

3.1 ¿Qué hemos hecho en clase?

Los alumnos de 5º de Educación Primaria del Colegio Santo Ángel de la Guarda (Huelva) han llevado a cabo un proyecto de trabajo multidisciplinar en el que “Los Ecosistemas” han sido el tema de partida.

Para situarnos en el contexto, diremos que en este colegio de Educación Infantil, Primaria y Secundaria, se llevan realizando experiencias relacionadas con el trabajo cooperativo, las inteligencias múltiples y el desarrollo de estrategias y rutinas de pensamiento desde hace aproximadamente nueve cursos escolares. Se comenzó con la formación del profesorado en competencias después de haber hecho un sondeo por parte del equipo directivo. Posteriormente y dada la inquietud de la mayoría de los miembros del claustro, se empezaron a implementar actividades encaminadas al trabajo competencial que incluían metodologías y propuestas didácticas distintas a las tradicionales. En los últimos cinco cursos, se han empezado a poner de manifiesto el diseño de actividades desde las inteligencias múltiples, asociadas al trabajo por competencias y las estrategias y rutinas de pensamiento, así como la organización del colegio en grupos cooperativos.

En el proyecto que vamos a describir, cada grupo cooperativo de clase (4-5 alumnos por grupo), que ya llevan tiempo trabajando, con ligeras modificaciones, desde principio de curso, creó un equipo para trabajar este tópico y decidieron llamarse para esta ocasión de formas originales y relacionadas –en la mayoría de los casos- con el tema principal de estudio (“Los exploradores de los ecosistemas”, “Los 4 del bosque”, “Los naturalistas”...).

Se asignaron, también, los siguientes roles: coordinador, secretario, portavoz y encargado de los materiales. Además de lo anterior, se propuso en la clase un “decálogo del trabajo cooperativo” para que cada grupo tuviera en consideración cuáles eran las pautas a seguir en un trabajo cooperativo, para el que ya habían ido siendo entrenados desde los cursos anteriores con proyectos de menor envergadura y complejidad.

Los roles asumidos son los siguientes:

COORDINADOR/A (Centrado en la tarea) 	• Coordina el trabajo del equipo. Tiene visión general de qué tal vamos • Anima a los miembros del grupo a avanzar en su aprendizaje. • Tiene claro lo que el profesorado quiere que aprendan. • Determina quién debe hacerse cargo de las tareas de los miembros ausentes. Flexibiliza las tareas según necesidades.
SECRETARIO/A (Centrado en el proceso y las relaciones) 	• Procura que no se pierda el tiempo. • Toma nota de las conclusiones del trabajo, las decisiones tomadas,... • Recuerda de vez en cuando, a cada uno, los compromisos personales y, a todo el equipo, los objetivos del grupo. • Rellena los documentos de evaluación del equipo.
PORTAVOZ (Centrado en las relaciones) 	• Habla en nombre del equipo cuando el profesorado requiere su opinión. • Controla el tono de voz. • Se asegura de que todos participan y son tenidos en cuenta.

¹⁰ Open courseware. Equipo Docente en ABP Facultad de Psicología. Universidad de Murcia. Recuperado el 4/III/17 de: <http://ocw.um.es/cc.-sociales/la-metodologia-de-aprendizaje-basado-en-problemas/material-de-clase-1/tema-5.pdf>

MATERIAL (Centrado en el proceso y la tarea) 	• Organiza y custodia los materiales del equipo. • Regula los tiempos. • Se asegura de que los miembros del equipo mantengan limpia y ordenada su zona de trabajo. • Se encarga de la presentación de los resultados.

De los doce grupos con que contaba la clase, diez grupos escogieron un ecosistema distinto (la selva, la taiga, el desierto cálido, los ecosistemas humanizados, bosque mediterráneo, desiertos fríos, la sabana, ecosistema de agua salada, ecosistemas de agua dulce y Doñana –como un ecosistema cercano-) y dos de los grupos eligieron acciones perjudiciales y acciones beneficiosas para el medio ambiente.

Para comenzar el trabajo se formularon, tanto individualmente como grupalmente, una serie de preguntas motivadoras relacionadas con su espacio a estudiar.

Para detectar sus ideas, los alumnos respondieron a dos de las tres preguntas de la rutina de pensamiento K-W-L (¿Qué sé? ¿Qué quiero aprender? ¿Qué he aprendido?): ¿Qué sé? ¿Qué quiero saber?, dejando la tercera para el final del trabajo a modo de resumen que incorporarán al portafolio de cada grupo.

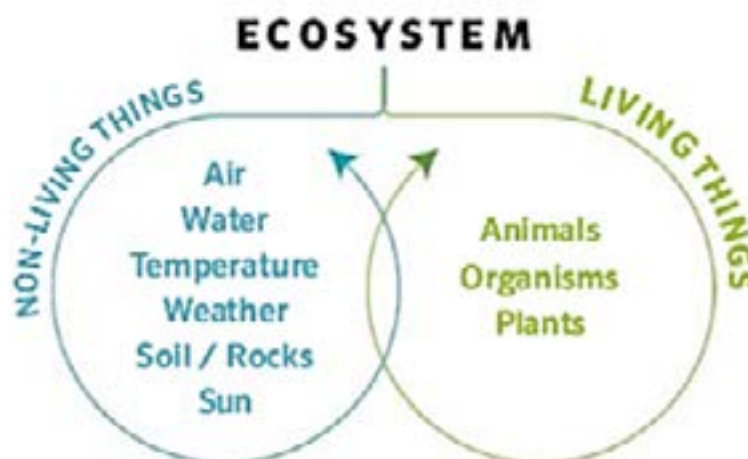
La trama de asignaturas y temas implicados en el proyecto queda recogido en el siguiente cuadro:

Ilustración 1. Asignaturas, objetivos y contenidos implicados en el proyecto

ÁREAS IMPLICADAS Y TEMAS: LOS ECOSISTEMAS				
SCIENCE	SOCIAL SCIENCE	ENGLISH	SPANISH	ART
TEMA: Ecosystems	TEMA: El clima	TEMA: Awesome animals	TEMA: La descripción	TEMA : Los paisajes
OBJETIVO: Saber los elementos de un ecosistema y cómo estudiarlo	OBJETIVO: Conocer el concepto de clima y tiempo atmosférico y su influencia en el medio ambiente	OBJETIVO: Saber describir los animales (características físicas y psicológicas)	OBJETIVO: Reconocer y usar los textos descriptivos	OBJETIVO: Representar las características de los paisajes del natural.
CONTENIDOS: Diferentes tipos de ecosistemas: Terrestres / acuáticos	CONTENIDOS: Influencias del clima en los ecosistemas	CONTENIDOS: Endangered animals / Comparison	CONTENIDOS: Redacción de cuentos sobre animales	CONTENIDOS: Elementos naturales y animales en movimiento

Partiendo de las Ciencias Naturales (Science), los alumnos investigaron sobre sus ecosistemas con total libertad y, con la ayuda de la biblioteca del centro y el aula de informática, encontraron libros y documentos en la web que les ayudaron a tener más información sobre su objeto de estudio que la que podían encontrar en sus libros de texto: cómo era la vegetación, la población animal y otros elementos. Además, por ellos mismos, empezaron a traer información impresa desde casa. El esquema básico de la información que tenían que aportar fue:

Ilustración 2. Imagen tomada del libro de texto. Science 5 -editorial SM-



La información aportada debía ser expuesta en un mural con el siguiente aspecto (ilustraciones 3, 4 y 5):

Ilustración 3. Modelo de mural con la información

POSTER DE TRABAJO ECOSYSTEMS					
ECOSYSTEM		COLD DESERT	HOT DESERT	TIGA	RAIN FOREST
PLACE					
BIOLOGICAL COMPONENTS	ANIMALS				
	PLANTS				
ABiotic COMPONENTS					
WEATHER					
OTHER ELEMENTS					

Ilustración 4. Alumnos trabajando en el mural



Ilustración 5. Otro aspecto del mural. Acciones beneficiosas y perjudiciales para el medio ambiente



Como complemento a lo anterior, desde la asignatura de Ciencias Sociales se aportó la información sobre el clima como uno de los elementos que va a condicionar y a su vez condiciona, cada ecosistema. Para ello se explicaron conceptos básicos sobre el clima y el tiempo atmosférico y se realizaron actividades que se añadieron a la carpeta de aprendizaje. Cada grupo investigó el clima típico de su ecosistema, haciendo su climograma correspondiente y estudiando las características de cada lugar, el tiempo y sus ubicaciones exactas.

Ilustración 6. Alumnas trabajando en el mural



Los contenidos se han tratado en inglés y español debido a que la asignatura de Ciencias Naturales se imparte en inglés –debido a un proyecto de anticipación del bilingüismo– y se han complementado con el tema de la asignatura de Lengua Inglesa. Por este motivo, dentro de cada ecosistema los alumnos investigaron los animales en peligro de extinción, tema que se corresponde con la asignatura de Inglés, dentro del tema que se organizó y programó para que coincidiera con el proyecto. En el tema los alumnos aprendieron a describir animales –recordando lo tratado en 3º EP sobre este mismo tópico– y tuvieron que aplicarlo a lo que estaban tratando en el proyecto. Para ello, cada alumno seleccionó un animal en concreto y describió sus características en esta segunda lengua completando la siguiente ficha:

Ilustración 7. Modelo de ficha para describir el animal en peligro de extinción

My endangered animal	
Where do they live?	
Appearance (physical description)	
What do they eat?	
Character	
Why are they in danger?	
How do they compare with another animal?	
How many are there today?	

En la asignatura de Lengua Castellana y Literatura se trataron los textos descriptivos (paisajes o animales), que sirvieron para confeccionar los textos que debían aportar a la gran presentación final del trabajo. Esta presentación final incluye dos sesiones para que los grupos de 5ºA y B presenten su proyecto al resto de los compañeros y, también, para que los alumnos presenten sus trabajos a las familias, a través de una tarde de encuentro en la que tendrán la oportunidad de compartir todo lo que han hecho a lo largo del proyecto.

En cuanto a la competencia artística, cada alumno dibujó una representación de su ecosistema, haciendo un acuerdo previo con su grupo, de forma que, entre todos lograron plasmar diferentes imágenes y paisajes de su objeto de estudio. El alumnado contó de nuevo con libertad de actuación (ilustraciones 8, 9 y 10). Para este tema pudieron buscar imágenes de los ecosistemas y plasmarlas de la mejor manera posible siguiendo las indicaciones del profesorado. La mayor parte de los alumnos optó por los dibujos coloreados con lápices de colores o ceras, aunque la técnica se propuso como libre, a elección de cada grupo.

Ilustración 8. Dibujo de un ecosistema humanizado



Ilustración 9. Dibujo de un ecosistema: taiga**Ilustración 10. Dibujo de un ecosistema: desierto cálido**

Aunque no fue objetivo de este proyecto incluir contenidos en lengua francesa —que se ha incorporado por primera vez al currículum de Educación Primaria en este curso—, los alumnos tuvieron la inquietud de preguntar al profesor de Francés sobre cómo se decían los diferentes ecosistemas en dicha lengua y lo aportaron a sus portafolios de grupo.

Hay que mencionar el esfuerzo de dos grupos que no seleccionaron un ecosistema en sí. Estos optaron por “Las acciones beneficiosas” y “Las acciones perjudiciales” para los ecosistemas, ya que tuvieron que adaptar algunos de los contenidos que debían trabajar y también la forma en la que van a presentar los contenidos.

En estos dos grupos, los alumnos centraron su atención en las acciones negativas o positivas y sus consecuencias. Ambos investigaron de manera distinta al resto. En lugar de estudiar los animales en extinción de un ecosistema en concreto, estos grupos aportaron información sobre la población animal que beneficia o perjudica al medio ambiente y al ser humano, dando una perspectiva diferente, al igual que lo hicieron respecto al clima, tratando el calentamiento global. A través de los ojos de los niños y sus capacidades artísticas, lograron poner de manifiesto muchas de las consecuencias de la sociedad consumista, de los pequeños gestos que cambian al mundo, plasmado en diferentes dibujos e incluso en una maqueta que hizo el grupo de las acciones perjudiciales para el medio ambiente.

Toda la información que han ido recogiendo y elaborando de las diferentes áreas, se incluyeron en una sola carpeta llamada “Our project: Ecosystems”, en las cuales los alumnos fueron controlando su propio conocimiento y descubrimientos y donde pudieron evaluar el proceso de las tareas e investigaciones. Además de esto, han plasmado la información en los dibujos y en el mural donde cada grupo pudo ver qué había hecho y cómo lo habían hecho los demás grupos.

Llegados a este punto, nos planteamos el porqué de una carpeta de trabajo o portafolio. El profesor Pozuelos Estrada (2007, p. 39) lo considera un elemento básico y útil para la evaluación, tanto del profesorado como del alumnado porque “consiste en un instrumento práctico destinado a compilar las variadas producciones y actividades que se efectúan a lo largo de la experiencia. Es por naturaleza bastante flexible y abierta a progresivas mejoras como consecuencia de las interacciones vividas y sugerencias expuestas. Reúne, por tanto, las aportaciones y evidencias inicialmente en versión provisional hasta que, al final, se exponen en su composición definitiva”.

Como ya hemos comentado anteriormente, como productos finales cabe reseñar las dos actividades realizadas como síntesis de este proceso. La primera de ellas, la creación de un resumen-mural (ver ilustraciones 3, 4 y 5), donde los alumnos reflejaron una síntesis de sus trabajos, para ello, completaron varios puntos: Clima y lugar, plantas y animales (componentes bióticos), componentes abióticos, y otros elementos (en donde los alumnos añadieron informaciones que consideraron relevante).

El mural ocupó una pared del pasillo existente entre ambos 5º, de manera que cualquier alumno pudo leer y conocer los puntos claves de los ecosistemas que habían estudiado sus compañeros, no solamente de clase, si no de curso. Este mural

sirvió también para detectar lo aprendido. Para las exposiciones orales, el mural se trasladó a la sala donde se realizaron, acompañando de la exposición de dibujos sobre los ecosistemas que habían hecho en las clases de Ed. Plástica.

La segunda actividad a destacar es la tarea de antes y durante la exposición final, en la cual los alumnos presentaron su ecosistema frente a los demás compañeros y profesorado y bajo la mirada de los padres (la presentación a las familias se desarrolló por la tarde, para facilitar la asistencia de los padres). Para su realización, los alumnos decidieron optar por crear una presentación en Impress (Openoffice) (ver ilustración 11) -aunque algunos grupos lo complementaron con carteles y maquetas-, dándole un mayor toque visual y explicativo a lo que narraron por grupos.

Para realizarla, los alumnos tuvieron que poner en práctica la Competencia Digital con la que, en principio, no contaban, ya que no todos sabían manejar programas para hacer presentaciones de diapositivas. Gracias a la colaboración de dos alumnas de prácticas¹¹, los alumnos pudieron llevar a cabo esta actividad en la que se adentraron en el mundo de las diapositivas. Guiados por sus propios intereses y por la forma de organización que decidieron en el grupo, fueron añadiendo la información que querían transmitir oralmente. Durante la exposición, el alumnado puso en marcha la competencia en comunicación lingüística desarrollando de la expresión oral y escrita, su capacidad de transmisores de conocimientos y fueron capaces de responder preguntas lanzadas por los compañeros y por los padres, creando una interacción con agentes que normalmente no están dentro del aula.

Otro elemento a destacar de la exposición y comunicación oral de los estudiantes, trabajando por proyectos, ha sido la capacidad de organización realizada por ellos mismos, mediando las diferentes intervenciones y logrando que todos los miembros del grupo hablasen por igual.

3.2 ¿Cómo han trabajado los alumnos?

Partimos de la pregunta ¿por qué hacer que los alumnos investiguen? La respuesta idónea la tiene Tonucci (2010) el cual considera que la investigación es la actividad natural en el niño para aprender. “La simple observación nos muestra cómo el niño empieza a conocer con la técnica de la investigación, a través de la experimentación, del tanteo y del error, etc. De hecho es el método de la ciencia; se trata de reelaborar creativamente la información que se posee, probar, intentar, verificar, comparar... Esto lo hace el niño desde que nace, hasta que la escuela interrumpe ese modo de conocer imponiéndole otro, ajeno y clasista y determinado por opciones políticas de clases dominantes que imponen un modelo escolar literario y verbalista. En ese modelo incluyo una cierta moda de la investigación, que traduce todo lo positivo de ésta en mera retórica literaria”.¹²

Mediante los proyectos de trabajo, los alumnos son los encargados de gestionar los materiales con los que trabajan y qué les es interesante y qué no para conseguir sus fines. El trabajo por proyecto en grupos cooperativos invitó de manera implícita, a un reparto de las tareas y temas a investigar, es decir, además de aprender contenidos, los alumnos también aprendieron a autorregularse y planificar las tareas, de tal manera que se promocionó la distribución y ordenación de trabajo de aula. De esta forma, consideramos que las competencias para aprender a aprender y sentido de la iniciativa y espíritu emprendedor se pusieron de manifiesto, así como las inteligencias intrapersonal e interpersonal.

Para ayudarles en la organización del proyecto, entregamos a los alumnos diferentes fichas en las que ellos tuvieron que detallar la labor de cada miembro del grupo: quién haría los resúmenes, quién traería fotos, quién escribiría los documentos para el póster, quién haría la presentación en el ordenador, etc.

Debemos resaltar que los alumnos fueron descubriendo que, de lo que se planea a lo que se llega a hacer realmente, hay una gran distancia. Ya que el propio proyecto fue sugiriendo nuevas tareas y funciones que, de primera mano, los estudiantes desconocían y que tuvieron que ir negociando a medida que el proyecto iba tomando forma.

Creemos que la palabra que mejor define el papel del alumnado es «libertad». A pesar de realizar tareas guiadas, los alumnos han manejado su propia información y han plasmado lo que ellos mismos querían resaltar, aspecto que se ve reflejado en las dos tareas mencionadas como actividades destacadas. Este punto es interesante discutirlo porque los alumnos, aunque han tenido una trayectoria de trabajo en grupos cooperativos y han sido entrenados en miniproyectos, suelen estar acostumbrados a actividades guiadas y donde tenían poco margen de actuación. Ahora han tenido que gestionar las tareas y también han tenido que negociar entre ellos cómo debían realizarlas. Esto ha servido, además, como ya hemos planteado, para que surgieran iniciativas y nuevas tareas que –a manera de retos- ellos han ido generando.

Se podría afirmar que los alumnos, en esta ocasión, han sido los mayores encargados de construir sus propios conocimientos, ya que no han tenido solo tareas en las que las respuestas podían ser buscadas en su propio libro de texto, sino que han tenido que manejar diferentes fuentes documentales e, incluso, han solicitado la ayuda de expertos para poder finalizar algunas actividades.

Al tratarse de un trabajo por proyectos cooperativo, los intereses individuales se han adaptado a los continuos consensos grupales, planteando metas de manera conjunta e intentando contentar y realizar todas las ideas que se iban aportando.

Además, el ritmo de trabajo y los distintos estilos de aprendizaje también marcaron la diferencia entre unos grupos y otros. Algunos, no se conformaron con realizar su comunicación oral apoyándose en el recurso de Impress (Openoffice) sino que crearon otros materiales, trabajando más pero logrando una mejor explicación, presentación y exposición.

En definitiva, el papel del alumno ha sido activo y protagonista durante todo el proceso.

¹¹ Una de Magisterio en Educación Primaria –que ha participado desde el principio en la elaboración del proyecto- y otra del Máster en Comunicación y Educación audiovisual –que se incorporó más tarde-.

¹² Fragmento de una entrevista realizada a Francesco Tonucci en 2010. Recuperado el 3/III/17 de: <https://colectivoeducadores.files.wordpress.com/2010/02/francesco-tonucci-investigar-en-la-escuela.pdf>

Ilustración 11. Alumnas realizando la presentación en Impress (Openoffice)

Además de lo anterior, consideramos que el trabajo por proyectos respeta los diversos ritmos de trabajo de los alumnos y facilita que ellos se sientan parte del equipo y que puedan contribuir al producto final, cada uno desde sus propias capacidades, entendiendo que es el resultado final lo que importa y que este depende del compromiso personal con la tarea.

3.3 ¿Cuál ha sido el papel del maestro?

La labor del docente en esta experiencia ha sido principalmente la de observar y guiar, aunque el papel del maestro como ayudante organizativo también ha sido esencial.

Este proyecto ha sido liderado por los dos profesores de Ciencias Naturales y Sociales (uno en 5º A y otra en 5º B), contando con la colaboración de los demás profesores de las demás áreas de la siguiente forma:

- Profesor de Lengua Extranjera (Inglés): imparte en los dos grupos y también CCNN, CCSS y Plástica en 5ºA.
- Profesor de Plástica y Lengua Española en 5ºB.
- Profesora de Lengua Española en 5ºA.
- Alumnas de Prácticas que han colaborado en los dos grupos, ejerciendo –a veces- de enlace entre las diferentes actividades.

Los profesores, trabajando en equipo, han sido los encargados de controlar las tareas, de marcar límites de tiempos, de elaborar y entregar fichas que ayudaban a la organización grupal de los estudiantes, así como la difícil tarea de corregir y valorar todo lo que el alumno produce y recoge en su carpeta de trabajo, además de evaluar los productos finales.

Aunque el alumno haya sido el protagonista de esta experiencia, los maestros, por su parte, han sido piezas fundamentales de este puzle educativo, destacando sobre todo la guía y la ayuda que ha aportado al aprendizaje del niño. Esto no hubiera sido posible sin la coordinación del equipo docente.

3.4 ¿Y el rol desempeñado por la familia?

Desde el primer día, los familiares han contribuido aportando informaciones impresas e imágenes a sus hijos. Durante esta experiencia, el papel de este agente externo ha sido clave por contribuir mediante libros, información oral, etc., pero es al final del proceso cuando su labor ha sido más activa, gracias a la asistencia a la exposición final.

Dicha exposición se convirtió en una interacción de alumnos-padres, en la que en algunos momentos, rozando casi el debate, las familias pudieron ver lo que sus hijos habían aprendido con la realización de este proyecto.

Esto último es interesante porque cuando las familias se enfrentan a situaciones de aprendizaje de sus hijos en las que ellos no pueden monitorizar –en la mayoría de los casos- qué están realizando estos en clase, porque no son las actividades que tradicionalmente han venido realizando, o porque no hay lecciones que memorizar y luego demostrar que se saben mediante un examen, se generan incertidumbres. Por este motivo, decidimos hacer este encuentro con los padres, para que pudieran ver que los niños están aprendiendo y que es momento de dejar ciertos espacios de libertad a los niños para que gestionen su propio aprendizaje.

Cabe destacar que los padres también contribuyeron a la evaluación de la experiencia ya que dispusieron de una ficha para evaluar las exposiciones que sirvió para la retroalimentación y contribuirán para mejorar algunos aspectos para próximas actividades o proyectos.

4. REFLEXIÓN DE LA PRÁCTICA INNOVADORA

4.1 ¿Cuáles han sido las limitaciones o desventajas encontradas?

Implementar nuevas formas de enseñanza-aprendizaje siempre es complejo. A pesar de la coordinación e implicación de los docentes y la predisposición de los alumnos, siempre hay discrepancias entre lo que se programa y lo que en realidad se

obtiene. A lo largo de este camino nos hemos encontrado con la complejidad para planificar y llevar, en cierta medida, un ritmo similar entre ambas clases, a pesar de la buena coordinación y contacto continuo entre los dos maestros implicados. De la misma forma, no todos los grupos de alumnos han aprovechado el tiempo de la misma forma o se han coordinado para conseguir resultados similares al final.

Según el Instituto Tecnológico y de Estudios Superiores de Monterrey (2003, p. 31),¹³ las principales dificultades y barreras para poner en práctica el el trabajo por proyectos o el ABP son las siguientes:

- Es una transición difícil: esta técnica didáctica no puede implementarse rápidamente y es necesario un estudio previo de las condiciones y ver qué situaciones pueden ser planteadas así y cuáles no.
- Requiere una modificación curricular: es necesario que los contenidos puedan abordarse de una forma distinta, desde muchos ángulos, con mayor profundidad, desde diferentes disciplinas. Para ello hay que contar con un equipo docente abierto a hacer estas modificaciones.
- Se requiere más tiempo: en el ABP no es posible transferir información de manera rápida como en métodos convencionales. Al trabajar con ABP se requiere más tiempo para lograr los aprendizajes y para planificar la enseñanza.
- El trabajo por proyectos o el ABP es más costoso: en la medida en que se requiere mayor capacitación y tiempo para lograr los objetivos de aprendizaje.
- Los profesores carecen de la habilidad de facilitar: la inercia hacia continuar siendo el centro de la clase y exponer la información es muy fuerte. Las competencias para hacer de guía en lugar de ser el transmisor del conocimiento son difíciles de conseguir porque, en la mayoría de las ocasiones, hemos aprendido así y en la formación inicial de los docentes se mantienen estas formas.

En nuestro caso, la formación inicial del profesorado no ha sido obstáculo porque ya se ha participado en acciones de educación permanente en las que ha estado implicado todo el claustro. No obstante, algo muy notorio ha sido la dificultad a la hora de controlar y manejar el tiempo de cada tarea y su realización. Por una parte, los niños están acostumbrados, aunque hayan hecho otros trabajos de grupo o cooperativos, a que los tiempos los organicen los profesores y sean ellos quienes programan qué tarea y en qué tiempo debe ejecutarse. Por otra parte, quizás las más notable, han sido las dificultades e inconvenientes de trabajar en grupos cooperativos. Por ejemplo, cuando hay tareas motivadoras a repartir, se generan enfrentamientos (manejo de las TICs para la presentación en Impress –Openoffice–) para ver quién la realiza y cuando existe alguna tarea menos emocionante o más tediosa, el alumnado tiende a evitarla, llegando, en algunas ocasiones a una peor ejecución de dicha tarea.

Dejar fluir todos los intereses de los alumnos al completo puede conllevar desorganización, y de esto al caos, por lo que hay que ofrecer el apoyo suficiente y también algunos instrumentos que favorezcan la organización de los grupos.

Otras dificultades que hemos observado en el trabajo de los alumnos son:

- Poca implicación personal en el trabajo en equipo porque prefieren el trabajo individual.
- La participación y aporte de recursos/trabajo no es homogénea –de ahí que es importante la coevaluación y la heteroevaluación–.
- Algunos alumnos están demasiado acostumbrados al trabajo tradicional y tienen dificultad para manejar el reto que les supone tener que organizarse con iguales.
- Abundancia de información a la que se puede acceder en la actualidad (uso de las TICs), que les dificulta el proceso de selección de la información relevante para cubrir aspectos del proyecto a realizar.
- Discrepancias entre la tarea a realizar y lo que realmente se pide. Algunos estudiantes consideran que hacer la actividad supone una evaluación positiva, independientemente de que esté bien realizada o que realmente responda a lo que se pide. Por este motivo hemos introducido la autoevaluación en el proceso.

4.2 ¿Qué ventajas y oportunidades de aprendizaje hemos encontrado durante la experiencia?

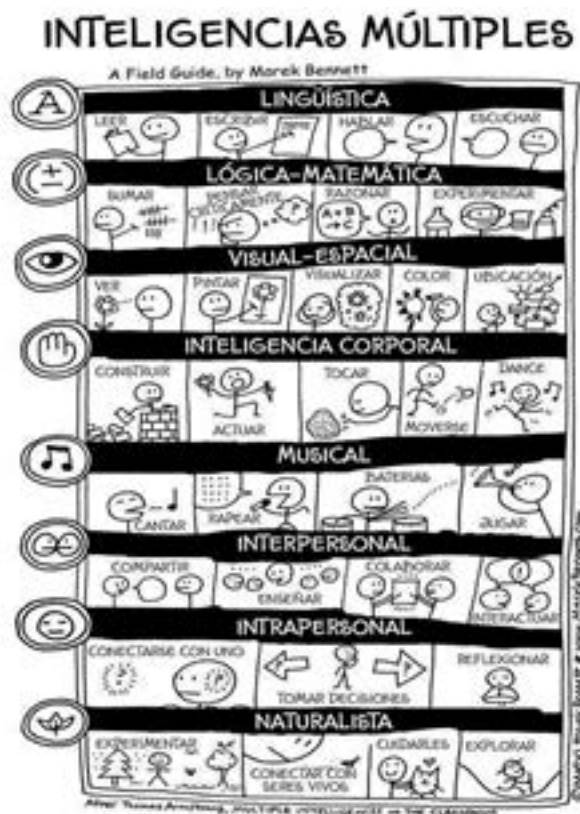
El trabajo por proyectos ha permitido abordar temas importantes que no se adhieren a una materia concreta, como por ejemplo, el tema de la contaminación de Huelva, la acción humana de la fábrica que han trabajado los alumnos de los dos grupos que no escogieron un determinado ecosistema.

Ha favorecido el alejamiento del libro de texto como única fuente de información, incorporando actividades no habituales y motivadoras como la creación de una presentación en Impress (Openoffice) o tener que comunicar sus resultados a otros compañeros y a los padres.

Ha fomentado el trabajo en grupo y todo lo que eso conlleva, los estudiantes se han sentido parte de un equipo que debía cumplir ciertas metas, y pusieron en funcionamiento una serie de estrategias cognitivas complejas de manera conjunta, como planificar, consultar, concluir, informar... Todo ello apoyado en la realización de tareas que les han permitido pensar en cómo aprenden. Los alumnos han contado con estrategias y rutinas de pensamiento, así como un cuadro con la taxonomía de Bloom y una caja de herramientas de las inteligencias múltiples (ilustración 12) donde han podido ir analizando qué hacían y qué estaban desarrollando en cada momento –todo ello monitorizado por el profesorado.

¹³ Tomado parcialmente de: <http://www2.uca.es/ordenacion/formacion/docs/jifpev4-documentacion.pdf>

Ilustración 12. Caja de herramientas de las inteligencias múltiples



La relación familia-escuela se ha potenciado fácilmente con esta metodología, y ha permitido acercar a los padres el conocimiento que adquieren sus hijos en el entorno escolar, estimulándoles a la hora de demostrar lo aprendido en clase.

Ha ofrecido un enfoque más personalizado y adaptado a los intereses de los alumnos, logrando también autonomía y responsabilidad durante todo el proceso.

Ha conseguido que el alumno sea dueño de su propio conocimiento a la vez que ha fortalecido su actitud investigadora.

Ha logrado unir diferentes materias del currículum oficial en un mismo compromiso.

Ha permitido atender a la diversidad partiendo del autoconocimiento –cada alumno ha sido consciente de qué podía aportar al grupo y ha trabajado en la medida de sus posibilidades y adecuando el trabajo a su propio ritmo-. El trabajo por proyectos “no sólo representa una opción eficaz para la adquisición de conocimientos sino también para la socialización del alumnado, para la integración del currículum y para la atención a la diversidad en contextos complejos”. (Trujillo Sáez, s/f, p. 15)

4.3 ¿Cómo valoramos este proceso de enseñanza y aprendizaje?

Trabajar por proyectos el aprendizaje es algo más que acumular información y salir victorioso de los típicos rituales académicos, y es que, de esta forma, los alumnos aprenden porque quieren y lo que quieren.

La competencia en Comunicación lingüística se ha visto reflejada en todo momento, especialmente en las dos áreas de la lengua (primera y segunda) donde los alumnos aprendieron a redactar textos descriptivos y formas verbales adecuadas tanto en inglés, como en español. Además, aprendieron el nombre de sus ecosistemas en francés. De esta, destacamos la tarea de la exposición final, donde los alumnos, a través de la inteligencia lingüística-verbal, pusieron todo su esfuerzo en el acto de la comunicación oral.

Las competencias a destacar del trabajo por proyectos, además de las mencionadas anteriormente, son la competencia de Aprender a aprender y la competencia de Sentido de iniciativa y espíritu emprendedor, por motivos nombrados anteriormente. Por su parte, se ha contribuido, además, al desarrollo de las inteligencias lingüístico-verbal, la intrapersonal –para tareas organizativas y reflexivas-, interpersonal –a la hora del trabajo grupal-, la visual-espacial –a la hora de representar gráficamente los ecosistemas y de presentar la información en el mural y en las diapositivas- y, por último, la lógico-matemática –a la hora de secuenciar las actividades, organizar los materiales,...

Finalmente consideramos que la competencia de Conciencia y Expresiones Culturales ha resaltado en los grupos de trabajos que tenían como objeto de estudio las acciones positivas o negativas para el medio ambiente, aunque todos los grupos han desarrollado su inteligencia más naturalista, demostrando también Competencias Sociales y Cívicas en la forma de organizarse y llevar el proyecto adelante mediante la planificación y la negociación.

A pesar de la dificultad a la hora de planificar acorde a los intereses de todos los alumnos, esta experiencia ha servido para desconectar de la rutina y ofrecer una manera distinta de enseñar y aprender a todos y cada uno, gracias también, a la asunción y adaptación de roles, la cual ha venido de la mano con el sentido de la responsabilidad. En general ha sido valorada positivamente por los alumnos que han manifestado, en sus evaluaciones, volver a repetir esta forma de trabajar. También, cómo no, ha servido para que el profesorado ponga de manifiesto otras competencias docentes.

Para próximos cursos volveremos a repetir el Proyecto «Ecosystems/Ecosistemas» porque ha logrado un aprendizaje significativo y ha desarrollado todas las competencias establecidas para Educación Primaria, incluida la Competencia digital, -aunque más específicamente se trata en una asignatura que los alumnos no tienen hasta llegar a 6º curso de EP- y ha desarrollado las inteligencias múltiples.

BIBLIOGRAFÍA

- Barrows, H. S. (Noviembre de 1986). A taxonomy of problem-based learning methods. *Medical Education*, 20(6), 481-486.
- Barrows, H., & Tamblyn, R. (1980). *Problem-based Learning*. New York: Springer.
- Benítez Sillero, A. (2008). El trabajo por proyectos en educación. *Innovación y experiencias educativas - Revista Digital*(12).
- Biggs, J. B. (2005). *Calidad del aprendizaje universitario*. Madrid: Narcea.
- Blumberg, P., & Michael, J. (1992). Development of self-directed learning behaviors in a partially teacher-directed problem-based learning curriculum. *Teaching and learning in Medicine*(4 (1)), 3-8.
- Bottoms, G., & Webb, L. (1998). *Connecting the curriculum to "real life". Breaking ranks: Making it happen*. Reston: National Association of Secondary School Principals.
- Castro Solano, A. (2002). Las inteligencias múltiples en la escuela. *Psicodebate. Psicología, Cultura y Sociedad*(2), 23-40.
- Coria Arreola, J. M. (2011). El aprendizaje por proyectos; una metodología diferente. *E-formadores*.(5), 1-8.
- Dochy, F., Segers, M., & Sluijsmans, D. (1999). The use of self-, peer and co-assessment in higher education: A review. *Studies in higher education*, 24(3), 331-350.
- Font Ribas, A. (2004). Líneas maestras del aprendizaje por problemas. *Revista Interuniversitaria de Formación del Profesorado*.(18), 79-95.
- García Sevilla, J. (2008). *El aprendizaje basado en problemas en la enseñanza universitaria*. Murcia: Servicio de publicaciones de la Universidad de Murcia.
- Glaser, R. (1990). The maturing of the relationship between the science of learning and cognition and educational practice. *Learning and instruction*(1 (2)), 129-144.
- González Gil, F. (2008). El rol del tutor. En J. García Sevilla, *El aprendizaje basado en problemas en la enseñanza universitaria* (págs. 75-89). Murcia: Servicio de Publicaciones de la Universidad de Murcia.
- Guzmán Casas, M. (2009). Los proyectos y su secuencia de trabajo. *Revista digital Enfoques Educativos*(38), 42-48.
- Iglesias, J. (Septiembre de 2002). El aprendizaje basado en problemas en la formación inicial de los docentes. *Perspectivas*, XXXII(3), 1-17.
- Mateo Villodres, L. (2010). Origen y desarrollo de las Competencias Básicas en Educación Primaria. *Temas para la educación*(7).
- Monterrey, S.A., Instituto Tecnológico de Estudios Superiores. (2003). *El aprendizaje basado en problemas como técnica didáctica*. Recuperado el 5 de marzo de 2017, de Instituto Tecnológico y de Estudios Superiores de Monterrey: http://sitios.itesm.mx/va/dide2/tecnicas_didacticas/abp/abp.pdf
- Morales Bueno, P., & Landa Fitzgerald, V. (2004). Aprendizaje basado en problemas. *Teoría*(13), 145-157.
- Norman, G., & Schmidt, H. (1992). The Psychological Basis of Problem-Based Learning: A Review of the Evidence. *Academic Medicine*(67 (9)), 557-565.
- Parikh, A., McReelis, K., & Hodges, B. (2001). Student feedback in problem based learning: a survey of 103 final year students across five Ontario medical schools. *Medical Education*, 35(7), 632-636.
- Pereira Baz, M. (31 de Enero de 2014). *CEDEC-Centro Nacional de Desarrollo Curricular en Sistemas No Propietarios*. Recuperado el 7 de abril de 2017, de EducaLAB: <http://cedec.educalab.es/es/noticias-de-portada/1559-8-claves-del-aprendizaje-por-proyectos>
- Pozuelos Estrada, F. (2007). *Trabajo por proyectos en el aula: descripción, investigación y experiencias*. Sevilla: Cooperación Educativa.
- Ramos García, J. (1999). Preguntar, debatir, indagar, compartir, cuestionar, reconsiderar, concluir... para aprender. *Investigación en la escuela*.(38), 19-44.
- Robinson, V. (1993). *Problem-based methodology: research for the improvement of practice*. Emerald.
- Romera Morón, M. M., & Martínez Cárdenas, O. (2009). *Los rincones: propuestas para jugar y aprender en el aula de Educación Primaria en el entorno de las competencias básicas*. Granada: Asociación Pedagógica Francesco Tonucci.
- Sola Ayape, C. (2005). *Aprendizaje basado en problemas. De la teoría a la práctica*. México: Trillas.
- Tann, C. (1991). *Diseño y desarrollo de unidades didácticas en la escuela primaria*. Madrid: MEC -Morata.

Tobón, S. (2006). *Método de trabajo por proyectos*. Uninet.

Trabucco, J. C., Benhayón, M., Fridzon, D., & Weisleder, J. (2006). Entorno virtual de aprendizaje apoyado en elementos de resolución de problemas. *VIII Congreso Iberoamericano de Informática Educativa*. San José (Costa Rica).

Trujillo Sáez, F. (s/f). *ABP. Aprendizaje basado en proyectos*. Recuperado el 3 de marzo de 2017, de INTEF. Instituto Nacional de Tecnologías Educativas y de Formación del Profesorado.: http://formacion.educalab.es/pluginfile.php/62104/mod_resource/content/4/AbP_3_15_B1_definicionAbP.pdf

Uribe Mallarino, C. (2012). Interdisciplinariedad en investigación: ¿Colaboración, cruce o superación de las disciplinas? *Universitas Humanística*(73), 147-172.

Vergara Ramírez, J. J. (2016). *Aprendo porque quiero. El aprendizaje basado en proyectos (ABP) paso a paso*. Madrid: SM.

INFORME DE TRABAJO DE UNA TAREA EN GRUPO
ECOSYSTEMS

Tarea _____

Nombre y nº de los alumnos _____

Nombre del grupo: _____

NORMAS PARA ELABORARLO: Este documento tiene como objetivo que expliquemos por escrito todo el trabajo que hemos hecho durante el desarrollo de una tarea. Será redactado por el secretario, pero todos deberemos revisar el resultado final. Este documento será parte del trabajo de la tarea. El profesor decidirá cómo recogerlo y evaluarlo. Se puede usar la parte de atrás.

Puntos del informe:

Planificación de la tarea (Contenido, formatos, distribución de tareas dentro del grupo ...).

I

Búsqueda de Información (Contenidos investigados, fuentes de información consultadas, información extraída).

Elaboración del producto o proceso (Explicación de la creación que se ha hecho contenidos, formato ...).

Presentación pública (Medio elegido para su difusión. Si se lleva a cabo una exposición oral o la creación de un recurso, debe incluirse un guión o estructura de los aspectos que se van a informar).

Valoración (Evaluación del producto o proceso final a partir de los puntos de la rúbrica de evaluación).

DOCUMENTO DEL ALUMNO AL INICIAR UNA TAREA - 2

ECOSYSTEMS

PRODUCTO FINAL:	ALUMNO:	FECHA:
¿Qué producto quiero/quremos construir?		
¿Qué pasos tengo/tenemos que dar?		
¿Qué espero/esperamos aprender al elaborar este producto?		
¿Hago/hacemos revisiones de lo que estamos aprendiendo?, ¿utilizamos alguna forma de recoger lo que vamos haciendo?		
Necesito/necesitamos demostrar lo que hemos aprendido haciendo:		

EVALUO LA EXPERIENCIA DE AULA ECOSYSTEMS

Nombre del alumno: _____ nº: _____

GRUPO: _____

- 1.- ¿Te ha gustado trabajar en este proyecto?, ¿Por qué?

- 2.- ¿Crees que has aprendido a través de las actividades y tareas que has ido realizando?
Razona la respuesta.

- 3.- ¿Cómo te has sentido? (contigo mismo, con tus compañeras, con el profesorado)

- 4.- ¿Volverías a trabajar de esta manera en el aula? ¿Por qué?

- 5.- ¿Qué es lo que más te ha gustado? ¿Por qué?

- 6.- y... ¿lo que menos? ¿Por qué?

- 7.- ¿Cuáles son los problemas u obstáculos que habéis encontrado para el logro de los resultados previstos en el proyecto?

- 8.- ¿Has trabajado bien en tu grupo?

- 9.- ¿Has participado en todas las decisiones adoptadas por tu grupo?

- 10.- ¿Qué cambiarías para mejorar?

GUÍA PARA LA AUTOEVALUACIÓN

ECOSYSTEMS

Nombre: _____ N°: _____

GRUPO: _____

Ahora se trata de que nosotros mismos evaluemos el trabajo que hemos realizado durante este proyecto.

1. Rellena la siguiente autoevaluación:

ASPECTOS A TENER EN CUENTA	Siempre	La mayoría de las veces	Ocasional-mente	Pocas veces
Participé responsablemente				
Cumplí los plazos				
Aporté ideas, fuentes de consulta, otros...				
Cuidé los materiales de trabajo				
Contribuí a que otros participaran				
Escuché y valore el trabajo de mis compañeros				
Lleve todos los trabajos al día				

2. Señala tres cosas que has aprendido al trabajar este tema y que antes no sabías:

1. _____

2. _____

3. _____

3. Señala las actividades que más te sirvieron para poder aprender.

1. _____

2. _____

3. _____

OTROS ASPECTOS QUE QUIERAS APORTAR Y QUE NO HAYAS SENALADO YA:

TABLA DE EVALUACIÓN GRUPAL (miembros del grupo)

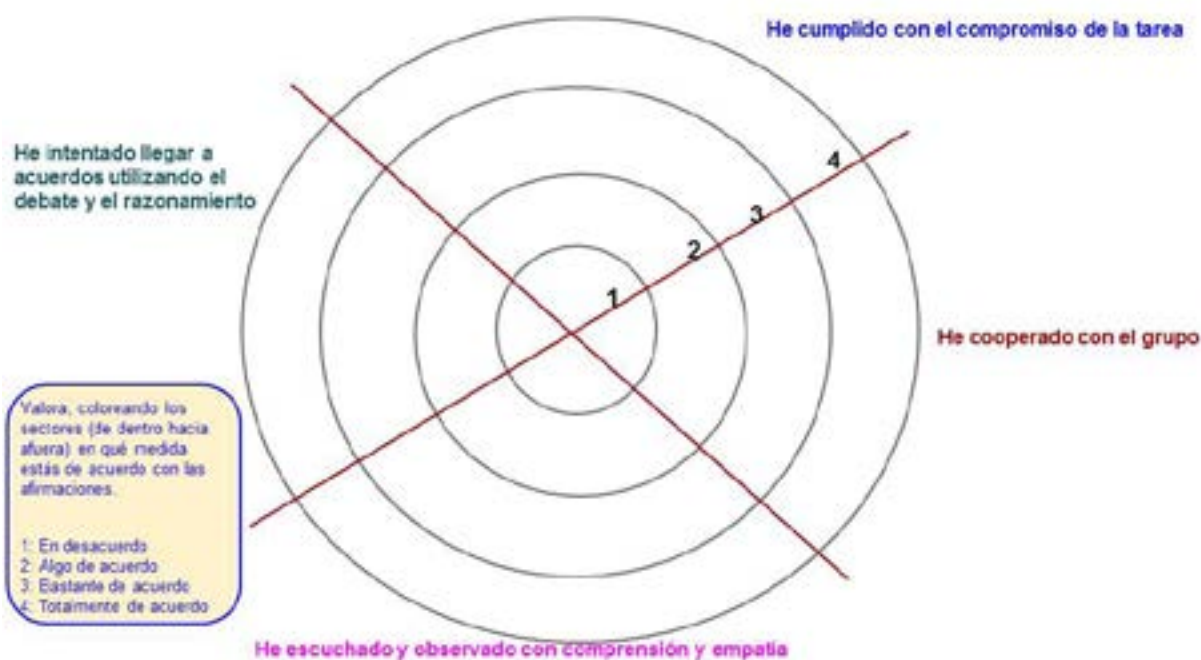
ECOSYSTEMS

NOMBRE DEL GRUPO: _____
¿QUÉN EVALÚA? _____

	NOMBRE DE LOS COMPONENTES			
Acepta el reparto de tareas				
Es responsable con la parte de trabajo asignada				
Participa en las discusiones de grupo aportando ideas, clarificando...				
Escucha activamente a los demás				
Acepta las opiniones de los miembros del grupo				
Muestra respeto a todos/as				
No entorpece el trabajo del grupo				
Alimenta, apoya y felicita al resto de compañeros y compañeras				
Dificulta el trabajo porque no aporta los materiales				
Pone pegas al trabajo/tarea asignada				
Entiende lo que hay que hacer y aporta soluciones				

FORMA DE EVALUAR: 3 (TOTALMENTE DE ACUERDO), 2 (DE ACUERDO), 1 (PARCIALMENTE DE ACUERDO), 0 (EN DESACUERDO)

Extraído/adaptado de *Aprender a Aprender* de Jéssica Bouas



TRABAJAR ACTIVIDADES ECONÓMICAS EN EL GRADO DE EDUCACIÓN PRIMARIA: UNA EXPERIENCIA EN LA CIUDAD DEL ARCOÍRIS

Inmaculada Gómez Hurtado

Departamento de Didácticas Integradas, Universidad de Huelva
(Inmaculada.gomez@ddcc.uhu.es)

Inmaculada González Falcón

Departamento de Educación, Universidad de Huelva
(Inmaculada.gonzalez@dedu.uhu.es)

RESUMEN

La presente comunicación desarrolla una experiencia de innovación docente en el 4º curso del Grado de Educación Primaria en la asignatura Didáctica de las Ciencias Sociales II. Esta experiencia tiene como objetivo desarrollar los contenidos teórico-prácticos relacionados con las metodologías didácticas activas para enseñar actividades económicas en la Educación Primaria. Para ello, se ha llevado a cabo una experiencia en el laboratorio didáctico “Ciudad Arcoíris” el cual se distribuye en diferentes rincones que simulan una ciudad. Los resultados muestran una alta satisfacción por parte de los estudiantes del Grado de Educación Primaria y de los maestros y maestras que han colaborado en dicha experiencia. Además, los estudiantes han valorado positivamente la construcción y aplicación del conocimiento teórico a través de una experiencia práctica. Concluimos que el uso de metodologías didácticas activas en la enseñanza de las Ciencias Sociales contribuye a la construcción del conocimiento del alumnado en dicha área.

Palabras clave: Actividades Económicas, Educación Primaria, Educación Superior, Metodologías Activa.

1. INTRODUCCIÓN

El desarrollo de los contenidos relacionados con actividades económicas en la Educación Primaria ayuda al alumnado a adquirir las competencias necesarias para desenvolverse como ciudadanos y consumidores críticos en su vida diaria. Las actividades económicas son un campo fundamental a trabajar en el área de Ciencias Sociales. La necesidad de que el alumnado de Educación Primaria conozca los aspectos más elementales del sistema económico es incuestionable. No obstante, la escuela no ha asumido esta cuestión posiblemente por dos motivos: porque existe una economía básica que se aprende en la calle o bien porque hay conceptos muy complejos que es mejor trabajarlo en niveles posteriores (Travé, 2006).

Esto hace fundamental la educación económica para una alfabetización económica que promueva y proporcione las herramientas necesarias para comprender el mundo económico y poder tomar decisiones personales y sociales sobre los problemas económicos que encontramos cada día en nuestro día a día (Denegri, 2006).

La población infantil y juvenil forma parte la ciudadanía económica la cual consume y es objetivo principal del sector publicitario, el cual a través de los medios de comunicación invita y crea expectativas en esta población. Por tanto, es relevante que la educación económica no interese ya que son las condiciones económicas las que condicionan el futuro, los estudios y el trabajo (Santesteban, 2008). Kemmis, Cole y Sugget (2007) citados por este autor consideran que es importante trabajar contenidos tales como el desempleo, el cambio tecnológico, los cambios en la estructura de la fuerza de trabajo y las modificaciones en las ocupaciones de la juventud.

Con la crisis económica, la educación económica, como dice Pagés y González (2010), se hace más necesaria en la educación obligatoria, ya que ayudará al alumnado a comprender situaciones como el desempleo en su familia, el desahucio de un vecino de su casa o que ya no pueda tener todos los caprichos que antes su familia le concedía.

La alfabetización económica de la ciudadanía, dice Santesteban (2013, p. 28), *tiene sentido si la dirigimos hacia la comprensión de esta realidad tan tozuda y compleja, para comprender cómo afecta la economía a nuestra vida y a nuestras expectativas, y si después levantamos la cabeza y enseñamos a mirar la perspectiva del cambio económico, social y político en el futuro, algo que puede comenzar hoy mismo.*

Los resultados obtenidos por Travé y Pozuelos (2007) en su investigación relacionada con la formación del profesorado en cuanto a contenidos económicos están ausentes e incide en el desinterés por la enseñanza de la economía en las etapas obligatorias. Estas carencias en el profesorado fomentan el analfabetismo económico del alumnado.

Es por este motivo que se hace necesario introducir en la formación inicial de maestros cuestiones relacionadas con las actividades económicas. De esta forma, en el Grado de Educación Primaria de nuestra universidad se desarrollan los contenidos básicos en la asignatura Didáctica de las Ciencias Sociales II de 4º.

Para el desarrollo de los contenidos de la asignatura, nos basamos en el Proyecto Investigando nuestro mundo: Investigando las actividades Económicas (Travé, 2006). Este proyecto se trata de una propuesta curricular basada en un currículum integrado en el cual se presenta el conocimiento científico de la temática, el conocimiento escolar, las concepciones del alumnado y tipos de actividades que se pueden desarrollar en el aula.

En el caso de Investigando Actividades Económicas, Travé (2006) explica que el estudio de esta temática en primaria facilita el desarrollo de la dimensión vital y social de la persona que aprende y propicia estructuras que permiten la interacción

con el medio uniendo la problemática económica con el resto de los ámbitos de investigación. De esta forma, la alfabetización económica contribuye a la alfabetización científica proporcionando las habilidades y valores necesarios para el desarrollo social y personal. Como explica Travé (2006), conocemos que las concepciones relacionadas con la economía se forman tanto en la vida, como en la vida cotidiana, a través de los medios de comunicación y también en la escuela. Por ello, es importante que la escuela no sea la única que propicie la organización del conocimiento económico necesario para desenvolverse como ciudadanos. Cualquier proyecto de aula, está relacionado con aspectos económicos.

Este proyecto es una propuesta para que el profesorado de Educación Primaria lo desarrolle en sus aulas y se basa en una metodología investigadora teniendo como principios básicos la globalización del conocimiento a través de un currículum integrado. Dicha propuesta, es estudiada por los estudiantes de formación inicial del Grado de Educación Primaria. Para su estudio, partimos de una metodología coherente que parte también de la investigación escolar donde es el propio estudiante el que va construyendo su conocimiento a partir de lecturas, seminarios, exposiciones, talleres, rincones, etc.

El uso de metodologías activas desde un enfoque investigador provoca la adquisición de un conocimiento teórico-práctico por parte del alumnado. De esta forma, estudios como Bigg (2003), Contreras y otros (2005), De Miguel (2006), Fonseca y Aguaded, (2007), Fry y otros (2003), García-Varcácel (2001), Ponsa y otros (2009), Rué (2007), Sánchez (2008), Ubieto y otros (2008), Zabalza (2002), Zabalza y Zabalza (2010) muestran que la docencia en la Universidad necesita un cambio hacia metodologías activas de enseñanza-aprendizaje que permitan el desarrollo de los contenidos y el aprendizaje de los mismos por parte del alumnado.

De acuerdo con Rekalde y otros (2014), consideramos que la enseñanza en la universidad no debe limitarse al conocimiento exclusivo de las disciplinas y de los contenidos científicos conceptuales de la misma sino que debe haber una preocupación por parte del docente de cómo trabajar en el aula las competencias y habilidades necesarias para desarrollar los procedimientos y actitudes en los estudiantes que le permitan conectar el conocimiento teórico con el práctico. Por esto, es fundamental reflexionar y buscar mecanismos sobre el cómo enseñar, qué estrategias, actividades y recursos son necesarios para atender a la diversidad de todo nuestro alumnado universitario.

Desde este punto de vista, y dadas las inquietudes de la docente por mejorar su práctica en el área de la Didáctica de las Ciencias Sociales, partiendo del Proyecto Investigando a nuestro Mundo, hemos desarrollado una experiencia innovadora dentro de la materia la cual desarrollaremos en los siguientes apartados.

2. LA EXPERIENCIA

La ciudad Arco Iris es un proyecto de innovación docente que surgió en el ámbito de la Educación Infantil y se ha ampliado a lo largo de los años a Educación Primaria y las distintas menciones de este grado, adaptando las actividades en cada uno de los casos. Este proyecto se lleva a cabo en la Facultad de Ciencias de la Educación de la Universidad de Huelva. El espacio donde se ubica recrea una ciudad donde alrededor de una plaza se disponen los espacios más comunes donde se desenvuelven la vida de los ciudadanos: cafetería, floristería, farmacia, centro de salud, casita, veterinario, ayuntamiento, banco, etc. Todo este espacio está pensado para que los niños y niñas aprendan jugando y para que los maestros y maestras de las escuelas, el alumnado y el profesorado de la universidad trabajen construyendo redes de colaboración que contribuyan al desarrollo de mejoras que transformen las escuelas.

Esta experiencia surgió en el curso académico 2000/2001, con el diseño de un aula experimental de infantil cuyo objetivo en aquel momento era que el alumnado de esta titulación tuviera la posibilidad de desenvolver en situaciones simuladas, conocieran los distintos espacios y elaboran materiales didácticos para su posible aplicación (González, Romero y Vidal, 2003).

2.1 Contexto y participantes

La experiencia se ha llevado a cabo en la Universidad de Huelva, en la Facultad de Ciencias de la Educación, concretamente en la titulación del Grado de Educación Primaria. En ella ha participado una docente, implicando un total de 120 estudiantes distribuidos en 2 grupos de 65-70 alumnos y alumnas cada uno. Esta innovación docente se ha desarrollado en los dos grupos ya que la docente ha impartido una misma asignatura en ellos.

Estos grupos son muy variados en sus características teniendo cada uno de ellos una serie de necesidades concretas que han hecho que se desarrollen las actuaciones de éxito en mayor o menor medida, considerando la flexibilidad y apertura pertinente en la planificación didáctica de una materia siendo uno de los objetivos prioritarios de la docente atender a la diversidad de su alumnado desarrollando prácticas que le permitan dar una respuesta lo más individualizada posible que parta de las demandas del alumnado.

El proceso de creación y desarrollo del proyecto se describe en González, Romero y Vidal, 2003; González y Romero, 2008; y González, Gómez y Álvarez, 2016¹. Basándonos en los principios didácticos con los cuales se comenzó el proyecto hemos desarrollado una actividad práctica dentro de la asignatura Didáctica de las Ciencias Sociales II, con un grupo de alumnos y alumnas de 65.

En esta asignatura, trabajamos a través de carpetas de investigación, dentro de esta carpeta, la experiencia que vamos a describir constaba de una actividad concreta transversal que se iba desarrollando a lo largo de todo el cuatrimestre. Una parte de la actividad era obligatoria y otra optativa, más adelante lo explicaremos

¹ En estas referencias se puede encontrar más información sobre el Proyecto "Ciudad Arcoíris".

2.2 Fases de la experiencia

Fase Inicial con el alumnado de la universidad:

- 1) En primer lugar, los estudiantes de grado en una clase teórica analizaron dos artículos que describían el Proyecto Ciudad Arcoíris. De esta forma, analizaron cuáles eran los objetivos, cómo se desarrollaban las visitas con el alumnado de infantil, etc. Posteriormente, en pequeños grupos, realizaron una reflexión sobre cómo relacionar las actividades económicas con el Proyecto Ciudad Arcoíris. En gran grupo, expusieron las ideas que tenían, debatieron la posibilidad de realizar una visita con alumnado de Educación Primaria y reflexionaron sobre la posibilidad de trabajar actividades económicas en el espacio de la Ciudad del Arcoíris. Para finalizar, la profesora explicó cómo surgió el proyecto y por qué lo estaban trabajando en la asignatura.
- 2) En segundo lugar, el alumnado visitó en una clase práctica, la Ciudad del Arcoíris. Una vez en el lugar, la profesora junto con otros miembros del equipo del Proyecto de Innovación, explica al alumnado algunos aspectos relevantes del proyecto que tienen que tener en cuenta a la hora de decidir si quieren participar en él. El alumnado observa y analiza cada uno de los rincones de los cuales está compuesto el espacio y cada pequeño grupo elige uno de ellos. Una vez elegido el rincón, el alumnado debe realizar un análisis de los recursos existentes, elaborar un listado con los mismos y ver cuáles deben ser restaurados, sustituidos o son útiles para su práctica.

Fase de desarrollo del Proyecto con el alumnado, las escuelas y el equipo del proyecto:

- 1) La docente, junto con la coordinadora del proyecto, elige los centros educativos, de un listado de solicitudes que se han realizado durante el año, que visitarán la ciudad para el desarrollo de las actividades que el alumnado planificará.
- 2) Durante cuatro semanas, el alumnado elabora una planificación didáctica con varias actividades que trabajen objetivos, contenidos y competencias relacionadas con las actividades económicas para alumnado de 1º y 2º de Educación Primaria. Esta planificación es orientada y supervisada por la docente en todo momento. A su vez, realiza varias sesiones en la ciudad de evaluación, reconstrucción y construcción de recursos, restauración del rincón y limpieza del mismo. La planificación se nutrirá de los contenidos teóricos que se están estudiando en otras actividades teóricas de la carpeta relacionadas con el conocimiento científico, las concepciones, el conocimiento escolar y el tipo de actividades que se utiliza para trabajar actividades económicas.
- 3) Una vez que se han elegido los centros educativos participantes, en este caso 2 centros de titularidad pública (3 unidades de 1º y una unidad de 2º con un total de 60 niños y niñas), el profesorado de la universidad se pone en contacto con las maestras y maestros implicados y tienen una reunión preparatoria en la cual se les explica el proyecto en profundidad, y se visita la Ciudad Arcoíris para que ellos la conozcan. En esta reunión, se consensuó una actividad previa a la visita en el aula planificada por el profesorado de la universidad y el alumnado para ser llevada a cabo en las aulas que visitarán la Ciudad del Arcoíris. En esta fase, se le da la siguiente información a los maestros y maestras:

“Antes de la visita es conveniente que, además de informar a los niños y niñas de qué es la ciudad y cómo va a transcurrir el día, repaséis con ellos las normas de comportamiento y tengáis en cuenta lo siguiente:

- **Autorización de las familias:** En la notificación que enviaréis a los padres y madres para que autoricen la asistencia de sus hijos/as a la Ciudad, debéis especificar que se realizarán fotografías y grabaciones de la visita para que puedan ser analizadas por los estudiantes de Magisterio y tengamos un recuerdo de la experiencia. Este material se puede distribuir gratuitamente a aquellos centros que lo soliciten.
- **Distribución previa:** *Debe haber una asignación y distribución previa de los rincones en los que van a participar los niños y niñas. Durante la primera parte de la jornada permanecerán en uno de ellos y después del descanso podrán rotar si así lo desean. Adjuntamos un cuadro resumen con datos sobre el número de alumnos y edades recomendadas en cada rincón. En dicho cuadro el número de niños es ilustrativo y se aumentaría si fuera necesario en aquellos rincones donde sólo se hayan ubicado 2 niños/as. Los niños/as deben distribuirse uniformemente por todos los rincones, sin dejar ninguno vacío.*
- **Identificación:** *Para la visita es conveniente que todos los niños/as traigan colgadas identificaciones con su nombre y el rincón que se les ha asignado para la primera parte de la sesión. Así mismo se indicará si el niño/a tiene algún tipo de alergia o intolerancia.*
- **Desayuno:** ¡No olvidéis traer algo para comer en el descanso, porque gastamos muchas energías!”

- 1) El profesorado de la Universidad se coordinó con las escuelas para recibir dicha información y transmitirla al alumnado. Cada grupo en diferentes tutorías, expuso su planificación didáctica a la profesora y consensua, analiza y da recomendaciones al alumnado para que la mejore.
- 2) La semana previa a la visita se desarrolló la actividad previa en las aulas del alumnado que va a realizar la visita a la Ciudad Arcoíris. La actividad llevada a cabo fue elaborada por un grupo de alumnos y alumnas y corregida por la profesora. Después se llevó a cabo por cuatro grupos de alumnado en las diferentes aulas de niños y niñas que vinieron.
- 3) La semana de la visita se realizó una limpieza profunda de la ciudad. Tanto alumnado como profesorado decidieron la colocación final del rincón, estructuraron los recursos en el espacio y revisaron que estuviera todo el material necesario para llevar a cabo las actividades que planificaron. En el aula, se hizo una última supervisión de las actividades y se controló que todo el alumnado tuviera los materiales pertinentes y la propuesta terminada además de tener claro los nombres de los niños y niñas y sus características.
- 4) Desarrollo de la visita. A la llegada hubo una asamblea inicial tras la cual los niños se distribuyeron por los rincones. La docente nombró a los niños y niñas que iban a cada rincón, que fueron previamente enviados por los maestros y maestras tras la elección de los niños y niñas en las aulas. Cada grupo de alumnos y alumnas del Grado cogió a

los niños y niñas de su rincón. Realizaron un recorrido general por todos los rincones y se colocan al final en su rincón para comenzar la actividad. Los maestros y maestras se quedaron fuera del laboratorio. Es conveniente que permanezcan en el recinto o sus cercanías para evitar cualquier percance. En la primera parte, se desarrollaron las actividades y el alumnado observará y registrará con una plantilla los criterios que han consensuado con la profesora sobre las actividades económicas. En la segunda parte, los maestros y maestras entraron para que la visita sea útil para todos y que, con su experiencia, colaboren en la buena marcha de la misma, apoyando, observando, preguntando y respondiendo las cuestiones de nuestros alumnos. Ellos pueden aprender mucho de los maestros y maestras y viceversa. Además, esta experiencia facilita a los maestros y maestras la oportunidad de observar a sus alumnos y alumnas en otros contextos de enseñanza y aprendizaje y permite evaluar la adquisición y desarrollo de muchos de los contenidos que se trabajan en el aula fuera de la misma.

Fase posterior a la visita: en el aula

- 1) El profesorado de la universidad entregará un cuestionario de valoración al profesorado de las escuelas y pedirá que la actividad posterior sobre la Ciudad que realicen en el aula nos la transmitan vía email o correo ordinario. En muchos casos, incluso envían las producciones elaboradas por los niños y niñas.
- 2) Por otro lado, el alumnado de la universidad junto con la profesora analizarán en gran grupo cómo se han trabajado las actividades económicas, que actividades deberían mejorarse y cuáles han funcionado, qué recursos han causado mayor impacto... La profesora, con sus anotaciones de la visita, debatirá que cuestiones han sido satisfactorias y cuáles se podrían mejorar. Se realizará una reflexión final de cómo nos ha servido la teoría para trabajar las actividades económicas en la práctica.

En esta primera experiencia con alumnado del Grado de Educación Primaria y niños y niñas de Educación Primaria se ha trabajado en torno a la enseñanza de las Ciencias Sociales, concretamente, el valor del dinero.

Al igual que en las experiencias llevadas a cabo anteriormente en el Grado de Educación Infantil (González, Gómez y Álvarez, 2016), el alumnado universitario y los niños y niñas de primaria han sido los principales protagonistas del proyecto. El papel del alumnado universitario ha sido muy relevante en todas las fases del proyecto, puesto que son ellos los responsables de las diferentes tareas que se han ido desarrollando en la Ciudad: selección, montaje y decoración del rincón, planificación de las actividades a realizar, elaboración de los distintos recursos y materiales, aplicación y evaluación de las actividades llevadas a cabo; observación e interacción con niños y niñas; intercambio con maestros/as y profesores/as; reflexión y mejora de la actuación docente... Ellos adquieren la responsabilidad de los niños y las niñas durante la visita a la Ciudad del Arcoíris, atendiendo a las características de cada uno de ellos y dando respuesta a sus demandas en cada momento.

Es importante reconocer la labor realizada por los maestros y maestras en la experiencia, ya que ellos facilitan la información necesaria al profesorado universitario, abren sus aulas para que el alumnado pueda trabajar con sus niños y niñas y están a la disposición de los docentes universitarios para cualquier cuestión relacionada con la visita e incluso se establecen, posteriormente, redes de colaboración para otras actividades.

La coordinación entre el profesorado universitario en el proyecto también es de gran relevancia dado que la Ciudad abre las puertas a diferentes materias y, también ahora, a diferentes titulaciones. Tanto los maestros y maestras como el profesorado universitario adquieren un rol de guía, orientación y coordinación de sus respectivos alumnos y alumnas pero también forman parte de los participantes activos de la experiencia.

De esta forma, se establece un gran entramado de relaciones entre todos y todas las participantes que ayudan a encajar las piezas del puzle de la teoría y la práctica nutriéndonos mutuamente para contribuir a una formación inicial completa del alumnado del Grado de Educación Primaria.

3. RESULTADOS

Una vez llevada a cabo la experiencia, hemos hecho un cuestionario abierto al alumnado del Grado de Educación Primaria para la evaluación de la asignatura. En él se dedicaba una cuestión a la metodología didáctica utilizada por la docente y, dentro del mismo, se hacía referencia a la valoración del proyecto. Además, posteriormente, se ha pedido a cinco alumnos que realice una valoración escrita de la actividad desarrollada. En el análisis, el alumnado describió aspectos positivos y a mejorar de la experiencia.

Comenzando por los aspectos que han contribuido de forma óptima a la formación, destacan la posibilidad de trabajar con los niños y niñas en un contexto de exploración y análisis de la práctica que se ha elaborado desde la teoría. Valoran considerablemente que es una oportunidad para ver cómo la teoría es aplicable a la práctica y remarcan la posibilidad de llevar una actividad a la realidad y después analizarla de nuevo en las clases teóricas teniendo la perspectiva del grupo aula y de la profesora.

Por otro lado, el alumnado remarca el valor positivo de trabajar con la diversidad del alumnado y muestran, en las clases preparatorias de la visita, su preocupación e interés por dar respuesta a las características del alumnado. Se observa que se desarrollan habilidades relacionadas con emociones como la empatía, el amor y el respeto al otro.

El alumnado valora positivamente la coordinación y atención por parte del equipo de profesorado y alumnado que participa en el proyecto destacando sus funciones en el proceso de decoración, limpieza, planificación y estructuración de la visita, consideran que facilitan el desarrollo del proyecto y el proceso de enseñanza-aprendizaje del alumnado.

Otra de las ventajas que enumeran es la utilización de diferentes materiales y recursos para el desarrollo de la planificación señalando la importancia de ver la importancia de la elaboración y restauración de los mismos para el aprendizaje del

alumnado. Resaltan que les ayuda a aumentar su creatividad y explorar diferentes vías didácticas para conseguir los objetivos de su planificación.

Es relevante la alta valoración del espacio de la Ciudad como laboratorio didáctico. El alumnado explica como ventaja el cuidado del espacio donde se desarrollan las visitas destacando la implicación de todo el equipo del proyecto y de ellos mismos en el mantenimiento de la belleza y la amplitud de la Ciudad que genera la motivación del alumnado.

Como aspectos a mejorar, en primer lugar, el alumnado considera en relación a la última ventaja, que debería cuidarse más algunos aspectos relacionados con el mantenimiento del espacio como la humedad en paredes, limpieza general, etc. Como propuesta, consideran que se deben dar más apoyos económicos y de recursos humanos a la Ciudad.

La dificultad de aplicar los contenidos teóricos y adaptar la planificación elaborada a las circunstancias que surgen durante la visita considerando que se debería desarrollar en un mayor número de horas.

En esta experiencia concreta, el alumnado percibió que los niños y niñas de primero y segundo de Educación Primaria tienen dificultades para entender los conceptos económicos de tal forma que corroboraron lo estudiado en la teoría.

Para finalizar, la valoración general de la visita ha sido muy positiva considerándolo como una oportunidad única que debería ser más común en la titulación ya que pueden llevar la teoría a la práctica y analizarla para después mejorarla.

4. CONCLUSIONES

Este proyecto de innovación docente, “La Ciudad del Arcoíris”, ampliado en esta experiencia a la Educación Primaria, ha tenido una repercusión mediática muy importante en los últimos años, obteniendo la mención de calidad en el curso 2003/2004 por la Unidad para la Calidad de las Universidades Andaluzas. Además, recientemente, en 2014, se le ha concedido el Premio de Innovación Docente de Excelencia de la Universidad de Huelva. Esta difusión en los medios, ha permitido que dicho proyecto haya sido la inspiración de otras experiencias similares como las desarrolladas en la Universidad de Córdoba, la Universidad de Almería o el Instituto de Educación Secundaria “La Orden”.

Los resultados se han obtenido en todos estos años permite concluir que

“este laboratorio no sólo fomenta prácticas alternativas de enseñanza en la educación superior, sino que también favorece la innovación, investigación didáctica y la actualización docente. El profesorado universitario tiene más oportunidades para contactar con la realidad y nutrirse de la experiencia práctica de los maestros/as y de las distintas situaciones de aprendizaje que se generan en la Ciudad. Los maestros y maestras cuentan con otro escenario en el que observar las reacciones e intereses de los escolares, relacionar contenidos y fundamentar sus propuestas didácticas y organizativas. El alumnado universitario, por su parte, mejora su conocimiento práctico; reforzando las competencias profesionales que Zabalza y Zabalza (2011) consideran básicas en Educación Infantil: crear ambientes de aprendizaje ricos y estimulantes; desarrollar relaciones constructivas con los colegas, las familias y el entorno; diseñar y desarrollar actividades de aprendizaje adaptadas a los niños/as pequeños y que cubran adecuadamente el currículo de la etapa; dominar las técnicas de la documentación y la observación y asumir los compromisos propios de un maestro/a de Educación Infantil. A las que nosotras añadimos: saber interpretar la realidad con ojos de niño y niña; fomentar la pedagogía del asombro; saber utilizar la cabeza, el corazón y las manos, y saber utilizar el juego como herramienta didáctica. Gracias a la interacción con los niños y niñas, el interés, motivación, implicación y compromiso del alumnado universitario aumenta, repercutiendo gratamente en sus resultados académicos (Romero y González, 2010; González, Álvarez y Báez, 2014). Los niños y niñas, finalmente, ven favorecidos sus procesos de enseñanza/aprendizaje por las acciones implementadas por todos los agentes anteriores. “(González, Gómez y Álvarez, 2016, p. 47)

Las redes de colaboración que se constituyen en torno a esta experiencia de trabajar juntos y en el mismo espacio alumnado del Grado de Educación Primaria, niños y niñas de Educación Primaria y profesorado de los distintos niveles educativos hacen que se den procesos de interacción que tienen gran potencialidad en los procesos de enseñanza-aprendizaje.

La ampliación del proyecto al Grado de Educación Primaria suponía un reto, sin embargo, se han cumplido la mayoría de los objetivos que se habían planificado ya que es una experiencia que permite reflexionar e indagar y realizar un proyecto de aprendizaje servicio e investigación-acción que mejora la teoría y práctica para poder seguir avanzado en la elaboración de recursos y creación de nuevos espacios abogando por metodologías activas basadas en la colaboración y en la atención a todo el alumnado.

Las repercusiones más importantes que observamos es la oportunidad que genera el proyecto de trabajar con maestras y maestros de Educación Primaria, con las cuales intercambiamos posturas didácticas y nos nutrimos de sus situaciones reales de aprendizaje desarrollando así el enriquecimiento de todos los implicados en el proyecto.

Se percibe que la valoración más importante del alumnado es la posibilidad de poder unir los contenidos teóricos y prácticos de una misma asignatura, observando y analizando cómo se lleva a cabo la teoría a la práctica y si es posible.

La coordinación entre el profesorado implicado, las becarias y el alumnado participante se desarrolla. Cabe reseñar las relaciones de interacción fuertes que se han ido construyendo entre las personas que participan en el proyecto considerando a estas como un valor enriquecedor del proceso de enseñanza-aprendizaje.

Por último, los miembros del equipo de este proyecto hemos observado y analizado los aspectos que se podrían mejorar para transformar la organización del mismo en lo que se refiere a gestión de recursos humanos y materiales y para insistir en la difusión de esta experiencia, condición ésta muy importante en cualquier proyecto de innovación.

REFERENCIAS

- Bigg, J. (2003). Teaching for quality learning at University. Buckinghamshire: Society for Research into Higher Education and Open University Press
- Contreras, L.C., Rodríguez, J.M. y Morales, F.J. (eds)(2005). Innovar juntos en la Universidad. Huelva: Servicio de Publicaciones de la Universidad de Huelva.
- De Miguel, M. (coord.)(2006). Metodologías de enseñanza y aprendizaje para el desarrollo de competencias: orientaciones para el profesorado universitario ante el Espacio Europeo de Educación Superior. Madrid: Alianza.
- Denegri M.; *et al.* (2006). Educación económica en la escuela: hacia una propuesta de intervención. *Estudios pedagógicos*, 32 (2), 103-120.
- Fonseca, M.C. y Aguaded, J.I. (2007). Enseñar en la Universidad. La Coruña: Netbiblo.
- Fry, H., Ketteridge, S., Marshall, A. (2003). A handbook for teaching and learning in H.E. London: Kogan Page
- García-Valcárcel, A. (2001). Didáctica universitaria. Madrid: La Muralla
- González Falcón, I.; Gómez Hurtado, I. y Álvarez, K. (2016). *La Ciudad del Arco Iris*. Una apuesta por la colaboración Universidad-Escuela en el Grado de Educación Infantil. En Serrano, N. (Edt.) (2016). Innovación docente en Educación Infantil. Pp. 31-48. Barcelona: Octaedro.
- González, I.; Romero, A. (2008). «El Proyecto Ciudad Arco Iris: jugar para aprender, aprender para jugar». *XXI Revista de Educación*, 10: 185-202.
- González, I.; Romero, A.; Sánchez, A.; Vidal, A. (2003). «La Ciudad Arco Iris. Un Proyecto de Formación Inicial Basado en la Experiencia». *Aula de Infantil*, 15: 38-43.
- Pagès, J. y González, N. (2010): “¿Por qué y qué enseñar sobre la crisis”. *Cuadernos de Pedagogía*, 405, 52-56.
- Pagès, J.; González, N. (2010): ¿Por qué enseñar y qué enseñar de la crisis económica actual en primaria y secundaria?. *Cuadernos de Pedagogía*, núm. 405, pp. 52-56.
- Ponsa, P., Amante, B.; Roman, J. A.; Oliver, S.; Díaz, M. y Vives, J. (2009). Higher Education Challenges: Introduction of Active Methodologies in Engineering Curricula. *International Journal of Engineering Education*, 25(4), 799-813.
- Rekalde, I.; Vizcarra, Mª T.; Macazaga, A. (2014). La observación como estrategia de investigación para construir contextos de aprendizaje y fomentar procesos participativos. *Educación XX1*, 17 (1), 201-220.
- Sánchez Moreno, M. (2007). *Cómo enseñar en las aulas a través del estudio de casos*. Zaragoza: ICE.
- Santisteban, A. M. (2013). La alfabetización económica de la ciudadanía. *Revista de Didáctica de las Matemáticas*, 62, 21-30.
- Santisteban, A.M. (2008). La educación para la ciudadanía económica: comprender para actuar. *Iber*, 58, 16-25.
- Travé, G. (2006). *Investigando las actividades económicas. Proyecto curricular investigando nuestro mundo (6-12)*. Sevilla: Díada.
- Travé, G.; Pozuelos, F. J. (2008). Enseñar economía mediante estrategias de investigación escolar. Estudio de caso sobre las concepciones y prácticas del profesorado. *Enseñanza de las Ciencias Sociales. Revista de investigación*, 7, 109-120.
- Ubieto, I. (coord.), Domingo, M., García, F.J., Paulo, A. (2008). Practicar con la teoría: metodologías activas en información y documentación en el marco del Espacio Europeo de Educación Superior. Zaragoza: Prensas. Universitarias de Zaragoza.
- Zabalza, M.A. (2002). La enseñanza universitaria. El escenario y sus protagonistas. Madrid: Narcea.
- Zabalza, M.A. y Zabalza, M. (2010). Planificación de la docencia en la Universidad. Madrid: Narcea.

PARALLEL SESSION IV

PREDICTION OF IRREGULAR SOCIO-ECONOMIC DATA

José Luis Carmo
University of Algarve and CEDMES
(jlcarmo@ualg.pt)

ABSTRACT

Irregular data are observable in the context of many different fields. Along with the irregular occurrence of observations, these series can exhibit other characteristics, such as trends and seasonality, which may make more difficult to predict. In this work, are discussed several methods to handle with irregularly spaced time series, based on exponential smoothing, as well the application of normalized basis function networks, a supervised learning model. Furthermore, relatively simple modifications are proposed to some of these methods, and their adequacy is shown in dealing with these processes. Some experimental comparisons with real time series are made.

Keywords: Forecasting, Non-stationary Data, Exponential Smoothing, Neural Networks.

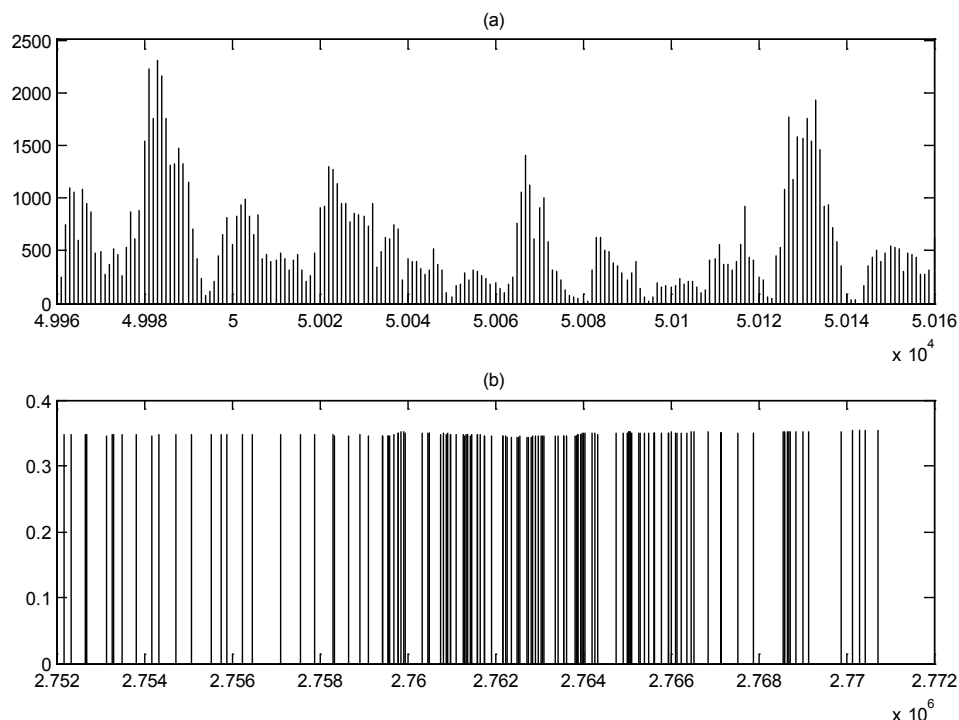
JEL Classification: C32, C45, C53

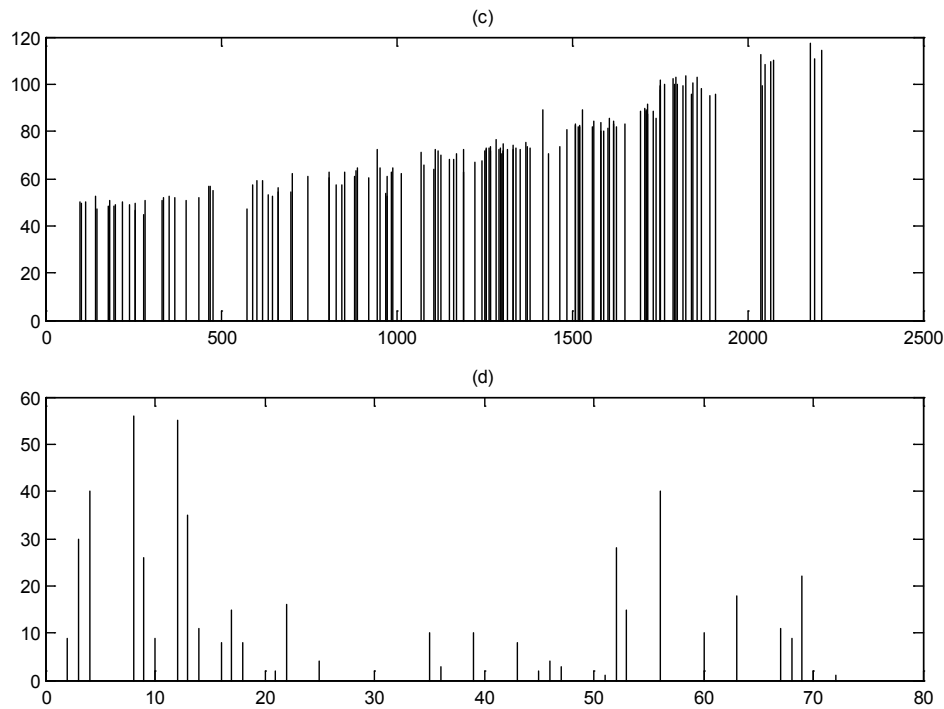
1. INTRODUÇÃO

Uma série temporal consiste num conjunto ordenado de observações de uma ou mais variáveis, registadas frequentemente a intervalos de tempo de igual amplitude. Mas, nem sempre as manifestações ou os registos de um fenómeno se apresentam regularmente espaçados no tempo e, nesse caso, a série temporal é *irregularmente espaçada*. Naturalmente, pode ser construída uma série de registos com os valores totais observados em períodos de tempo de igual amplitude. Contudo, tal acarreta uma perda de informação mais ou menos importante, pelo que pode ser crítico realizar a sua análise e modelação. Diferente é o caso de uma série *incompleta*, onde o processo de ocorrências é regular, mas por um qualquer motivo não são conhecidas todas as observações – por exemplo, devido a falhas pontuais no processo de registo das observações.

Fenómenos observados de forma irregular no tempo podem ser encontrados em áreas bastante díspares (Figura 1).

Figura 1 – (a) Número diário de manchas solares (*sunspot numbers*); (b) Variações “intraday” nas taxas de câmbio entre o Franco Suíço e o Dólar Americano; (c) Avaliação imobiliária no mercado português; (d) Procura de peças de reposição na indústria aeroespacial





Como já referidas atrás, o estudo de séries temporais inclui duas vertentes fundamentais: a *análise* e a *modelação*. Na primeira, pretende-se estudar e caracterizar as principais propriedades da série, o que poderá ser feito tanto no domínio temporal como no domínio das frequências. Poderá assim servir de fase preliminar à escolha de um modelo adequado. Na modelação de séries, tem-se como objectivo principal possibilitar a realização de *previsões* de valores futuros da série. Poderá também pretender-se uma descrição da série em termos das suas componentes de interesse, por exemplo, para examinar o comportamento sazonal da série. Assim que o modelo esteja completamente definido/identificado e estimado, a sua adequabilidade poderá ser aferida, não só através da realização de testes de diagnóstico, mas também através de algum tipo de conhecimento que eventualmente já exista sobre o fenómeno observado.

Para a modelação de séries temporais procura-se descobrir regularidades empíricas fortes na sequência de valores conhecidos da série. Desta forma, é necessário encontrar um modelo adequado, descrito através de uma função parametrizada – *linear* ou *não linear* –, e, depois, um método para a estimação dos parâmetros do modelo. Frequentemente, supõe-se que o processo dinâmico desconhecido gerador de uma série temporal é descrito através de um modelo de tipo auto-regressivo. Como nas abordagens que irão consideradas neste trabalho, supõe-se, então, que qualquer valor de uma série temporal pode ser aproximado como função de um certo número de observações anteriores.

Para a determinação completa de um modelo, além da estimação dos parâmetros correspondentes, é muitas vezes indispensável a identificação de outro tipo de quantidades. Por exemplo, o factor de esquecimento do método de alisamento exponencial simples para a estimação do nível de uma série estacionária, ou a localização de funções para um modelo definido através da combinação linear de funções gaussianas. Estes parâmetros especiais, designados por *hiperparâmetros* (ou metaparâmetros), condicionam a estimação dos restantes parâmetros do modelo. O processo completo de determinação do modelo será desta forma constituído por duas fases: uma fase preliminar de identificação dos hiperparâmetros, e uma segunda fase, onde se procede à estimação final dos parâmetros do modelo. A identificação dos hiperparâmetros pode ser tratado como um problema de optimização (não linear), envolvendo repetidas experiências provisórias de estimação dos parâmetros.

Na previsão de processos conhecidos genericamente como *procura intermitente* (originada pela indústria de aviação e a sua necessidade de previsão do consumo de peças ou itens de reposição) assumem-se sequências de valores de procura regularmente espaçados no tempo, mas exibindo uma percentagem relativamente alta de valores nulos de procura. Esta é a assunção básica feita no Método de Croston (Croston, 1972) e as suas variantes, e seguida por vários autores – vide, por exemplo, Teunter e Duncan (2009). No entanto, em muitos casos, será preferível registar ou converter os dados em duas sequências de variáveis,

$$\{(X_i, y_i)\}_{i=1, \dots, N},$$

instantes e observações, como se mostra na Figura 1. Deste modo, a série pode ser assumida explicitamente como bivariada, e outras variáveis de interesse serão facilmente definidas:

- $x_k = X_k - X_{k-1}$: intervalo de tempo entre duas observações consecutivas;

- $Y_k = \sum_{i=1, \dots, k} y_i$: valor total observado até ao instante k ;
- $d_k = y_k / x_k$: valor médio observado por período de tempo (“taxa de procura”).

A definição destas variáveis será instrumental, nomeadamente, para a resolução das seguintes questões:

- Quanto é que se espera para a próxima observação?
- Quando é que se espera que a próxima observação ocorra?
- Quanto é que se espera que seja o total observado num dado horizonte temporal?

A partir de um modelo completamente estimado, pode então ser calculada uma previsão do valor futuro da série, para um horizonte temporal adequado. Assim que o valor efectivamente observado se encontre disponível, estes dois valores podem ser comparados. Denotando por

$$\hat{y}_{k|k-p}$$

uma previsão para y_k , utilizando a informação disponível até ao instante $k - p$, o erro de predição p -passos-à-frente é definido por:

$$e_{k|k-p} = y_k - \hat{y}_{k|k-p}$$

Para aferir a qualidade do modelo, comparando-o com outros, ou mesmo com variantes do mesmo modelo, é necessária uma medida de desempenho apropriada. O seu valor será determinado por uma sequência de erros de previsão, produzida através de um conjunto de observações conhecidas da série. Será conveniente, na utilização de métodos de estimação recursiva, ignorar os primeiros erros cometidos no cálculo das medidas de desempenho, visto a inicialização destes métodos ser habitualmente feita de forma heurística e simples, produzindo assim enviesamento significativo nas primeiras estimativas obtidas. Podem ser referidas, entre as mais conhecidas, as medidas MAD (*Mean Absolute Deviation*), RMSE (*Root Mean Squared Error*), e MAPE (*Mean Absolute Percentage Error*). No entanto, mais recentemente, Hyndman (2006) propôs como padrão uma medida que pode ser interpretada como o rácio de duas MAD: a obtida pelo procedimento que está sendo avaliado sobre a resultante da aplicação do método conhecido como *Naïve* (cada previsão é simplesmente o valor registado na ocorrência anterior). O resultado produzido por esta medida – denominada de MASE (*Mean Absolute Scaled Error*) – é independente da escala original dos dados, e tem uma interpretação directa: um valor menor que um significa que as previsões obtidas são melhores que o método “ingénuo”.

2. PREVISÃO DE DADOS (QUASI-)ESTACIONÁRIOS

Um conceito importante na análise de séries temporais é o conceito de estacionariedade. De forma intuitiva, pode-se dizer que uma série é *estacionária* quando as suas propriedades distribucionais são invariantes ao longo do tempo. Em particular, o valor médio e a variância da série deverão ser constantes ao longo do tempo. Uma série será *não estacionária* se, por exemplo, exibir tendência, efeitos periódicos, heteroscedasticidade, entre outros efeitos. A simples observação do gráfico dos valores da série pode ajudar a diagnosticar se a série é ou não estacionária. Se os valores apresentarem uma certa flutuação com variação constante em torno de uma média constante, será razoável pensar que se trata de uma série estacionária.

2.1 Alisamento exponencial simples

Os métodos vulgarmente designados de *métodos de alisamento exponencial* são bastante utilizados para a previsão de séries temporais. São definidos por fórmulas de actualização recursiva, onde se empregam pesos para diferenciar a importância das várias observações. Em cada método, a estimação dos vários parâmetros baseia-se na aplicação de esquemas recursivos do tipo:

$$\text{nova estimativa} = \text{coeficiente de alisamento} \times \text{nova informação} + \left(1 - \text{coeficiente de alisamento} \right) \times \text{anterior estimativa}$$

Deste modo, perante a presença de novas observações, o método facilmente procede à actualização do modelo de previsão. O *coeficiente de alisamento*, que poderá também variar com o tempo, descreve o grau de importância relativa entre a nova informação e a anterior estimativa.

No *alisamento exponencial simples* o que se procura é a estimação apenas do nível (local) da série, através de uma sequência de estimativas “alisadas” do valor médio, que variam com o tempo. O esquema atrás apresentado é assim aplicado directamente para a estimação do parâmetro de nível, ficando disponível no final do processo uma previsão para o valor futuro da série. Mesmo nalgumas situações em que se presume que o parâmetro de nível varia no tempo de forma lenta ou até moderada, o alisamento exponencial simples poderá produzir previsões suficientemente satisfatórias.

Alguns dos métodos de alisamento exponencial são adaptados para séries irregularmente espaçadas. O mais conhecido e usado para esse fim foi proposto por Croston (1972) – e “recuperado” mais tarde por Willemain *et al.* (1994) –, estando inclusivamente disponível em algum *software* comercial de previsão. Consiste meramente na aplicação do método de alisamento exponencial simples, quer à série das observações, quer à série dos intervalos de tempo, mas com coeficiente de alisamento de valor comum às duas sequências de valores. Estas estimativas são então usadas para estimar a taxa de procura futura:

$$\hat{d}_k = \frac{\hat{y}_{k|k-1}}{\hat{x}_{k|k-1}}$$

Este método será designado por CRT#1. O método de Croston pode apresentar estimativas enviesadas, pelo que Syntetos e Boylan (2001) propuseram uma fórmula correctiva:

$$\left(1 - \frac{\alpha}{2}\right) \hat{d}_k$$

sendo α o coeficiente de alisamento (CRT#2).

2.2 Alterações ao método de Croston

Com recurso a procedimentos bastante simples, podem ser efectuadas alterações básicas ao método de Croston original, por forma a torná-lo mais versátil e assim poder apresentar um acréscimo no seu desempenho.

A optimização de um coeficiente de alisamento comum para ambas as séries, intervalos de tempo e observações, pode ser demasiado restritivo e levar, em alguns casos, a resultados notoriamente mais pobres. A primeira dessas propostas consiste, portanto, em permitir que as duas sequências de valores possuam coeficientes de alisamento diferentes, ou seja, aplicar separadamente o método de alisamento exponencial simples. Esta alteração será designada por CRT#3.

Mesmo depois de uma optimização cuidada dos dois coeficientes de alisamento, a sequência de estimativas da taxa de procura pode não ser suficientemente alisada. Como tal, propõe-se incluir no processo a realização de um alisamento adicional a essas estimativas, de forma a possibilitar a obtenção de melhores resultados. Assim, a segunda proposta, CRT#4, modifica um pouco mais o método original, onde se aplica o alisamento exponencial simples a uma terceira série, a sequência de estimativas da taxa de procura. Deste modo, existirão no total três coeficientes de alisamento diferentes para optimizar.

2.3 Redes de funções de base normalizadas

Os modelos conhecidos por *redes neuronais artificiais*, e em particular as *redes neuronais supervisionadas*, utilizando determinados procedimentos de pesquisa ou de estimação paramétrica, procuram “aprender” com base em exemplos, ou *padrões de treino*. O modelo, uma vez estimado, deverá ter a capacidade de “generalizar” convenientemente o conhecimento adquirido para novas situações. Essa generalização pode ser entendida como *previsão*, se os padrões forem construídos a partir de séries temporais.

As redes neuronais artificiais são modelos paramétricos que incluem componentes não lineares. Alguns modelos neuronais têm a capacidade de aproximar, arbitrariamente bem, qualquer função contínua não linear, conhecido apenas um conjunto de pontos. Em particular, as *redes de funções de base* apresentam-se como um dos modelos mais atractivos. O facto de poderem ser heurísticamente interpretadas como modelos lineares relativamente aos parâmetros, permite a utilização de métodos eficientes de estimação, como os métodos baseados no critério de mínimos quadrados. É uma clara vantagem em relação a outros modelos mais conhecidos, e complexos, como o *perceptrão multicamada*. Entre outras contribuições importantes para a teoria e metodologia subjacentes à construção e aplicação de redes de funções de base, deve-se referir os trabalhos de Powell (1987), Broomhead e Lowe (1988), e Moody e Darken (1989).

As redes neuronais artificiais podem ser representadas de forma gráfica, através de estruturas organizadas em *camadas de neurónios*, mas, naturalmente, resumem-se a expressões matemáticas. A resposta de uma rede de funções de base, com uma saída, é definida por uma função contínua parametrizada, não linear em relação às variáveis de entrada mas linear nos parâmetros:

$$f_w(\mathbf{x}) = w_0 + \sum_{i=1}^m w_i \phi_i(\mathbf{x})$$

onde $\mathbf{x}$ é um padrão de entrada genérico, w_i é o peso associado à função de base φ_i (w_0 representa um termo independente), e m é o número de funções de base consideradas. Cada função de base é localizada num ponto $\mathbf{c}_i$, designado de *centro*, e o seu valor depende da distância euclidiana entre o padrão de entrada e o seu centro. Várias expressões são admissíveis, mas habitualmente consideram-se funções gaussianas para as funções de base:

$$\phi_i(\mathbf{x}) = \phi(\|\mathbf{x} - \mathbf{c}_i\|) = \exp\left(-\frac{\|\mathbf{x} - \mathbf{c}_i\|^2}{2\sigma_i^2}\right)$$

em que σ_i é um hiperparâmetro de dispersão, designado por *raio*. O modelo é assim entendido como uma mistura (combinação linear) de gaussianas multidimensionais, que depende dos parâmetros $\{w_i\}$ e dos hiperparâmetros de localização e dispersão $\{(\mathbf{c}_i, \sigma_i)\}$.

Cada neurónio artificial representado por uma função de base gaussiana foca, portanto, uma certa região do espaço de entrada, caracterizada pelo centro e pelo raio dessa função, e, ao se considerar como raio um escalar, atribuindo igual importância às diferentes dimensões desse espaço. Mas, em certos problemas, as propriedades intrínsecas ao modelo podem levar, nomeadamente, a um número relativamente elevado de funções de base, aumentando assim o número de parâmetros e hiperparâmetros presentes. Uma forma natural de obviar alguns destes efeitos é considerar para o raio, não um escalar, mas um vector. Contudo, também assim se aumenta a complexidade do modelo, além de que, em estudos experimentais realizados anteriormente, os resultados obtidos não foram especialmente prometedores (Carmo e Rodrigues, 2009). Mais interessante, e uma opção mais simples, é utilizar *funções de base normalizadas* (RFBN), onde cada valor obtido por uma função de base é dividido pelo total obtido por todas as funções de base, para o mesmo padrão de entrada. Uma formulação especial para este tipo de redes, bem como a discussão sobre a sua identificação e estimação, pode ser encontrada no trabalho referido acima.

Assim, no caso de séries irregularmente espaçadas, o que procura é, através de um esquema auto-regressivo não linear, dado pela função f , a previsão de uma das variáveis supondo a outra conhecida, ou, mais geralmente, a estimação simultânea das duas variáveis:

$$\begin{aligned} & \bullet \{(x_{k-p}, y_{k-p}), \dots, (x_{k-1}, y_{k-1}), x_k\} \longrightarrow \hat{y}_k \\ & \bullet \{(x_{k-p}, y_{k-p}), \dots, (x_{k-1}, y_{k-1})\} \longrightarrow (\hat{x}_k, \hat{y}_k) \end{aligned}$$

2.4 Comparação experimental

Com a finalidade de avaliar o desempenho preditivo das abordagens atrás referidas, realizou-se um pequeno estudo experimental, através de cinco séries representativas de processos de procura irregular de uma empresa portuguesa da indústria papelreira. Como medida de avaliação considerou-se o RMSE, baseado nos erros de previsão um passo à frente da série de valores da taxa de procura, e ignorando os 20 primeiros erros. Os respectivos hiperparâmetros foram otimizados por uma pesquisa apropriada em grelha. O treino de RFBN – com duas saídas, intervalos de tempo e observações – foi realizado através da versão recursiva do conhecido método dos mínimos quadrados (RLS), e com a contínua adaptação de centros e raios (Carmo e Rodrigues, 2009).

Tabela 1 – Valores de RMSE produzidos pelos métodos em análise na previsão da taxa de procura

Série (N)	Naïve	CRT#1	CRT#2	CRT#3	CRT#4	RFBN
A1 (168)	65.61	47.77	47.78	47.77	46.95	39.51
A2 (177)	64.66	46.22	46.23	46.12	45.24	37.51
A3 (163)	61.37	44.70	44.70	44.51	44.29	37.68
A4 (182)	54.58	39.08	39.08	39.08	38.80	21.15
A5 (179)	40.58	29.27	29.33	29.09	28.84	25.53

Os resultados obtidos encontram-se na Tabela 1, onde se incluiu igualmente, como termo de comparação relativo aos métodos em estudo, o método *Naïve*. Como seria expectável, sendo um modelo muito mais robusto, a rede de funções de base apresentou um domínio claro sobre as várias versões do método de Croston. Estas não apresentaram diferenças significativas, comparativamente, no entanto, a versão que considera o alisamento adicional das estimativas da taxa de procura obteve sempre um menor erro. É igualmente de assinalar o ganho manifesto de todos os métodos relativamente à forma básica que utiliza como previsão a ocorrência anterior.

3. PREVISÃO DE DADOS COM TENDÊNCIA

Tendências ou periodicidades podem estar presentes nos dados, e os métodos anteriores podem se revelar insuficientes para lidar com estes casos. Em particular, foram desenvolvidas várias extensões do método de alisamento exponencial simples para atender a diferentes aspectos de não estacionariedade que podem estar presentes numa série temporal. Nomeadamente, Holt (1957) apresentou um esquema, através da introdução de um ajustamento localmente linear, para reconhecer a presença de tendência na série de observações.

3.1 Método IDUHO

O método de alisamento exponencial IDUHO (*Irregular Data Using Holt's method*), variante do método de Holt proposta por Wright (1985), é uma abordagem indicada para a previsão de séries irregularmente espaçadas. A série em causa deverá apresentar uma tendência local de tipo linear, não poderá demonstrar efeitos de sazonalidade significativos e deverá apresentar um número suficientemente grande de observações. Note-se que, mesmo admitindo-se a estacionariedade, é possível a sua aplicação, através da série dos valores acumulados. Contudo, embora a série acumulada seja estritamente crescente, o método pode excepcionalmente produzir previsões de valor negativo, pelo que são necessários esquemas correctivos (Carmo e Rodrigues, 2004).

Os dois coeficientes de alisamento, um para o parâmetro de *nível* e o outro para o de *declive*, são no IDUHO também variáveis com o tempo. Encontram-se dependentes do respectivo hiperparâmetro, que, portanto, terão que estar definidos antes do início do processo de estimação. No final ficará definida uma função de previsão, que, dado um qualquer horizonte temporal futuro, fornecerá a estimativa da ocorrência respectiva.

3.2 Comparação experimental

No contexto da avaliação imobiliária do mercado português, foram consideradas três séries, relativas a apartamentos de igual tipologia e para o mesmo período de tempo, em três diferentes localidades. Apresentando uma tendência crescente evidente, de tipo linear, o desempenho do método IDUHO foi analisado para a sua previsão. Foi igualmente considerado, apesar da sua limitação em lidar com este tipo de dados, inerente ao próprio modelo, o modelo RFBN, agora apenas com uma saída.

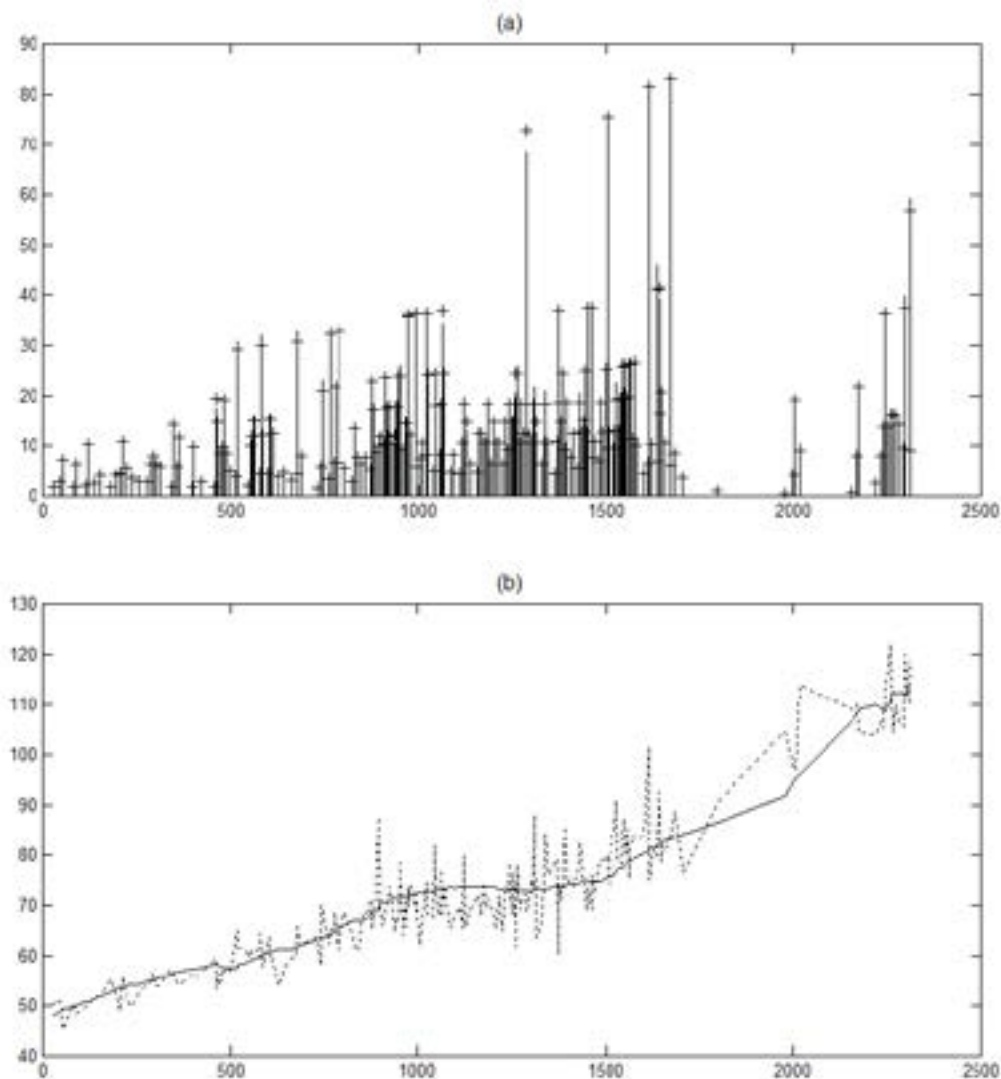
Tabela 2 – Valores de RMSE produzidos pelos métodos em análise na previsão da taxa de procura

Série (N)	Naïve	IDUHO	RFBN
B1 (141)	1.62	1.26	1.32
B2 (229)	2.23	1.25	1.31
B3 (233)	2.32	2.11	2.22

Como no caso anterior, a série otimizada, através da medida RMSE, foi a relativa aos valores da taxa de procura, com os hiperparâmetros definidos por pesquisa em grelha.

Os resultados obtidos (Tabela 2) mostram a maior capacidade do método IDUHO na estimação das séries. As redes de funções de base, não sendo especialmente indicadas para séries não estacionárias, obtiveram valores para a medida de erro apenas ligeiramente superiores. Inesperado, apenas numa primeira análise, foi o comportamento do método *Naïve*, em que, apesar da sua natureza simplista, consegue na prática acompanhar o crescimento da série. Na Figura 2 apresentam-se graficamente os resultados obtidos para a série B2.

Figura 2 – Resultados obtidos pelo método IDUHO para a série B2: (a) série da taxa de procura, a série otimizada, e as respectivas estimativas ('+'); (b) série dos valores originais, e as respectivas estimativas (traço contínuo)



4. PREVISÃO DE DADOS COM SAZONALIDADE

O problema da previsão de processos irregularmente espaçados com efeitos sazonais tem merecido pouca atenção na literatura, apesar de sua importância em várias áreas, incluindo na gestão de inventários e cadeias de abastecimento. Como extensão directa do método de Holt, Winters (1960) desenvolveu um processo para lidar com séries que apresentem igualmente sazonalidade, que viria a ser conhecido como método de Holt-Winters.

4.1 Método de Cipra, Trujillo e Rubio

Para séries irregularmente espaçadas que apresentem efeitos sazonais, pode-se recorrer ao método de alisamento exponencial proposto por Cipra, Trujillo e Rubio (1995) – que aqui será designado por CTR#1 –, que combina as formulações do método IDUHO e do método de Holt-Winters.

Neste método, o nível, a tendência e os índices *sazonais* são actualizados sempre que uma nova observação fique disponível, usando esquemas recursivos do mesmo tipo do método IDUHO, mas agora com três hiperparâmetros, e levando em consideração a possível ausência de dados entre duas ocorrências consecutivas. Ou seja, o método não pressupõe que a série seja irregular. Pelo contrário, é dirigido para séries regularmente espaçadas, mas admitindo que algumas observações podem estar em falta. Em particular, a inicialização do método é consideravelmente rígida, pois exige, na parte inicial da série, a presença de pelo menos uma observação para cada instante do ciclo sazonal (por exemplo, para uma série mensal com ciclo anual, é necessário que nos primeiros anos haja uma observação para Janeiro, uma para Fevereiro, etc., até ao mês de Dezembro). Portanto, para muitas séries, que pela sua própria natureza são irregularmente espaçadas, não será possível a aplicação deste método, pelo menos, com esta inicialização.

4.2 Alteração ao método de Cipra, Trujillo e Rubio

Tendo em conta a limitação apontada na secção anterior, foi estudada uma alternativa à inicialização do método, permitindo, ou pelo menos, não invalidando à partida, a sua aplicação a qualquer série irregular. Esta inicialização envolve a utilização do próprio método IDUHO, aplicado em primeiro lugar à série revertida (considerando a série do fim para o início) para a definição do valor inicial do nível e do declive, e depois à série original, para, a partir dos respectivos *erros filtrados*, a inicialização dos índices sazonais. Concretamente, o procedimento pode ser esquematizado através dos passos do seguinte quadro:

Inicialização do nível, a_0 , declive, b_0 , e índices sazonais, $\mathbf{c}_0$
1. Aplicar IDUHO à série revertida, e obter
$\tilde{a}_N$
$\tilde{b}_N$
2. Aplicar IDUHO à série original, com
$a_0 = \tilde{a}_N + \tilde{b}_N$
$b_0 = -\tilde{b}_N$
3. Obter $\mathbf{c}_0$, através dos erros filtrados
$y_k - \hat{y}_{k k}$

O método original, mas com a inicialização apresentada, será denominado por CTR#2.

4.3 Comparação experimental

Com o objetivo de verificar o desempenho da abordagem descrita na secção anterior, comparando com o método original, foi considerado um novo conjunto de séries reais. São sete séries relativas à procura (venda) diária de gasolina de uma grande companhia do mercado português, com efeitos sazonais semanais. Apresentam uma percentagem relativamente baixa de valores “em falta”, pelo que é possível aplicar o método CTR#1. Optou-se, mais uma vez, em utilizar também o modelo RFBN, aplicando-o a séries não estacionárias. Como nas experiências anteriores, foi otimizada a série da taxa de procura, mas agora através da medida MASE, e os hiperparâmetros das diferentes abordagens determinados por pesquisa em grelha.

Os resultados obtidos (Tabela 3) mostram, desde logo, que qualquer das três abordagens apresenta ganhos muito consideráveis relativamente ao método *Naïve*. Depois, não sendo uma diferença muito grande, é um facto que CTR#2 melhorou sempre CTR#1. Ou seja, além de agora o método ter aplicação universal, é também de supor que a sua forma “mais inteligente” de inicialização permitirá que apresente um aumento de desempenho. É igualmente de realçar o comportamento das redes face a dados sazonais, ao se mostrarem, em geral, bastante competitivas, e terem mesmo alcançado resultados de destaque para algumas séries.

Tabela 3 – Valores de MASE produzidos pelos métodos em análise na previsão da taxa de procura

Série (N)	CTR#1	CTR#2	RFBN
C1 (230)	0.48	0.46	0.45
C2 (236)	0.45	0.44	0.43
C3 (249)	0.51	0.48	0.30
C4 (261)	0.42	0.40	0.52
C5 (268)	0.50	0.48	0.50
C6 (270)	0.37	0.34	0.52
C7 (275)	0.48	0.47	0.54

5. CONCLUSÕES

É bem conhecida a utilização dos métodos de alisamento exponencial para a previsão de séries temporais. Menos estudada, no entanto, tem sido a aplicação desses métodos quando esses processos se apresentam, distintamente, irregularmente

espaçados no tempo. Foram apresentados alguns métodos que podem ser utilizados para esse fim, e foram feitas algumas propostas de melhoria de desempenho desses métodos. Adicionalmente, e de forma comparativa a estes métodos, foi também considerado um modelo de rede neuronal, concretamente, a rede de funções de base normalizadas. Estas diferentes abordagens foram avaliadas através de pequenos estudos experimentais, utilizando-se dados reais estacionários e não estacionários.

As modificações que foram propostas para os métodos de alisamento exponencial revelaram-se apropriadas, e, no caso sazonal, ultrapassando mesmo uma importante limitação à sua utilização. A rede de funções de base normalizadas, ao ter em conta as possíveis correlações não lineares dos dados, mostrou a sua adequabilidade para a previsão de séries irregularmente espaçadas. No caso estacionário, produziu claramente melhores previsões do que o alisamento exponencial, e, para algumas séries com sazonalidade, foi igualmente possível apresentar um melhor desempenho.

Um caminho que se julga interessante a seguir na previsão de séries irregularmente espaçadas é o proporcionado pela combinação de diferentes ideias metodológicas. Assim, baseado nos métodos de alisamento exponencial e na versão recursiva dos mínimos quadrados, encontra-se em preparação uma nova abordagem, integralmente recursiva, agregando na mesma formulação diferentes métodos, e aplicável à estimação de diferentes modelos. Pretende-se ainda avaliar o seu desempenho, não só através de séries reais, com diferentes características, mas também através da simulação adequada de séries representativas de processos irregulares.

REFERÊNCIAS

- Broomhead, D.S. and Lowe, D. (1988). Multivariable functional interpolation and adaptive networks. *Complex Systems*. 2: 321-355.
- Carmo, J.L. and Rodrigues, A.J. (2004). Adaptive forecasting of irregular demand processes. *Engineering Applications of Artificial Intelligence*. 17: 137-143.
- Carmo, J.L. and Rodrigues, A.J. (2009). Modelos de previsão para procura irregular. *Livro de Actas do 14º Congresso da Associação Portuguesa de Investigação Operacional - IO'2009*. 11-18.
- Cipra, T., Trujillo, J. and Rubio, A. (1995). Holt-Winters method with missing observations. *Management Science*. 41(1): 174-178.
- Croston, J.D. (1972). Forecasting and stock control for intermittent demands. *Operational Research Quarterly*. 23: 289-303.
- Holt, C.C. (1957). Forecasting seasonals and trends by exponentially weighted moving averages. *ONR Memorandum*. Carnegie Institute of Technology. Pittsburgh. 52.
- Hyndman, R.J. (2006). Another look at forecast-accuracy metrics for intermittent demand. *Foresight: International Journal of Applied Forecasting*. 1(4): 43-46.
- Moody, J. and Darken, C.J. (1989). Fast learning in networks of locally-tuned processing units. *Neural Computation*. 1: 281-294.
- Powell, M.D. (1987). Radial basis functions for multivariable interpolation: A review. In: J.C. Mason and M.G. Cox (eds.), *Algorithms for Approximation*. Clarendon Press. Oxford. 143-167.
- Syntetos, A.A. and Boylan, J.E. (2001). On the bias of intermittent demand estimates. *International Journal of Production Economics*. 71: 457-466.
- Teunter, R.H. and Duncan, L. (2009). Forecasting intermittent demand: A comparative study. *Journal of the Operational Research Society*. 60(3): 321-329.
- Willemain, T.R., Smart, C.N., Shockor, J.H. and DeSautels, P.A. (1994). Forecasting intermittent demand in manufacturing: A comparative evaluation of Croston's Method. *International Journal of Forecasting*. 10: 529-538.
- Winters, P.R. (1960). Forecasting sales by exponentially weighted moving averages. *Management Science*. 6: 324-342.
- Wright, D.J. (1985). Extensions of forecasting methods for irregularly spaced data. In: O.D. Anderson (ed.), *Time Series Analysis: Theory and Practice*. Elsevier Science Publishers. Amsterdam. 7: 169-181.

MODELO MATEMÁTICO + SISTEMA FÍSICO = TEORIA DOS SISTEMAS

João M. Brito Lima
University of Algarve
(jlima@ualg.pt)

ABSTRACT

Automatic Control Systems are far and wide used in all modern and industrialized societies. Devices designed to control automatized tasks are each time more present from small plants to large industrial buildings.

The development of mathematical models is a compulsory task for whom aim at analyzing or design any control systems. These mathematical models should reproduce some performance measures as accurate as possible. So, no matter the physical nature of the process we aim at control, an accurate mathematical model should be evaluate. So, the development of mathematical models can be considered an hi-level step over the physical nature of the system that we aim at analyze or design. For this reason the study of Systems Theory and Control Systems are considered transversal areas of the knowledge and them studies are compulsory in many branches of sciences and technologies in many universities all over the world. In spite of normal systems are non-linear the linearization procedure simplify the analysis and design of control systems and, depending on the accuracy of the model can give us good results.

Keywords: Physical Systems, Mathematical Models, Differential Equations.

1. INTRODUÇÃO

A Teoria dos Sistemas é composta por métodos formais com vista ao estudo, projeto, interpretação analítica e homogeneizada de sistemas físicos do nosso quotidiano independentemente de quais sejam as suas naturezas (Ribeiro, 2002).

Sistemas de controlo automático estão cada vez mais presentes em todas as sociedades industrializadas, então, facilmente se compreende que a Teoria dos Sistemas inclua temas e metodologias úteis em diferentes ramos das ciências e tecnologias.

Um enquadramento mais palpável da Teoria dos Sistemas pode ser apresentado num contexto de conceção de um sistema de controlo (Ribeiro, 2002). Desta forma, independentemente de qual seja a dimensão ou a natureza física do sistema que se pretenda controlar, o projeto de um controlador deverá ter em conta as seguintes fases:

- Especificação
- Modelação
- Análise
- Verificação das especificações
- Síntese

O controlador que se pretende sintetizar (ou projetar) deverá ter em conta uma lista de especificações que deverão ser atendidas pelo sistema uma vez que este esteja controlado. Um sistema (ou processo) que se pretenda controlar terá uma complexidade mais ou menos elevada. O projeto de controladores é por vezes um procedimento iterativo tal que, até se atingir a solução final, soluções intermédias são experimentadas podendo resultar funcionamentos mais ou menos lesivos para o processo que se pretende controlar. Assim sendo, a utilização direta do processo que se pretende controlar durante o procedimento de síntese do controlador poderá originar danos graves, desta forma, assume-se com especial importância a fase de modelação. A utilização de um modelo adequado do processo que se pretende controlar tem como vantagem a preservação deste durante a fase de síntese do controlador.

Para além disso, em ambiente laboratorial dispõe-se, dum modo geral, de dispositivos que de alguma forma modelam processos do quotidiano.

Um modelo consiste geralmente numa simplificação da realidade e deverá ter em conta as especificações a ser atendidas na fase de síntese do controlador.

Estabelecido um modelo para o processo que se pretende controlar, passa-se à fase de análise deste para se verificar se a lista de especificações é ou não atendida. Nessa altura, consoante o grau de verificação das especificações, assim se se decidirá (ou não) pelo projeto dum controlador. Tal projeto consiste na associação de dispositivos e determinação dos respetivos parâmetros com vista à verificação das especificações.

A Teoria dos Sistemas está presente, em maior ou menor grau, em todas as fases da conceção de um sistema de controlo automático, independentemente de qual seja a sua natureza física. Apesar das abordagens iniciais versarem sobre sistemas elétricos ou mecânicos, presentemente a Teoria dos Sistema encontra aplicabilidade numa larga gama de áreas do conhecimento estendendo-se inclusivamente às ciências sociais (Ribeiro, 2002).

No presente artigo vão ver estudadas, recorrendo a exemplos, representações matemáticas de sistemas que se poderão incluir na etapa de modelação; neste contexto, este artigo é composto pelas secções que se descrevem de seguida. A secção 2 debruçase sobre a representação matemática de sistemas sendo dado ênfase a sistemas lineares e invariantes no tempo SLIT

contínuos. Na secção 3 será exemplificado como diferentes realidades físicas são modeladas pela mesma realidade matemática. Na secção 4 será apresentado um procedimento uniformizador para a representação de sistemas. O artigo termina com a secção 5 onde se concluirá que diferentes realidades físicas podem ser descritas pela mesma realidade matemática.

2. REPRESENTAÇÃO MATEMÁTICA DE SISTEMAS

Os sistemas que usualmente se encontram no quotidiano são dum modo geral não lineares. Sistemas lineares correspondem a aproximações da realidade que, em maior ou menor grau, podem ser consideradas bastante satisfatórias resultando em modelos cuja exatidão deverá ser tida em conta, tendo em vista o fim a que se destinam. Pode-se assim dizer que um modelo é uma abstração da realidade física extraíndo dela as características que se considerem relevantes para o fim em vista, tendo em conta hipóteses simplificativas.

No âmbito da Teoria dos Sistemas, ao modelo chama-se sistema, e este constitui a sua entidade básica sobre a qual ela (Teoria dos Sistemas) se debruça (Ribeiro, 2002).

O carácter simplificado do modelo relativamente ao sistema físico que o originou explica o facto de, a partir de um mesmo sistema físico poderem ser extraídos vários modelos consoantes as questões relativas ao sistema físico que se pretendam ver resolvidas. Por exemplo, considerando o sistema físico (elétrico) transístor sabe-se que o modelo para baixas frequências é diferente do modelo para as altas frequências, então, o modelo a adotar deverá ter em conta a gama de frequência onde se pretende trabalhar.

As hipóteses simplificativas na linearização de um sistema deverão ter em conta o ponto de funcionamento do sistema físico não linear para o qual se pretende extrair o modelo. Por exemplo, a dinâmica do pêndulo gravítico pode ser linearizada assumindo que para pequenas elongações o seno dum ângulo pode ser aproximado pela sua amplitude.

A linearização de um modelo resulta numa simplificação considerável em termos de conceção e uso das ferramentas matemáticas necessárias à sua análise. Por este motivo esta secção desenvolve-se assumindo sistemas lineares e invariantes no tempo, SLIT.

Neste contexto considere-se um sistema contínuo linear e invariante no tempo arbitrário, descrito pela equação diferencial linear e de coeficientes constantes (1).

$$\begin{aligned} y^{(n)}(t) + a_{n-1}y^{(n-1)}(t) + \dots + a_2\ddot{y}(t) + a_1\dot{y}(t) + a_0y(t) = \dots \\ b_m u^{(m)}(t) + b_{m-1}u^{(m-1)}(t) + \dots + b_2\ddot{u}(t) + b_1\dot{u}(t) + b_0u(t), \quad n > m \end{aligned} \quad (1)$$

Trata-se de um sistema de ordem igual à ordem da equação diferencial, (ordem n), em que a entrada é o sinal $u(t)$ e a saída é o sinal $y(t)$.

A linearidade do sistema traduz-se na linearidade da correspondente equação diferencial (1) e a invariância no tempo reflete-se no facto de serem constantes os coeficientes a_i e b_j .

A equação diferencial (1) descreve completamente o correspondente sistema significando isso que, a partir dela, conhecido o sinal de entrada $u(t)$ e n valores iniciais da saída $y(t)$ e das suas $n-1$ primeiras derivadas, é possível determinar, de forma única, a evolução temporal da saída do sistema, $y(t)$.

Partindo-se de (1) pode-se obter representação em termos de entrada-saída, (ou representação externa) e representação em termos de estado (ou representação interna).

Olhando para (1) na perspetiva de entrada-saída e tendo em conta que a transformada de Laplace pode ser usada na resolução de equações diferenciais lineares, então, pode-se obter uma representação externa do sistema que resulta no quociente entre a transformada de Laplace da saída, $Y(s)$, e a transformada de Laplace da entrada, $U(s)$. Esta representação externa denomina-se função de transferência que, para o sistema representado por (1), resulta (2), sendo que, no instante inicial se consideram nula a saída $y(t)$ bem como as suas $n-1$ primeiras derivadas (Dorf and Bishop, 1995).

$$\frac{Y(s)}{U(s)} = \frac{b_ms^m + b_{m-1}s^{m-1} + \dots + b_1s + b_0}{s^n + a_{n-1}s^{n-1} + a_{n-2}s^{n-2} + \dots + a_1s + a_0} \quad (2)$$

A equação diferencial (1) permite a obtenção de uma representação interna alternativa àquela vertida em (2). Esta representação interna denomina-se modelo de estado acomodando, para além da entrada e da saída, a definição de variáveis internas. Estas variáveis internas são funções do tempo e coordenadas do vetor de estado $X(t)$, poderão ter significado

físico ou serem entidades matemáticas abstratas: $X(t) = [x_1(t) \ x_2(t) \ \dots \ x_n(t)]^T$ (Dorf and Bishop, 1995).

A escolha duma representação, interna ou externa, faz-se consoante as técnicas de análise ou projeto que se pretendam utilizar enquadradas num eventual procedimento para controlo do sistema. Nomeadamente, a representação (2) permite calcular a saída $y(t)$ conhecida a entrada $u(t)$ desde que o sistema parta do repouso, ou seja, as condições iniciais sejam nulas. Porém, muitas situações do quotidiano existem em que o sistema não parte do repouso mas sim, apresenta um estado inicial não nulo, nessas circunstâncias o modelo (2) revela-se incompleto, sendo que, uma representação interna, ou modelo de

estado, por acomodar a existência de condições iniciais não nulas, revela-se adequado.

A partir da representação externa (2) pode-se calcular uma infinidade de representações internas, (uma por cada conjunto de variáveis de estado $[x_1(t) \ x_2(t) \ \dots \ x_n(t)]$ que se escolha), sendo que, uma delas está representada pelo diagrama de simulação na Fig. 1.

A leitura direta da Fig. 1 permite estabelecer a equação de estado (3) e a equação de saída (4).

$$\begin{bmatrix} \dot{x}_1 \\ \dot{x}_2 \\ \vdots \\ \dot{x}_{n-1} \\ \dot{x}_n \end{bmatrix} = \begin{bmatrix} 0 & 1 & 0 & \cdots & 0 \\ 0 & 0 & 1 & 0 & \cdots \\ \vdots & \vdots & \vdots & \vdots & \vdots \\ 0 & 0 & \cdots & 0 & 1 \\ -a_0 & -a_1 & \cdots & -a_{n-2} & -a_{n-1} \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ \vdots \\ x_{n-1} \\ x_n \end{bmatrix} + \begin{bmatrix} 0 \\ 0 \\ \vdots \\ 0 \\ 1 \end{bmatrix} u(t) \quad (3)$$

$$y(t) = [b_0 \ b_1 \ \cdots \ b_{m-1} \ b_m \ 0 \ \cdots \ 0] \cdot \begin{bmatrix} x_1 \\ x_2 \\ \vdots \\ x_m \\ x_{m+1} \\ x_{m+2} \\ \vdots \\ x_n \end{bmatrix} \quad (4)$$

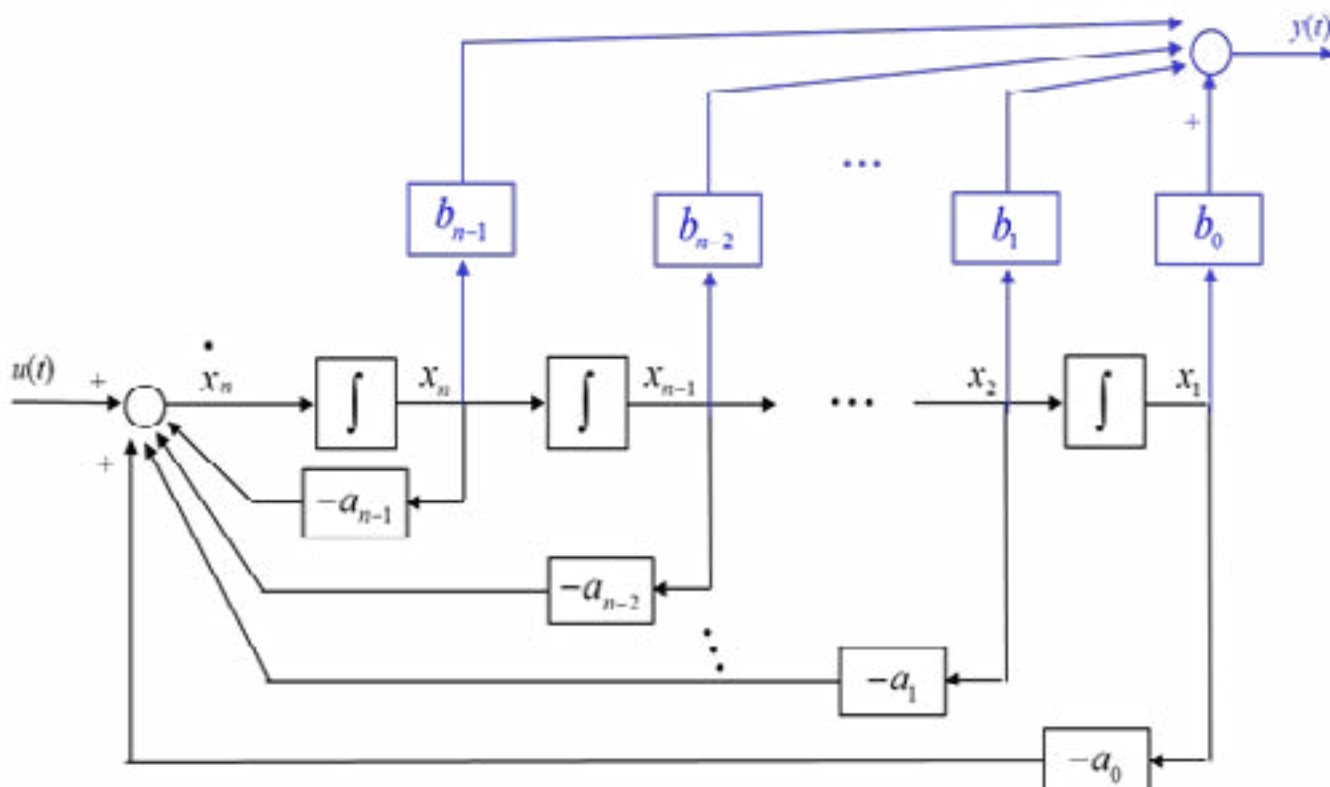
O par de equações (3) e (4) pode ser escrito na forma compacta (5).

$$\begin{cases} \dot{X}(t) = AX(t) + BU(t) \\ Y(t) = CX(t) + DU(t) \end{cases} \quad (5)$$

Definindo-se:

- A - matriz da dinâmica $[n \times n]$,
- B - matriz de entrada $[n \times q]$, q is the number of inputs,
- C - matriz de saída $[p \times n]$, p is the number of outputs,
- D - matriz $[p \times q]$ matrix ($D = 0$, para este caso).

Fig. 1 –Diagrama de simulação respeitante à função de transferência (2)



A representação de SLIT desenvolvida nesta secção é genérica, para sistemas contínuos, não tendo havido a necessidade de se particularizar a suas naturezas físicas; semelhante estudo pode ser feito para sistemas discretos. Nessas circunstâncias a equação diferencial linear de coeficientes constantes (1) daria lugar a uma equação com diferenças, linear e de coeficientes constantes. O cálculo da transformada de Laplace de (1) seria substituído pelo cálculo da transformada z da equação com diferenças, originando uma função de transferência discreta análoga à que se apresenta em (2) mas sendo função de z . O diagrama de simulação (Fig. 1) daria lugar a um diagrama de simulação em que os integradores seriam substituídos por elementos de atraso unitários para tempo discreto representados por Z^{-1} . O modelo de estado discreto análogo ao contínuo (5) é dado por (6), tendo as matrizes A , B , C e D denominações análogas.

$$\begin{cases} X[k+1] = AX[k] + BU[k] \\ Y[k] = CX[k] + DU[k] \end{cases} \quad (6)$$

3. MODELOS MATEMÁTICOS DE SISTEMAS FÍSICOS

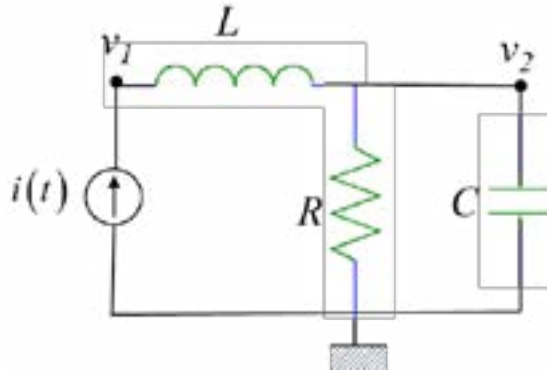
A função de transferência como representação externa de sistemas em termos de entrada-saída e, o modelo de estado onde se definem variáveis internas (variáveis de estado), foram apresentados na secção anterior para *SLIT* contínuos. Ficou claro nessa secção que a metodologia exposta não mencionava a natureza física de nenhum sistema em particular.

Nesta secção vão ser apresentados exemplos de sistemas físicos para os quais se calcularão as correspondentes representações matemáticas (D'Azzo and Houpis, 1988). Apesar de se tratar de exemplos de sistemas físicos de naturezas diferentes, vai ficar claro que os mesmos serão representáveis pelo mesmo modelo matemático.

3.1 Sistema elétrico

Nesta secção vai ser estudado o sistema da Fig. 2 que consiste num circuito elétrico.

Fig. 2 – Circuito elétrico



Este circuito é composto por uma bobine de indutância L medida em Henry $[H]$ ligada a um paralelo de uma resistência R medida em Ohm $[\Omega]$ com um condensador de capacidade C medida em Farad $[F]$; o circuito é alimentado por uma fonte de corrente $i(t)$. Para este circuito será determinada uma função de transferência e um modelo de estado que serão confrontados com os modelos representados pelas expressões (2), (3) e (4).

Na representação externa (função de transferência), é considerada como entrada a tensão aos terminais da fonte de corrente $v_1(t)$ e como saída a tensão aos terminais do condensador $v_2(t)$. Tratando-se de um sistema de natureza elétrica, as leis fundamentais da análise de circuitos elétricos (Dorf, 1993) vão ser utilizadas para se chegar à função de transferência (7).

$$\frac{V_2(s)}{V_1(s)} = \frac{\frac{1}{LC}}{s^2 + \frac{1}{RC}s + \frac{1}{LC}} \quad (7)$$

A função de transferência dada por (7) é formalmente idêntica ao modelo expresso por (2) tendo em conta que a saída Y corresponde à tensão V_2 , e a entrada U corresponde à tensão V_1 . Para além disso, a função racional (7) obtém-se da que se apresenta em (2) fazendo $m = 0$, $n = 2$ e definindo-se os coeficientes da seguinte forma:

$$\begin{aligned} \bullet \quad b_0 &= \frac{1}{LC} \\ \bullet \quad a_0 &= \frac{1}{LC} \\ \bullet \quad a_1 &= \frac{1}{RC} \end{aligned}$$

Alternativamente, uma representação interna para o circuito elétrico da Fig. 2 pode ser estabelecida. Para os valores dos coeficientes a_0 , a_1 e b_0 , tendo em conta o modelo de estado apresentado em (3) e (4), pode-se estabelecer o modelo de estado para o circuito elétrico da Fig. 2, representado pela equação de estado (8) e a equação de saída (9). A saída $y(t)$ representa $v_2(t)$ e a entrada $u(t)$ representa $v_1(t)$.

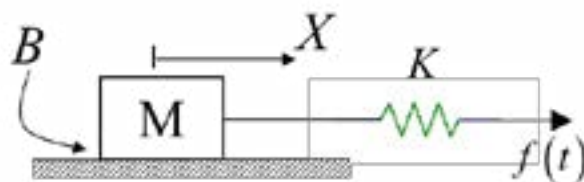
$$\begin{bmatrix} \dot{x}_1 \\ \dot{x}_2 \end{bmatrix} = \begin{bmatrix} 0 & 1 \\ -\frac{1}{LC} & -\frac{1}{RC} \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} + \begin{bmatrix} 0 \\ 1 \end{bmatrix} u(t) \quad (8)$$

$$y(t) = \begin{bmatrix} \frac{1}{LC} & 0 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} \quad (9)$$

3.2 Sistema mecânico

Nesta secção vai ser estudado o sistema mecânico translacional da Fig. 3.

Fig. 3 – Sistema mecânico translacional



Trata-se de uma massa M medida em Quilograma $[Kg]$ que se desloca numa superfície horizontal segundo uma reta (eixo dos X), por ação de uma força $f(t)$ medida em Newton $[N]$ aplicada a uma mola em hélice de constante de elasticidade K medida em $\left[\frac{N}{m}\right]$ ligada à massa. Do contacto da massa com a superfície gera-se um atrito de constante B medida em $\left[\frac{Ns}{m}\right]$.

De forma análoga ao que foi feito para o exemplo elétrico anterior, será determinada uma função de transferência e um modelo de estado que serão confrontados com os modelos representados pelas expressões (2), (3) e (4).

Dada a natureza física do sistema em estudo, vão ser utilizadas as leis da mecânica para o estabelecimento das equações diferenciais que descrevem a sua dinâmica (Ribeiro, 2002). Assumindo-se como entrada a velocidade da extremidade da mola onde é aplicada a força f , v_F , e como saída a velocidade da massa, v_M , determina-se a função de transferência (10) a partir das equações diferenciais obtidas previamente.

$$\frac{V_M(s)}{V_F(s)} = \frac{\frac{K}{M}}{s^2 + \frac{B}{M}s + \frac{K}{M}} \quad (10)$$

Semelhantemente ao que aconteceu com o circuito elétrico, a função de transferência agora obtida corresponde àquela representada por (2) tendo em conta que a saída Y corresponde à velocidade e a entrada U corresponde à velocidade V_F . Trata-se de um sistema de 2ª ordem sem zeros pelo que $m = 0$ e $n = 2$, assim, a partir de (2) obtém-se (10) fazendo os coeficientes:

$$\begin{aligned} \bullet \quad b_0 &= \frac{K}{M} \\ \bullet \quad a_0 &= \frac{K}{M} \\ \bullet \quad a_1 &= \frac{B}{M} \end{aligned}$$

Apresenta-se de seguida um modelo de estado para o sistema da Fig. 3. Assim, particularizando o diagrama de simulação da Fig. 1 para os coeficientes a_0 , a_1 e b_0 podem-se então estabelecer as equações de estado (11) e de saída (12).

$$\begin{bmatrix} \dot{x}_1 \\ \dot{x}_2 \end{bmatrix} = \begin{bmatrix} 0 & 1 \\ -\frac{K}{M} & -\frac{B}{M} \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} + \begin{bmatrix} 0 \\ 1 \end{bmatrix} u(t) \quad (11)$$

$$y(t) = \begin{bmatrix} \frac{K}{M} & 0 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} \quad (12)$$

As representações externas na forma de funções de transferência, respetivamente (7) e (10), bem como as representações internas na forma de modelos de estado, respetivamente (8) e (9), (11) e (12), servem de base tanto a procedimentos de análise como a procedimentos de síntese de controladores. A escolha da representação por função de transferência ou por modelo de estado depende de que técnicas se pretendem utilizar. Tais representações permitem estudos tanto no domínio do tempo quanto no domínio da frequência.

4. REPRESENTAÇÃO UNIFORMIZADA DE SISTEMAS

Na secção anterior foram estudados 2 sistemas físicos de naturezas distintas, eléctrico Fig. 2, e mecânico Fig. 3. Para tais sistemas foram apresentadas as funções de transferência e os modelos de estado respetivos (Dorf and Bishop, 1995). Tratando-se de SLIT as funções de transferência estão na forma de (2) e os modelos de estado estão na forma de (5). Dada a similaridade das representações matemáticas destes 2 sistemas físicos de natureza distinta pode-se colocar a seguinte questão:

- Obtido um modelo para um dado sistema, existirão outros sistemas para os quais esse modelo seja adequado?

No caso da resposta ser afirmativa poder-se-á questionar se os outros sistemas poderão ser de natureza física distinta do sistema original.

Os exemplos apresentados na secção anterior permitem responder afirmativamente à questão colocada, na medida em que, o modelo a que se chega para o circuito eléctrico é idêntico ao modelo a que se chega para o sistema mecânico. Assim, pode-se dizer que o outro sistema para o qual o modelo do sistema eléctrico é adequado é de natureza distinta (mecânico).

Neste contexto, cingindo-se a sistemas de natureza eléctrica e mecânica, vai-se apresentar nesta secção uma metodologia para, partindo-se de um sistema mecânico arbitrário, encontrar-se um sistema (circuito) eléctrico cujo modelo matemático seja idêntico ao modelo matemático do sistema mecânico. Encontrado o circuito eléctrico diz-se que este é um sistema análogo do sistema mecânico.

Consideremos as grandezas físicas envolvidas em cada um dos sistemas da secção anterior; para o circuito eléctrico a perturbação do sistema é feita à custa de uma fonte de corrente enquanto para o sistema mecânico a perturbação é feita pela aplicação de uma força. Assim, pode-se considerar que a corrente eléctrica num circuito tem função análoga a uma força num sistema mecânico. Na verdade, tanto a força como a corrente propagam-se através dos elementos, mecânicos e eléctricos respetivamente. Os respetivos aparelhos de medida, dinamómetro para medição da força e amperímetro para medição da intensidade de corrente, são colocados em série. Assim, na procura de analogias pode-se afirmar que as seguintes grandezas físicas:

$$\text{Intensidade da corrente, } i \sim \text{Força, } f$$

são análogas.

Semelhante leitura pode ser feita relativamente à tensão eléctrica num circuito e à velocidade de um ponto num sistema mecânico. Ambas as grandezas medem-se em relação a uma referência; a tensão num nó dum circuito mede-se relativamente a um nó de referência bem como a velocidade de um ponto se mede em relação a um referencial que se considera parado. Assim, na procura de analogias pode-se afirmar que as seguintes grandezas físicas:

$$\text{Tensão eléctrica, } v \sim \text{Velocidade, } v_e$$

são análogas.

Considere-se agora os elementos básicos dos circuitos eléctricos e dos sistemas mecânicos da Tab. 1 onde se apresentam as leis elementares que os governam.

Com base as leis que governam a massa M e o condensador C , respetivamente, $f(t) = M \frac{dv_e(t)}{dt}$ e

$i(t) = C \frac{dv(t)}{dt}$; então, assumindo as analogias anteriores (força, corrente eléctrico e velocidade, tensão), pode-se dizer

que:

- o modelo da massa M é igual ao modelo do condensador C desde que a capacidade do condensador seja $C = M$.

Considere-se agora as leis que governam a mola de constante de elasticidade K e a bobine de indutância L , respetivamente

$f(t) = Kx(t)$ e $v(t) = L \frac{di(t)}{dt}$. Derivando ambos os membros da lei que governa a mola e resolvendo em ordem

à velocidade tem-se $v_e(t) = \frac{1}{K} \frac{df(t)}{dt}$. Comparando esta expressão com a lei que governa a bobine e tendo em conta as

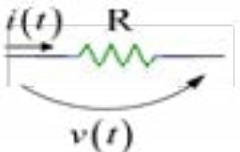
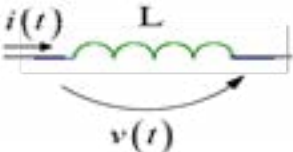
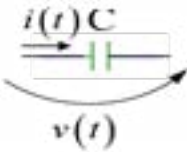
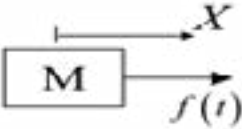
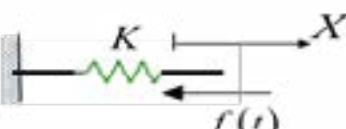
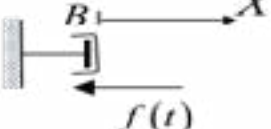
analogias anteriores, pode-se dizer que:

- o modelo da mola K é igual ao modelo da bobine L desde que a indutância da bobine seja $L = \frac{1}{K}$.

$$v_e(t) = \frac{dx(t)}{dt}$$

² A ausência do sinal negativo relativamente ao que se apresenta na tabela deve-se ao facto de agora não se estar a considerar a força de restituição da mola mas sim a força externa que se deve aplicar para que a mola sofra um alongamento x .

Tab. 1 Elementos básicos de circuitos elétricos e de sistemas mecânicos, suas representações e leis que os governam

Elementos elétricos	Resistência	Bobina	Condensador
			
	$v(t) = Ri(t)$	$v(t) = L \frac{di(t)}{dt}$	$i(t) = C \frac{dv(t)}{dt}$
Elementos mecânicos	Massa	Mola	Atrito
			
	$f(t) = M \frac{d^2x(t)}{dt^2}$	$f(t) = -Kx(t)$	$f(t) = -B \frac{dx(t)}{dt}$

Por último, repare-se no atrito de constante B e na resistência R , bem como nas respectivas leis que as governam,

$f(t) = Bv_e(t)$ e $i(t) = \frac{1}{R}v(t)$; então, tendo em conta as analogias habituais pode-se dizer que:

- o modelo do elemento de atrito B é igual ao modelo da resistência R desde que a resistência seja $R = \frac{1}{B}$.

Resumindo, na Tab. 2 registam-se as condições que se devem verificar entre cada par de elementos análogos para que o modelo dum circuito elétrico seja igual ao modelo do sistema mecânico.

Nesta altura, pode-se verificar que, tanto para a função de transferência (10), como para o modelo de estado (11) e (12), obtidos para o sistema mecânico Fig. 3, substituindo os seus parâmetros M , K e B de acordo com a Tab. 2, resultam na função de transferência (7) e no modelo de estado (8) e (9) do circuito elétrico Fig. 2. De forma inversa, os modelos (função de transferência e modelo de estado) a que se chegaram para o circuito elétrico resultam nos correspondentes modelos para o sistema mecânico desde que se façam as substituições dos parâmetros elétricos de acordo com a Tab. 2.

Tab. 2 Condições a verificar para que elementos análogos sejam governados pelo mesmo modelo

Massa – Condensador	$M = C$
Mola – Bobine	$K = \frac{1}{L}$
Atrito – Resistência	$B = \frac{1}{R}$

5. CONCLUSÕES

Chega-se então à conclusão de que se está perante sistemas físicos distintos que são representáveis pelo mesmo modelo matemático.

Esta conclusão é extrapolável a sistemas de outras naturezas que não elétrica ou mecânica, por exemplo, sistemas de naturezas tão dispares como hidráulicos ou térmicos são constituídos por elementos básicos que terão correspondência em termos de modelos para com, por exemplo, sistemas mecânicos ou elétricos.

Esta conclusão permite dizer que:

- **diferentes realidades físicas são representadas pela mesma realidade matemática.**

Esta conclusão uniformizadora tem implicações para toda a metodologia que integra a Teoria de Sistemas, seja no que se refere à representação de sistemas, análise ou síntese.

REFERÊNCIAS

Ribeiro, M. (2002). *Análise de Sistemas Lineares*. IST Press. ISBN: 972-8469-13-6.

D'Azzo, J. and Houpis, C. (1988). *Linear Control System Analysis and Design Conventional and Modern*. 3rd edition, McGraw-Hill International Editions. ISBN 0-07-016186-0.

Dorf, R. and Bishop, R. (1995). *Modern Control Systems*. 7th edition, Addison Wesley. ISBN 0-201-84559-8.

Dorf, R. (1993). *Introduction to Electric Circuits*. 2nd edition, John Wiley & Sons, Inc. ISBN 0-471-60011-3.

APLICAÇÕES DE TRANSFORMADAS INTEGRAIS EM PROCESSAMENTO DE SINAIS

Rui Marreiros

Departamento de Matemática, Faculdade de Ciências e Tecnologia, Universidade do Algarve
(rmarrei@ualg.pt)

RESUMO

As transformadas integrais constituem uma área da matemática de enorme investigação teórica e aplicada em diferentes ramos da ciência e tecnologia. Entre as aplicações destaca-se o seu uso em telecomunicações, no processamento de sinais físicos com vista à transmissão destes. Neste trabalho mostramos a utilização das transformadas integrais de Fourier e de Hilbert na, assim designada, modelação de amplitude.

Palavras-chave: Transformada de Fourier, Transformada de Hilbert, Modelação de Amplitude.

1. INTRODUÇÃO

Seja $f(t)$ uma função de variável real tal que $\int_{-\infty}^{+\infty} |f(t)| dt < \infty$; a *transformada de Fourier* de $f(t)$, ou o espectro de $f(t)$, define-se por

$$\hat{f}(\omega) = \int_{-\infty}^{+\infty} f(t) e^{-2\pi i \omega t} dt.$$

A transformada inversa de Fourier de $\hat{f}(\omega)$, define-se por

$$f(t) = \int_{-\infty}^{+\infty} \hat{f}(\omega) e^{2\pi i \omega t} d\omega.$$

Por um sinal $s(t)$ entende-se uma função real do tempo t tal que

$$\hat{s}(\omega) = \begin{cases} \hat{s}(\omega), & \omega \in [-\omega_0, \omega_0] \\ 0, & \omega \notin [-\omega_0, \omega_0] \end{cases}$$

onde $\omega_0 > 0$ é uma constante (tipicamente, em rádio, $\omega_0 = 4,5 \text{ kHz}$).

Conhecendo $\hat{s}(\omega)$, tem-se

$$s(t) = \int_{-\omega_0}^{+\omega_0} \hat{s}(\omega) e^{2\pi i \omega t} d\omega.$$

Os sinais não podem ser transmitidos directamente por dois motivos:

- 1) as frequências no intervalo $[-\omega_0, \omega_0]$ não são passíveis de transmissão por ondas electromagnéticas;
- 2) para permitir a transmissão simultânea, diferentes emissores deverão utilizar diferentes frequências que não se intersectem.

Assim os sinais devem ser modulados antes de serem transmitidos; são usados dois sistemas de modulação: modulação de amplitude (AM) e modulação de frequência (FM). Vamos descrever dois tipos de AM:

- i) Modulação clássica e ii) Modulação de banda unilateral.

2. MODULAÇÃO CLÁSSICA

O sinal dado é multiplicado por $2\cos 2\pi\omega_c t$, onde ω_c é a designada frequência portadora (frequência que se sintoniza no rádio, característica do emissor considerado, $\omega_c \cong 1000 \text{ kHz}$, $\omega_c \gg \omega_0$). Assim o sinal modulado é

$$S(t) = 2s(t)\cos 2\pi\omega_c t.$$

Calculemos o espectro do sinal modulado; tem-se

$$\begin{aligned}\hat{S}(\omega) &= \int_{-\infty}^{+\infty} S(t) e^{-2\pi i \omega t} dt = \int_{-\infty}^{+\infty} 2s(t) \cos 2\pi \omega_c t e^{-2\pi i \omega t} dt = \\ &= \int_{-\infty}^{+\infty} s(t) (e^{2\pi i \omega t} + e^{-2\pi i \omega t}) e^{-2\pi i \omega t} dt = \\ &= \int_{-\infty}^{+\infty} S(t) e^{-2\pi i (\omega - \omega_c) t} dt + \int_{-\infty}^{+\infty} S(t) e^{-2\pi i (\omega + \omega_c) t} dt \Leftrightarrow \\ &\hat{S}(\omega) = \hat{s}(\omega - \omega_c) + \hat{s}(\omega + \omega_c). \quad (a)\end{aligned}$$

Chegado ao receptor o sinal modulado deve ser demodulado; multiplicando $S(t)$ por $\cos 2\pi \omega_c t$ obtem-se o sinal demodulado $S_1(t) = 2s(t) \cos^2 2\pi \omega_c t$.

De forma análoga ao cálculo de $\hat{S}(\omega)$, calculamos o espectro do sinal demodulado e obtemos

$$\hat{S}_1(\omega) = \frac{1}{2} \hat{s}(\omega - 2\omega_c) + \hat{s}(\omega) + \frac{1}{2} \hat{s}(\omega + 2\omega_c).$$

O receptor filtra os termos de alta frequência $\hat{s}(\omega \pm 2\omega_c)$ e sintetiza o sinal original

$$s(t) = \int_{-\omega_0}^{+\omega_0} \hat{s}(\omega) e^{2\pi i \omega t} d\omega.$$

Desvantagem da modulação clássica: o comprimento do espectro do sinal modulado $\hat{S}(\omega)$ ($= 4\omega_0$) é maior que o comprimento do espectro do sinal original $\hat{s}(\omega)$ ($= 2\omega_0$). Pretende-se economizar o “espaço das frequências” de modo a permitir o seu uso por um maior número de emissores.

Tratamento: existe informação redundante em $\hat{S}(\omega)$; de facto, como o sinal é real tem-se

$$\hat{s}(-\omega) = \overline{\hat{s}(\omega)}. \quad (b)$$

De (a) tem-se

$$\hat{S}(\omega_c + \omega) = \hat{s}(\omega), \quad \hat{S}(\omega_c - \omega) = \hat{s}(-\omega);$$

e, com (b),

$$\hat{S}(\omega_c - \omega) = \overline{\hat{S}(\omega_c + \omega)}.$$

Daqui obtemos que é suficiente conhecer a função $\hat{S}(\omega)$ no intervalo $[\omega_c, \omega_c + \omega_0]$.

Questão: será possível associar ao sinal dado $s(t)$ um sinal $S_0(t)$ cujo espectro $S_0(\omega)$ coincida com $\hat{S}(\omega)$ nos intervalos $\pm[\omega_c, \omega_c + \omega_0]$ e seja igual a zero fora deles? Sim, é possível definir uma função $S_0(t)$ tal que

$$\hat{S}_0(\omega) = \frac{1}{2} [1 + \text{sgn}(\omega - \omega_c)] \hat{s}(\omega - \omega_c) + \frac{1}{2} [1 - \text{sgn}(\omega + \omega_c)] \hat{s}(\omega + \omega_c),$$

onde $\text{sgn}(\omega) = \begin{cases} +1, & \omega > 0 \\ -1, & \omega < 0 \end{cases}$, como mostraremos de seguida.

3. MODULAÇÃO DE BANDA UNILATERAL

O sinal modulado é definido por

$$S_0(t) = s(t) \cos 2\pi \omega_c t - \check{s}(t) \sin 2\pi \omega_c t,$$

onde $\check{s}(t)$ designa a *transformada de Hilbert* da função $s(t)$, i.e.,

$$\check{s}(t) = \frac{1}{\pi} \int_{-\infty}^{+\infty} \frac{s(t_1)}{t - t_1} dt_1.$$

Observação 1. Procedendo ao cálculo da transformada de Fourier da função $S_0(t)$, mostra-se que o seu espectro é a função $\hat{S}_0(\omega)$ mencionada anteriormente.

Observação 2. O integral na definição da transformada de Hilbert existe como integral impróprio para $t \notin \mathbb{R}$ e no sentido do valor principal segundo Cauchy para $t \in \mathbb{R}$, que é o caso presente.

Chegado ao receptor o sinal modulado deve ser demodulado; tal como na modulação clássica obtém-se o sinal demodulado com o produto $S_{01}(t) = 2S_0(t) \cos 2\pi\omega_c t$.

Calculando o espectro do sinal demodulado obtemos

$$\hat{S}_{01}(\omega) = \frac{1}{2} [1 + \text{sgn}(\omega - 2\omega_c)] \hat{s}(\omega - 2\omega_c) + \hat{s}(\omega) + \frac{1}{2} [1 - \text{sgn}(\omega + 2\omega_c)] \hat{s}(\omega + 2\omega_c).$$

O receptor filtra os termos de alta frequência $\hat{s}(\omega \pm 2\omega_c)$ e sintetiza o sinal original

$$s(t) = \int_{-\omega_0}^{+\omega_0} \hat{s}(\omega) e^{2\pi i \omega t} d\omega.$$

Observação 3. O sinal modulado $S_0(t)$ pode ser escrito na forma

$$S_0(t) = \text{Re}\{z(t)e^{2\pi i \omega_c t}\},$$

onde $z(t) = s(t) + i\tilde{s}(t)$ é o sinal analítico associado à função $s(t)$. Tem lugar a seguinte proposição: a função complexa $z(t)$ de variável real t é um sinal analítico se e só se

$$\hat{z}(\omega) = \frac{1}{2} [1 + \text{sgn}(\omega)] \hat{z}(\omega), \quad \hat{z}(\omega) = \begin{cases} \hat{z}(\omega), & \omega > 0 \\ 0, & \omega < 0 \end{cases}, \text{ i.e.,}$$

BIBLIOGRAFIA

- Henrici, P. (1993). *Applied and Computational Complex Analysis, vol. 3*. John Wiley & Sons.
- Allen, R. and Mills, D. (2004) *Signal Analysis*. IEEE, John Wiley & Sons.
- Cohen, L. (1995) *Time Frequency Analysis*. Prentice-Hall, New Jersey.

BEM-ESTAR PSICOLÓGICO E RENDIMENTO ACADÊMICO: UM ESTUDO COM ESTUDANTES DO ENSINO SECUNDÁRIO

Dina Olim

Escola Profissional Cristóvão Colombo

Regina Capelo

Direção Regional de Educação

Miguel Varela

Direção Regional de Educação

RESUMO

Este estudo pretende investigar as relações entre o bem-estar psicológico e o rendimento académico. É um design quantitativo, transversal e correlacional, com uma amostra de 411 alunos do ensino secundário, portugueses, com idades compreendidas entre os 15 e os 21 anos. O instrumento de recolha de dados foi a escala multidimensional de Bem-Estar Psicológico de Ryff, adaptada para adolescentes. A capacidade de um aluno concluir em três anos o 3.º ciclo do ensino básico foi considerada rendimento académico. Os resultados apontam significado estatístico para uma diferenciação segundo o género, com as raparigas a pontuarem mais alto nas dimensões autonomia, crescimento pessoal e relações positivas com os outros e a mostrarem que os estudantes mais velhos (>18 anos) percecionam níveis de autonomia mais elevados. Ocorreram correlações significativas positivas entre o rendimento académico e todas as dimensões do bem-estar-psicológico. Salienta-se a importância das intervenções potenciadoras do bem-estar-psicológico dos alunos tendo em vista a promoção do rendimento académico.

Palavras-chave: Alunos, Bem-Estar-Psicológico, Rendimento Académico.

1. INTRODUÇÃO

O bem-estar psicológico é um constructo multidimensional, que envolve elementos cognitivos e emocionais (Salami, 2011), constituindo requisitos para a compreensão global do bem-estar humano em congruência com fatores ao nível individual e social (Ryff & Singer, 1996). Neste sentido, o bem-estar é o nível em que cada indivíduo perceciona a satisfação de sua vida como um todo, sendo uma construção complexa da atividade humana.

O tema, bem-estar, tem despertado interesse em diversas áreas científicas e a cidadãos comuns. Este constructo está alicerçado em torno de duas perspetivas gerais: a abordagem hedónica, que incide sobre a felicidade e define o bem-estar em termos de obtenção de prazer e de evitar a dor, e a abordagem eudaimónica, que se refere à autorrealização do potencial individual, a fim de superar os desafios existenciais, conferindo metas fundamentais à sua vida. Bem-estar respeita ao grau em que uma pessoa está em pleno funcionamento, contemplando diversas dimensões do funcionamento psicológico (Novo, 2003; Salami, 2011). Essas duas visões têm dado origem a diferentes focos de pesquisa e um corpo de conhecimento que é em algumas áreas divergentes e, em outras complementares. Novos desenvolvimentos metodológicos sobre modelagem multinível e comparações de constructo, conduzem à formulação de novas perguntas.

A atenção dispensada ao bem-estar (*well-being*) não é recente. Remonta à Grécia Antiga por parte de diversos pensadores e filósofos, na procura de fatores determinantes da promoção da felicidade e do prazer. Aristóteles na sua obra de *Ética a Nicómano*, aborda o “bem humano” como uma condição principal da “felicidade” (Santos, 2001, p. 20), enquanto que os filósofos Aristippus e Hobbes, do século 4 a.C., sustentavam que o objetivo da vida é a máxima experiência de prazer (Ryan & Deci, 2001, p. 143).

O conceito bem-estar passou a configurar no campo científico da psicologia na última década do século XX (Novo, 2005; Siqueira & Padovam, 2008), segundo Ryan e Deci (2001, p. 142), com o intuito de conhecer os fatores psicológicas que estão associados a uma vida saudável. Até então a psicologia ocupava-se, sobretudo, em dar resposta aos problemas do foro psicopatológico e na área da saúde mental, ou seja, a saúde era interpretada como ausência de doenças (*absence of illness*) em vez de ser presença de bem-estar (*presence of wellness*) (Ryff & Singer, 1996, p. 14).

No âmbito da Psicologia Positiva, centrada no estudo científico das experiências positivas e nas características positivas individuais, foi retomado o interesse em analisar o bem-estar, porque atribui particular importância às variáveis positivas dos comportamentos humanos, nomeadamente à felicidade, amor, esperança, competência, responsabilidade, otimismo, compaixão, entre outras (Novo, 2005). Contudo, no fim do século XX, o conceito de bem-estar é enfatizado em diversos estudos, sobretudo na área de intervenção social, clínica e de avaliação das políticas sociais, passando o tema bem-estar a ser frequentemente aplicado pela população em geral, utilizando diferentes abordagens e tornando-se um componente fundamental na determinação de uma vida saudável (Novo, 2005; Siqueira & Padovam, 2008).

Antes de abordar os antecedentes e os estudos anteriores do constructo BEP importa referenciar que o bem-estar comporta diferentes modelos a citar: bem-estar subjetivo, bem-estar psicológico e bem-estar social (Maia, 2011; Novo, 2005). Porém, entre as várias teorias, metodologias na conceção e operacionalização do constructo bem-estar, destacamos as abordagens do bem-estar psicológico.

O constructo bem-estar psicológico é proposto por Ryff (1989), configurando um novo modelo sustentado nas dimensões nucleares do funcionamento psicológico positivo, integrando o bem-estar no domínio da saúde mental positiva. Ryff considerou que o bem-estar subjectivo-BES não contempla a motivação central na busca do prazer e por isso não fornece elementos suficientes de análise. Como contraponto, o seu modelo é fundamentado na interpretação do conceito aristotélico de *eudaimonia*¹, que consiste na busca do bem supremo, de uma vida justa, boa e feliz, ou seja, permite os indivíduos reconhecerem as suas capacidades, talentos e viverem de acordo com o seu *daimon*, a fim de alcançarem a perfeição e a realização pessoal e, por fim, a sua felicidade e o seu bem-estar (Fernandes, Vasconcelos-Raposo, Bertelli, & Almeida, 2011; Novo, 2005; Siqueira & Padovam, 2008). Com efeito, o modelo de BEP (*psychological well-being*) de Ryff difere do BES por ser mais amplo, teoricamente mais sólido e com capacidade de incluir o bem-estar na promoção da saúde mental e momento do funcionamento psicológico positivo (Fernandes, 2007; Novo, 2003). Para além de abranger a subjetividade o constructo bem-estar psicológico também inclui a satisfação de algumas necessidades (Kesebir & Diener, 2008).

Ryff (1989), ao efetuar uma revisão intensiva da literatura propôs um modelo de BEP que engloba diversos modelos teóricos, nomeadamente da personalidade, da psicologia do desenvolvimento e psicologia clínica, e ainda as mais relevantes propostas do “human flourishing” (Ryan & Deci, 2001). Com efeito, o modelo multidimensional, holístico e teórico-empírico de avaliação do bem-estar proposto pela investigadora Ryff (1989), destinado a maiores de dezoito anos, é constituído por seis dimensões: autonomia (*autonomy*) – sentimento de autodeterminação e capacidade de auto-regulação e liberdade ou independência em relação à aprovação externa; domínio do meio (*environmental mastery*) – capacidade para gerir a vida própria e exigências extrínsecas ao indivíduo; crescimento pessoal (*personal growth*) – sentimento de desenvolvimento contínuo e abertura a novas experiências de vida necessárias à maximização do seu potencial; relações positivas com os outros (*positive relationships*) – estabelecimento de relações positivas e altruístas para com os outros; objetivos na vida (*purpose in life*) – definição de propósitos de vida e atribuição de significação/importância à existência e autorealização pessoal; e, aceitação de si (*self acceptance*) – caracterizada pela perceção e aceitação dos múltiplos aspetos do indivíduo, quer sejam relacionados com características boas ou más, e avaliação positiva do seu passado (Fava & Tomba, 2009; Fernandes, 2007; Novo, 2005; Ryff, 1989, 2013; Ryan & Deci, 2001; Ryff & Keyes, 1995; Ryff & Singer, 2006; Siqueira & Padovam, 2008).

Os estudos de bem-estar psicológico têm sido aplicados maioritariamente a pessoas adultas e a idosos, sendo escassos os estudos sobre populações mais jovens. Neste sentido, Fernandes (2007), no âmbito do seu estudo de doutoramento que aplicou a escala de BEP de Ryff (cento e vinte itens), porém, adaptada e validada à população adolescentes portuguesa, sendo mais compacta com trinta itens, denominada a EBEP-adolescentes, numa amostra de 698 alunos com idades compreendidas entre os 12 e os 18 anos, do 3º Ciclo do Ensino Básico e do Secundário, na zona centro de Portugal. Esta escala mostrou uma boa adequação fatorial.

O estudo desenvolvido por Sá (2012), que teve como objetivo principal a perceção do efeito de uma intervenção sobre as habilidades sociais no comportamento pró-social, autoconceito e aceitação pelos pares, em seis momentos, tendo participado em cada um deles cerca de duzentos e quarenta alunos, do género masculino e feminino, do 3º ciclo básico (7º, 8º e 9º ano) de uma escola pública, na região do norte de Portugal, foi aferido que os alunos ao frequentarem o Programa de Desenvolvimento de Habilidades Sociais- PDHS contribuíam para uma melhoria em quase todos os domínios do BEP, à exceção do BEP-autonomia. Assim como, os resultados indicaram a existência de diferenças estatisticamente significativas entre o bem-estar psicológico global em todos os momentos e o rendimento escolar dos primeiros, segundo e terceiro período. Para este estudo o RE foi avaliado pela média da nota obtida no 3º Ciclo do Ensino Básico-CEB. No que concerne, às diferenças entre o género masculino e o feminino, Sá sugere diferenças estatisticamente significativas no BEP global, em que os alunos do género feminino apresentaram médias do BEP global superiores às apresentadas pelos alunos do género masculino em todos os momentos.

Também Coelho (2015) concluiu que o bem-estar psicológico é crucial na vida de um indivíduo, proporcionando-lhe um desenvolvimento normativo, permitindo lidar com os desafios quotidianos e um ajustamento académico. Ou seja, na perspectiva do referido autor, quanto maior o bem-estar psicológico maior será o sentimento de ajustamento académico, ou vice-versa.

Tendo em consideração que os estudos em torno do BEP a que nós tivemos acesso, são maioritariamente dirigidos a adultos ou jovens universitários, porém, diversos autores defendem a importância da investigação sobre o BEP e eudaimónico na adolescência, por ser considerada uma fase de desenvolvimento cateterizado por mudanças cognitivas, sociais e físicas, pelo papel de construção da identidade e de preparação para a vida adulta (Bizarro, 2001a; Fernandes, 2007; Fernandes, Vasconcelos-Raposo, Bertelli & Almeida, 2011), o presente estudo tem como objetivo investigar as relações entre o bem-estar-psicológico e o rendimento académico em alunos do ensino secundário.

2. MÉTODO

2.1 Participantes

A amostra global da presente investigação empírica foi constituída por 411 alunos, do ensino secundário com idades compreendidas entre 15 e 21 anos ($M= 16,82$; $DP= 1.42$). Ao nível do género, a amostra subdividiu-se em 222 (54%) rapazes e 189 (46%) raparigas.

¹ Segundo a etimologia *eudaimonia* significa “(eu) bem disposto; (*daimon*) que tem um poder divino”.

Foram definidos dois grupos de idades. Assim, o grupo com menos de 18 anos contemplou um total de 272 indivíduos (138 rapazes e 134 raparigas), que se enquadram na escolaridade obrigatória. O grupo com idade igual ou superior a 18 anos foi constituído por 139 indivíduos (84 rapazes e 55 raparigas). Trezentos e trinta e três alunos (81%) completaram o 3.º ciclo do ensino básico no período regulamentar de três anos e 78 (19%) excederam o tempo previsto de três anos.

Para um dos propósitos do estudo, procedeu-se à caracterização da amostra face ao rendimento escolar global obtido no 3.º ciclo do ensino básico. O grupo de nível 3 foi composto por 157 alunos (38,20%), o grupo de nível quatro com 194 alunos (47,20%). O grupo com nível 5 abrangeu um total de 60 alunos (14,60%).

O processo de amostragem norteou-se por um processo não probabilístico, onde buscámos a participação de um número adequado de sujeitos para a consecução dos objetivos a que nos propusemos. Socorrendo-nos da técnica em bola de neve, tomámos como elementos cooperantes na amostragem, docentes que lecionavam numa escola Secundária de meio urbano. Os critérios de inclusão foram ser estudantes do ensino secundário, público, participação voluntária, consentimento informado e ter autorização dos pais/encarregados de educação no caso dos menores de 18 anos.

2.2 Instrumentos

Após os alunos responderem a questões de natureza sociodemográfica (género, idade, ano de escolaridade que frequenta), foi-lhes apresentada uma questão sobre a avaliação global obtida no 3.º ciclo do ensino básico.

Para a medição do bem-estar psicológico foi utilizada a versão portuguesa das escalas de Carol Ryff (1989b) - EBEP-adolescentes, adaptada por Fernandes & Vasconcelos-Raposo (2008). O conjunto dos 30 itens foi respondido numa escala de numa escala de Likert de 5 pontos (1 – discordo plenamente; 5 – concordo plenamente), (os itens 2, 5 e 19 estão invertidos), que quando somados por total de escala permitem analisar a variabilidade por dimensão das escalas de bem-estar psicológico, enquanto adicionados na sua globalidade, dão origem a um resultado designado de bem-estar global que se constitui como indicador do conceito base do bem-estar psicológico.

2.3 Procedimentos

O estudo quantitativo, transversal e correlacional ocorreu em meio urbano, numa escola de ensino público. Procedeu-se à recolha de dados após obtenção do consentimento informado para aplicação do questionário, por parte da Direção Regional de Educação, da direção do estabelecimento de ensino, dos encarregados de educação e dos respetivos alunos, sendo-lhes assegurado a confidencialidade e o anonimato dos dados recolhidos. O preenchimento do questionário decorreu em contexto sala de aula, demorando cerca de 10 a 15 minutos.

Foram verificados os pressupostos da normalidade, cuja prova de Kolmogorov-Smirnov mostrou distribuição não normal em todas as dimensões ($p < 0,001$) (Field, 2011), seguidos pelo cálculo do coeficiente alpha de Cronbach de modo a aferir a consistência interna das escalas de avaliação multi-item. Tendo em conta o cálculo do coeficiente *Alpha de Cronbach*² considerou-se a escala do BEP global ($\alpha = 0,88$), autonomia ($\alpha = 0,60$), Crescimento pessoal ($\alpha = 0,72$), Relações positivas com os outros ($\alpha = 0,66$), Objetivos de vida ($\alpha = 0,76$), Aceitação de si ($\alpha = 0,79$). O Domínio do meio ambiente foi excluído das análises por não apresentar índices minimamente aceitáveis de fiabilidade ($\alpha = 0,45$).

Relativamente à análise estatística, inicialmente foram estimados os indicadores univariados de tendência central média e dispersão (desvio-padrão) das medidas analisadas.

No âmbito da inferência estatística procedeu-se à aplicação do teste de diferenças *Mann-Whitney Test*, *U*, *design* inter-sujeitos para dois grupos independentes e o teste de associação - coeficiente de correlação de Spearman, - com o intuito de compreender com base nos elementos observados, como as variáveis se diferenciam ou associam, consoante a sua natureza, dependente ou independente (Pestana & Gageiro, 2008).

3. RESULTADOS

Efetuuou-se, inicialmente, a análise descritiva das medidas de bem-estar psicológico, apresentadas na tabela 1.

Por uma questão de organização estrutural, subdividimos a análise descritiva dos resultados em caracterização da qualidade de vida e a caracterização do bem-estar psicológico.

Tabela 1 - Medidas centrais e de dispersão da escala do bem-estar psicológico- EBEP-adolescentes

Domínios	N	Média	Desvio padrão	Mínimo	Máximo
Global	383	111.64	12.89	70	141
Autonomia	408	18.83	3.00	5	25
Crescimento pessoal	404	20.87	2.78	9	25
Relações positivas com os outros	407	18.75	3.03	5	25
Objetivos na vida	407	17.52	3.64	5	25
Aceitação de si	408	18.15	3.42	8	25

² O coeficiente *Alpha de Cronbach* é uma das medidas utilizadas para a verificação da consistência interna de uma escala e é comumente usado como uma estimativa da fiabilidade de um teste psicométrico para uma amostra de respondentes. Varia entre 0 e 1, sendo que a regra básica é se o valor estimado do *Alpha de Cronbach*, situar entre 0,7 e 1 é aceitável, sendo inferior a 0,6 é inaceitável (Pestana & Gageiro, 2008).

A análise dos valores expressos na tabela 1 revela que na EBEP-adolescentes os alunos apresentam resultados mais elevados no domínio EBEP-a Global ($M= 111,64$; $DP= 12,89$), seguido do domínio do crescimento pessoal ($M= 20,87$; $DP= 2,78$), autonomia ($M= 18,83$; $DP= 3,00$), relações positivas com os outros ($M= 18,75$; $DP= 3,03$), aceitação de si ($M= 18,15$; $DP= 3,42$) e por fim, o score mais baixo corresponde ao domínio objetivos na vida ($M= 17,52$; $DP= 3,64$).

A fim de determinar a influência do género dos alunos em relação à perceção do nível do bem-estar psicológico aplicou-se o teste de Mann-Whitney (U), por permitir comparar os dois grupos (masculino e feminino), a nível de uma variável com distribuição não normal (tabela 2).

Tabela 2 - Análise do bem-estar psicológico em função do género

Variável	Género	N	Média (DP)	U	p	R_G
Autonomia	Masculino	220	18.54 (2.71)	23550.00	.015	-.14
	Feminino	188	19.16 (3.30)			
Crescimento Pessoal	Masculino	217	20.23 (2.76)	26318.50	.001	-.30
	Feminino	187	21.61 (2.61)			
Relações positivas com os outros	Masculino	218	18.30 (3.22)	24094.00	.003	-.17
	Feminino	189	19.26 (2.71)			

Nota. U : Estatístico de Mann-Whitney; p : Nível de significância; n : total de casos da amostra; R_G : coeficiente de correlação bisserial por ordem de Glass

Os resultados sugerem diferenças significativas em função do género, nos domínios de autonomia ($U= 23550,0$, $p=0,015$), do crescimento pessoal ($U= 26318,5$, $p < 0,001$) e de relações positivas com os outros ($U= 24094,0$, $p= 0,003$), regista-se que as raparigas apresentam scores mais elevados do que os rapazes, embora estas diferenças sejam pequenas, de acordo com o valor das correlações bisseriais por ordem de Glass (r_G).

No que concerne à idade, o resultado do Teste de Mann-Withney, demonstrou diferenças estatisticamente significativas no domínio autonomia ($U= 15859,5$, $p= 0,018$), isto é, os alunos maiores de dezoito anos apresentam níveis de autonomia mais elevados relativamente aos alunos com menos de dezoito anos (tabela 3).

Tabela 3 - Análise do bem-estar psicológico em função da idade

Variável	Idade	N	Média (DP)	U	p	R_G
BEP – Autonomia	≤ 18 anos	272	19.03 (3.08)	15859.50	.018	.14
	> 18 anos	136	18.43 (2.81)			

Nota. U : Estatístico de Mann-Whitney; p : Nível de significância; n : total de casos da amostra; R_G : coeficiente de correlação bisserial por ordem de Glass

O estudo da relação entre as dimensões do bem-estar psicológico e o rendimento académico visa a compreensão da natureza e magnitude das associações entre as diferentes medidas, numa amostra de alunos do ensino secundário. Para analisar o rendimento académico foi tido em consideração a avaliação global dos alunos no 3.º ciclo do ensino básico.

Os coeficientes de correlação produto-momento (r de Spearman) refletiram diversos graus de associação, embora todos evidenciassem significado estatístico (tabela 4).

Tabela 4 - Matriz de inter-correlações entre as dimensões do bem-estar psicológico e o rendimento académico

Bem-estar psicológico						Rendimento académico
Autonomia	Crescimento pessoal	Relações positivas com os outros	Objetivos de vida	Aceitação de si	BEP Global	
.20**	.15**	.11*	.18**	.11*	.22**	
.001	.002	.027	.001	.025	.001	

Nota. r_s : Coeficiente de correlação de Spearman; ** $p < 0,01$; * $p < .05$.

Da leitura da tabela 4 denota-se que autonomia ($r= 0,20$), crescimento pessoal ($r= 0,15$), objetivos de vida ($r= 0,18$) e Bem-estar psicológico global ($r= 0,22$) evidenciam maior coeficiente de associação com o rendimento académico ($p < 0,01$). No que diz respeito às relações positivas com os outros ($r= 0,11$) e aceitação de si ($r= 0,11$) o coeficiente é mais fraco ($p < 0,05$) (Pestana & Gageiro, 2008). Daqui se depreende que quando maior for o bem-estar psicológico dos alunos, maior é o rendimento académico.

4. DISCUSSÃO

Com o presente estudo procurámos investigar as relações entre o bem-estar-psicológico e o rendimento académico em alunos do ensino secundário, visando não só a colmatção da evidência empírica sobre esta problemática, como também, sugerir novas possibilidades de investigação no âmbito educativo/académico.

O rendimento académico está relacionado com obtenção de bons resultados escolares. Em contrapartida, o insucesso escolar deve-se ao baixo rendimento académico, não sendo, porém, linear uma vez que é necessário ter em conta a análise de outras variáveis (Almeida, Gomes, Ribeiro, Dantas, Sampaio, Alves, Rocha, Paulo, Pereira, Nogueira, Gomes, Marques, Sá & Santos, 2005; Formiga, 2004). No presente estudo a variável selecionada para aferir o rendimento académico foi a avaliação global obtida no término do 3.º Ciclo do Ensino Básico.

A análise centrada no bem-estar psicológico global não evidencia diferenças significativas em função do género. Parece, então, notório a supremacia das perceções do género feminino nos domínios “autonomia”, “crescimento pessoal” e “relações positivas com os outros”. Embora estas diferenças são de tamanho pequeno, com a exceção no domínio crescimento pessoal, onde se observa diferenças moderadas, as raparigas apresentam níveis mais elevados de bem-estar psicológico dos que os rapazes. Esta constatação foi igualmente verificada no estudo de Fernandes (2007), com exceção no domínio autonomia, em que não obteve diferenças de superioridades das raparigas. Por sua vez, Sprinthall e Collins (2003) referem que a família assume um papel fundamental, assim como, os estilos parentais, na promoção da autonomia e identidade dos adolescentes, dimensão que não foi abordada no presente estudo. Na aceção de Simões (2007) autonomia está relacionada com todo o processo de socialização, facilitando o desenvolvimento numa perspetiva de identidade pessoal, modificando as representações que o sujeito tem de si e dos outros.

Simões (2007) sustenta que para um adolescente, ser autónomo significa ter poder de decisão de acordo com um sistema de ideias e opiniões, nos mais diversos aspetos da sua vida, nomeadamente na gestão do dinheiro, relacionamentos afetivos, saídas com amigos e organização do seu quarto. A autonomia assume para o adolescente uma reflexão sobre os seus papéis sociais, as normas, e os aspetos de vida do seu quotidiano, em diferentes contextos (escola, casa e espaço lúdicos), por vezes, acentuado numa relação dicotómica com os pais, entre autonomia e dependência.

Quanto aos domínios “crescimento pessoal” e “relações positivas com os outros”, Fernandes (2007) obteve dados mais elevados para os participantes mais velhos e do género feminino. Pois, mudanças biológicas, cognitivas, desenvolvimento social, emocional e construção de identidade difere no *timing*, na forma, de pessoa para pessoa e entre os géneros (Abaid, Dell’Aglia & Koller, 2009; Bizarro, 2001a; Carrasco, Brustad, & Mas, 2007; Garrada, 2004; Fernandes, 2007; Kahneman *et al.*, 1999; Moshman, 2005; Mota & Matos, 2008; Sprinthall & Collins, 2003). Pessoas felizes tendem a investir no seu crescimento pessoal com impacto importante na motivação humana, no desenvolvimento da personalidade e na promoção do bem-estar psicológico (Cabral, 2010). O domínio “crescimento pessoal”, segundo Ryff (1989) é o domínio que mais se aproxima do conceito de eudaimonia - que se baseia na demanda do bem supremo, de uma vida justa, boa e feliz, permitindo as pessoas reconhecerem as suas capacidades (Fernandes *et al.*, 2011; Novo, 2005; Ryff, 1989; Siqueira & Padovam, 2008).

Relativamente ao domínio “relação positiva com os outros” Fernandes (2007), salienta que é através dele que se traduz a amizade, a empatia, e a capacidade de identificação com o outro em que as raparigas valorizam mais a esfera das relações interpessoais, no estabelecimento de relações altruístas para com os outros, em ter novas experiências de vida e no enriquecimento pessoal, do que os rapazes (Knox, Funk, Elliott, & Bush, 2000; La Greca & Harrison, 2005; Sprinthall & Collins, 2003, citados por Fernandes, 2007).

Atendendo à diferença em função da idade, a evidência empírica demonstrou que os adolescentes mais velhos apresentaram níveis de bem-estar psicológico mais elevados que os do grupo com idades inferiores a 18 anos, sobretudo no domínio *autonomia*. Os resultados sugerem que a idade é um bom preditor de bem-estar psicológico, ou seja, à medida que a idade dos adolescentes aumenta, o bem-estar psicológico aumenta. Logo, maior autonomia registada pelos alunos mais velhos, que caracteriza o processo de autonomia e individuação ou identidade pessoal na adolescência é corroborado por Fernandes (2007) e Ryff (1986) ao constatarem que a “autonomia” aumenta ao longo da adolescência, ou seja, os adolescentes mais velhos obtiveram níveis mais elevados neste domínio do bem-estar psicológico, mas não no domínio “aceitação de si”. Estudos efetuados por Ryff (1989b, 1991) e Ryff & Keyes (1995), quer em jovens, quer em adultos, indicam que os resultados são igualmente consistentes uma vez que a “autonomia” aumenta com a idade. Mais recentemente o estudo desenvolvido por Coelho (2015), também verificou que os alunos mais velhos tendem a apresentar maior “autonomia” que os mais novos.

A análise de associação entre o bem-estar psicológico e o rendimento académico, demonstrou correlações significativas positivas entre os diferentes domínios do bem-estar psicológico e o rendimento académico. Este resultado sugere que quando maior for o bem-estar psicológico, maior é o rendimento escolar. O estudo de Sá (2012), também mostrou que os alunos com rendimento escolar elevado, apresentam igualmente níveis mais elevados de bem-estar psicológico e vice-versa, sugerindo que o rendimento académico e o bem-estar psicológico estão associados. Neste estudo o rendimento escolar foi avaliado pela média da nota obtida no 3.º Ciclo do ensino básico.

O estudo de Cabral (2010) também evidenciou relação entre todos os domínios da escala bem-estar psicológico-adolescentes e todos os domínios da escala Cidadania para a Adolescência, realçando, o fato de encontrar correlações mais significativas nos domínios *crescimento pessoal* da escala BEP-adolescentes e os domínios *envolvimento global na escola*, *envolvimento com os professores* e *envolvimentos com os colegas* da escala de cidadania para adolescentes, ou seja, a participação dos alunos no contexto da cidadania é um preditor do bem-estar psicológico dos mesmos.

Conclui-se que as variáveis sociodemográficas evidenciaram diferenças estatisticamente significativas em função do género nas dimensões - bem-estar psicológico global, crescimento pessoal e relações positivas com os outros, com as raparigas a apresentarem scores mais elevados; e em função da idade, com os estudantes maiores de 18 anos a apresentarem níveis de autonomia mais elevados. A nível correlacional, as múltiplas dimensões do bem-estar-psicológico associaram-se

positivamente ao rendimento académico. Perante a relação estatisticamente significativa e positiva, os resultados sugerem que o rendimento académico aumenta à medida que a variável psicológica também aumenta.

Em suma, estes resultados reforçam o papel imprescindível que o bem-estar psicológico exerce no rendimento académico dos alunos, sendo necessário aprofundar a compreensão desta dinâmica durante a infância e juventude, tendo por quadro de referência múltiplas variáveis interventoras bem como diversos contextos de vida dos alunos.

REFERÊNCIAS

- Abaid, J., Dell'Aglio, D. & Koller, S. (2009). Preditores de sintomas depressivos em crianças e adolescentes institucionalizados. *Universitas Psychologica*, 9(1), 203-216.
- Almeida, L., Gomes, C., Ribeiro, I., Dantas, J., Sampaio, M., Alves, M., Santos, F. (2005). Sucesso e insucesso no ensino básico: relevância de variáveis sociofamiliares e escolares em alunos do 5º ano. *Atas do VIII Congresso Galaico Português de Psicopedagogia*. Universidade do Minho: Braga.
- Bauer, B., Frijns, B., Otten, R. & Tourani-Rad, A. (2008). The impact of corporate governance on corporate performance: Evidence from Japan. *Pacific-Basin Finance Journal*, 16, 236-251.
- Bizarro, L. (2001a). Avaliação do bem-estar psicológico na adolescência. *Revista Portuguesa de Psicologia, Saúde & Doenças*, 35, 81-116.
- Bizarro, L. (2001b). O bem-estar psicológico de adolescentes com insuficiência renal crónica. *Psicologia, Saúde & Doenças*, 2(2), 55-68.
- Cabral, N. (2010). *A cidadania e o bem-estar psicológico de estudantes adolescentes* (Tese de Doutoramento em Educação, Especialidade de Educação e Cidadania). Universidade dos Açores, Ponta Delgada.
- Carrasco, A., Brustad, R., & Mas, A. (2007). Bienestar psicológico y su uso en la psicología del ejercicio, la actividad física y el deporte. *Revista de Iberoamericana de Psicología del ejercicio y el deporte*, 2(1), 31-52.
- Carvalho, N. (2015). *Bem-estar psicológico e recursos contextuais e pessoais em adolescentes de uma escola particular portuguesa*. (Dissertação de Mestrado em Psicologia da Educação) Instituto de Educação da Universidade de Lisboa, Lisboa.
- Coelho, A. F. C. (2015). *Bem-estar psicológico de estudantes de licenciatura: sua relação com o ajustamento académico*. (Dissertação de Mestrado), Universidade Portucalense, Portugal.
- Fava, G., & Tomba, E. (2009). Increasing Psychological well-being and resilience by psychotherapeutic methods. *Journal of Personality*, 77(6), 1903-1934.
- Fernandes, H. (2007). *O bem-estar psicológico em adolescentes: Uma abordagem centrada no florescimento humano* (Tese de Doutoramento em Psicologia). Universidade de Trás-os-Montes e Alto Douro, Vila Real.
- Fernandes, H. M., Vasconcelos-Raposo, J., Bertelli, R. & Almeida, L. (2011). Satisfação escolar e bem-estar psicológico em adolescentes portugueses. *Revista Lusófona de Educação*, 18, 155-172.
- Formiga, N. (2004). Atribuição de causalidade e rendimento académico: predição e diferença em alunos da universidade pública e privada. *Revista de Psicologia da Universidade do Contestado*, (2)1, p. 3-14.
- Garralda, M. (2004). The interface between physical and mental health problems and medical help seeking in children and adolescents: A research perspective. *Child and Adolescent Mental Health*, 9(4), 146-155.
- Kahneman, D., Diener, E., & Schwarz, N. (Eds.) (1999). *Well-being: The foundations of hedonic psychology*. New York: Russell Sage.
- Kesebir, P., & Diener, E. (2008). In pursuit of happiness: Empirical answers to philosophical questions. *Perspectives on Psychological Science*, 3 (2), 117-125.
- Knox, M., Funk, J., Elliott, R., & Bush, E. (2000). Gender differences in adolescents: possible selves. *Youth & Society*, 31(3), 287-309.
- La Greca, A. & Harrison, A. M. (2005). Adolescent peer relations, friendships, and romantic relationships: do they predict social anxiety and depression? *Journal of Clinical Child and Adolescent Psychology*, 34(1), 49-61.
- Maia, M. (2012). Algumas reflexões sobre o papel do Estado na sociedade, *Atas VII Congresso Português de Sociologia*. Universidade do Porto
- Moshman, D. (2005). *Adolescent psychological development: Rationality, morality, and identity* (2ª edição). New Jersey: Lawrence Erlbaum Publishers.
- Mota, C. & Matos, P. M. (2008). Competências sociais e variáveis relacionadas em adolescentes. *Psicologia, Educação e Cultura*, 12, 61-86.
- Novo, R. (2003). *Para além da Eudaimonia – o bem-estar psicológico em mulheres na idade adulta avançada*. Coimbra: Fundação Calouste Gulbenkian/Fundação para a Ciência e Tecnologia.

- Novo, R. (2005). Bem-estar e psicologia: conceitos e propostas de avaliação. *Revista Iberoamericana de Diagnóstico y Evaluación Psicológica*, 2(20), 183-203.
- Pestana, M., & Gageiro, J. (2008). *Análise de Dados para Ciências Sociais, A complementaridade do SPSS*, Lisboa: Edições Silabo.
- Ryan, R., & Deci, E. (2001). On happiness an human potentials: a review of research on hedonic and eudaimonic Well-Being. *Annual Reviews Psychology*, 52, 141-146.
- Ryff, C. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well being. *Journal of Personality and Social Psychology*, 57, 1069- 1081.
- Ryff, C. (2013). Eudaimonic well-being and health: Mapping consequences of selfrealization. In: A. S. Waterman (Ed.). *The best within us: Positive psychology perspectives on eudaimonia*. Washington, DC: American Psychological Association. (pp. 77-98).
- Ryff, C., & Keyes, C. (1995). The Structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719-727.
- Ryff, C., & Singer, B. (1996). Psychological well-being: meaning, measurement, and implications for psychotherapy. *Psychoter Psychosom*, 65, 14-23.
- Ryff, C., & Singer, B. (2006). Best news yet on the six-factor model of well-being. *Social Science Research*, 35, 1103-1119.
- Ryff, C. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well being. *Journal of Personality and Social Psychology*, 57, 1069- 1081.
- Ryff, C. (1989b). Happiness is everything o tis it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069-1081.
- Sá, E. (2012). *Habilidades sociais, bem-estar psicológico e rendimento escolar*. (Tese de Doutoramento em Psicologia). Departamento de Ciências da Educação e Psicologia da Universidade de Aveiro, Aveiro.
- Salami, S. (2011). Psychosocial Predictors of Adjustment Among First Year College of Education Students. *US-China Education Review*, 8(2), 239-248.
- Santos, J. (2001). Ética e “Felicidade” em Platão e Aristóteles: semelhanças, tensões e convergências. *Cadernos de Atas da ANPOF*, 19-28.
- Simões, C. (2007). *Comportamentos de risco na adolescência*. Lisboa: Fundação Calouste Gulbenkian.
- Siqueira, M., & Padovam, V. (2008). Bases teóricas de bem-estar subjetivo, bem-estar psicológico e bem-estar no trabalho. *Psicologia: Teoria e Pesquisa*, 24(2), 201-209.
- Sprinthall, W., & Collins, A. (2003). *Psicologia do Adolescente*. Lisboa: Fundação Calouste Gulbenkian.

DREAM MAKERS ERASMUS+ PROJECT: A CREATIVE APPROACH TO EDUCATION

Margarida Pocinho
IF/CIERL-UMa
(margaridapocinho@gmail.com)

Noemi Serrano Diaz
UCA
(noemi.serrano@gm.uca.es)

Soraia Garcês
IF/CIERL-UMa
(soraiaagarcês@gmail.com)

Marzanna Farnicka
UZG
(m.farnicka@wpsnz.uz.zgora.pl)

ABSTRACT

Dream Makers is the acronym for the project “Creativity, Multiple Intelligences and 3D printing in pre-school education for disadvantage children”. This is a project funded by Erasmus+ Programme, Cooperation for Innovation and the Exchange of Good Practices, namely Key Action 2 – Strategic Partnerships and specifically Strategic Partnerships for school education. The fundamental aim of this project is the development of innovation. It started September 2016 and will run till August 2019. The project leader is Portugal (Rochinha Kindergarten) with Spain (Cádiz University) and Poland (Zielona Gorá University) as partners. We aim to promote a more inclusive education, by giving pre-school children with fewer opportunities the chance to engage in an array of activities that aim to develop their creativity, their intelligences (according to Gardner Multiple Intelligences Theory) and their technological skills, enhancing their inherent abilities and giving them tools to surpass their economic obstacles. The current article highlights the theoretical framework of the project and its research design.

Keywords: Creativity, Intelligence, 3D Technology, Preschool Education.

JEL Classification: 124

1. DREAM MAKERS THEORETICAL GUIDELINES

New technologies make it possible for us to observe daily the globalization processes¹ that are taking place. Availing ourselves of the resources of the ‘global village’ has become our everyday practice. The world has shrunk - socially, economically and culturally. We are able to do our shopping in various time zones on various continents and track the delivery 24 hours a day in cyberspace². However, one should add here that the process of separating the traditionally understood time and space works both ways. Today, thanks to the use of cyberspace, the world may not only ‘compress’ – come closer, but also ‘expand’ – become more distant. Network participants can create their own worlds to suit their needs. The created worlds may be alternative to reality, and the network user may switch back and forth between the real and the virtual domain while retaining his or her core identity. A person may not feel psychologically attached to the actual physical location where that person is staying; on the other hand, someone staying physically close to us may actually live in a world that is unattainable and distant, because it is artificially created. Another problem that has been manifesting itself is greater and greater diversification of societies and distance between individuals measured by their competences and access to new technologies (Bauman, 2011). Lack of readiness and competences for living in a globalized world may cause a globalization shock leading to apathy and resistance, a certain aversion (Nieman, 2011) or even loss of access to culture (Salzman, 2001).

The problems considered by A. Giddens in his book *Modernity and identity* (2001) concerning a separation of time and space and uprooting of social institutions, have led to a reduced trust in the hitherto used sources of knowledge and guarantors of safety. In the new times, the patterns of life called by S. Bauman (2002) as permanent wanderers, pilgrims, adventurers, loners and traditional settlers are alternative standards of living. The pilgrim and the wanderer are just representatives of some otherness. Bauman (2002) does not point to new forms of existence or new ways of life but to their coexistence in the narrowing space-time of postmodernism. This narrowing is a result of technological progress. In the context of dynamic and multicultural transformations of civilisation, the probability of evaluating others through the prism of stereotypes increases, as this attitude saves the time and effort needed by a post-modernistic man to recognise and test new alternatives of life pathways. This can bring not only escalation of conflicts in the already known areas, but their more frequent experience and appearance of new conflict points.

Social differences make rivalry between the competitors unequal (Farnicka 2016a). This inequality means that layers/groups with higher status or with more power can exclude the weaker ones from the competition using various means.

¹ The term ‘globalization’ was introduced in the theory of culture by M. McLuhan (1960) to describe changes connected with the emergence of new media. Their use resulted in the subjective process of shrinking of the social space and increased velocity of social and economic interactions, which was named globalization or the ‘global village’ effect. A. Giddens (2008) pointed to the separation of time and space and uprooting of social institutions as indicators of that process.

² Cyberspace is understood as the space that has been created and is still being created by new technologies (particularly the Internet).

Rivalry for resources is not the only explanation. There is another conceptual scheme that helps to understand the identity of exclusion. Up till now we have introduced exclusion as a "preemptive strike" against the competition in the fight for social resources. It suggests that the root cause of exclusion is the finite amount of resources, the possibility to accumulate these resources, and the consequence of the accumulation. That is the more successful somebody in the accumulation the more successful they become in all other aspects of their life. The consequence is that it is true that if the resources are becoming scarcer the competition becomes stronger, but its reverse is not true. If the resources are expanding it will not lessen the competition automatically, as accumulation is an adaptive behaviour. Several factors create and maintain social inequality across generations. Certain social strata, and individuals can gain from inequality (Gans, 1992), or they can obtain more favourable positions in socio-economic competition, thus, it is their best interest to maintain the inequality systems. These interests can be realized – among others – through the strategy of exclusion. This is how exclusion becomes the means for sustainability and reproduction at the same time.

However, the most important is integration and finally being a part of new society. It means that an individual adopts the identity of a new culture and is able to treat them as their own context, place and space. The individual could see "cross points" or not. It includes processes of identification, requiring engagement of cognitive and evaluative structures and assimilation and accommodation processes. The outcome of these processes are changes in self-definition, changes in self-evaluation, in evaluation of the individual's ethnic group, also in relation to others. Throughout the whole life this basic structure undergoes development and transformations. For example in the period of adolescence, this structure develops and gets more elastic through the processes of auto-reflection and the formal thinking permits anticipation of its further development and construction (Piaget, 1972). Moreover, specific styles of identity defining the orientation in the individual and in the world are generated. Camilla Pagani (2014) has proposed to treat the process of adaptation as a complex phenomenon encompassing the level of perception of tolerance of one's own and alien group and the level of acceptance of one's own and alien group. This author distinguishes between the two levels, low and high, of functioning in these areas. The low level of this complex (or rather two-dimensional) thinking, the individuals use stereotypes, are driven by emotions and simple examples when evaluating another person recognized as belonging to one's own and alien group. The low level of functioning in these two dimensions means that a given individual follows a multiaspect and many ways of thinking. Complex thinking was defined by Morin in 2008, who pointed out the two main components of this process; the cognitive and emotional ones. This way of thinking is affected by the level of self – awareness, acceptance of lack, open – minded multidirectional activity, creativity, communication and emotional response divided into the emotional response focused on individual and that focused on the group. Extension of the cognitive categories in the process of education and improve creativity can be one of the methods for development of the ability to live in the multicultural world society (Farnicka, 2016).

Social exclusion leads us to think in the need of social inclusion. In this multicultural world we need to promote the awareness for inclusion. Thus, the urgency in decreasing the inequalities of social and economic obstacles.

We understand that social and economic disadvantages have impact in the whole society, but particularly, families and their children are affected. The educational system is crucial to help children develop their skills. Early childhood is the phase where education can have a more significant impact in a child development. Investing in high quality care in early childhood diminishes the costs for society in terms of lost talent and aids in reducing public costs in a long term basis on welfare, health, education and even justice (European Commission/EACEA/Eurydice/Eurostat, 2014). Societies should give their children the best education and care possible and this wish is a crucial feature in the European Union policies. It is a fact that "one in four children under the age of 6 in Europe is at risk of poverty or social exclusion and may need specific measures to support their educational needs" (European Commission/EACEA/Eurydice/Eurostat, 2014, p. 17). To help children in these conditions is one of the fundamental concerns of the European Early Childhood Education and Care policy. This early period of life is critical for the children development and poverty at this stage can cause difficulties in their physical, emotional and psychological development and negatively influence their well-being present and future (European Anti-Poverty Network & EUROCHILD, 2013). Growing up in poverty can have impact also in the social life and children social networks, preventing them from engaging in activities with other children, likewise it can influence negatively children education leading to drop out, affecting their well-being and their own expectations for their future life (Pocinho, 2010). Poverty in childhood is also a danger to society because additional social costs increase and economic productivity diminishes since poor children normally do not reach their entire potential, they have less chances of achieving good jobs and contribute positively to the country economy (European Anti-Poverty Network & EUROCHILD, 2013). In the Member States the severity of child poverty varies. In a study, countries such as Portugal showed deprivation rates from 40% to 80% (Guio, Gordon, and Marlier, 2012). Helping these children develop to their full potential is essential, as it is developing their inherent abilities (Diniz, Pocinho and Almeida, 2011; Pocinho, 2004, 2009a, 2010). Creativity, Intelligence and Technology are fundamental abilities in today societies for a better future time perspective of life. Creativity has two main characteristics: novelty and appropriateness and implies personality traits that can be enhanced or changed by the environment. Creativity is an ability for all, that enables to make new connections, to produce new ideas both original and valuable, that uses divergent thinking skills and requires personality traits, affective processes, cognitive abilities, expertise, motivations, thinking skills, imagination and evaluation and the promotion of a cultural environment (Ferrari, Cachia, and Punie, 2009). A creative personality can be seen in different aspects such as humor, ideational fluency and flexibility, originality, imagination and so on (Garcês, Pocinho, Jesus, Viseu, Imaginário, and Wechsler, 2015), but the way one expresses his or her creativity can be different, according to their own creative styles, which can be define as the way each one of us preferably uses to express creativity (Garcês, Pocinho, Wechsler and Jesus, 2014; Ibérico Nogueira, Almeida, Garcês, Pocinho, and Wechsler, 2015). The importance of creativity for Education is evident and Skinner (2007) reports that giving children the chance to experience creativity will enable them to: a) make connections; b) express and challenge ideas; c) problem solving in a range of situations; c) develop an individual sense of aesthetic beauty; d) develop self-esteem and/or e) acknowledge cultural issues. A good

creative environment is also a key piece for creative production (Garcês, Pocinho, Jesus, and Viseu, 2016) and Education is a privileged field to be a promoter of a free and creative space for learning and enhancing of skills. Gardner proposed that there are not only one intelligence but eight, namely Linguistic, Spatial, Logical/Mathematical, Interpersonal, Intrapersonal, Bodily-Kinesthetic, Musical and Naturalistic. Additionally, he suggested an Existential one (Visser, Ashton, and Vernon, 2006; Pocinho, 2004). These multiple intelligences are many times associated with creativity. In education the promotion of creativity can be a key factor for student's academic achievement but also to promote a friendly environment for their emotional and social development (Garcês, Pocinho & Jesus, 2013). In a more global perspective Dino (2015) states that

The ability to produce and implement new, useful ideas is rapidly becoming the critical attribute for leveraging knowledge and increasing the quality of life, whether that ability is used to create worlds of art, find ways to provide inexpensive and abundant sources of water or energy, develop non invasive surgical devices, eradicate the scourge of cancer, or improve urban infrastructure.

The Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, in 2012, mentions that skills such as critically thinking, initiative taking, problem solving and collaboratively work are important to prepare people to the changing and unpredictable world that we live today. But especially entrepreneurial skills that are fundamental to new business creation but also to employ young people. Creativity and entrepreneurship are fundamental factors to a country economic growth. Creativity seeks novelty and value and entrepreneurship also seeks novelty in business and new ideas in the market. Creativity and entrepreneurship both make use of depth knowledge, but also they are not limited to it, they seek and challenge new ideas (Matthews, 2007). We can see creativity as the motor behind entrepreneurship which is linked to employment, poverty reduction and innovation (Valerio, Parton, and Robb, 2014). Entrepreneurship education and training is a well established field of study that fosters entrepreneurial mindsets and skills, which integrate socio-emotional aspects such as self-confidence, leadership, creativity, motivation, resilience and self-efficacy (Valerio, Parton, & Robb, 2014). Future time perspective (FTP), a cognitive-motivational concept, is defined as a belief or a personal orientation regarding oneself future, considering time distant goals and is an important concept to develop entrepreneurship skills in young children (Carvalho, Pocinho, and Silva, 2010; Pocinho, Correia, Carvalho, and Silva, 2010; Pocinho, 2011).

Emerging new technologies, such as 3D printing, are an intrinsic part of today lives and consequently to education settings. 3D printing promotes students motivation and allows them to go beyond theoretical concepts to practical products, having an extraordinary impact on children imagination, because children's ideas can transform into real life objects (Szulzyk-Cieplak, Duda, and Sidor, 2014).

3D printers are machines that, from the creation and design of digital files, generate objects from different materials (molten plastic, resin, metal, dust, etc.). This technology has also come to be called rapid prototyping (Canessa, Fonda, and Zennaro, 2013). The lowering of this technology in recent years has allowed us to think about its use for educational contexts (Saorin, Torre Cantero, Melian, Meier and Rivero Trujillo, 2015).

Already in the 2013 annual report of the Horizon Project of the NMC³ was estimated that 3D printing would have widespread adoption in a few years in the educational field. According to this report, digital manufacturing would have an important relevance in education, science and creative research, and ensured that 3D printing would become one of the trends to be adopted in higher education within a period of four to five Years (Johnson, Adams Becker, Estrada, and Freeman, 2013). The 2015 report states that the potential is even greater as this type of technology becomes more accessible:

Creativity, design and engineering are making their way to the forefront of educational considerations... Advocates of education makers emphasize the benefit of students involved in solving higher-order creative problems through Practical approach to design, construction, and iteration. The question of how to renovate or reuse classrooms to meet the needs of the future is being addressed through the concept of the makers of workshops that provide the tools and learning experiences necessary to help people carry out their ideas. (Johnson, Adams Becker, Cummins, Estrada, Freeman, and Ludgate, 2015)

3D technology offers faculty new ways to address the Teaching and learning process. From this perspective, the 3D printer opens a range of possibilities to teachers that was difficult to cover until now, using this tool for the development of entrepreneurship and creativity in its students. John Dewey, a towering educator from the 1950's said, "If we teach today as we taught yesterday we rob our children of tomorrow."

It is customary that 3-dimensional design programs are intended for use by engineers or specialists, ultimately aimed at adults. In recent years are appearing software adapted to young people and adolescents which do not need too much training, which facilitates their use in the classroom. In addition more recently, free programs have appeared that can be used by children. An example is *Tinkercad* that is simple to use, its appearance is attractive and, with a few hours of training, the children can acquire a lot of skill in its use. The designs are very basic and come from direct design options (geometric shapes, letters, symbols ...) that appear in a series of drop down menus in the right. With them students can create simple objects to make toys, prototypes, home or classroom decoration, jewelry and an endless list of possibilities.

Thanks to the different programs of 3D design adapted for the different educational stages we can initiate the students of the stage of Childhood Education in the 3D design.

These perspectives have been taken under consideration during the preparation of the Dream Makers project focusing on improving competencies to protect social capital of societies. The content and scope of the project was drawn from

³ A research project designed to identify and describe emerging technologies that may have an impact on learning, teaching and creative research in Higher Education.

knowledge of the relationships between the various risk factors, protective factors and developmental processes in groups and societies and combine knowledge, practical useful skills and good psychological experience.

2. DREAM MAKERS DESIGN

The Dream Makers Project fundamentals are these three core concepts: Creativity, Multiple Intelligences and 3D Technology. The ground-breaking nature of this project is clear in the combination of these variables to help children in disadvantage situations, promote social inclusion, bilingualism skills and, ultimately, the development of a new methodology for the pre-school education curriculum (Figure 1).

Figure 1. Project conceptual diagram



The priority of the Dream Makers is to develop a new educational method to fight childhood poverty, through innovation and a quality childhood care. It will be developed in a course of three years (from September 2016 till August 2019) and follows a social science methodology. It is an experimental, action-research, longitudinal study with pre and post-test. It is being implemented in Portugal at a kindergarten in Madeira Island, and next will be implemented in Spain and in Poland.

The core of the project is the development of “Creativity Day’s”, which are monthly days with activities aimed to developed one of Gardner Multiple Intelligences and creativity, while, simultaneously, making use of the emergent 3D technology. The biggest innovation of the project is the synergy between different fields of studies, namely social sciences and technology. By developing children skills through social sciences methodologies we aim to help them to gain a better perspective of life and their future; but by introducing 3D technology we aim to develop a must needed skill in this century: digital abilities. The activities surrounding 3D will focus on the abilities to develop modelling skills in age appropriate software and then bring the children imagination and ideas to reality, by printing it in a 3D printer.

Evaluation follows three major directions: children skills; teachers/educators perceptions and parents/legal guardians perceptions. Children, their legal guardians and their teachers will be evaluated to control the project achievements regarding gain or abilities development. We introduce the evaluation of children’s teachers and parents perceptions of their skills in creativity, multiple intelligences and technology, because understanding how they view themselves and if they perceive their skills as important and applicable in their daily and working lives can give us information of how they as teachers and parents may influence or not their students and children behaviors and skills development.

For these measurements psychological tests such as Raven Progressive Matrices and a Creativity Test will be used; also pedagogical tools, developed specifically for the project to evaluate academic achievement, technological skills, bilingualism and teachers/parents perceptions, resorting to semi-structured interviews, questionnaires and/or observational grids will be used.

Participants of the Creativity Day’s are children with four years old, in the first year of the project, with economic difficulties. The economic difficulties were measured through the children who are awarded school social support or that were indicated by school as being children in need. The children are expected to participate in the project during its duration.

The project also focus on the partners organization staff who will receive training in each of the partner countries to developed their skills and bring new insights to each one of the organizations and to the project implementation and development.

As seen the project involves diverse methods and a diversification of ideas from varied fields, but is in these connections that we aim for innovation and for the development of a new extra-curricular program that we hope will make a difference in the children social and economic lives.

The project is being developed in Funchal, Madeira with children who are in economic disadvantages, from this perspective, the project not only supports the materials and resources necessary for the implementation of the learning program, but also provides them with food, displacements and even some needs for clothing or footwear that they may have. It would not be logical to provide them with innovative training and not cover the basic needs of these children in poverty.

3. CONCLUSION

The future holds uncertainty, the best we can do to our children is give them tools that will help them adapt and transform their own future. The Dream Makers project is an innovative and creative approach to education. We bring together a set of variables from different psychological, pedagogical and technological fields that composed a complex project. Its complexity help us understand that to fight social inequality we have to focus on multidisciplinary perspectives and start from a young

age. We need to help our children develop their inner strengths and by doing that give them hope in their current and future live. By focusing on the children we hope that indirectly their families will be positively affected and also learn new skills through their children.

The Dream Makers aims to be a new methodology to extra-curricular activities and to be a new “light” in education. Old curriculum do not fit in our current changing world, we must find new ways to approach education and with this project we hope to do just that, by focusing in the children own abilities, their strengths and their imagination. We need to let children be themselves and simply guide them in their development process and nurture their skills and, ultimately, their dreams. As Einstein once wrote: “We dance for laughter, we dance for tears, we dance for madness, we dance for fears, we dance for hopes, we dance for screams, we are the dancers, we create the dreams.” and we hope that the project ultimately can help children with less opportunities believe they have the potential to make dreams a reality.

ACKNOWLEDGMENTS

This research is part of the Dream Makers Project funded by the Erasmus+ Programme of the European Commission.

REFERENCES

- Allport, G. (1954). *The nature of prejudice*. Addison – Wesley: Reading, MA.
- Bauman, Z. (2000). *Liquid Modernity*. Polity Press: Cambridge.
- Bennet, J. (1986). A developmental approach to training intercultural sensitivity. In J. Martin (ed.), *Special Issue on Intercultural Training, International Journal of Intercultural Relations*, 10 (2): 179-186.
- Berry J.W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29 (6): 697-712.
- Branskobe, N., Schmitt, M., and Hatvey, R.D. (1999). Perceiving pervasive discrimination among African – Americans. *Journal of Personality and Social Psychology*. 77: 135-149.
- Canessa, E., Fonda, C., & Zennaro, M. (2013). Low-cost 3D Printing for Science, Education & Sustainable Development. Trieste, Italy: ICTP.
- Carvalho, R., Pocinho, M., and Silva, C. (2010). Adaptive behaviour and future time perspective: some evidence from education and health settings. *Psicologia: Reflexão e Crítica*. 23(3): 554-561.
- Dahrendorf, R. (1992). *Der moderne soziale Konflikt: Essay zur Politik der Freiheit*. DVA: Stuttgart.
- Diniz, A., Pocinho, M.D., and Almeida, L.S. 2011. Cognitive abilities, sociocultural background and academic achievement. *Psicothema*. 23(4): 695–700.
- Dino, R. (2015). Crossing Boundaries: Toward Integrating Creativity, Innovation, and Entrepreneurship Research Through Practice. *Psychology of Aesthetics, Creativity, and the Arts*. 9(2): 139-146.
- Durkheim, E. (1973). *Moral Education: A Study*. In: E. Wilson and H. Schnurer, *The Theory and Application of the Sociology of Education*. The Free Press. New York.
- European Anti-Poverty Network & EUROCHILD (2013). *Towards Children's Well-Being in Europe: Explainer on Child Poverty in the EU*. Accessed in 22nd of March 2017, on the Web site of: European Parliament: http://www.europarl.europa.eu/meetdocs/2014_2019/documents/empl/dv/child_poverty_eurochild_/child_poverty_eurochild_en.pdf
- European Commission/EACEA/Eurydice/Eurostat (2014). *Key Data on Early Childhood Education and Care in Europe. 2014 Edition*. Accessed in 22nd of March 2017, on the Web site of: Education, Audiovisual and Culture Executive Agency: http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/166EN.pdf
- European Union, Commission to the European Parliament, The Council, The European Economic and Social Committee and The Committee of the Regions. (2012). *Rethinking Education: Investing in skills for better socio-economic outcomes*. Accessed in 22nd of March 2017, on the Web site of: European Union Law: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0669&from=EN>
- Farnicka, M. (2016). Marginalization as Exclusion as a violence “in” society. *Quicio Revista de Psicologia*. 1 (1): 15-33.
- Farnicka, M. (2016a). Social Mobility. In: C. L. Shehan, *The Wiley Blackwell Encyclopedia of Family Studies*. Wiley-Blackwell: New York.
- Ferrari, A., Cachia, R., and Punie, Y (2009). *Innovation and Creativity in Education and Training in the EU Member States: Fostering Creative Learning and Supporting Innovative Teaching. Literature review on Innovation and Creativity in E&T in the EU Member States*. Accessed in 22nd of March 2017, on the Web site of: European Commission, Joint Research Centre, Institute for Prospective Technological Studies: http://ftp.jrc.es/EURdoc/JRC52374_TN.pdf
- Gans, H. (1992). The war against the Poor – Report and Programm. In: M. L. Kennedy and W. J. Kennedy (eds.), *A Reader and Rhetoric for Academic Writers*. Pearson: Boston.

- Garcês, S., Pocinho, M., and Jesus, S. (2013). Predição da Criatividade e da Saúde Mental. *Psicologia, Saúde & Doenças*. 14 (2): 271-279.
- Garcês, S., Pocinho, M., Jesus, S., and Viseu, J. (2016). The impact of creative environment on the creative person, process, and product. *Revista Avaliação Psicológica*. 15 (2): 169-176.
- Garcês, S., Pocinho, M., Jesus, S., Viseu, J., Imaginário, S., and Wechsler, S. (2015). Estudo de Validação da Escala de Personalidade Criativa. *Revista Iberoamericana de Diagnóstico e Evaluación Psicológica*. 40 (1): 17-24.
- Garcês, S., Pocinho, M., Wechsler, S., and Jesus, S. (2014). Estilos de Pensar e Criar na Região Autónoma da Madeira. *Revista Iberoamericana de Diagnóstico e Evaluación Psicológica*. 38(2): 55-68.
- Giddens, A. (2010). *Modernity and Self-Identity. Self and Society in the Late Modern Age*. Warszawa: PWN.
- Guio, A. C., Gordon D., and Marlier E. (2012). *Measuring material deprivation in the EU: Indicators for the whole population and child specific indicators*. Accessed in 22nd of March 2017, on the Web site of: European Commission: <http://ec.europa.eu/eurostat/documents/3888793/5853037/KS-RA-12-018-EN.PDF>
- Ibérico Nogueira, S., Almeida, L., Garcês, S., Pocinho, M., and Wechsler, S. (2015). The Style Troika Model (STM). A Structural Model of the Thinking and Creating Styles Scale. *Journal of Creative Behavior*. Online advance publication. doi: 10.1002/jocb.81
- Inhelder B., and Piaget, P. (1969). *The psychology of the child*. Basic Books: New York.
- Jasinskaja – Lahti, I., Liebkind k., and Solheim, E. (2009). To identify or not to identify? National disidentification as an alternative reaction to perceived ethnic discrimination. *Applied Psychology: An International Review*. 58: 105-128.
- Johnson, L., Adams Becker, S., Estrada, V., and Freeman, A. (2015). *NMC Horizon Report: Edición Educación Superior*. The New Media Consortium: Austin, Texas.
- Johnson, L., Adams Becker, S., Cummins, M., Estrada, V., Freeman, A., and Ludgate, H. (2013). *NMC Horizon Report*. Edición sobre Educación Superior, Texas.
- Kosíková, V., Liberska, H., and Farnicka, M. (2014). Formative function of assessment in a psycho-didactical context. *Polish Psychological Forum*. 19(8): 7-16.
- Lindquist, K., and Barrett, L. F. (2008). Constructing emotion: The experience of fears as a conceptual act. *Psychological Science*. 19: 898-903.
- Matthews, J. H. (2007) Creativity and Entrepreneurship: Potential Partners or Distant Cousins? In: Chapman and Ross (eds.), *Proceedings Managing Our Intellectual and Social Capital: 21st ANZAM 2007 Conference*. Sydney, Australia.
- Pagani C. (2014). Violence as a complexity. In: C. Paganii, M. Farnicka , H. Liberska , J.M. Ramirez (eds.), *Conflict and aggression: developmental and social conditions*. Warszawa: Difin.
- Peker M., Crisp R., and Hogg M. (2010). Predictors of ingroup projection. *Group Processes and Intergroup Relations*. 13: 525-542.
- Pervin L. A., Cervone, D., and John, O. P. (2004). *Personality: Theory and research*. Wiley: New York.
- Pocinho, M. (2004). *Psicologia cognitiva e língua materna: avaliação da eficácia dum programa de estratégias de aprendizagem para alunos com insucesso escolar em Língua Portuguesa*. Ph.D. Thesis. University of Madeira.
- Pocinho, M. (2009a). Enhancing Comprehension in Low Achieving 9th Graders: A quasi-experiment study. *L1 - Educational Studies in Language and Literature*. 9(4): 141-156.
- Pocinho, M. (2009b). Superdotação: conceitos e modelos de diagnóstico e intervenção psicoeducativa. *Revista Brasileira de Educação Especial*. 15(1): 3–14.
- Pocinho, M. (2010). Psicologia, cognição e sucesso escolar: concepção e validação dum programa de estratégias de aprendizagem. *Psicologia: Reflexão e Crítica*. 23(2): 362 - 373.
- Pocinho, M. (2011). Evaluation of a primary school educational career program. *Revista Brasileira de Orientação Profissional*. 12(2): 253-265.
- Pocinho, M., Correia, A., Carvalho, R., and Silva, C. (2010). Influences of gender, family and vocational guidance services on career decision making. *Revista Brasileira de Orientação Profissional*. 11(2): 201-212.
- Popay J., Escorel S., Hernández M., Johnston H., Mathieson J., and Rispel L. (2008). *Understanding and Tackling Social Exclusion, SEKN Final Report, WHO Social Exclusion Knowledge Network*. Accessed in 22nd of March 2017, on the Web site of: World Health Organization: http://www.who.int/social_determinants/knowledge_networks/final_reports/sekn_final%20report_042008.pdf
- Saorin, J.L.; De la Torre, J; Melian, D; Meier, C & Rivero, D. (2015). Blokify: Juego de modelado e impresión 3D en tableta digital para el aprendizaje de vistas normalizadas y perspectiva. *Digital Education Review*. 27: 105-121.
- Skinner, S. M. (2007). *Creative activities for the early years*. SAGE Publications Ltd. London.

- Szalai, A. (2005). *Socialism. An Analysis of Its Past and Future*. Central European University Press: Budapest – New York.
- Szulzyk-Cieplak, J., Duda, A., and Sidor, B. (2014). 3D Printers – New Possibilities in Education. *Advances in Science and Technology*. 8 (24): 96-101.
- Trempala J. (2000) Modele rozwoju psychicznego czas i zmiana. Bydgoszcz: Wydawnictwo Uczelniane Akademii: Bydgoskiej.
- Valerio, A., Parton, B., and Robb, A. (2014). *Entrepreneurship Education and Training Programs around the Worlds: Dimensions for Success*. The World Bank: Washington, DC.
- Visser, B., Ashton, M., and Vernon, P. (2006). Beyond g: Putting multiple intelligences theory to the test. *Intelligence*. 34: 487-502.
- Xiberras, M. (1993). *Les théories de l'exclusion*, Méridiens-Klincksieck: Paris.
- Zolnai E., Hüse L, Balogh E., Farnicka, M., and Holecek V. (2016). Quality Versus Equality. The Integration as the Component of Primary School's Excellence – a Cross-Cultural Perspective. *Educational Studies Review*. 2(23): 105-123.

DETERMINANTES DA INDISCIPLINA ESCOLAR EM ALUNOS DO 2.º E 3.º CICLO DO ENSINO BÁSICO

Regina Capelo
CLEPUL-UMa
(m.regina.capelo@gmail.com)

Margarida Pocinho
IF/CIERL-UMa
(margaridapocinho@gmail.com)

Miguel Varela

RESUMO

A indisciplina é um fenómeno recorrente no contexto escolar, que afeta ou prejudica a aprendizagem dos alunos, e comporta uma complexidade acrescida na determinação dos fatores desencadeantes. O objetivo deste estudo foi identificar os determinantes da indisciplina escolar tendo em conta o contexto familiar, o nível socioeconómico, a motivação escolar e o rendimento escolar. Na análise comparativa entre grupos “grupo com indisciplina”, $n=33$ e “grupo sem indisciplina”, $n=33$, participaram 66 alunos, com idades compreendidas entre os 10 e os 17 anos do 2.º e 3.º ciclo do ensino básico. Os resultados evidenciam diferenças intergrupais significativas com pontuações mais elevadas para o “grupo com indisciplina” nos filhos de pais divorciados e que residem em habitação social; scores mais altos para o “grupo sem indisciplina” na orientação dos objetivos de aprendizagem, perceção do clima de aula, instrumentalidade endógena com regulação interna do aluno, instrumentalidade exógena com regulação interna do aluno, estratégias de repetição, estratégias de elaboração, estratégias de organização, pensamento crítico, estratégias metacognitivas e rendimento escolar. Conclui-se que o contexto familiar, a motivação escolar e o rendimento escolar são determinantes da indisciplina escolar. Sugere-se a implementação de programas de intervenção junto dos alunos e da comunidade envolvente que concorram para a diminuição da indisciplina e promoção do sucesso escolar.

Palavras-chave: Indisciplina, 2.º e 3.º Ciclo do Ensino Básico, Nível Socioeconómico, Motivação Escolar, Rendimento Escolar.

1. INTRODUÇÃO

A indisciplina é um fenómeno complexo que, em contexto escolar, tem vindo a aumentar nos últimos anos (Velez & Veiga, 2010). Uma maior frequência e visibilidade das manifestações deste fenómeno, evidenciadas pelos diversos intervenientes no processo educativo, conduziu a um acréscimo do interesse investigativo a nível nacional e internacional (Caldeira & Veiga, 2011; Lochan, 2010).

Intimamente relacionado com o conceito de disciplina como conjunto de regras ou ordens que regem o comportamento de uma pessoa ou coletividade, observância de regras, capacidade de controlar um determinado comportamento de forma a respeitar regras ou conseguir resultados tende a ser definido pela sua negação ou privação ou pela desordem proveniente das regras estabelecidas (Estrela, 2002). Corresponde ao incumprimento das regras ou a comportamentos desviantes ou disruptivos, persistentes ou ocasionais, iniciados pelo aluno, grupo ou turma e que pode perturbar as relações sociais no interior da escola (Amado & Freire, 2009). As transgressões das normas escolares prejudicam as condições de aprendizagem, o ambiente de ensino ou o relacionamento interpessoal na escola (Veiga, 2001).

Como constructo social, o conceito de indisciplina está, muitas vezes, associado ou difuso noutros conceitos como: agressividade – visto como fenómeno biológico e social decorrente das disposições, significações, motivações e atitudes que utilizam a violência como meio (Ramirez, 2001) e conflito – caracterizado pela divergência de necessidades, interesses e valores entre sujeitos (Carita & Fernandes, 1997). A clarificação destes conceitos é imprescindível para compreender efetivamente a indisciplina. Neste âmbito, quando falamos em indisciplina escolar reportamo-nos aos desvios e incumprimentos das regras estabelecidas para um determinado contexto escolar. Esses desvios comportamentais podem assumir diferentes intensidades e manifestações, tornando difícil a tarefa de definir o conceito de indisciplina podendo, segundo Amado e Freire (2009), enquadrar-se em três níveis, designadamente (1) infrações à regra de trabalho e produção, (2) infrações aos regulamentos e normas culturais e (3) confronto com a autoridade. Nos dois últimos níveis está implícita a eventualidade da indisciplina ser violenta. No entanto, apesar de toda a violência agregar um desvio à norma, nem sempre comporta um carácter violento.

Diferentes abordagens teóricas que sustentam o estudo da indisciplina estão associadas ao modo como os investigadores perspetivam o fenómeno quanto às causas, prevenção e intervenção (Aquino, 2003). Entre as principais correntes teóricas explicativas da indisciplina destaca-se a sociológica que coloca o foco nas mudanças na sociedade e na família, isto é, nas condições externas ao sujeito; a psicológica que versa questões emocionais e psicológicas numa abordagem psicanalítica,

cognitivista ou comportamental; pedagógica, assente no funcionamento escolar, atividades pedagógicas, relação professor-aluno, estrutura escolar e currículo; e socio-histórico-cultural contextualizada, interacionista, integrada, dialética e evolutiva (Pereira, 2009).

A diversidade de formas e expressões, as múltiplas repercussões, a dificuldade em identificar e discernir claramente os fatores desencadeantes da indisciplina escolar, bem como a influência mútua entre os diferentes fatores, converge para o estudo de uma problemática complexa. Genericamente, as causas da indisciplina podem estar associadas a fatores inerentes ao indivíduo (Moffit & Caspi, 2002; Trzesniewski, Moffit, Caspi, Taylor & Maughan, 2005), fatores relacionados com o contexto familiar (Campos, 2007; Steinberg, Blatt-Eisengart & Cauffman, 2006), fatores sociais e políticos (Andréo, 2005) e fatores pedagógicos e escolares (Gouveia-Pereira, 2008; Merle, 2005).

O contexto familiar constitui o primeiro referencial linguístico, cultural e comportamental da criança. A família, estrutura basilar da sociedade, nos seus múltiplos formatos, - tradicional, monoparental, com pais divorciados, entre outras (Mendes & Alves, 1997), podem ser determinantes de um comportamento escolar mais adaptado (DiPrete & Peng, 1981).

O nível socioeconómico poderá condicionar as oportunidades educativas, as perspectivas de futuro, as ocupações e os comportamentos sociais (Pellizzari & Billari, 2011). Neste âmbito, Martinez (2006) apurou que questões de cariz social como grandes desigualdades sociais, concentrações de etnias ou grupos minoritários frequentemente motivados por pressões ou circunstâncias socioeconómicas e facilidade de acesso a substâncias ilícitas e álcool são potenciadores de comportamentos desviantes. Também Auni, Songok, Jepchirchir, Odhiambo, Nabwire e Lyanda (2014) realçam que a prevalência do uso de álcool e abuso de substâncias psicoativas entre estudantes determinou o acréscimo da indisciplina na escola, aumento de obscenidades e inadequada relação social entre alunos e professores.

Além de fatores biológicos, interpessoais e ambientais, também o baixo estatuto socioeconómico, infraestruturas fracas e/ou com baixas condições de habitabilidade podem potenciar episódios de indisciplina (Matos, Negreiros, Simões & Gaspar, 2009).

Uma forma de pensar a disciplina é a partir da motivação do aluno. Isto é, quanto maior a motivação, maior será a intensidade dos esforços orientados para a ação (Huffman, Vernoy & Vernoy, 2003; Oliveira & Alves, 2005).

A orientação dos objetivos dos alunos mantém uma relação obscura, não só com o desempenho académico e o interesse nas aprendizagens, mas também com as estratégias de aprendizagem utilizadas pelos alunos (Cordeiro, 2010). Isto é, alunos indisciplinados não vêm na escola prazer ou instrumentalidade para alcançar objetivos fundamentais, decisivos, numa perspetiva da temporalidade futura (Lens, Paixão & Herrera, 2009) e, aparentemente, a motivação e o rendimento escolar influenciam-se mutuamente (Tavares & Santiago, 2001).

Geralmente, o rendimento escolar é entendido como prestação satisfatória, ou seja, a obtenção de resultados positivos. Em contrapartida, baixo rendimento escolar ou insucesso escolar acontece quando os alunos não cumprem os objetivos nem adquirem as competências expressas nas metas curriculares previstas para um determinado período de tempo e obtêm classificações não satisfatórias. Apesar de sucesso não se reduzir às classificações académicas obtidas, é através destas que os alunos são efetivamente avaliados e posicionados perante escolhas futuras (Saavedra, 2001). Neste sentido, é imperativo proporcionar aos alunos experiências escolares positivas que contribuam para o desenvolvimento pessoal e social harmonioso conforme preconiza a Lei de Bases do Sistema Educativo (Lei n.º 48/86, alterada pela Lei n.º 115/97, Lei n.º 49/05 e Lei n.º 85/2009). Isto é, a dita Lei estabelece uma ação formativa orientada para favorecer o desenvolvimento global da personalidade, o progresso social e a democratização da sociedade.

A escola é uma realidade complexa, composta marcada pela heterogeneidade e multiculturalidade, com organização curricular e relação pedagógica nem sempre ajustada às especificidades dos alunos. Estas especificidades podem estar na génese da indisciplina nos alunos. Neste seguimento, o propósito deste estudo consiste em identificar os determinantes da indisciplina escolar tendo em conta o contexto familiar, o nível socioeconómico, a motivação escolar e o rendimento escolar.

2. MÉTODO

2.1 Participantes

Uma amostra de conveniência constituída por 66 alunos, 10 raparigas e 56 rapazes entre os 10 e os 17 anos, que frequentam o 2.º e 3.º ciclo do ensino básico, numa escola de meio urbano inserida num contexto socioeconómico baixo. A amostra divide-se em dois grupos, com e sem comportamentos de indisciplina.

2.2 Instrumentos

- Questionário de dados sociofamiliares elaborado para o efeito que inclui contexto familiar (pais, com par/sem par), nível socioeconómico (escalo social – 1, 2, sem escalo), situação profissional da mãe (empregada, desempregada, outra), situação profissional do pai (empregado, desempregado, outro) e tipo de habitação (própria, arrendada, social).
- Questionário de motivação escolar (QME) (Cordeiro, 2010) – Multidimensional, de auto-resposta, composto por 101 questões fechadas, organizado sob formato de *rating scale*, tipo likert de cinco pontos (1 – totalmente falso; 2 – Falso; 3 – Mais verdadeira do que falsa; 4 – Verdadeira; 5 – Totalmente verdadeira). É multidimensional na medida em que compreende 6 dimensões e 16 subescalas, distribuídas em 96 questões (do item 3 ao 99), após o indivíduo responder a questões de cariz sociodemográfico, presentes na questão 1 - Dados mais pessoais (idade, sexo, repetências, tipo de escola, tipo de ensino) e disciplina sobre a qual está a responder a este questionário, conducentes às variáveis contexto familiar, rendimento socioeconómico, motivação escolar, rendimento escolar. Neste caso foram consideradas as classificações obtidas pelos alunos disciplinas de português, matemática e inglês.

As pontuações mínimas e máximas atribuídas a cada escalão oscilam entre 20 pontos (orientação dos objetivos de desempenho do professor) e 50 pontos (estratégias metacognitivas). O QME avalia os indicadores da motivação do aluno, apresentando *scores* parcelares por cada escala analisada sendo o atributo considerado relevante quando o valor total da pontuação for superior à média (ponto de corte) (tabela 1).

Tabela 1. Distribuição dos indicadores da motivação do aluno

Escala	Mín.	Máx.	Ponto de corte (média)
A1 – Orientação dos objetivos de aprendizagem do professor	5	25	12.5
A2 – Orientação dos objetivos de desempenho do professor	4	20	10
B1 – Promoção da instrumentalidade exógena com regulação externa	7	35	17.5
B2 – Promoção da instrumentalidade exógena com regulação interna	7	35	17.5
B3 - Promoção da instrumentalidade endógena com regulação interna	5	25	12.5
C1 – Perceção do clima de aula	6	30	15
D1 – Orientação do aluno para objetivos de aprendizagem	7	35	17.5
D2 - Orientação do aluno para objetivos de desempenho	8	40	20
E1 – Instrumentalidade exógena com regulação externa do aluno	6	30	15
E2 – Instrumentalidade exógena com regulação interna do aluno	6	30	15
E3 - E1 – Instrumentalidade endógena com regulação externa do aluno	7	35	17.5

Tabela 1. Distribuição dos indicadores da motivação do aluno (continuação)

Escala	Mín.	Máx.	Ponto de corte (média)
F1 – Estratégias de repetição	4	20	10
F2 – Estratégias de elaboração	6	30	15
F3 – Estratégias de organização	4	20	10
F4 – Pensamento crítico	5	25	12.50
F5 – Estratégias metacognitivas	10	50	25

A fiabilidade dos diferentes subescalas do QME determinada através do cálculo do coeficiente *Alpha de Cronbach* do QME, indica níveis de consistência interna muito bons ($\alpha > 0.90$).

2.3 Procedimentos

Esta investigação foi iniciada após anuência do Diretor Regional de Educação e da direção de uma Escola Básica do 2.º e 3.º Ciclo do Ensino Básico, público, situado em meio urbano, na Região Autónoma da Madeira, bem como do consentimento informado dos encarregados de educação dos alunos participantes.

A amostra constituiu-se após divulgação da avaliação atribuída no 2.º trimestre. Para identificar os determinantes da indisciplina escolar foram constituídos dois grupos: 1 – grupo com indisciplina; 2 – grupo sem indisciplina. Nesse sentido, a única forma de estabelecer uma relação de causa e efeito é comparar os resultados obtidos pelos alunos destes dois grupos. A amostra do grupo sem disciplina apresenta o *N* aproximado ao grupo sem disciplina e engloba as idiosincrasias e critérios de inclusão semelhantes ao grupo sinalizado com indisciplina, mas não associados a comportamentos indisciplinados.

Os dados respeitantes às variáveis contexto familiar, rendimento socioeconómico, motivação escolar, rendimento escolar, extraídos dos registos biográficos de cada aluno bem como os dados do QME foram inseridos no software *Statistical Package for Social Sciences* (SPSS – versão 22.0) e analisados os resultados. Verificou-se os pressupostos da normalidade e homogeneidade das variâncias. A prova de *Kolmogorov-Smirnov* revela que as escalas apresentam distribuição normal. A metodologia empregue foi do tipo analítico, dando lugar à caracterização e classificação dos participantes. Realizou-se análise comparativa dos grupos através de estatística paramétrica. Foram cumpridos os procedimentos éticos em investigação com seres humanos (Feldman, 2001), designadamente o anonimato, o consentimento informado, o direito à intimidade e à não participação e a confidencialidade dos dados obtidos.

3. RESULTADOS

A análise comparativa dos grupos (1 - grupo com indisciplina; 2 - grupo sem indisciplina) teve em consideração a variável contexto familiar (pais, com par/sem par). O resultado da prova de Qui-quadrado sugere diferença associada ao estado civil

dos pais com a probabilidade associada à ocorrência de comportamentos indisciplinados nos filhos de pais que vivem sós ($\chi^2(3) = 5.06; p = .044$) (tabela 2).

Tabela 2. Contexto familiar e indisciplina do aluno (Prova Qui-quadrado)

Variável			Grupo 1	Grupo 2	χ^2	p
Pais	Com par	N	16	24	5.06	.044
		%	48.50	72.7		
	Sem par	N	17	9		
		%	51.50	27.3		

A variável rendimento socioeconómico analisada a partir do escalão social do aluno (escalão 1; escalão 2; sem escalão), da situação profissional dos pais (com emprego; sem emprego) e do tipo de habitação (própria; arrendada) através da prova de Qui-quadrado (χ^2) não exibe diferenças significativas em função da indisciplina dos alunos ($\chi^2(2) = 5.55; p = 0.063$).

No concernente à indisciplina do aluno em função da motivação escolar (tabela 3), o resultado da prova *t-Student* para amostras independentes, aponta *scores* superiores no grupo sem indisciplina nas escalas orientação dos objetivos de aprendizagem do professor ($t(64) = 2.22; p = 0.030$), perceção do clima de aula ($t(64) = 3.41; p = 0.001$), orientação do aluno para objetivos de aprendizagem ($t(64) = 3.77; p < 0.001$), instrumentalidade exógena com regulação externa do aluno ($t(64) = 2.19; p = 0.032$), instrumentalidade endógena com regulação interna do aluno ($t(64) = 2.55; p = 0.013$), estratégias de repetição ($t(64) = 2.73; p = 0.008$), estratégias de elaboração ($t(64) = 3.35; p = 0.001$), estratégias de organização ($t(64) = 3.35; p = 0.001$), pensamento crítico ($t(64) = 2.94; p = 0.005$) e estratégias metacognitivas ($t(64) = 3.48; p = 0.001$). Os resultados não são estatisticamente significativos nas restantes escalas, mas o grupo associado à indisciplina apresenta valores tendencialmente mais baixos em todas as dimensões da motivação escolar.

Tabela 3. Motivação escolar e indisciplina dos alunos

Escalas	Grupo	M	DP	t	p
A1 – Orientação dos objetivos de aprendizagem do professor	Com Indisc.	16.28	5.45	2.22	.030
	Sem Indisc.	18.83	3.75		
C1 – Perceção do clima de aula	Com Indisc.	16.35	6.10	3.41	.001
	Sem Indisc.	20.87	4.55		
D1 – Orientação do aluno para objetivos de aprendizagem	Com Indisc.	21.67	6.47	3.77	.001
	Sem Indisc.	26.87	4.58		
D2 – Orientação do aluno para objetivos de desempenho	Com Indisc.	22.97	8.47	1.39	.169
	Sem Indisc.	25.72	7.61		
E1 – Instrumentalidade exógena com regulação externa do aluno	Com Indisc.	18.44	4.96	2.19	.032
	Sem Indisc.	20.79	3.67		
E2 – Instrumentalidade exógena com regulação interna do aluno	Com Indisc.	21.29	4.31	1.77	.081
	Sem Indisc.	23.15	4.20		
E3 – Instrumentalidade endógena com regulação interna do aluno	Com Indisc.	24.99	5.05	2.55	.013
	Sem Indisc.	27.80	3.80		
F1 – Estratégias de repetição	Com Indisc.	10.03	3.73	2.73	.008
	Sem Indisc.	12.72	4.24		
F2 – Estratégias de elaboração	Com Indisc.	15.65	6.68	3.35	.001
	Sem Indisc.	20.61	5.27		
F3 – Estratégias de organização	Com Indisc.	9.57	4.26	3.35	.001
	Sem Indisc.	13.36	4.56		
F4 – Pensamento crítico	Com Indisc.	13.00	5.48	2.94	.005
	Sem Indisc.	16.45	3.92		
F5 – Estratégias metacognitivas	Com Indisc.	25.15	10.72	3.48	.001
	Sem Indisc.	33.65	9.03		

O teste *t-Student* mostra scores significativamente superiores na disciplina de Português ($t(63) = 3.75; p < 0,001$), Matemática ($t(63) = 5,99; p < 0,001$) e Inglês ($t(55) = 6,78; p < 0,001$) por parte do grupo sem indisciplina (tabela 4).

Tabela 4. Rendimento escolar e indisciplina do aluno

Disciplina	Grupo	N	M	DP	t	p
Português	Com Indisc.	32	2.59	.70	3.75	.001
	Sem Indisc.	33	3.30	.76		
Matemática	Com Indisc.	32	2.34	.94	5.99	.001
	Sem Indisc.	33	2.58	.70		
Inglês	Com Indisc.	32	2.81	.86	3.56	.001
	Sem Indisc.	33	3.58	.87		

4. DISCUSSÃO

Os determinantes da indisciplina escolar estão na linha cimeira das preocupações de professores, psicólogos, pais e dos responsáveis pelas políticas de educação. Para identificar os determinantes da indisciplina escolar tendo em conta o contexto familiar, o nível socioeconómico, a motivação escolar e o rendimento escolar recorreu-se à análise comparativa entre grupos de alunos indisciplinados - “grupo com indisciplina” - e grupo de comparação - “grupo sem indisciplina” -, numa amostra de alunos que frequentam o 2.º e 3.º ciclo do ensino básico, numa escola pública da ilha da Madeira. O grupo sem indisciplina engloba as idiossincrasias e critérios de inclusão semelhantes ao grupo sinalizado, mas não associados a comportamentos indisciplinados (Feldman, 2005).

Este estudo sugere que os alunos pertencentes ao grupo com indisciplina coabitam, apenas, com um progenitor. Este resultado encontra suporte em Bedding (2006). Este apurou que existe correlação significativa entre a indisciplina e a monoparentalidade que envolve filhos de pais divorciados ou em casos de morte de um dos progenitores. Shepherd (2003) também constatou que alunos do género masculino, com comportamentos agressivos e disruptivos, viviam com um dos pais a tempo inteiro. Isto é, alunos oriundos de famílias desagregadas, tendencialmente, apresentam condutas inadequadas.

O rendimento socioeconómico na amostra estudada não determina a indisciplina dos alunos. Na aceção de Debarbieux (2002), o estatuto socioeconómico das famílias (baixo rendimento, famílias numerosas e o “stress” causado pela pobreza) poderá estar associado a práticas comportamentais disruptivas. Embora possa existir relação entre as características socioeconómicas e os comportamentos violentos/disruptivos em escolas integradas em contextos sociais vulneráveis, o clima escolar é melhor comparativamente a escolas de meios sociais mais favorecidos (Debarbieux, 2004). A propósito das causas da indisciplina escolar, Ngwokabuenui (2015) aponta a superproteção parental, sistema social pobre, abandono, corrupção, insatisfação com a qualidade de vida, trabalho duro, falta de supervisão parental, desconhecimento parental dos amigos dos seus educandos e desrespeito pelas regras e regulamentos das escolas.

Eccheli (2008) defende que a indisciplina escolar está associada à desmotivação dos alunos perante assuntos lecionados e incompreensão sobre a utilidade da escola a curto, médio/longo prazo. Na presente investigação, o grupo associado à indisciplina apresenta níveis de motivação tendencialmente mais baixos, mas estatisticamente significativos, do que o grupo sem indisciplina no respeitante à orientação dos objetivos de aprendizagem do professor, perceção do clima de aula (perceção do professor enquanto promotor de autonomia *versus* controlo), orientação dos alunos para objetivos de aprendizagem, instrumentalidade exógena com regulação externa do aluno, instrumentalidade endógena com regulação interna do aluno e perceção do aluno sobre a utilização de estratégias de aprendizagem (estratégias de repetição, elaboração, organização, pensamento crítico e estratégias metacognitivas). A orientação para objetivos de aprendizagem correlaciona-se com a utilização de estratégias de aprendizagem (Covington, 2000), com maior adaptabilidade às exigências escolares (Anderman & Wolters, 2006) e a perceção do valor que determinadas tarefas escolares poderão ter (instrumentalidade) está diretamente relacionado com os objetivos intrínsecos dos alunos predizendo de modo positivo a motivação escolar e o desempenho escolar dos alunos (Simon, Dewite & Lens, 2003).

O grupo sem indisciplina apresenta rendimento escolar mais elevado do que o grupo com indisciplina nas áreas curriculares avaliadas (português, matemática e inglês). Também o estudo de Karanja e Bowen (2012) mostra que comportamentos indisciplinados afetam negativamente a performance académica. Por seu turno, Auni, Songok, Jepchirchir, Odhiambo, Nabwire e Lyanda (2015) concluem que um ajustamento social pobre é resultado da ineficácia de programas de orientação, a instalações inadequadas, estratégias de orientação ineficazes e sem o devido acompanhamento usadas nas escolas. Para contrariar esta problemática de modo proactivo prospetivo, Auni, Songok, Jepchirchir, Odhiambo, Nabwire e Lyanda (2015) recomendam lideranças fortes, professores motivados e competentes na apresentação, orientação, acompanhamento e prossecução de regras claras e bem precisas, bem como envolvimento parental e de outros parceiros sociais da comunidade envolvente que contribuam com o seu aconselhamento para o ajuste social dos alunos.

Por fim, estudo coloca em evidência o seguinte:

- 1) Alunos indisciplinados coabitam com um único progenitor;
- 2) O rendimento socioeconómico das famílias não é determinante da indisciplina do aluno;
- 3) A motivação escolar do aluno influencia o respetivo rendimento escolar;
- 4) Alunos com rendimento escolar apresentam níveis de indisciplina baixo.

Para determinar se o contexto familiar, o rendimento socioeconómico, a motivação escolar e o rendimento escolar predizem a indisciplina do aluno seria necessário recorrer à prova de regressão logística binária, cuja variável dependente seria pertencer ou não ao grupo de indisciplina e uma amostra representativa da população, com um número mínimo de dez casos por cada variável preditora (Field, 2011). Ocorre, porém, que somente a variável da motivação escolar comporta 16 escalas, concluindo por isso que a nossa amostra é muito pequena (66 sujeitos) para realizar este tipo de análise e também, pouco representativa, na medida em que está confinada a uma escola da Madeira. Logo, não é possível recorrer à referida prova nem produzir um modelo preditor da indisciplina a partir de diversas variáveis explicativas. Pesquisas implementadas noutros contextos educacionais e com amostras mais alargadas seriam convenientes na identificação dos determinantes da indisciplina escolar.

Conclui-se que o contexto familiar, a motivação escolar e o rendimento escolar são determinantes da indisciplina escolar. Estas conclusões induzem a necessidade de implementação de programas de intervenção junto dos alunos, em articulação com as respetivas famílias e a comunidade envolvente que concorram para diminuição da indisciplina e promoção do sucesso escolar.

REFERÊNCIAS

- Amado, J. & Freire, I. (2009). *A(s) indisciplina(s) na escola: compreender para prevenir*. Coimbra: Almedina.
- Anderman, E. & Wolters, C. (2006). *Handbook of Educational Psychology*. Mahwah, NJ: Lawrence Erlbaum.
- Andréo, C. (2005). *Déviance scolaire et control social. Une ethnographie des jeunes à l'école*. Villeneuve d'Asq: Press Universitaire de Septentrion.
- Aquino, G. (2003). *Indisciplina: o contraponto das escolas democráticas*. São Paulo: Moderna.
- Auni, R., Songok, Jepchirchir, R., Odhiambo, Ong'unya, Nabwire & Lyanda, J. (2014). Determinants of Guidance and Counseling Programme in Addressing Students social Adjustment in Secondary Schools in Siaya District, Kenta. *International Journal of Humanities and Social Sciences*, 4(4), 69-76.
- Bedding, E. (2006). *The relationship between single parenting and indiscipline among teenager pupils in selected shools in Lusaka province*. Dissertação de Mestrado. Universidade de Zambia, Lusaka.
- Caldeira, S. & Veiga, F. (Eds.) (2011). *Intervir em situações de indisciplina, violência e conflito*. Lisboa: Fim de Século.
- Campos, L. (2007). *Disciplina e indisciplina na aula: uma perspectiva sociológica*. Dissertação de Doutoramento. Universidade Federal de Minas Gerais, Brasil.
- Carita, A. & Fernandes, G. (1997). *Indisciplina na sala de aula*. Lisboa: Editorial Presença.
- Cordeiro, P. (2010). *Construção e validação do questionário de motivação escolar para a população portuguesa: estudos exploratórios*. (Dissertação de Mestrado) Universidade de Coimbra, Portugal.
- Covington, M. V. (2000). Goal Theory, motivation and school achievement: Na integrative review. *Annual Review of Psychology*, 51, 171-200.
- Debarbieux, E. (2002). *Violence in Schools and Policies*. France: Elsevier.
- Debarbieux, E. (2004). *Victimactions et microviolences dans les écoles françaises. Enquêtes de victimations 1996-2004*. Paris: Ministère de l'Éducation National.
- DiPrete, T. A. & Penge, S. S. (1981). *Discipline and order in American Hight Schools*. Washington, DC: National Center for Education Studies.
- Eccheli, S. D. (2008). A motivação como prevenção da indisciplina. *Educar*, 32, 199-213.
- Estrela, M. T. (2002). *Relação pedagógica, disciplina e indisciplina na aula*. Porto: Porto Editora.
- Feldman, R. (2001). *Compreender a Psicologia*. Amadora: McGraw-Hill.
- Field, A. (2011). *Discovering statistics using SPSS*. London: Sage.
- Gouveia-Pereira, M. (2008). *Perceções de justiça na adolescência. A Escola e a legitimação das Autoridades Institucionais*. Lisboa: Fundação Kalouste Gulbenkian.
- Huffman, K., Vernoy, M. & Vernoy, J. (2003). *Psicologia*. S. Paulo: Editora Atlas.
- Karanja, R. & Bowen, M. (2012). *Student indiscipline and academic performance in public schools in Kenya*. Kenya. Daystar University.
- Lens, W., Paixão, M. P. & Herrera, D. (2009). Instrumental motivation: So What??? *Psychologica*, 50, 21-40.
- Lochan, D. (2010). *Students perceptions of indiscipline at three primary schools in one educational district in central Trinidad*. Thesis University of West Indies. Faculty of Umanities and Education.
- Matos, M., Negreiros, J., Simões, C. & Gaspar, D. (2009). *Violência, bullying e delinquência: gestão de problemas de saúde em meio escolar*. Lisboa: Coisas de Ler Edições.

- Mendes, F. & Alves, J. (1997). Educação e tecnologia. *Revista do Instituto Politécnico da Guarda*, 20, 153-177.
- Merle, P. (2005). *L'Élève humilié: L'École, un espace de non-droit?* Paris: PUF.
- Moffit, T. & Caspi, A. (2002). *Comportamento antissocial e família. Uma abordagem científica*. Coimbra: Almedina.
- Ngwokabuenui, P. (2015). Students' Indiscipline: Types, Causes and Possible Solutions. *Journal of Education and Practice*, 6(22), 64-72.
- Oliveira, C. B. E. & Alves, P. B. (2005). Ensino Fundamental: Papel do professor, Motivação e Estimulação no contexto escolar. *Paidéia*, 15(31), 227-238.
- Pellizzari, M. & Billari, F. (2011). The younger, the better? Age related differences in academic performances at university. *Journal of Populations Economics*, 31, 1-45.
- Pereira, M. (2009). *Indisciplina escolar: concepções dos professores e relações com a formação docente*. (Dissertação de Mestrado). Universidade Católica D. Bosco. Campo Grande, Brasil.
- Pestana, M. H. & Gageiro, J. N. (2005). *Análise de dados para Ciências Sociais. A Complementaridade do SPSS*. Lisboa: Edições Sílabo.
- Ramirez, F. (2001). *Condutas agressivas na idade escolar*. Amadora: McGrau-Hill.
- Saavedra, L. (2001). Sucesso/insucesso escolar. A importância do nível socioeconómico e do género. *Psicologia*, 15(1), 67-92.
- Sheperd, S. (2003). *Causes, what causes?*. London Westminsterwatch: United Kingdom.
- Simons, J. Dewite, S. & Lens, W. (2003). "Don't do it for me, do it for yourself". Stressing the personal elements enhances motivation in physical education. *Journal of Sport Exercise Psychology*, 25, 145-160.
- Steinberg, L., Blatt-Eisengart, I & Cauffman, E. (2006). Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent and neglectful holmes: A replication in a sample of serious juvenile offenders. *Journal of Research on Adolescence*, 16(1), 47-58.
- Tavares, J. & Santiago, R. (2001). *Ensino Superior – (In)Sucesso Académico*. Porto: Porto Editora.
- Tresniewski, K., Moffit, T., Caspi, A., Taylor, A. & Maughan, B. (2005). Revisiting the association between Reading achievement and antisocial behavior: New evidence of na environmental explanation from a twin study. *Child Development*, 77(1), 72-88.
- Veiga, F. (2001). *Indisciplina e violência na escola. Práticas comunicacionais para professores e pais*. Coimbra: Almedina.
- Velez, F. & Veiga, F. H. (2010). Indisciplina e violência na escola: distribuição dos alunos pela vitimização e pela agressão, por anos de escolaridade. In F. Patrício, L. Sebastião, J. Justo, & J. Bonito (orgs). *Da exclusão à excelência: Caminhos Organizacionais para a Qualidade da Educação – Atas do XI Congresso da AEPEC*, Évora, Portugal.

A UTILIZAÇÃO DE APRENDIZAGEM ATIVA NO ENSINO SUPERIOR RESULTA NUM MELHOR DESEMPENHO DO ALUNO?

Ana C. Conceição

Departamento de Matemática, Faculdade de Ciências e Tecnologia, Universidade do Algarve

Centro de Estudos e Desenvolvimento da Matemática no Ensino Superior (CEDMES)

Centro de Análise Funcional, Estruturas Lineares e Aplicações (CEAFEL)

(aicdoisg@gmail.com)

RESUMO

A aplicação de técnicas pedagógicas inovadoras num contexto de aprendizagem ativa é uma metodologia de ensino enriquecedora em qualquer área de conhecimento. Esta metodologia de ensino-aprendizagem pode também motivar a adaptação de alguns dos elementos de avaliação.

Neste artigo pretende-se exemplificar como a utilização de uma nova metodologia de avaliação no ensino superior, baseada no conceito de aprendizagem ativa e acrescida de uma prática pedagógica com utilização de software educacional, pode melhorar o desempenho dos alunos.

Palavras-Chave: Aprendizagem Ativa, Avaliação no Ensino Superior, Desempenho do Aluno.

JEL Classification: C02, C65

1. INTRODUÇÃO

Com o objetivo de estimular o interesse e participação dos alunos na apropriação e consolidação de conceitos, promovendo novas formas de raciocinar, ensinar e aprender que facilitam o processo ensino-aprendizagem, foi concebida uma metodologia de avaliação baseada no conceito de aprendizagem ativa. Esta metodologia, acrescida de uma prática pedagógica com utilização de software educacional, foi aplicada a alunos da Universidade do Algarve, inscritos na unidade curricular *Cálculo I*, no ano letivo 2016/17.

Com o propósito de recolher e analisar as opiniões dos alunos sobre a utilização desta metodologia de avaliação integrada numa prática pedagógica em contexto de aprendizagem ativa foi elaborado um questionário e recolhidas as opiniões de discentes matriculados na respetiva unidade curricular e que se submeteram a avaliação.

2. DESCRIÇÃO DA PRÁTICA PEDAGÓGICA

2.1. Objetivos e público-alvo

Cálculo I é uma disciplina, transversal a diversos cursos de ciências naturais, da área científica da Matemática. No início do ano letivo 2016/17 encontravam-se inscritos 48 alunos nesta unidade curricular.

Com o objetivo de melhorar o desempenho dos alunos em *Cálculo I*, decidiu-se utilizar uma metodologia de avaliação, baseada no conceito de aprendizagem ativa e acrescida de uma aplicação prática de técnicas pedagógicas inovadoras.

2.2. Metodologia

Nas aulas teóricas e teórico-práticas, os conteúdos programáticos da disciplina foram explorados através da utilização de software educacional apropriado. Por exemplo, utilizando o conceito F-Tool (Conceição *et al.*, 2012) foram construídos exemplos gráfico-analíticos e dinâmicos em tempo real e foram apresentadas diversas propriedades gerais de várias classes de funções. Os alunos realizaram de uma forma autónoma e reflexiva (dirigida estrategicamente pelo docente) escolhas de entre as várias opções de funções e parâmetros, promovendo uma aprendizagem mais eficaz. Os conteúdos programáticos da unidade curricular foram também explorados através da utilização do Wolfram|Alpha, motor de conhecimento computacional desenvolvido pela Wolfram Research. Foi também sugerida a utilização das F-Tool e do Wolfram|Alpha como ferramentas de validação das resoluções obtidas pelos alunos de exercícios propostos para trabalho autónomo. O enquadramento da utilização destas ferramentas num contexto de aprendizagem ativa encontra-se descrito em (Conceição *et al.*, 2013; Conceição *et al.*, 2015; Conceição *et al.*, 2017; Pereira *et al.*, 2013).

Esta prática pedagógica baseada no conceito de aprendizagem ativa teve como consequência a adaptação de alguns dos elementos de avaliação, permitindo a inclusão de questões com carácter mais conceptual e desviando um pouco o foco da mera aplicação mecânica de fórmulas e do simples cálculo numérico (para uma geração dependente da máquina de calcular). Os alunos foram informados que teriam oportunidade de obter aprovação à unidade curricular sem se submeterem a exame, realizando testes e diversos tipos de atividades em sala de aula (Figura 1).

Figura 1: Informação disponível na tutoria eletrónica relativa à avaliação em *Cálculo I*.**AValiação:**

Realização de testes e sugestão de atividades, dando a possibilidade de obter aproveitamento à UC sem se submeter a exame. A classificação relativa aos testes (*ClassT*) corresponderá à média aritmética das notas obtidas nos mesmos. A classificação relativa à realização de algumas das atividades (*ClassA*) terá o valor máximo de 20 valores. O aluno que realize todos os testes obterá a classificação final (*ClassF*) que corresponde ao $\max(\text{ClassT}; 0,2 \cdot \text{ClassA} + 0,8 \cdot \text{ClassT})$. Serão aprovados os alunos que obtenham uma *ClassF* não inferior a 9,5 valores. Será admitido ao Exame de Época Normal o aluno inscrito na disciplina e aprovado caso obtenha classificação não inferior a 10 valores. Será admitido ao Exame de Recurso o aluno inscrito na disciplina que ainda não tenha obtido aproveitamento e aprovado caso obtenha classificação não inferior a 10 valores.

A classificação obtida nessa fase pré-exames, denominada *ClassF*, foi considerada sempre que o aluno realizou todos os testes. De forma a estimular o interesse e a participação dos alunos em sala de aula foi introduzida a classificação relativa à realização de diversas atividades em sala de aula, *ClassA* (Figura 2).

Figura 2: Informação disponível na tutoria eletrónica relativa à classificação *ClassA*.**ClassA:**

Assiduidade $\rightarrow$ [80%-100%] das aulas (T + TP) $\Rightarrow$ 5 valores.

$\rightarrow$ [65%-80[das aulas (T + TP) $\Rightarrow$ 2,5 valores.

Participação ativa em sala de aula com observações/conclusões interessantes $\Rightarrow$ entre 0,5 e 1 valor

Resolução (com explicação) de exercício no quadro $\Rightarrow$ entre 0,5 e 1 valor

Resolução de exercícios nas aulas TP para correção posterior $\Rightarrow$ entre 1,5 e 3 valores

NOTA: A presença em sala de aula só será contabilizada caso o aluno não perturbe e esteja presente em pelo menos 75% da aula.

NOTA: Nas aulas T só será permitida a entrada na sala de aula durante os primeiros 15 minutos.

A *ClassF* foi calculada através da classificação obtida em testes escritos, *ClassT*, e da classificação *ClassA*, através da fórmula indicada na Figura 1. Dos alunos submetidos a avaliação contínua, 90% optaram pela utilização da *ClassA*, sendo que dois dos alunos não usufruíram da *ClassA* pois não conseguiram realizar tarefas suficientes devido a incompatibilidade de horários com outras disciplinas. Apesar do carácter não obrigatório das aulas teóricas e teórico-práticas decidiu-se incluir a componente “*Assiduidade*” na avaliação. Os 27 alunos que beneficiaram da *ClassA* assistiram a uma média de 82,3% das aulas teóricas e teórico-práticas lecionadas. Foi possível observar que o nº de alunos em sala de aula não sofreu alterações significativas durante o semestre. Só um dos alunos que utilizou a *ClassA* não obteve qualquer classificação através da componente assiduidade (tendo assistido, por opção, a 55% das aulas). Utilizando uma metodologia de avaliação, baseada no conceito de aprendizagem ativa, os alunos foram constantemente convidados a serem participantes realmente ativos e críticos a tudo o que se passava na sala de aula. Assim, com o intuito de motivar os alunos, de tornar mais interessante a aquisição de novos conhecimentos científicos e de melhorar o desempenho dos alunos que frequentaram as aulas de *Cálculo I* optou-se por incluir na *ClassA* a componente “*Participação ativa em sala de aula*”: resolução de exercícios no quadro (Figuras 3 e 4) e a classificação obtida através de uma participação realmente ativa.

Figura 3: Exemplo de atividade proposta na componente “Participação ativa em sala de aula”.

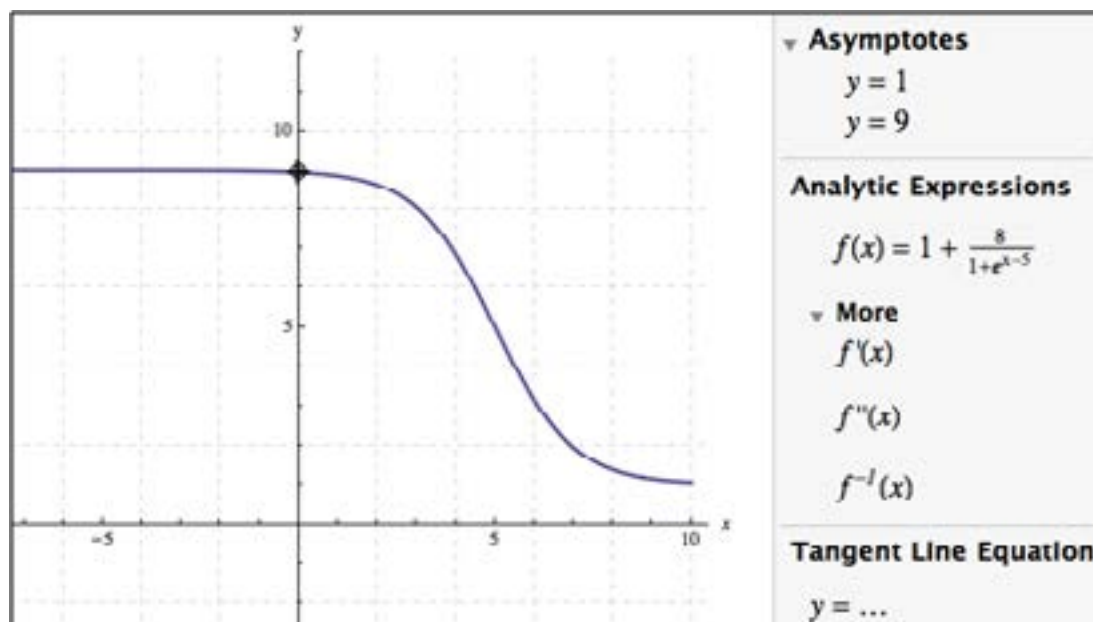
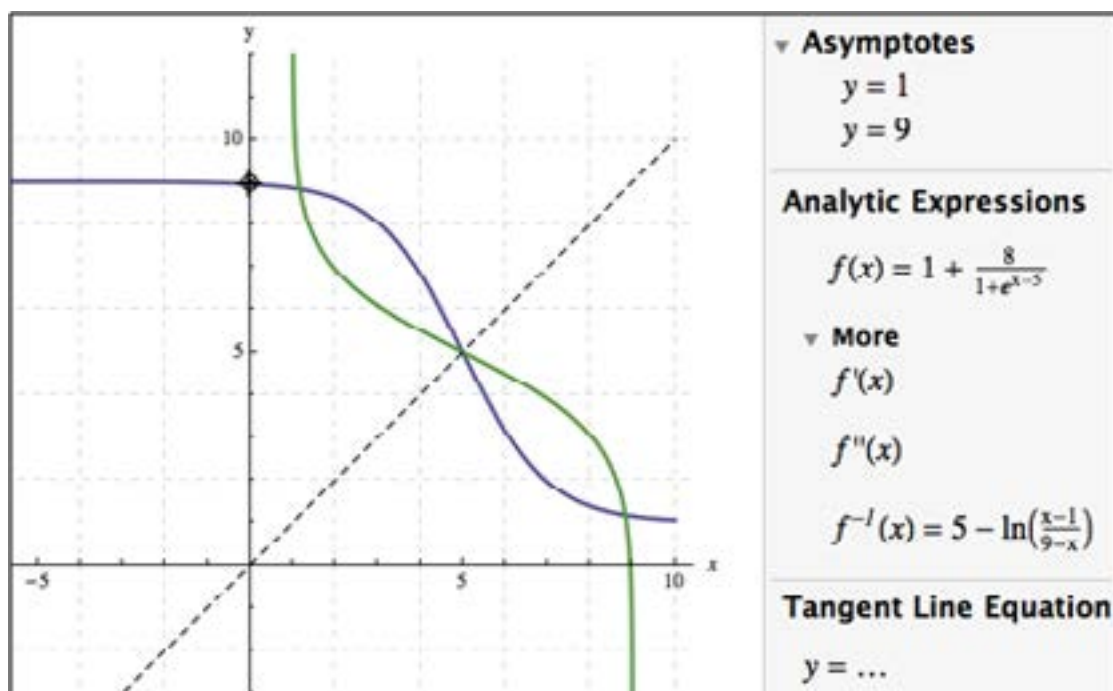


Figura 4: Resolução obtida através das F-Logistic (Pereira *et al.*, 2013), ao exercício referido na Figura 3.



Adicionalmente, nas aulas teórico-práticas, os alunos que optaram pela *ClassA* tiveram acesso à componente “Questões-aula nas aulas TP”: questões-aula sobre a temática abordada durante a semana anterior (Figura 5). Na aula seguinte todos os alunos tinham acesso à classificação obtida e aconselhados a ver a correção e a analisar as observações personalizadas sobre a forma de resolver os exercícios. Só um dos alunos que optou pela *ClassA* não obteve (de forma direta) benefícios na realização de questões-aula devido a incompatibilidade de horários relativamente às aulas teórico-práticas.

Figura 5: Exemplo de atividade proposta na componente “Questões-aula nas aulas TP”.

Calcule o integral indefinido (Exercício a valer no máximo 1,5 valor)

$$\int \frac{\sin(2x)}{\sqrt[3]{10 - \cos(2x)}} dx$$

Devido à diversidade de componentes incluídas na *ClassA*, foram identificados vários perfis de aluno:

- 1) confiante nos seus conhecimentos científicos e com uma participação muito ativa em sala de aula

- 2) tímido, mas com bons conhecimentos científicos
- 3) com fracos conhecimentos científicos, mas com vontade de melhorar o seu desempenho académico na área da Matemática tomando uma atitude de participação ativa em sala de aula
- 4) com fracos conhecimentos científicos e desmotivado em melhorar o seu desempenho académico na área da Matemática
- 5) desanimado com o seu desempenho em anos letivos anteriores, mas interessado nesta nova metodologia de avaliação

A classificação máxima em *ClassA* foi atingida por diversos alunos. Os alunos com perfil do tipo *i)*, *iii)* ou *v)* atingiram muito rapidamente boas classificações nas componentes “Assiduidade” e “Participação ativa em sala de aula”. Como as classificações relativas à *ClassA* foram sendo constantemente atualizadas na tutoria eletrónica, alguns dos alunos com perfis *ii)* e *iv)* ficaram motivados a também participarem na sala de aula de forma mais ativa, melhorando o seu desempenho na unidade curricular. Outros alunos de perfil *ii)* preferiram apostar nas componentes “Assiduidade” e “Questões-aula nas aulas TP”, atingindo também bons resultados na *ClassA*.

3. RESULTADOS

Dos 48 alunos inscritos à unidade curricular só 62,5% (30 alunos) foram abrangidos pela classificação *ClassF*. É importante referir que 35% não tiveram oportunidade de assistir de forma regular às aulas teóricas e teórico-práticas devido a incompatibilidade de horários com disciplinas de outros anos curriculares (7 alunos não assistiram a qualquer aula).

A inclusão da componente “Assiduidade” na avaliação, com o objetivo de manter estável o número de alunos em sala de aula, originou uma participação mais ativa.

Todos os alunos que beneficiaram da *ClassA* foram aprovados à unidade curricular. Só um dos alunos que optou pela *ClassF* não obteve aproveitamento a *Cálculo I*, ficando com a classificação final de 8 valores. A maioria dos alunos que optou pela *ClassA* viu aumentada a sua classificação obtida em testes em 1 valor, sendo que dois alunos beneficiaram de 2 valores devido à classificação obtida nas três componentes da *ClassA* ser muito superior à classificação obtida nos testes (alunos com perfil *iii)*). Só um dos alunos que aderiu à *ClassF* obteve (de forma direta) aproveitamento à unidade curricular devido à inclusão da *ClassA* (caso só fossem contabilizados os testes ficaria com uma classificação final de 8 valores). A classificação média obtida na *ClassF* foi de 14,8 valores. A classificação média em período de exames foi de 5 valores (só tendo comparecido o aluno que reprovou com 8 valores a *ClassF* e um aluno sem classificação *ClassF*).

Com o propósito de recolher e analisar as opiniões dos alunos sobre a utilização desta metodologia de avaliação integrada numa prática pedagógica em contexto de aprendizagem ativa foi elaborado um questionário (Figura 6) e recolhidas as opiniões de alunos matriculados na respetiva unidade curricular e que se submeteram a avaliação. O questionário foi apresentado aos alunos na última semana de aulas.

Figura 6: Questionário utilizado para recolher as opiniões dos alunos sobre a utilização da *ClassA* em *Cálculo I*.

Classificação relativa à realização de atividades na sala de aula (ClassA)
2016/2017 – Cálculo I (Faculdade de Ciências e Tecnologia da Universidade do Algarve)

Questionário

1 – Está inscrito pela 1ª vez em Cálculo I? SIM ☐ NÃO ☐

2 – Que classificação espera obter em Cálculo I? <10 ☐ 10-12 ☐ 13-15 ☐ 16-18 ☐ 19-20 ☐

3 – A “Classificação relativa à realização de atividades na sala de aula (ClassA)” foi uma componente importante da avaliação em Cálculo I? SIM ☐ NÃO ☐

4 – Avalie de 1 a 7.

1: Discordo completamente; 2: Discordo bastante; 3: Discordo; 4: Não concordo nem discordo; 5: Concordo; 6: Concordo bastante; 7: Concordo completamente

4.1. Assiduidade		1	2	3	4	5	6	7
4.1.1.	A assiduidade não deveria ter sido considerada para avaliação.							
4.1.2.	Assisti às aulas T/TP só para ter a classificação relativa à assiduidade.							
4.1.3.	Assistirei às aulas T/TP mesmo que a assiduidade não tivesse sido considerada para avaliação.							

4.2. Participação ativa em sala de aula		1	2	3	4	5	6	7
4.2.1.	A participação ativa em sala de aula não deveria ter sido considerada para avaliação.							
4.2.2.	A participação ativa em sala de aula foi muito importante para esclarecer as minhas dúvidas.							
4.2.3.	A participação ativa em sala de aula foi muito importante para mostrar os meus conhecimentos sobre os conteúdos lecionados.							
4.2.4.	Teria tido uma participação menos ativa em sala de aula se não contasse para avaliação.							
4.2.5.	Deveria ter aprovado melhor a existência da componente “Participação ativa em sala de aula”.							

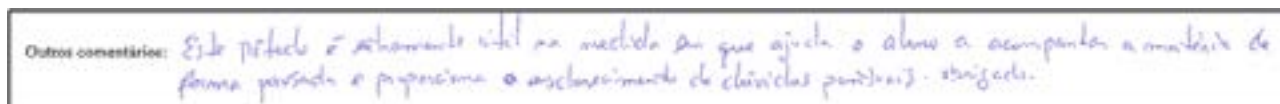
4.3. Questões-aula nas aulas TP		1	2	3	4	5	6	7
4.3.1.	A realização de questões-aula foi uma componente importante na avaliação em Cálculo I							
4.3.2.	A realização de questões-aula permitiu-me acompanhar, semanalmente, a matéria lecionada.							
4.3.3.	As questões-aula não deveriam ter sido realizadas durante as aulas T/P, mas em horário extra.							
4.3.4.	Assisti às aulas TP só para resolver as questões-aula consideradas para avaliação.							
4.3.5.	A realização de questões-aula não teve qualquer relação com a classificação que obtive nos testes que já realizei em Cálculo I.							

5 – Considera que este tipo de avaliação/classificação deveria ser utilizada em outras unidades curriculares do seu curso? SIM ☐ NÃO ☐
Porquê?

Outros comentários:

A análise das respostas aos 21 questionários validados indica que utilização desta metodologia de avaliação no ensino superior, baseada no conceito de aprendizagem ativa e acrescida de uma aplicação prática de técnicas pedagógicas inovadoras, é considerada uma mais-valia para os alunos inquiridos (Figura 7).

Figura 7: Comentário de um aluno relativamente às mais-valias da utilização da *ClassA* na avaliação.



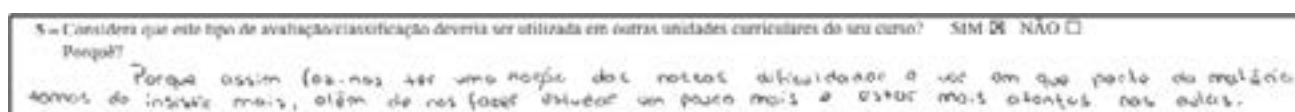
Relativamente à componente “Assiduidade” é importante referir que 95,2% dos alunos referiu que a possibilidade de adquirir classificação através da assiduidade não teve influência no número de aulas a que assistiu. O único aluno que afirmou só ter assistido às aulas para ter a classificação relativa a essa componente reconheceu que deveria ter aproveitado melhor a componente “Participação ativa em sala de aula”.

Dos 21 alunos inquiridos, 12 admitiram que deveriam ter aproveitado melhor a existência da componente “Participação ativa em sala de aula”. Por sua vez, 19% reconheceu que teria tido uma participação menos ativa em sala de aula caso não fosse considerada para a avaliação na unidade curricular.

Apesar de 3 dos alunos terem assumido ter assistido às aulas teórico-práticas somente para resolverem as questões-aula consideradas para avaliação, 95,2% dos alunos inquiridos reconheceram que a realização das questões-aula permitiu-lhes acompanhar, semanalmente, a matéria lecionada.

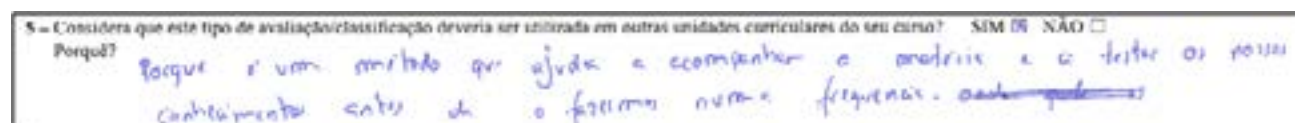
De uma forma geral, os alunos sentiram-se motivados a estudar, a consolidar conhecimentos científicos e a aprender novos conceitos (Figura 8).

Figura 8: Comentário de um aluno relativamente à relação entre a *ClassA* e a aquisição de novos conhecimentos.



Todos os alunos inquiridos consideraram que este tipo de avaliação/classificação deveria ser utilizado em outras unidades curriculares do seu curso (Figura 9).

Figura 9: Comentário de um aluno relativamente à utilização da *ClassA* em outras unidades curriculares do seu curso.



4. CONCLUSÕES

A aplicação de técnicas pedagógicas inovadoras num contexto de aprendizagem ativa é uma metodologia de ensino enriquecedora em qualquer área de conhecimento. Esta metodologia de ensino-aprendizagem proporciona um contexto de ensino-aprendizagem onde os alunos e professores são igualmente convidados a contribuir, podendo também motivar a adaptação de alguns dos elementos de avaliação. Além disso, a utilização de software educativo é um recurso valioso para a construção de um profícuo processo de ensino-aprendizagem e reveste-se de especial importância quando acrescida de uma metodologia de avaliação baseada no conceito de aprendizagem ativa e a técnicas pedagógicas inovadoras.

Figura 10: Comentário de um aluno relativamente à relação entre a *ClassA* e o seu desempenho em *Cálculo I*.



A maioria dos alunos reconheceu que esta metodologia de avaliação permitiu melhorar o seu desempenho na unidade curricular (Figura 10) e foram unânimes em considerar que este tipo de avaliação/classificação deveria ser utilizado em outras unidades curriculares do seu curso. De facto, devido ao seu carácter interdisciplinar, esta metodologia de avaliação pode ser adaptada a qualquer unidade curricular da mesma, ou de outra, área de formação (Figura 11).

Figura 11: Comentário de um aluno relativamente à utilização da *ClassA* em outras unidades curriculares.



Estes resultados vêm ao encontro das expectativas adquiridas por observação direta pelo docente em sala de aula.

REFERÊNCIAS

- Conceição, A.C., Fernandes, S., and Pereira, J.C. (2015). Prática pedagógica com o software educacional F-Tool em Cálculo I. In: F. Remião, J. Oliveira, L. Castro, M. Ferreira, P. Pinto, R. Cadima, (eds.), *Livro de Atas do Congresso Nacional de Práticas Pedagógicas no Ensino Superior (CNaPPES.15)*. Leiria. Portugal. 99-104.
- Conceição, A.C., Pereira, J.C., Silva, C.M., and Simão, C.R. (2013). Software Educacional em Pré- Cálculo e Cálculo Diferencial: o Conceito F-Tool. *Bol. Soc. Port. Mat.*, Spec. Iss.: 57- 60.
- Conceição, A.C., Pereira, J.C., Silva, C.M., and Simão, C.R. (2012). Mathematica in the Classroom: New Tools for Exploring Precalculus and Differential Calculus. *Proceedings of 1st National Conference on Symbolic Computation in Education and Research*. Lisboa. Portugal.
- Conceição, A.C. and Martins, P.V. (2017). Prática pedagógica em Engenharia Informática: análise da utilização do Wolfram|Alpha. In: F. Remião, J. Oliveira, L. Castro, M. Ferreira, P. Pinto, R. Cadima, (eds.), *Livro de Atas do Congresso Nacional de Práticas Pedagógicas no Ensino Superior (CNaPPES.16)*. Lisboa. Portugal. 389-394.
- Pereira, J.C. and Conceição, A.C. (2013). F-Tool 2.0: Exploring the Logistic function in the classroom. In: A. Loja, J. Barbosa, J. Rodrigues (eds.), *Proceedings of 1st 1st International Conference on Algebraic and Symbolic Computation (SYMCOMP2013)*. Lisboa. Portugal. 149-158.

A ASSIMETRIA DO COEFICIENTE DE CORRELAÇÃO E PROPRIEDADES NA DETECÇÃO DE VARIÁVEIS ENDÓGENAS

Filipe Barros
CEDMES, FCT, Universidade do Algarve
(fbarros@ualg.pt, fssbarros@gmail.com)

RESUMO

Embora a correlação seja um conceito simétrico de 2 variáveis, não o será no caso de uma regressão onde distinguimos uma variável resposta ou endógena a partir de uma variável explicativa.

Existem várias maneiras de exprimir o coeficiente de correlação como uma fórmula assimétrica de duas variáveis envolvidas no modelo de regressão. Contrariamente à alguns resultados bem conhecidos, elas não são necessariamente preservadas na amostra, quando o modelo não é o correcto.

Como consequência, podem ser usadas para verificação e selecção do modelo.

Propõe-se também um critério de escolha da variável endógena num modelo de regressão múltipla.

1. INTRODUÇÃO

Conceitos como regressão e correlação são tão velhas quanto a estatística. Enquanto o coeficiente de correlação de Galton-Pearson é talvez a fórmula mais usada na análise de dados, regressão é talvez o conceito mais importante de toda a Estatística, que conduz à muitas generalizações e novas técnicas.

Embora intuitivamente relacionados um com o outro estes dois conceitos são diferentes pela sua natureza. Ambos envolvem pelo menos duas variáveis, partilham o mesmo papel na correlação, distinguem-se em variável explicatória e variável resposta na regressão.

Por isso um coeficiente de correlação é definido por uma fórmula simétrica a duas variáveis, tal que $\rho_X = \rho_Y$.

Estas fórmulas são em certo sentido não bem adaptadas à regressão linear, onde as duas variáveis têm diferente interpretação.

Um exemplo do campo social, nomeadamente a taxa de natalidade ilustra a teoria.

O coeficiente de correlação entre duas variáveis aleatórias é definido por

$$\rho_X = \frac{\text{cov}(X, Y)}{\sigma_X \sigma_Y}. \quad (1)$$

Se assumirmos um modelo de regressão linear $Y = \alpha + \beta X + \varepsilon$, $E(\varepsilon) = 0$, $V(\varepsilon) = \sigma^2$, tem-se

$$\rho_X = \beta \frac{\sigma_X}{\sigma_Y}. \quad (3)$$

Contrariamente à definição (1), o resultado (3) exprime a correlação como uma fórmula assimétrica em X e Y.

Se tivermos o modelo $\hat{Y} = a + bX$ ou $\hat{y}_i = a + b x_i$ teremos

$$\begin{aligned} \hat{\rho}_X &= \frac{\text{cov}(\hat{X}, \hat{Y})}{\hat{\sigma}_X \hat{\sigma}_Y} = \frac{S_X}{S_X S_Y} \\ &= \frac{\frac{1}{n} \sum_i (X_i - \bar{X})(Y_i - \bar{Y})}{S_X S_Y} = \frac{\frac{b}{n} \sum_i (X_i - \bar{X})^2}{S_X S_Y} = b \frac{S_X^2}{S_X S_Y} = b \frac{S_X}{S_Y} \end{aligned}$$

Para o modelo $\hat{X} = c + dY$, teremos

$$\hat{\rho}_X = \frac{\frac{d}{n} \sum_i (Y_i - \bar{Y})^2}{S_X S_Y} = d \frac{S_Y}{S_X}.$$

Donde se tem $\hat{\rho}_X = b \frac{S_X}{S_Y} \neq d \frac{S_Y}{S_X} = \hat{\rho}_X$ ou seja $\rho_X \neq \rho_Y$.

Considerando a hipótese de na regressão $\hat{Y} = a + bX$ termos $X = -\frac{a}{b} + \frac{Y}{b}$, i. e. admitindo a hipótese de $d = \frac{1}{b}$ e $c = -\frac{a}{b}$, ainda assim teríamos $\rho_X = \frac{1}{\rho_X}$. Ora na regressão linear não é certo que $X = \frac{Y}{b} - \frac{a}{b}$. Num exemplo de SPSS obtivemos:

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18,250	,623		29,299	,000
	PIBCAPIT	-4,78E-03	,001	-,862	-7,018	,000

a. Dependent Variable: TXNATAL

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2996,461	349,205		8,581	,000
	TXNATAL	-155,530	22,161	-,862	-7,018	,000

a. Dependent Variable: PIBCAPIT

Assim teríamos $a=18,250$; $b = -0,00478$; $c = 2996,461$; $d = -155,53$; $\frac{1}{b} = -209,205 \neq d$; $-\frac{a}{b} = 3817,99 \neq c$.

2. EXPRESSÕES ASSIMÉTRICAS PARA ρ_X

Momentos de ordem (Kendall and Stuart, 1966)

Usando as propriedades fundamentais dos momentos de ordem¹, temos para cada $r \geq 3$

$$K_r(Y) = \beta^r K_r(X) + K_r(\varepsilon), \quad (\mu_r(Y) = \beta^r \mu_r(X) + \mu_r(\varepsilon)) \quad (4)$$

onde $K_r(Y)$, $K_r(X)$ e $K_r(\varepsilon)$ representam os cumulantes de ordem r para Y , X e ε respectivamente. Por isso se

$K_3(\varepsilon) = 0$ (o que é possível se o termo erro for simétrico) teremos através de (3) e (4) (com $K_3(X) \neq 0$),

$$\rho_X^3 = \frac{\gamma_Y}{\gamma_X}, \quad (5)$$

onde $\gamma_X = \frac{K_3(X)}{\sigma_X^3}$ e $\gamma_Y = \frac{K_3(Y)}{\sigma_Y^3}$ são os coeficientes de assimetria de X e Y respectivamente. Como ρ_X é por

definição menos do que ou igual 1 (em valor absoluto), o resultado (5) implica que a assimetria da variável resposta é sempre mais pequena do que a da variável explicativa.

Também interessante é o facto de que o cubo do coeficiente de correlação pode ser descrito como percentagem da assimetria que é “preservado” por um modelo linear.

Mais genericamente, para $r \geq 3$ e se $K_r(\varepsilon) = 0$ (possível para todo o r , se o termo erro for normalmente distribuído) obtém-se de (3) e (4)

$$\rho_X^r = \frac{K_r(Y) / \sigma_Y^r}{K_r(X) / \sigma_X^r} \quad (6)$$

¹ $K_r(X) = E[X - \mu_X]^r$ - momentos de ordem r em relação à origem.

A potência de expoente r do coeficiente de correlação é assim o rácio dos cumulantes estandardizados de ordem r para as variáveis X e Y .

Tem-se também que $|\gamma_r(Y)| \leq |\gamma_r(X)|$, o que significa que a variável resposta é próxima de uma distribuição normal.

Isto não é surpreendente, se Y for definido como a convolução de uma variável explicativa normal com um termo erro normal. Introduzindo covariâncias de ordem superior

$$\text{cov}_k(X, Y) = E[(X - E(X))^j (Y - E(Y))^k],$$

pode ser obtido um segundo conjunto de fórmulas para ρ_X sob condição $Y = \alpha + \beta X + \varepsilon$. Assim

$$\rho_k(X, Y) = \frac{\text{cov}_k(X, Y)}{\sigma_X^j \sigma_Y^k} \quad (7)$$

Note-se que $\text{cov}_3(X, Y) = E(X - E(X))^3 = K_3(X) = \mu_3(X)$, $\rho_3(X, Y) = \gamma_X$ (coef. de assim para X),

$$\rho_0(X, Y) = \gamma_Y.$$

Tem-se para $r \geq 2$

$$\begin{aligned} \text{cov}_{r-1,1}(X, Y) &= E[(X - E(X))^{r-1} (Y - E(Y))] \\ &= E[(X - E(X))^{r-1} (\beta(X - E(X)) + \varepsilon - E(\varepsilon))] \\ &= \\ \beta E[(X - E(X))^r] + E[(X - E(X))^r] E[\varepsilon - E(\varepsilon)] \\ &= \beta E[(X - E(X))^r] \\ &= \beta \text{cov}_{r,0}(X, Y) \end{aligned} \quad (8)$$

Combinando (8), (3) e (7), obtém-se para $r \geq 2$

$$\rho_X = \frac{\rho_{r-1,1}(X, Y)}{\rho_{r,0}(X, Y)}, \quad (9)$$

desde que $\text{cov}_{r,0}(X, Y) \neq 0$, pois $\frac{\rho_{r-1,1}(X, Y)}{\rho_{r,0}(X, Y)} = \frac{\text{cov}_{r-1,1}(X, Y) \sigma_X^r}{\sigma_X^{r-1} \sigma_Y \text{cov}_{r,0}(X, Y)} = \beta \frac{\sigma_X}{\sigma_Y} = \rho_X$.

O caso $r = 2$ é trivial. Tem-se $\rho_0(X, Y) = 1$, $\rho_1(X, Y) = \frac{\text{cov}(X, Y)}{\sigma_X \sigma_Y} = \rho_X$. Tomando $r = 3$ em (9) obtém-se a expressão

$$\rho_X = \frac{\rho_2(X, Y)}{\gamma_X}, \quad (10)$$

um exemplo de uma fórmula assimétrica para ρ_X , desde que $K_3(X) \neq 0$. Por outro lado

$$\rho_X = \frac{\rho_2(X, Y)}{\rho_2(X, Y)}, \quad (11)$$

desde que $\rho_X \neq 0$, $K_3(X) \neq 0$, pois

$$\rho_2(X, Y) = \frac{\text{cov}_2(X, Y)}{\sigma_X^2 \sigma_Y} = \frac{\beta \text{cov}_0(X, Y)}{\sigma_X^2 \sigma_Y} = \frac{\beta K_3(X)}{\sigma_X^2 \sigma_Y};$$

$$\begin{aligned}
cov_{\mathbf{p}}(X, Y) &= E[(X - E(X))(\beta X + \varepsilon - \beta E(X) - E(\varepsilon))^2] = \\
&= \beta^2 E[(X - E(X))^3] + 2\beta E[(X - E(X))^2(\varepsilon - E(\varepsilon))] + E[(X - E(X)(\varepsilon - E(\varepsilon))^2] \\
&= \beta^2 E[(X - E(X))^3] \\
&= \beta^2 K_3(X).
\end{aligned} \tag{12}$$

$$\text{Daí que } \rho_{\mathbf{p}}(X, Y) = \frac{\beta^2 K_3(X)}{\sigma_X \sigma_Y^2} \text{ e } \frac{\rho_{\mathbf{p}}(X, Y)}{\rho_1(X, Y)} = \frac{\beta^2 K_3(X)}{\sigma_X \sigma_Y^2} * \frac{\sigma_X^2 \sigma_Y}{\beta K_3(X)} = \beta \frac{\sigma_X}{\sigma_Y} = \rho_X.$$

Multiplicando (10) e (11) obtém-se uma expressão original para o quadrado do coeficiente de correlação, mais precisamente

$$\rho_X^2 = \frac{\rho_{\mathbf{p}}(X, Y)}{\gamma_X}, \tag{13}$$

desde que $\rho_X \neq 0$, $K_3(X) \neq 0$.

Dividindo $\rho_X^3 = \frac{\gamma_Y}{\gamma_X}$, por (13) teremos

$$\rho_X = \frac{\gamma_Y}{\rho_{\mathbf{p}}(X, Y)}. \tag{14}$$

Em conclusão o coeficiente de correlação pode ser expresso de três maneiras diferentes e relacionadas,

$$\rho_X = \frac{\rho_{\mathbf{p}}(X, Y)}{\rho_{\mathbf{g}}(X, Y)} = \frac{\rho_{\mathbf{p}}(X, Y)}{\rho_1(X, Y)} = \frac{\rho_{\mathbf{g}}(X, Y)}{\rho_1(X, Y)}. \tag{15}$$

3. ESCOLHA DA VARIÁVEL RESPOSTA NUMA REGRESSÃO LINEAR

Consideremos uma amostra dos triplos $(X_i, Y_i, \varepsilon_i)$, $i = 1, 2, \dots, n$ obtidas a partir do vector aleatório (X, Y, ε) e para a qual só X_i e Y_i são observados. Se quisermos investigar um modelo de regressão linear podemos hesitar entre o modelo

$$Y_i = \alpha + \beta X_i + \varepsilon_i, \text{ (com } X_i \text{ independente de } \varepsilon_i) \tag{16}$$

e o modelo

$$X_i = \delta + \eta Y_i + \varepsilon_i \text{ (com } Y_i \text{ independente de } \varepsilon_i) \tag{17}$$

Para responder a esta pergunta, exploremos as propriedades do coeficiente de correlação dado na secção 2 para distinguir a variável resposta da variável explicativa.

Isto não pode ser feito usando a fórmula $\rho_X = \beta \frac{\sigma_X}{\sigma_Y}$, visto que este resultado tem a particularidade de preservar-se na amostra, mesmo que o modelo esteja errado.

Se $\hat{\beta}$ e $\hat{\eta}$ forem estimadores dos mínimos quadrados de β e η em (16) e (17) e se $\hat{\rho}_X$, $\hat{\sigma}_X$ e $\hat{\sigma}_Y$ representam as versões amostrais de ρ_X , σ_X e σ_Y é sabido que

$$\hat{\rho}_X = \hat{\beta} \frac{\hat{\sigma}_X}{\hat{\sigma}_Y} = \hat{\eta} \frac{\hat{\sigma}_Y}{\hat{\sigma}_X}$$

e nada se podendo concluir daí. Por outro lado, fórmulas assimétricas tais como em (15) não são necessariamente preservadas na amostra.

Por isso estas fórmulas podem ser usadas para verificar ou escolher o modelo linear como a seguir se explica.

Como o quadrado do coeficiente de correlação é menor ou igual a 1, teremos sob o modelo (16)

$$\gamma_Y^2 \leq \rho_{\mathbf{p}}^2(X, Y) \leq \rho_1^2(X, Y) \leq \gamma_X^2, \tag{18}$$

onde $K_3(\varepsilon) = 0$, $\rho_X \neq 0$, $K_3(X) \neq 0$.

Sob o modelo (17),

$$\gamma_Y^2 \geq \rho_1^2(X, Y) \geq \rho_2^2(X, Y) \geq \gamma_X^2, \quad (19)$$

se $K_3(\varepsilon) = 0$, $\rho_X \neq 0$, $K_3(Y) \neq 0$.

Devemos portanto, preferir o modelo para a qual as desigualdades apropriadas são satisfeitas na amostra. Especificamente podíamos calcular as quantidades amostrais

$$\hat{\gamma}_Y^2 = \frac{n \left(\sum (Y_i - \bar{Y})^3 \right)^2}{\left(\sum (Y_i - \bar{Y})^2 \right)^2}; \quad (20)$$

$$\hat{\rho}_1^2(X, Y) = \frac{n \sum (X_i - \bar{X})(Y_i - \bar{Y})^2}{\sum (X_i - \bar{X})^2 \left(\sum (Y_i - \bar{Y})^2 \right)^2}; \quad (21)$$

$\hat{\rho}_1^2(X, Y)$ e $\hat{\gamma}_X^2$. Escolhendo depois o modelo (16) se se satisfizer

$$\hat{\gamma}_Y^2 \leq \hat{\rho}_1^2(X, Y) \leq \hat{\rho}_2^2(X, Y) \leq \hat{\gamma}_X^2 \quad (22)$$

ou o modelo (17) se se satisfizer

$$\hat{\gamma}_X^2 \geq \hat{\rho}_1^2(X, Y) \geq \hat{\rho}_2^2(X, Y) \geq \hat{\gamma}_Y^2. \quad (23)$$

Pode acontecer que nem o (22), nem o (23) é satisfeito. Neste caso isto pode indicar que o modelo linear é não adequado para a modelação dos nossos dados ou os estimadores do tipo (20) e (21) têm muita variabilidade para se tirar uma conclusão (se não houver dados suficientes).

Se realmente precisarmos de escolher entre os modelos (16) e (17) podemos aplicar uma regra mais simples, que usa só duas (em vez de quatro) quantidades amostrais.

Uma primeira possibilidade seria comparar as assimetrias amostrais de X_i e Y_i . Assumindo $K_3(\varepsilon) = 0$, $\rho_X \neq 0$, $K_3(X) \neq 0$ a estatística

$$\gamma_Y^2 - \gamma_X^2, \quad (24)$$

fornece alguma evidência empírica para o modelo (16) se ela for menor do que zero e para o modelo (17) se for maior do que zero.

Analogamente, assumindo $\rho_X \neq 0$, $K_3(X) \neq 0$ e $K_3(Y) \neq 0$, poderíamos aplicar a mesma estratégia com a quantidade

$$\rho_1^2(X, Y) - \rho_2^2(X, Y). \quad (25)$$

Esta segunda estratégia tem a importante vantagem de que nenhuma assumption é feita acerca do erro (excepto a sua independência em relação à variável explicativa) e por ser de certo modo mais interpretável, uma vez que toma em conta a interacção entre X_i e Y_i .

Note-se que a probabilidade de tomar a decisão correcta é a mesma sob ambos os modelos (usando qualquer estratégia). Isto ocorre porque a distribuição de (24) tal como a de (25) são as mesmas, (até o sinal). O primeiro contudo terá tipicamente uma esperança maior do que o último (em valor absoluto), visto que

$$|\gamma_Y^2 - \gamma_X^2| \geq |\rho_1^2(X, Y) - \rho_2^2(X, Y)|$$

Isto pode resultar numa maior probabilidade em tomar decisão correcta, quando se usa a primeira estratégia.

Para estar seguro disto, deve-se também comparar as variâncias de ambas as estatísticas. Embora o procedimento é muito simples a usar deve-se ter cautelas nas condições sob as quais ele se aplica.

Em adição à linearidade do modelo, fez-se uma assumption forte de que ambas as variáveis são assimétricas. Em particular o procedimento não se aplica, quando X e/ou Y são normalmente distribuídas (como normalmente se assume na prática). Em tais casos, restringiremos a atenção a um subdomínio, onde a variável explicativa é assimétrica.

4. APLICAÇÃO NA REGRESSÃO LINEAR MÚLTIPLA

No artigo [1] os autores Yadolah Dodge e Valentin Rousson ilustram a teoria com um exemplo de regressão linear. Aqui vamos aplicar esta teoria para para um exemplo de regressão múltipla.

Vamos fazer um estudo sobre a taxa de natalidade (tnat) em Portugal entre os anos de 1971 e 1997, usando as variáveis taxa de casamento (tcas), taxa do divórcio (tdiv), taxa de alfabetização (talf), população (pop), PIB per capita (pibcap), taxa de inflação (tinfl) e taxa de desemprego (tdes), (fonte: INE).

Para os referidos dados temos os seguintes valores para os coeficientes de assimetria e os respectivos quadrados.

	Tnat	Tcas	Tdiv	Txalf	Pop	Pibcap	Tinfl	Txdes
γ_i	0,2	0,7	-0,2	0,0	-0,9	0,6	0,2	-0,3
γ_i^2	0,05	0,43	0,06	0,0	0,85	0,36	0,04	0,08
Ordem (γ_i^2)	3	7	4	1	8	6	2	5

Pela teoria acima exposta a taxa de natalidade (tnat) poderia ser variável resposta num modelo de regressão simples em que as variáveis explicatórias poderiam ser taxa do divórcio (tdiv), taxa de desemprego (tdes), taxa de casamento (tcas), PIB per capita (pibcap) e população (pop).

No entanto, os coeficientes de correlação fornecem informação complementar. Segundo a tabela que a seguir se apresenta verifica-se que as variáveis que influenciam directamente na taxa de natalidade e que se mantêm ao longo de toda a amostra são a taxa de casamento (tcas) e população (pop).

Y	γ_Y^2	$\rho_2^2(X, Y)$	$\rho_1^2(X, Y)$	γ_X^2	X
TNAT	0,05	0,03	0,04	0,06	TXDIV
	0,05	0,19	0,25	0,08	TXDES
	0,05	0,07	0,17	0,43	TCAS
	0,05	0	0,13	0,36	PIBCAP
	0,05	0,14	0,39	0,85	POP

Por outro lado entre estas duas variáveis não existe uma relação linear que se mantenha ao longo de toda a amostra o que sugere a sua independência. A tabela que a seguir se apresenta é ilustrativa disto mesmo.

X	γ_X^2	$\rho_2^2(X, Y)$	$\rho_1^2(X, Y)$	γ_Y^2	Y
POP	0,85	0,23	0,13	0,43	TCAS

Assim a taxa de natalidade pode ser expressa através de um modelo de regressão múltipla do tipo

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon,$$

onde Y- **Tnat**, X_1 - **Tcas**, X_2 - **Pop**.

Estes resultados podem ser validados através de outras formas de análise de dados como os clusters, por exemplo.

5. CONCLUSÃO

Um método alternativo para escolha de variáveis endógenas, explicadas ou dependentes numa regressão linear pode ser a comparação dos respectivos coeficientes de assimetrias amostrais das variáveis em estudo.

BIBLIOGRAFIA

Kendall, M. G. and Stuart, A.. *The Advanced Theory os Statistics*, vol 1, 2nd ed, 1963.

Pierre Dagnelie. *Estatística. Teoria e métodos*, vol 2. Publicações Europa-América, 1973.

Rogers, J. L. and Nicewander, W. A. Thirteen Ways to look at the correlation coefficient. *The American Statistician*, 42, 59-66, 1988.

Yadolah Dodge and Valentin Rousson. On Assymmetric Properties of the Correlation Coefficient in the regression Setting. *The American Statistician*, vol 55, nº1, 2001.

ESTRATÉGIAS DE APRENDIZAGEM ATIVA VERSUS APRENDIZAGEM TRADICIONAL: RESULTADOS DE UM PEQUENO ESTUDO DE CASO

Cristina Dias

Escola Superior de Tecnologia e Gestão do Instituto Politécnico de Portalegre
(cpsilvadias@gmail.com)

Carla Santos

Departamento de Matemática e Ciências Físicas do Instituto Politécnico de Beja
(carla.santos@ipbeja.pt)

Maria Varadinov

Escola Superior de Tecnologia e Gestão do Instituto Politécnico de Portalegre
(dinov@estgp.pt)

Baltazar Vaz

Escola Superior de Tecnologia e Gestão do Instituto Politécnico de Portalegre
(jbvaz@estgp.pt)

RESUMO

Um dos objetivos deste estudo foi o de usar métodos ativos (activity-based methods) em prol dos métodos tradicionais e mostrar que o efeito desses métodos em sala de aula não só aumentam a motivação dos alunos como ajudam a melhorar os resultados da avaliação. Embora a pedagogia tenha mudado, o currículo permanece o mesmo. O foco é envolver os alunos no contexto dos conteúdos e ajudá-los a desenvolver o pensamento crítico e construtivo em relação aos assuntos lecionados em sala de aula. Para atingir esse objetivo, foram criados grupos de trabalho com um máximo de três elementos. Após uma abordagem dos conteúdos em sala de aula pelo professor, os alunos desenvolveram seu trabalho no laboratório de computação utilizando a folha de cálculo do Excel. Trata-se da unidade curricular estatística, cujo desenvolvimento dos conteúdos envolve vários cálculos por vezes complexos na resolução de alguns problemas. Sempre em contexto de laboratório, os alunos podem perguntar, discutir e falar com os parceiros do grupo, ou com toda a turma, expressando as suas ideias com ajuda da folha de cálculo Excel utilizada para o tratamento dos dados, através da visualização de gráficos, tabelas e cálculo de medidas estatísticas. No final do semestre, os alunos apresentam os trabalhos em sala de aula aos colegas e ao professor. O resultado final da avaliação é dado pelo somatório da pontuação atribuída pelo professor (60%) e pela avaliação dos colegas (40%). A partir dos resultados finais, pode-se concluir que a mudança da abordagem tradicional de ensino para aulas com uma abordagem mais interativa levaram a uma melhoria das classificações finais da unidade curricular, para além de aumentarem a motivação dos mesmos.

Palavras-chave: Ensino Tradicional, Active Based Methods, Abordagens Interativas, Motivação.

1. INTRODUÇÃO

As mudanças tecnológicas do século XXI são um desafio constante para professores e alunos. No momento presente, o professor deve estar mais preocupado com a aprendizagem do que com o ato de ensinar, consciente de que o ensino ocorre quando o aluno aprendeu. O próprio conteúdo da informação fornecida em sala de aula, por melhor que seja, não é aprendizagem. A pedagogia e a didática atual apontam para a chamada metodologia de aprendizagem ativa (Eison & Bonwell, 1993).

Assim, os papéis tradicionais na sala de aula onde o professor ensina e o aluno aprende, são, de certa forma, invertidos. No Método de Aprendizagem Ativa, o professor incentiva o aluno a produzir conhecimento e apresentá-lo na dinâmica académica. O professor universitário torna-se um mediador nesse processo propondo desafios académicos aos alunos e ajudando-os a superar as suas dificuldades com métodos ativos (Aliaga *et al.*, 2010; Cobb, 1992; Moore, 1997).

Desta forma, o dinamismo da aprendizagem supera o conteúdo da aprendizagem, promovendo a capacidade de aprender e produzir conhecimento e aplicá-lo a situações relevantes, nas quais adquire postura crítica, prática e autonomia no processo de aprendizagem (O'Neil & McMahon, 2005). Durante muitas décadas, o ensino universitário deu ênfase ao processo de ensino focado em aulas expositivas tendo por objetivo cumprir um programa. Nestas circunstâncias, a avaliação equivalia a um exame do que tinha sido assimilado através de aulas tradicionais e notas de classificação (Massetto, 2003).

No entanto, é imperativo que o processo de avaliação evolua e mude o processo de ensino-aprendizagem o qual deve estar orientado para a aprendizagem de habilidades (McAleer, 2001). A utilização de novas tecnologias de informação no processo ensino-aprendizagem tem crescido nas últimas décadas, pelo que o uso de computadores tornou-se generalizado

no processo de formação em todas as áreas do conhecimento, especialmente na disciplina de estatística dos vários cursos introdutórios de ensino superior.

No contexto social e educacional, o ensino da estatística nos diferentes graus de ensino superior, pode representar um mecanismo importante, funcionando como articulador da prática e da teoria, já que incorpora técnicas próprias que, permitem a interpretação da realidade através de dados obtidos de situações reais, comprovando a flexibilidade do método quando aplicado ao ensino desta disciplina.

O objetivo deste estudo foi introduzir o software Excel nas aulas de estatística, para que os alunos possam aprender fazendo, isto é, manipular e exibir dados de forma eficaz, levando a uma maior compreensão dos conceitos de estatística e à obtenção de resultados finais mais satisfatórios aquando da avaliação final desta unidade curricular.

Com o intuito de entender, na perspetiva do aluno, a importância da integração da folha de cálculo Excel e das suas mais-valias como instrumento inovador para a aprendizagem, registaram-se através de um questionário, as opiniões de alunos matriculados, no ano letivo 2015/16, na unidade curricular de Estatística, da Licenciatura em Administração Publicidade e Marketing do Instituto Politécnico de Portalegre. Apresentamos neste artigo uma análise descritiva das respostas obtidas através do questionário.

2. APRENDIZAGEM ATIVA E RECURSOS COMPUTACIONAIS NA EDUCAÇÃO

O ensino da estatística é uma das preocupações da educação estatística vivida nos mais diversos centros académicos do mundo. Muitas discussões levam os educadores a refletir sobre a adoção das melhores alternativas de ensino que proporcionem ao aluno uma aprendizagem mais significativa.

Uma dessas alternativas será a utilização de recursos computacionais - software educacional que é construído para ser usado especificamente na educação e segue uma concepção educacional. Estes softwares constituem uma importante ferramenta pedagógica para o processo de ensino-aprendizagem. O uso desses recursos evidencia uma forma de dinamização no ensino e motivação para a aprendizagem da estatística.

O uso de recursos computacionais - software educacional pode ser um aliado importante no desenvolvimento cognitivo de cada aluno, facilitando um trabalho que se adapte a diferentes ritmos de aprendizagem e permita aos alunos aprender com seus erros (Gladcheff, Zuffi & Silva, 2001). A busca de novas metodologias de ensino que visem favorecer uma participação mais ativa dos alunos no processo de ensino e aprendizagem, associando o uso de computador como uma tecnologia que se conecta a esses processos, possibilita que este seja um trabalho mais orientado para a visão do mundo do século XXI.

A motivação dos alunos pode aumentar quando o professor constrói um clima de confiança, abertura e cordialidade, o que, por sua vez, depende de como as tecnologias são percebidas e utilizadas (Kenski, 2002). Entre os recursos computacionais que podem auxiliar no processo de ensino e aprendizagem, destacam-se as aplicações de programas para produção de textos, folhas de cálculo, gráficos, vídeos e apresentações de trabalhos (Word, Excel, Power Point e Internet). Também se destacam os jogos educativos e a internet com outro alcance (Pesquisa, e-mail, chats, teleconferências e hipertextos).

Uma ação pedagógica inovadora deve contemplar os vários recursos disponíveis. O aluno e o professor podem utilizar estas ferramentas tecnológicas na resolução de problemas de vários domínios do conhecimento. A representação desta resolução pode ser feita de acordo com:

- uma linguagem de programação;
- controle de processos em tempo real (como visualização e manipulação de dados);
- experiências de um laboratório estatístico;
- produção de música;
- comunicação;
- utilização de redes informáticas.
- ... etc.

Por outro lado, não devemos negligenciar que o principal objetivo do uso de recursos computacionais pelos professores deve ser o de melhorar a aprendizagem dos alunos, segundo Meireles (2006: 21), e deve sempre ser justificado à luz dos benefícios e vantagens de Processo de ensino-aprendizagem. No entanto, o uso adequado desses recursos computacionais implica uma mudança na forma de ensinar e aprender. Ou seja, a integração destes recursos computacionais pode ser ainda mais efetiva na exploração de novos modelos pedagógicos diferenciados, onde as pedagogias ativas se encaixam. Como mencionamos antes, queremos mostrar que ensinar com menos aulas tradicionais e mais métodos de aprendizagem ativos inovadores, como a folha de cálculo do Excel (que inclui uma ampla gama de aplicações) ajuda os alunos a pensar sobre as tarefas que estão a realizar levando a um melhor desempenho das mesmas (Bonwell & Eison, 1991).

Existem várias práticas pedagógicas que abordam a questão da aprendizagem do aluno a partir de uma perspetiva diferente das técnicas clássicas de aprendizagem, como as aulas expositivas, onde é esperado que o professor “ensine” e que o aluno “aprenda”. Na aprendizagem ativa entende-se que, o aluno não deve ser meramente um “recetor” de informações, mas deve ativamente participar no processo de aquisição do conhecimento, com focando-se nos seus objetivos e proactivamente procurar o conhecimento. O uso de recursos computacionais em sala de aula e para além desta, contribui para uma aprendizagem mais ativa, beneficiando todo o processo de ensino aprendizagem. De acordo com Neiss (2005), há uma necessidade de integrar a tecnologia no ensino e aprendizagem nas áreas académicas. No passado, uma vez que as fontes de informação eram escassas, era mais difícil de implementar uma aprendizagem ativa, uma vez que, era necessário que a instituição tivesse uma boa biblioteca onde os alunos pudessem buscar os conhecimentos necessários.

Hoje em dia, com a Internet, tornou-se muito mais fácil aplicar estratégias de aprendizagem ativa. According, Michael e Modell (2003), existem algumas abordagens de aprendizagem ativa centradas nos alunos, que devem ser consideradas: (a) aprendizagem baseada em problemas ou baseada em casos; (b) aprendizagem cooperativa / colaborativa / trabalho de grupo de todos os tipos, (d) estratégias de mudança conceitual, (e) Aprendizagem baseada em inquéritos, (f) aprendizagem baseada na investigação, (g) aprendizagem reforçada por tecnologia.

3. A ESTATÍSTICAS E A FOLHA DE CALCULO EXCEL

O Excel é um programa (folha de cálculo) que foi desenvolvido pela Microsoft para operar no ambiente Windows. Como a maioria das aplicações de computador, foi refinado ajustando-se às novas capacidades dos computadores pessoais, sendo um programa facilmente acessível no ambiente escolar. Com a folha de cálculo do Excel é possível visualizar e aplicar muitos dos conceitos estatísticos e ilustrar graficamente várias situações que passam do papel a um ambiente virtual ou computadorizado, atraindo a atenção dos alunos para o assunto, facilitando a aprendizagem do aluno. Podemos associar os avanços tecnológicos ao ensino da estatística, porque através desta folha de cálculo podemos resolver problemas estatísticos através de comandos simples, para além disso é uma ferramenta que permite a visualização gráfica dos dados com maior precisão.

A utilização de computadores, seja através de software ou da Internet, tem marcado uma presença crescente no ensino e estudo da estatística. No caso da folha de cálculo Excel, que é um software facilmente acessível, é usado nas escolas por professores e alunos, especialmente no caso da estatística. A crescente utilização de novos recursos tecnológicos na sociedade de hoje também se reflete na escola onde calculadoras, computadores e internet são utilizados por professores e alunos para melhorar o processo de ensino e aprendizagem. No caso da estatística, em comparação com outras áreas, a utilização destes novos meios ainda é recomendada com maior ênfase.

Propor aos estudantes a resolução de problemas reais com dados reais e relatar os resultados obtidos, é agora praticável de uma forma que não foi no passado, e os educadores acreditam que o uso de dados reais sobre temas de interesse para os alunos contribui para a sua motivação em aprender estatística e para desfrutar de fazê-lo (Fernandes, Carvalho & Correia, 2011).

Entre os novos recursos tecnológicos, a folha de cálculo Excel é especialmente adequada para o estudo da estatística nos diferentes níveis escolares. A sua fácil acessibilidade, resultante da sua integração no software base do PC, aumenta seu interesse em termos educacionais. São várias as funcionalidades do computador, e em especial da folha de cálculo Excel que parecem contribuir para uma melhor compreensão do conteúdo estatístico pelos alunos e para a capacidade de operar com rapidez e precisão.

Moore (1997) considera as ferramentas tecnológicas como um meio de apoiar os alunos na construção ativa do conhecimento, proporcionando oportunidades para que os alunos reflitam sobre os fenômenos observados, ajudando os alunos a desenvolver habilidades metacognitivas renovando o currículo e o ensino baseados em fortes sinergias entre, conteúdo, pedagogia tecnologia. Estas ferramentas, ao fornecerem fácil acesso a representações textuais, gráficas, tabulares e numéricas, podem ajudar o aluno a alternar o discurso entre diferentes domínios, contextual, gráfico e manipulação de dados. A mudança do ensino tradicional da estatística, enfatizando fórmulas e procedimentos de cálculos, para um ensino mais ativo, onde prevalece o raciocínio estatístico e a capacidade de interpretar, avaliar e aplicar de forma flexível as ideias estatísticas, é agora privilegiada e adotada por muitos professores dos diferentes níveis de ensino (Morales & Roig, 2002; Beh, 2006).

Num estudo realizado por Fernandes, Sousa e Ribeiro (2004), todos os professores participantes foram unânimes em reconhecer que o uso de ferramentas tecnológicas, que incluíam a folha de cálculo Excel e outros softwares, para além de serem recursos muito adequados para o ensino e a aprendizagem da estatística, têm um efeito motivador na aprendizagem dos alunos, mantendo-os interessados e perseverantes na resolução das tarefas.

No caso das tabelas e gráficos estatísticos, a capacidade gráfica da folha de cálculo Excel para construí-los de forma rápida e rigorosa, permite que os alunos se concentrem na sua construção e rápida interpretação, melhorando e facilitando a assimilação dos conteúdos estatísticos, melhorando a motivação dos alunos, contribuindo para uma aprendizagem de melhor qualidade e facilitando a resolução de problemas estatísticos por vezes complexos com base em dados reais (Henriques & Colaço, 2012; Bittar, 2011; Agyei, 2013).

3.1 Metodologia

Os conteúdos introdutórios de estatística estão divididos em três secções: estatística descritiva, probabilidades e estatística e estatística inferencial. A estatística descritiva inclui a representação dos dados através de (gráficos, tabelas de distribuição de frequências, histogramas, polígonos, gráfico de dispersão, e boxplot), medidas de tendência central (média, moda e mediana), e medidas de dispersão (amplitude total, amplitude interquartis, variância, coeficiente de variação, desvio padrão). A teoria das probabilidades aborda temas como acontecimentos mutuamente exclusivos, probabilidade conjunta e condicionada, distribuições de probabilidade, distribuições normais e a estatística inferencial inclui a amostragem e a estimação da média populacional e intervalos de confiança e regressão linear. Estes tópicos regra geral implicam uma hora teórica, uma hora pática e uma hora laboratorial. Introduzimos o Excel como fazendo parte do processo pedagógico. Este é um pacote bastante utilizado, amigável no seu uso, acessível e de custo zero para os alunos.

Os alunos aprendem a lidar com a folha de cálculo e usá-la no levantamento e resolução de problemas, analisando dados e fazendo investigação de padrões/distribuição dos dados, produzindo estatísticas de resumo e gráficos, escrevendo equações e usando ferramentas de análise de dados e comandos estatísticos do Excel. Os estudantes têm de assistir às aulas e participar

nas mesmas, embora a frequência das aulas não seja obrigatória, a realização do trabalho de grupo com recurso ao Excel é obrigatório, talvez por isso os alunos são bastante assíduos. Todos os resumos das aulas, assim como sebentas, material de revisão para a avaliação, foram colocados numa pasta digital, à qual os alunos têm acesso através da intranet da escola. Esta nova metodologia de ensino-aprendizagem desviou o foco da mera aplicação mecânica das fórmulas e, do por vezes complexo cálculo numérico, efetuado através da calculadora, permitindo a visualização rápida dos resultados, principalmente através da representação gráfica tão eficaz no Excel.

Para completar a investigação, foi utilizado um questionário dicotómico distribuído pelos alunos que frequentaram esta unidade curricular de estatística, com o intuito de entender o impacto real da utilização da folha de cálculo Excel, como instrumento inovador para a aprendizagem. Através do questionário foi possível recolher também informações demográficas sobre os alunos, que inclui sexo, idade, nacionalidade, e conhecimentos anteriores de estatística (caso existissem). Perguntamos ainda sobre a sua perceção em relação à estatística e aos estilos de ensino.

Figura 1: Frequência absoluta das respostas às questões dicotómicas do questionário.

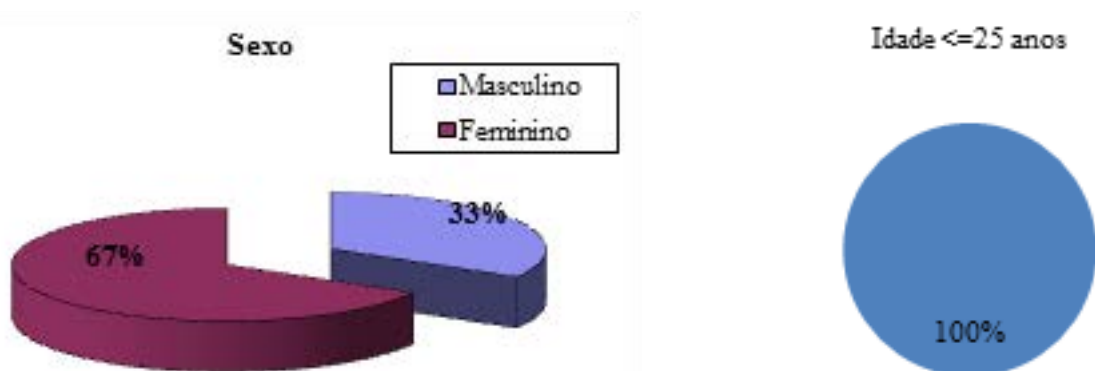
1) Sexo	
1.1 () Feminino	
1.2 () Masculino	
2) Faixa etária	
2.1 () até 25 anos	2.4 () de 36 a 40 anos
2.2 () de 26 a 30 anos	2.5 () de 41 a 45 anos
2.3 () de 31 a 35 anos	2.6 () mais de 45 anos
3) A realização do trabalho de grupo contribuiu para entender melhor os conceitos estatísticos?	
3.1 () Sim	3.2 () Não
4) Conhece a folha de cálculo Excel?	
4.1 () Sim	4.2 () Não
5) Conseguir calcular medidas estatísticas no Excel?	
5.1 () Sim	5.2 () Não
6) A utilização do Excel foi útil para a realização do trabalho de grupo?	
6.1 () Sim	6.2 () Não
7) Na sua opinião as aulas de estatística melhoraram com a utilização do excel	
7.1 () Sim	7.2 () Não
8) Recomenda a sua utilização nas aulas de Estatística?	
8.1 () Sim	8.2 () Não
Comentário:	

Fonte: Dados da pesquisa

3.2 Análise dos dados

O questionário foi apresentado aos alunos durante a última semana de junho. Foram validados 29 questionários, que corresponderam às 29 respostas obtidas.

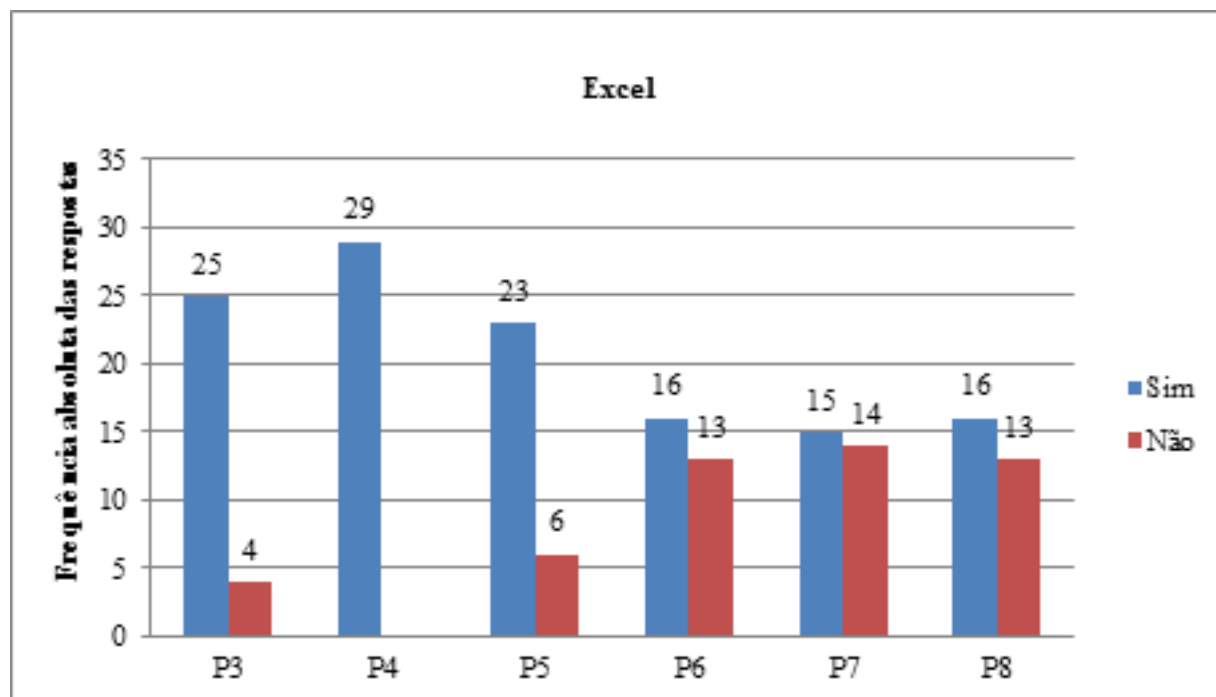
Figura 2: Percentagem das respostas relativas ao sexo dos alunos e à idade



Fonte: Dados da pesquisa.

Pela análise do gráfico verificamos que 67% dos respondentes são raparigas e 33% são rapazes, com idades inferiores ou iguais a 25 anos, a idade de 25 anos justifica-se devido a alguns alunos serem repetentes.

Figura 3: Frequência absoluta das respostas às questões dicotómicas do questionário



Fonte: Dados da pesquisa

Os resultados do estudo indicam que:

- 1) Mais de 86% dos alunos concordam que o trabalho de grupo contribui para entender melhor os conceitos de Estatística.
- 2) Todos os alunos conhecem a folha de cálculo Excel.
- 3) 79,3% dos alunos sentem-se aptos no cálculo de medidas estatísticas no Excel.
- 4) A utilização do Excel foi considerada útil para a realização do trabalho de grupo por 55,2% dos alunos.
- 5) 51,7% dos alunos consideraram que as aulas de Estatística melhoraram com a utilização da folha de cálculo Excel.
- 6) Aproximadamente 52% dos alunos recomenda a utilização desta ferramenta nas aulas de Estatística.

4. CONCLUSÕES

As conclusões apontam para a manutenção e inclusão desta ferramenta em sala de aula, podemos mesmo afirmar que deu a oportunidade a estes alunos de aplicar os conceitos de estatística a situações da vida real. Os alunos aprenderam a representar dados em tabelas de frequências, histogramas e tabelas de contingência através do uso da folha de cálculo Excel. Também aprenderam a sintetizar informação estatística, utilizando as ferramentas do menu do Excel data analysis. Além disso, percebeu-se ainda que os alunos ao realizarem os trabalhos de grupo, desenvolveram uma atitude positiva perante a estatística e seus conceitos, independentemente do seu desempenho global.

O impacto desta atividade aumentou o nível de motivação dos alunos e, a retenção dos alunos diminuiu, em comparação com os métodos tradicionais.

Em geral, a pesquisa teve resultado significativo, verificando-se que a utilização do Excel como nova ferramenta no processo de ensino/aprendizagem aumenta o desempenho dos alunos.

Enumeram-se de seguida alguns dos efeitos positivos observados ao longo das aulas de estatística, com a integração do Excel em sala de aula:

- pode ser utilizado como uma ferramenta para suportar e reforçar a aprendizagem dos alunos;
- percepção de benefícios mais amplos ao nível da aprendizagem;
- pode fornecer oportunidades únicas para os alunos fazerem tarefas matemáticas de novas maneiras que ajudam a promover a aprendizagem;
- é uma ferramenta importante para promover a matemática e a resolução de problemas;
- os alunos são motivados a conhecer os comandos da folha de cálculo por forma a que eles possam manipular os mesmos, à sua maneira, por exemplo para desenhar gráficos ou para resolver problemas numéricos;
- permite aos alunos utilizarem o computador como ferramentas de recursos, ou como forma de comunicação e partilha das suas ideias com outros alunos;
- compartilham e comparam a sua compreensão e experiências individuais, aquando da exposição dos trabalhos.
- a apresentação do trabalho de grupo estimulou os processos de expressão e comunicação de todos os estudantes.

- Os resultados indicam que se verificou um impacto positivo na forma de aprender estatística, os alunos tornaram-se mais ativos na participação em grupo.
- Os alunos para além de gostarem de trabalhar em grupo melhoraram as suas habilidades estatísticas e de análise de dados.
- positive impact on the culture of statistical learning, students became active in group participation, and students
- enjoyed learning statistics and also improved their understanding and skill in statistics.

Enumeram-se de seguida algumas considerações que consideramos pertinentes sobre o ensino tradicional e o ensino com aulas interativas, que foram observadas durante este estudo:

- enquanto, nas aulas onde se privilegia o ensino tradicional, o professor fala e os alunos ouvem com o mínimo de interrupções, nas aulas interativas o professor fala mas faz pausas periódicas, para realização de atividades estruturadas;
- no ensino tradicional verifica-se que a concentração dos alunos diminuem após os 10-15 minutos iniciais, nas aulas interativas à medida que a concentração dos alunos começa a diminuir, é-lhes atribuída uma curta atividade para realizarem;
- no ensino tradicional as perguntas feitas pelo professor são na maioria das vezes perguntas retóricas, enquanto nas aulas interativas as perguntas do professor requerem uma resposta;
- no ensino tradicional as respostas dos alunos às perguntas do professor são comumente dadas pelos alunos que levantam as mãos, nas aulas interativas, são dadas várias respostas pelos alunos e discutidas em conjunto;
- No ensino tradicional a conversa entre alunos é normalmente desencorajada, enquanto nas aulas interativas verifica-se o contrário;
- no ensino tradicional os alunos ouvem e tiram nota separadamente, nas aulas interativas os alunos trabalham na maioria das vezes em grupo;
- no ensino tradicional a compreensão do aluno durante a leção dos conteúdos não é percebida explicitamente pelo professor, nas aulas interativas a compreensão do aluno sobre os conteúdos lecionados é avaliada diretamente;
- no ensino tradicional as oportunidades para corrigir interpretações erradas não são muitas das vezes levadas em conta e corrigidas, durante o desenvolvimento dos conteúdos, nas aulas interativas as oportunidades para corrigir mal-entendidos são periodicamente fornecidas aquando do desenvolvimento dos conteúdos;
- Nas aulas tradicionais o de absentismo costuma ser mais elevado, nas aulas interativas as taxas de frequência são frequentemente elevadas.

REFERÊNCIAS

- Agyei, D. D. (2013). The effect of using interactive spreadsheet as a demonstrative tool in the teaching and learning of mathematical concepts. *International journal of educational planning & administration*. pp. 81-99. Obtido em Abril de 2017, de http://www.ripublication.com/ijepa/ijepav3n1_09.pdf
- Bittar, M. (2011). A abordagem instrumental para o estudo da integração da tecnologia na prática pedagógica do professor de matemática. *Educar em Revista*. Obtido em 3 de Junho de 2014, de <http://dx.doi.org/10.1590/S0104-40602011000400011>
- Bonwell, C., & Eison, J. (1991). *Active learning: Creating excitement in the classroom* (ASHE-ERIC Higher Education Report No. 1). Washington, DC: George Washington University. Abstract online at http://www.ed.gov/databases/ERIC_Digests/ed340272.html.
- Burr Settles (2009). Active Learning Literature Survey. *Computer Sciences Technical Report 1648*, University of Wisconsin–Madison.
- Clark, Richard. (1983). Reconsidering Research on Learning From Media. *Review of Educational Research*. 53: 445-459.
- Cobb, G. W. (1992). Teaching statistics. In *Heading the Call for Change: Suggestions for Curricular Action*, edited by L. A. Steen. No. 22 in MAA Notes, Washington DC: Mathematical Association of America. 3_43.
- Eison, J. A., & Bonwell, C. C. (1993, January). *Recent works on using active learning strategies across the disciplines*. Unpublished manuscript. ERIC Document Reproduction Service No. ED 364 135.
- Fernandes, J. A., Carvalho, C. F. & Correia, P. F. (2011). Contributos para a Caracterização do Ensino da Estatística nas Escolas. *Boletim de Educação Matemática*. 24(39): 585-606.
- Fernandes, J. A., Sousa, M. V. & Ribeiro, S. A. (2004). O ensino de estatística no ensino básico e secundário: Um estudo exploratório. In J. A. Fernandes, M. V. Sousa & S. A. Ribeiro (Orgs.), *Ensino e aprendizagem de probabilidades e estatística – Actas do I Encontro de Probabilidades e Estatística na Escola*. Braga: Centro de Investigação em Educação da Universidade do Minho. pp. 165-193.
- Gladcheff A. P.; Zuffi, E.M.; Silva, M. (2001). Um Instrumento para Avaliação da Qualidade de Softwares Educacionais de Matemática para o Ensino Fundamental. *Anais do XXI Congresso da Sociedade Brasileira de Computação*. Fortaleza.
- Henriques, A., & Colaço, S. (2012). Probabilidade e raciocínio estatístico. *ProfMat 2012 - Simpósio 4 - Probabilidade e Raciocínio Estatístico*. Obtido em 4 de Junho de 2016, de http://www.apm.pt/encontro/profmat_2012_siemp.php?id=201597

- Kenski, Vani M. (2002). Processos de interação e comunicação no ensino mediados pelas tecnologias. In: Rosa, Dalva E.G e Souza, Vanilton C. *Didática e prática de ensino – interfaces com diferentes saberes e lugares formativos*. Rio de Janeiro: DP&A. p. 254-264.
- Neiss, M. L. (2005). Preparing teachers to teach sciend and mathematics with technology: Developing a technological content knowledge. *Teaching and Teacher Education*. 21: 509-523.
- Meirelles, Alcides (2006). Uso de quadros interativos em educação: uma experiência em Físico-Químicas com vantagens e “resistências”. *Porto: Faculdade de Ciências da Universidade do Porto*. Retirado de <http://nautilus.fis.uc.pt/cec/teses/alcides/docs/tesecompleta.pdf>.
- Massetto, M. T. (2003). *Competência pedagógica do professor universitário*. São Paulo, Summus editorial.
- Mcaleer, S. (2001). Choosing assesement instruments. *A practical guide for medical teachers*. J. A.
- Michael, J.A. and Modell HI. (2003). *Active Learning in Secondary and College Science Classrooms: a Working Model of Helping the Learning to Learn*. Mahwah, NJ: Erlbaum,.
- Moore, D. S. (1997). New pedagogy and new content: The case of statistics. *International Statistical Review*. 65: 123–165.
- Morales, L., & Roig, G. (2002). Connecting a technology faculty development program with student learning. *Campus Wide Information System*, 19 (2), 67-72.
- O'Neill, G. and McMahon, T. (2005). Student-centred learning: what does it mean for students and lecturers?. In O'Neill, G., Moore, S. and McMullin, B. (Eds.). *Emerging Issues in the Practice of University Learning and Teaching*. *Dublin, Ireland: All Ireland Society for Higher Education*. www.aishe.org/readings/2005-1/oneill-mcmahon-Tues_19th_Oct_SCL.html
- Peiris, S., & Beh, E. J. (2006). Where statistics teaching can go wrong. *CAL-laborate*. pp. 21-23.

EDUCAÇÃO FINANCEIRA: UM PROJETO PILOTO PARA A EDUCAÇÃO E FORMAÇÃO DE ADULTOS E PARA A FORMAÇÃO CONTÍNUA DE PROFESSORES E EDUCADORES

Helena Quintas
Universidade do Algarve e CIEO
(hquintas@ualg.pt)

Fernanda Matias
Universidade do Algarve e Centro de Estudos e Formação Avançada em Gestão e Economia – CEFA
(mfmatis@ualg.pt)

Nélia Amado
Universidade do Algarve e UIDEF, Instituto de Educação, Universidade de Lisboa
(namado@ualg.pt)

Susana Carreira
Universidade do Algarve e UIDEF, Instituto de Educação, Universidade de Lisboa
(scarrei@ualg.pt)

RESUMO

De acordo com a OCDE (2006), a Educação Financeira tem como propósito proporcionar a todos os cidadãos uma melhor compreensão dos conceitos financeiros, tornando-os mais atentos aos riscos e oportunidades financeiras, de forma a tomarem decisões refletidas, saberem onde se dirigir para obter ajuda e adotarem comportamentos que melhorem o seu bem-estar financeiro. A Universidade do Algarve, através do Grupo de Voluntariado da Educação Financeira, associou-se a este desafio realizando várias sessões de divulgação e sensibilização para esta temática para diferentes públicos, nomeadamente formandos adultos e professores e educadores dos ensinos Básico e Secundário. O presente artigo relata algumas destas experiências de formação, que assentaram na realização de tarefas baseadas em situações do quotidiano e que requerem a compreensão de conceitos chave sobre Educação Financeira. Tratou-se de uma atividade experimental que tencionamos aprofundar e expandir, mas que nos permitiu, desde já, compreender a pertinência desta área de formação, tanto no campo da Educação e Formação de Adultos como na formação profissional de docentes e de educadores, de modo a que passem a incluir a Educação Financeira nos projetos de desenvolvimento curricular que são desenvolvidos nas escolas dos ensinos básico e secundário.

Palavras-chave: Educação Financeira, Orçamento Familiar, Despesas, Saldo.

1. INTRODUÇÃO

A evolução da sociedade, marcada pela globalização, integração dos mercados financeiros e inovação tecnológica nos últimos vinte anos na maioria dos países da Organização para a Cooperação e Desenvolvimento Económico (doravante, OCDE), tornou premente a necessidade da Educação Financeira dos indivíduos. Por um lado, observa-se crescente complexidade e diversidade dos serviços e produtos financeiros que, paralelamente, se têm tornado mais acessíveis a pequenos investidores, expansão do crédito ao consumo e maior responsabilização pessoal pela gestão das suas finanças do que no passado. Por outro, as pessoas têm de tomar decisões financeiras que poderão ter importantes consequências ao longo das suas vidas (por exemplo, escolher entre o arrendamento ou aquisição de habitação; poupar para investir em educação ou em planos de reforma) e decisões financeiras de menor impacto (por exemplo, utilizar cartões de crédito; adquirir um seguro de saúde) para as quais, e não raramente, faltam o conhecimento e as competências financeiras.

Os estudos sugerem que somente uma pequena percentagem da população é detentora do conhecimento básico dos conceitos necessários para a tomada de decisões financeiras, tanto em países com mercados financeiros desenvolvidos, como em vias de desenvolvimento (Lusardi & Mitchell, 2014).

Os conceitos de Educação Financeira, conhecimento financeiro e literacia financeira são, muitas vezes, utilizados indiferentemente pelos investigadores e poucos têm tentado definir ou diferenciar estes termos (Huston, 2010). Esta autora acrescenta que, tipicamente, os indicadores de literacia financeira e/ou o conhecimento financeiro são os *inputs* utilizados para modelar a necessidade de Educação Financeira. Noutros termos, a Educação Financeira contribuirá para aumentar o nível de literacia financeira (Sukumaran, 2015), conforme se observará na secção seguinte.

Genericamente, a atenção que tem sido dispensada à Educação Financeira nas últimas duas décadas cresceu em correlação direta com a crescente complexidade de produtos e mercados financeiros (Alsemgeest, 2015). Fatores como a crise financeira

internacional, que afeta as economias desde 2008, o aumento das taxas de desemprego, o decréscimo das taxas de poupança, o sobre-endividamento das famílias e o aumento de famílias que declaram falência contribuíram para despertar, em muitos países, a necessidade de melhorar o nível de Educação Financeira das populações.

“As organizações internacionais como o G20, a OCDE, a União Europeia e o Banco Mundial têm desenvolvido um amplo trabalho de promoção de programas de formação financeira e de sensibilização para a importância da literacia financeira” (Banco de Portugal, 2013). A OCDE tem estado particularmente ativa em prol da melhoria do nível de Educação Financeira, especialmente desde 2005, ano em que publicou um relatório no qual destacava a grave insuficiência de literacia financeira em muitos países (OCDE, 2005), tendo, em 2008, criado uma Rede Internacional de Educação Financeira e, em 2012, no Programa Internacional para Avaliação dos Estudantes (Programme for International Student Assessment – PISA), introduzido a avaliação opcional da literacia financeira em alguns países. Portugal não foi incluído.

À semelhança de outros países, Portugal também tem revelado alguma preocupação com o nível de literacia financeira da sua população, embora formalmente não exista uma estratégia para a promoção da literacia financeira a nível nacional extensível aos diferentes níveis de ensino. Em 2010 o Banco de Portugal aplicou um questionário conhecido por “Inquérito à literacia Financeira da População Portuguesa”.

A Educação Financeira é deveras importante. A evidência empírica mostra que as disparidades de conhecimento financeiro entre os jovens pode atuar como um multiplicador de desigualdade de riqueza entre os adultos mais velhos (Lusardi, 2015), que a literacia financeira é um importante elemento de promoção da inclusão financeira (Sukumaran, 2015), tem um efeito positivo nos comportamentos financeiros dos indivíduos (Shim, Xiao, Barber & Lyons, 2009), e é um importante elemento de estabilidade económica e financeira dos indivíduos e da economia (Lusardi, 2015).

Esta comunicação insere-se na corrente de investigação de Educação Financeira para adultos. Descreve um projeto de formação da responsabilidade da Universidade do Algarve, numa iniciativa de voluntariado de docentes desta instituição de Ensino Superior no Centro de Formação Profissional do Instituto de Emprego e Formação Profissional de Faro (IEFP) e em contextos de formação contínua para professores dos Ensino Básico e Secundário.

2. EDUCAÇÃO FINANCEIRA E LITERACIA FINANCEIRA

Existem inúmeras definições de literacia financeira, mais ou menos abrangentes, mas não há uma universalmente aceite (Huston, 2010), o que poderá, eventualmente, afetar o efeito de programas de Educação Financeira. Este estudo refere que a literacia financeira poderá ser concetualizada através de duas dimensões: *compreensão* - conhecimento financeiro adquirido através da educação e da experiência sobre finanças pessoais; e *aplicação* - capacidade e confiança para aplicar eficazmente o conhecimento na gestão das finanças pessoais. Assim, o conhecimento financeiro surge como uma dimensão da literacia financeira. Por sua vez, a Educação Financeira é um *input* destinado a aumentar o capital humano das pessoas, especificamente conhecimento financeiro e/ou aplicação (i.e. literacia financeira).

Por sua vez, segundo o estudo de Borden, Lee, Serido e Collins (2008), o modelo de literacia financeira inicia-se, normalmente, pela Educação Financeira, que conduzirá à literacia financeira, modificando as atitudes financeiras e tornando mais eficientes os comportamentos financeiros.

Remund (2010) apresenta duas definições de literacia financeira: a definição concetual, que abrange conceitos financeiros, capacidade de comunicar sobre os mesmos, aptidão para gerir as suas finanças pessoais, competências para tomar as decisões financeiras adequadas e confiança para planear eficazmente as suas necessidades futuras; e a definição operacional com quatro segmentos – orçamento, poupança, crédito e investimento.

A OCDE (2014) apresenta uma definição de literacia financeira que abrange não só o conhecimento e compreensão dos assuntos financeiros, mas também a sua aplicação efetiva na tomada de decisões. Acresce o seu objetivo de melhorar o bem-estar financeiro dos indivíduos e da sociedade, e de melhor preparar os cidadãos para uma participação na vida económica. Defende que a literacia financeira é uma competência essencial para o século XXI.

A literacia financeira tem sido objeto de investigação a vários níveis. Além da pesquisa sobre a sua definição a nível dos países, entidades governamentais e organizações privadas, têm aplicado surveys para medir o nível de literacia das populações. Outros investigadores têm estudado determinantes da literacia financeira como, por exemplo, a idade, o sexo, a nacionalidade, o rendimento, a experiência profissional e o nível de educação, conforme se observa nos estudos empíricos seguintes.

Varum, Santos e Afreixo (2014), no seu estudo sobre os determinantes da literacia económica, que envolve aspetos reais e financeiros com base numa amostra de adultos portugueses, investigaram o efeito do nível de educação, da área de educação, do nível de rendimento, do sexo, da idade, da situação profissional e do grupo étnico. Concluem que os indivíduos que se encontram no ativo apresentam scores mais elevados do que aqueles que se encontram sem atividade, ou seja, os que estão no ativo têm melhores conhecimentos. Monticone (2010) confirmou que os indivíduos empregados responderam mais corretamente às questões sobre literacia financeira do que os desempregados ou inativos.

Scheresberg (2013), investigando o nível de literacia financeira entre adultos jovens nos Estados Unidos, conclui que somente 34% dos inquiridos responderam corretamente às questões de literacia financeira. Encontrou uma relação direta entre os níveis de literacia financeira e educacional, mas constatou que os conhecimentos financeiros continuam a escassear, mesmo nos inquiridos com elevados níveis de escolaridade. Na pesquisa de comportamentos financeiros notou que os inquiridos com melhor nível de literacia têm maior sensibilidade ao custo do financiamento, à necessidade de efetuar poupanças para fazer face a imprevistos e à adesão a planos de reforma, pelo que concluiu que a promoção da educação/literacia financeira entre os jovens pode ser particularmente importante e que é abismal a diferença existente entre a responsabilidade financeira que normalmente lhes é atribuída e a sua capacidade para tomar decisões financeiras eficazes.

Lusardi (2012) descreve uma investigação realizada sobre o nível de conhecimento financeiro dos adultos mais velhos e a qualidade da sua tomada de decisões financeiras em vários países (EUA, Holanda, Itália, Suécia, Rússia, Japão e Nova Zelândia). A comparação internacional mostra que o nível de literacia é baixo nesses países e que os adultos mais velhos, consistentemente, apresentam níveis inferiores de conhecimento financeiro.

Relativamente à relevância da idade dos indivíduos como determinante da literacia financeira, não existe consenso na literatura. Por exemplo, Wood e Doyle (2002) defendem que a idade tem reduzida relevância, enquanto Monticone (2010), no seu survey sobre os determinantes do conhecimento financeiro no contexto italiano, conclui que os adultos de meia-idade dominam mais conhecimentos financeiros do que os mais jovens e os mais velhos. O nível de literacia financeira cresce até aos 40-60 anos, decrescendo posteriormente.

Através do “Inquérito à literacia Financeira da População Portuguesa”, aplicado pelo Banco de Portugal em 2010 e 2015, pretendeu-se avaliar as várias dimensões do conceito de literacia financeira (atitudes, comportamentos e conhecimentos financeiros) e recolher informação para a definição de prioridades de formação financeira. Em ambos os inquéritos, os resultados sugerem que os grupos de indivíduos com idade entre 25 e 54 anos e os de trabalhadores apresentam melhores índices de literacia financeira do que os grupos de indivíduos com idade entre 16 e 24 anos e mais de 55 anos e de desempregados, estudantes e aposentados, à semelhança de estudos já referidos anteriormente.

Não obstante, a investigação sobre educação/literacia financeira tem recaído, especialmente, na avaliação dos conhecimentos, atitudes e comportamentos dos participantes, mas a interligação com a avaliação efetiva das finanças pessoais não tem sido estabelecida (Huston, 2010). Segundo Schuchardt, Hanna, Hira, Lyons, Palmer e Xiao (2009), existe evidência bastante consistente de que a Educação Financeira contribui para melhorar o conhecimento financeiro, e que a correlação é positiva entre o conhecimento financeiro e as práticas financeiras. Mas a literatura ainda não consegue estabelecer claramente essas relações como factos empíricos estilizados. Os referidos autores especificam cinco lacunas na investigação em educação/literacia financeira: i) avaliação do sucesso dos programas de educação; ii) diferenças de metodologias de recolha de dados e respetiva análise; iii) investigação sobre os melhores métodos e momentos de Educação Financeira; iv) uma melhor compreensão do processo pelo qual a Educação Financeira pode contribuir para modificar os comportamentos financeiros e para a tomada de decisões financeiras informadas; e, por último, v) se a Educação Financeira, por si, é eficaz na alteração do bem-estar financeiro.

3. A EDUCAÇÃO FINANCEIRA E OS PROCESSOS EDUCATIVOS E FORMATIVOS

Preocupada com os conhecimentos sobre Educação Financeira dos cidadãos, a OCDE realizou, em 2005, um estudo sobre as competências neste domínio, do qual resultou um relatório denominado “Melhoria da Literacia Financeira: análise de questões e políticas” (OCDE, 2005).

Este estudo colocou a descoberto os conhecimentos e as lacunas de informação que os cidadãos apresentavam neste domínio, e contribuiu para que esta área passasse a ser considerada prioritária nos processos de ensino e de aprendizagem, tanto em contextos formais como informais. As razões apresentadas para esta priorização têm a ver com três motivos que passamos a apresentar. O primeiro é a existência de um número crescente de trabalhadores que, muito provavelmente, terão que contar com as suas pensões e com as suas poupanças para financiar a sua reforma. O segundo, a constatação de que muitos consumidores, em particular as camadas mais jovens, se endividam cada vez mais, quer através do crédito ao consumo ou pela aquisição de habitação própria. O terceiro motivo justifica-se pela evidência de que a maior parte das operações financeiras é feita eletronicamente, o que leva à necessidade de que os cidadãos tenham conta bancária, embora uma percentagem muito significativa de consumidores não participe no sistema financeiro.

Outro dos resultados do estudo, e que reforça a necessidade de Educação Financeira para a população em geral, é a complexidade e a diversidade de produtos financeiros disponíveis, a diversidade de opções relativas, por exemplo, a taxas de juros, prazos e honorários, o aumento da esperança média de vida das pessoas e os baixos conhecimentos financeiros dos consumidores.

Estes resultados deram lugar a um conjunto de recomendações que apontam a Educação Financeira como uma prioridade dos processos de ensino e de aprendizagem sendo, neste sentido, entendida como:

O processo pelo qual os consumidores financeiros/investidores melhoram a sua compreensão sobre os conceitos e produtos financeiros e, através da informação, instrução e/ou aconselhamento objetivos, desenvolvem habilidades e a confiança para tomar consciência de riscos e oportunidades financeiras, para fazer escolhas informadas, saber onde procurar ajuda e tomar outras medidas eficazes para melhorar a sua proteção e o seu bem-estar financeiro (Referencial de Educação Financeira para a Educação Pré-Escolar, o Ensino Básico, o Ensino Secundário e a Educação e Formação de Adultos, 2015, p. 5).

Quanto às recomendações sobre as práticas de Educação Financeira, o relatório é muito claro ao afirmar que estas devem começar na escola, o mais precocemente possível, mas é igualmente relevada a necessidade de formação de professores e de educadores nesta área de ensino e de formação. Para tal, o relatório sublinha que devem ser incentivados programas para formar formadores, devendo, igualmente, ser fornecido material de informação e ferramentas específicas para o trabalho pedagógico (Silva & Powell, 2013).

Conscientes da importância desta área de estudo e de investimento no campo educativo e formativo, está em curso um programa de Educação Financeira da responsabilidade da Universidade do Algarve, numa iniciativa de um grupo de voluntariado de docentes desta instituição de Ensino Superior e que abrange públicos distintos. Temos, assim, realizado sessões de formação com públicos variados, nomeadamente formandos do Centro de Formação Profissional do Instituto de Emprego e Formação Profissional de Faro (IEFP), e com a população de reclusos do Centro Prisional de Faro. Numa outra

vertente desta intervenção, através dos Centros de Formação de Professores tem sido dada formação a docentes de vários ciclos de ensino, a qual pretende, de acordo com o relatório da OCDE anteriormente referido, dotar os professores dos ensinos básico e secundário com as competências necessárias para que implementem a Educação Financeira nos processos de ensino e de aprendizagem.

4. ATIVIDADES DESENVOLVIDAS

Na formação destinada aos adultos, formandos do IIEFP e reclusos, a tarefa tinha como objetivo elaborar um orçamento familiar com um determinado rendimento. Após uma abordagem ao conceito de despesas necessárias e extras, fixas e variáveis, tratou-se o conceito de saldo (positivo e negativo), passando-se, em seguida, para um trabalho prático de simulação de um orçamento mensal em função de algumas situações-problema.

No contexto de uma Oficina de Formação Contínua destinada a professores do Ensino Básico e Secundário, realizada num Centro de Formação de Professores da região do Algarve, foram propostas diversas tarefas adequadas a todos os níveis de ensino, desde a Educação Pré-escolar até ao final do Ensino Secundário, de acordo com o Referencial de Educação Financeira para a Educação Pré-Escolar, o Ensino Básico, o Ensino Secundário e a Educação e Formação de Adultos (2015).

A abordagem das tarefas foi realizada tendo em vista a sua integração no processo de ensino e aprendizagem de várias disciplinas e procurou abarcar três temas distintos do aludido Referencial, tais como: Planeamento e Gestão de Orçamento, Sistema e Produtos Financeiros Básicos e Poupança. Para este artigo selecionámos três tarefas: i) Cartão de crédito – o melhor amigo ou inimigo; ii) a Fatura – adaptada de uma proposta das provas PISA (2015) e iii) Poupar – Uma conversa entre amigos.

4.1 Gestão do Orçamento Familiar

Conforme exposto, a literacia financeira cobre diversas áreas e o referido Referencial de Educação no que respeita à Educação e Formação de Adultos contempla várias unidades que encerram os conteúdos fundamentais para a compreensão das finanças pessoais, nomeadamente: Planeamento e Gestão do Orçamento Familiar, Produtos Financeiros Básicos, Poupança, Crédito e Endividamento e Funcionamento do Sistema Financeiro. A atividade “Gestão do Orçamento Familiar” incidiu na primeira unidade.

Num primeiro momento foram apresentados e discutidos vários conceitos relacionados com despesas, tais como despesas necessárias e extras e as que têm um carácter fixo ou que são variáveis ao longo do tempo. Após uma referência ao rendimento que cada formando usufruía mensalmente foi abordada a situação que decorre da diferença entre o rendimento e a despesa mensal.

Para ilustrar os vários conceitos foi solicitada a participação dos formandos para a apresentação de exemplos do seu dia-a-dia que exemplificassem cada um dos tipos de despesas anteriormente referidas. Assim, como exemplos de despesas necessárias fixas surgiu a renda da casa, a mensalidade do empréstimo bancário para a aquisição de habitação própria, a mensalidade do infantário. Para as despesas necessárias variáveis os formandos apresentaram os valores gastos em combustível para o automóvel, o valor pago mensalmente pelo consumo de água, luz e gás. Como despesas extras fixas surgiu o crédito ao consumo e, como despesas extras variáveis, foram apontadas as despesas em restaurantes ou em lazer.

Após os vários exemplos e alguma discussão, e ainda antes de a tarefa ser proposta aos formandos, estes rapidamente concluíram, com base nos seus próprios rendimentos e nas despesas efetuadas, que, com alguma frequência, se deparam com um saldo negativo e, consequentemente, em situação de dívida a familiares, amigos ou a entidades financeiras.

Para apoiar a resolução da tarefa foi disponibilizada uma tabela (fig. 1), que permitiu aos formandos uma maior facilidade na elaboração do orçamento, pela possibilidade de preenchimento dos valores destinados a cada item, bem como as situações-problemas que teriam que resolver (fig 2).

Figura. 1 Exemplo de tabela para elaboração do orçamento familiar

Mês			Janeiro	Fevereiro	Março
			Valor	Valor	Valor
Rendimentos		Salários			
		Pensão			
		Horas extraordinárias			
		13.º mês			
		Subsídio de férias			
		Outros			
Total de rendimentos					
Despesas					
NECESSÁRIAS Fixas	Habitação	Renda de casa/Prestação			
		Condomínio			
	Transporte	Seguro da casa			
		Prestação do carro			
	Saúde	Seguro do carro			
		Seguro saúde			
	Segurança social				
Educação	Infantário				
	Faculdade				
	Curso				
Outros					
Total despesas necessárias fixas					
NECESSÁRIAS Variáveis	Habitação	Luz			
		Água			
		Telefone			
		Pacote TV+Telemóvel+Internet			
		Gás			
	Transportes	Transportes Públicos			
		Combustível			
		Portagens			
		Estacionamento			
	Alimentação	Supermercado			
		Mercaço			
		Pastelaria/Café			
	Cuidados pessoais	Cabeleireiro			
		Esteticista			
		Ginásio			
	Saúde	Consulta			
		Dentista			
		Hospital			
		Medicamentos			
	Manutenção/ prevenção	Carro			
		Casa			
	Educação	Material escolar			
Total despesas necessárias variáveis					
EXTRAS	Lazer	Viagens			
		Cinema/teatro			
		Restaurantes/bares			
	Vestuário	Roupa			
		Calçados			
	Outros	Presentes			
Total despesas extras					
TOTAIS	Receita				
	Despesas necessárias fixas				
	Despesas necessárias variáveis				
	Despesas extras				
	Saldo				

Figura. 2 Tarefa Gestão do Orçamento Familiar

TAREFA

Considere a família Antunes constituída por um casal e dois filhos. O sr. Antunes e a mulher são ambos funcionários da Câmara Municipal da sua terra. Os filhos têm 15 e 19 anos, o mais novo frequenta o 10.º ano da Escola Secundária local e o mais velho frequenta o 1.º ano da Universidade da região.

Simule um orçamento familiar para a família Antunes para os primeiros três meses de 2016.

Suponha que o sr. Antunes tem um salário líquido de 738,05 euros e a sua mulher um salário líquido de 635,07 euros. Esta família possui ainda uma pequena horta da qual recolhe alguns produtos para consumo próprio e que lhes proporciona um pequeno rendimento adicional. Nos meses de janeiro, fevereiro e março conseguiram ganhar 150 €, 200 € e 250 €, respetivamente.

Comece por calcular o rendimento mensal desta família.

Proponha valores para as despesas fixas, variáveis e extraordinárias (siga a tabela dada) de modo a que:

1. O saldo da família ao fim de cada mês seja **SEMPRE POSITIVO**.
2. Haja um saldo negativo num dos meses, mas que seja compensado no mês seguinte.
3. No final destes três meses haja uma poupança de, pelo menos, 300 € para gastar nas férias de verão.
4. Considere que no mês de fevereiro houve uma despesa imprevista de 350 €. Procure que orçamento do mês de março equilibre esta despesa extraordinária.

Na resolução da tarefa foram surgindo diferentes questões e dificuldades, muitas das quais relacionadas com as experiências de vida de cada adulto. Nos grupos mais jovens, em que os formandos ainda vivem em casa dos pais, foi evidente uma falta de consciência em relação aos gastos com a alimentação, luz, água e eletricidade. No entanto, a discussão em pequeno grupo sobre o custo dos bens alimentares, bem como a partilha da experiência de jovens que já constituíram família e que apenas usufruem do subsídio de formação como rendimento mensal, foi determinante para a conclusão da tarefa. Num caso particular, uma jovem explicou às colegas como eram realizadas as compras, semanalmente, no supermercado, qual o contributo de cada um dos elementos do agregado familiar para as despesas, e como ainda conseguia fazer uma pequena poupança para fazer face a despesas imprevistas. Uma das questões mais discutida entre os elementos mais jovens foi, sem dúvida, as despesas com alimentação, consumo de luz e água. Em contrapartida, quase todos os formandos parecem muito esclarecidos e conhecedores do custo dos pacotes de televisão, telemóvel e internet.

Um aspeto que mereceu grande discussão foi o das despesas extras. Rapidamente se constatou que nem todos encaram as despesas extra da mesma forma, e fazer face a uma despesa extra parece ser uma ideia pouco consensual. Nuns casos a despesa extra surge como uma situação que ocorre em virtude da avaria do carro ou de um problema de saúde imprevisto, em outros casos uma despesa extra será aproveitar os saldos para comprar mais vestuário ou calçado, em função da moda e da oportunidade e não da necessidade. Esta discussão foi particularmente rica para acentuar a consciência das compras desnecessárias.

Alguns participantes destas sessões são pessoas que já tiveram rendimentos elevados, que perderam os seus empregos e que necessitam de repensar as suas estratégias de consumo, em particular pela alteração substancial do seu rendimento familiar que passou a ser bastante mais reduzido.

Embora o contexto da tarefa fosse bastante realista, na medida em que apresentava o rendimento de um casal de funcionários públicos com vencimentos pouco superiores ao ordenado mínimo nacional, para alguns participantes o valor do rendimento foi considerado demasiado elevado.

4.2 Cartão de Crédito; o melhor amigo ou o pior inimigo

As questões relacionadas com o cartão de crédito surgem no 3º ciclo do Ensino Secundário, contudo, a tarefa possibilita a introdução da problemática associada à utilização deste meio de pagamento, mas também permite revisitar vários subtemas relacionados com o Planeamento e Gestão do Orçamento, como, por exemplo, necessidades e desejos ou despesas e rendimento que são tratados desde o ensino pré-escolar. Esta tarefa insere-se no tema Sistema e Produtos Financeiros Básicos – caracterização dos meios de pagamento, e pretende conhecer o funcionamento do cartão de crédito como é proposto no referido Referencial.

CRÉDITO – O MELHOR AMIGO OU O PIOR INIMIGO?

Joel é um estudante do ensino superior com um emprego em part-time. Em janeiro, ele adquiriu o seu primeiro cartão de crédito. A sua conta de cartão de crédito cobra uma taxa de juros anual de 18%. Isto significa que todos os meses Joel paga uma taxa de financiamento de 1,5 por cento (que é 18% dividido por 12 meses) sobre o saldo não pago. E em cada mês, Joel deve fazer um pagamento mínimo de 5% do saldo não pago.

Em janeiro, Joel usou o cartão de crédito para comprar duas camisas e um par de calças, a um preço total de 160€. Ele também comprou um novo par de sapatos com o cartão, a um preço de 75€. Quando o seu primeiro extrato do cartão de crédito chegou, em fevereiro, Joel sabia que era melhor pagar a conta inteira a cada mês e, assim, evitar encargos financeiros; mas como estava um pouco apertado de dinheiro, em fevereiro, ele enviou apenas o pagamento mínimo obrigatório.

Em fevereiro, Joel ofereceu a si mesmo e à sua namorada as entradas num concerto de rock. Comprou online dois bilhetes por 50€ cada, mais uma taxa de cartão de 3€ por cada bilhete. Ele aproveitou ainda para comprar três CDs do grupo a 17€, na banca promocional do concerto. Quando o extrato do cartão chegou, em março, ele continuava a ter pouco dinheiro disponível, por isso fez o pagamento mínimo obrigatório.

No mês de março, Joel teve a grande oportunidade de ir esquiar com o seu amigo Tiago. Os pais de Tiago tinham alugado um apartamento e planearam fazer a viagem de carro. Juntando-se a eles, Joel teve hospedagem gratuita, transporte e pequeno almoço. Mas os almoços e jantares para o período de três dias custaram-lhe 150€ (ele convidou o amigo e os pais para almoçar num dos dias). Os ingressos na estância de esqui para três dias custaram-lhe 120€. Assim, a conta de cartão de crédito total do Joel no início de abril incluiu os novos gastos, o saldo anterior e os juros.

Nesse momento, Joel ficou alarmado com o tamanho da sua conta de cartão de crédito. Mas como ainda estava um pouco desprevenido de dinheiro, ele fez de novo o pagamento mínimo obrigatório. Depois de enviar o seu pagamento, Joel decidiu firmemente parar de usar o seu cartão até ter todo o seu saldo pago. Infelizmente, no mês de abril, o seu carro avariou-se e a conta da oficina foi de 190€. Ele precisava do carro para ir trabalhar e estudar e, portanto, pagou com o cartão. Quando chegou o extrato, em maio, ficou chocado com a dívida crescente e prometeu a si mesmo não gastar nem mais um centimo até pagar toda a dívida. Acabou por decidir pagar 55€ por mês durante o tempo necessário até saldar a dívida do seu cartão de crédito.

Tarefa e Discussão:

- 1) Faça os cálculos do extrato do cartão de Joel (complete a tabela seguinte)
- 2) Se Joel cumprir a sua resolução de fazer pagamentos de 55€ por mês, quanto tempo levará ele a pagar o que deve?
- 3) Quais são as vantagens e os inconvenientes de um cartão de crédito?

Para ajudar na resolução desta tarefa foi apresentada a seguinte tabela que permite o registo dos dados de acordo com a situação apresentada:

Janeiro	
Compras	_____
(-) Pagamento mínimo	_____
Saldo Cartão	_____
Fevereiro	
Compras	_____
Saldo anterior	_____
Taxas de cartão	_____
Saldo Cartão	_____
(-) Pagamento mínimo	_____
Saldo em Dívida	_____
Março	
Compras	_____
Saldo anterior	_____
Juros Cobrados	_____
Saldo Cartão	_____
(-) Pagamento mínimo	_____
Saldo em Dívida	_____
Abril	
Compras	_____
Saldo anterior	_____
Juros Cobrados	_____
Saldo Cartão	_____
(-) Pagamento mínimo	_____
Saldo em Dívida	_____

4.3 A Fatura

A tarefa – A Fatura, foi adaptada do teste PISA 2012 (OCDE, 2014) sobre Literacia Financeira que se realizou em 18 países – Austrália, Bélgica (Flamenga), Shanghai-China, Colômbia, Croácia, República Checa, Estónia, França, Israel, Itália, Letónia, Nova Zelândia, Polónia, Rússia, República Eslovaca, Eslovénia, Espanha e Estados Unidos da América. A versão original é composta por duas questões de escolha múltipla (nível 1 e 2), sendo apresentadas quatro opções de resposta para cada questão, devendo os alunos apenas escolher a opção correta. Na proposta que apresentámos todas as questões são de resposta aberta de modo a promover a discussão em torno de vários tópicos ligados a esta temática. A fatura criada para esta tarefa procura ser o mais próxima possível da realidade portuguesa, nomeadamente na utilização da moeda utilizada em Portugal – o euro. Para além das questões extraídas do teste do PISA 2012 introduzimos outras que estão diretamente relacionadas com os conteúdos curriculares de matemática do ensino básico, o que pode facilitar e contribuir para a integração deste tema na disciplina de matemática. O professor poderá aproveitar a situação problemática para discutir ainda questões de ordem ética e dos direitos e deveres dos cidadãos.

Rua da Escola Nova, Vila Branca, 1234-765
 Tel. 981-123456 Fax 981-234567
 NIF: 01020304

O melhor preço

Fatura [N.10]

[24-06-2016]

Nome	NIF	Morada
Ana Maria Francisca	123456789	Rua das Flores 1234-987 VILA BRANCA

Quantidade	Descrição	Preço Unitário	Total
4	CADERNOS ESPIRAL A4 LINHAS (azul)	0,99	3,96
1	CADERNO ESPIRAL A4 QUADRICULADO (azul)	2,49	2,49
1	BORRACHA Pequena branca	1,19	1,19
Subtotal			7,64
Imposto sobre Vendas			23%
Total A Pagar			9,40

Obrigado pela visita!

- 1) Em que nome foi passada a fatura?
- 2) Por que razão está nesse nome?
- 3) Coloque outras questões que possa trabalhar com os seus alunos em função do nível de escolaridade.
- 4) Que tópicos matemáticos podem ser explorados com esta atividade?
- 5) Crie extensões desta tarefa em articulação com outras áreas (no caso do 1.º ciclo) ou com outros tópicos matemáticos no caso do 2.º e 3.º ciclos.

4.4 Poupança

Por fim, apresentamos uma tarefa dedicada ao tema da poupança. A discussão em torno das necessidades e desejos surge desde o ensino pré-escolar. A necessidade de levar os jovens a compreender e a distinguir, desde os primeiros anos, entre “necessitar” e “querer” é uma preocupação presente no referido Referencial em todos os níveis de ensino. Mais, os jovens no final de ensino básico devem ser capazes de “saber o que é a poupança e quais os seus objetivos” assim como “Compreender formas de aplicação e de remuneração da poupança” (p. 33).

Esta tarefa permite ao professor abordar estes tópicos de acordo com as características dos seus alunos e, se o entender, poderá estabelecer conexões com outras situações.

POUPAR - UMA CONVERSA ENTRE AMIGOS

Paulo, Matias, Elisa, Bernardo e Sara conversavam sobre dinheiro. Um dos seus professores, o Prof. Gabriel, tinha-lhes pedido para pensarem na ideia de poupar dinheiro. Este é um excerto da conversa:

Paulo: Na semana passada comprei esta camisola da Nike por 30 €. Na semana anterior, estava por 39 €. Poupei 9 €.

Elisa: Mas, Paulo, tu gastaste 30 €! Não acho que seja isso que o Prof. Gabriel chama de poupar.

Matias: Para o Prof. Gabriel, poupar significa não gastar o nosso dinheiro.

Bernardo: Sim, acho que o Matias tem razão. Mas é TÃO difícil poupar! Eu, para já, não tenho muito dinheiro. E quero montes de coisas.

Sara: Bem, os meus pais querem que eu poupe um pouco da minha mesada. Eles disseram que se eu poupar 100 € no final do ano, eles acrescentam mais 100 €.

Elisa: Uau, isso é muito generoso! E tu vais conseguir isso?

Sara: Vou tentar. Abri uma conta poupança no banco.

Matias: Eu não tenho uma conta poupança, mas tento não gastar todo o dinheiro que tenho porque quero comprar um bom presente de Natal para a minha namorada.

Paulo: Eu ouvi dizer que se ganham juros sobre o dinheiro que se tem numa conta poupança. É verdade, Sara?

Sara: Sim, acho que sim, mas ainda não sei muito sobre isso.

Bernardo: Eu queria mesmo uma bicicleta nova, mas os meus pais disseram que tenho que juntar dinheiro para a comprar. Eles não a vão comprar.

Elisa: Eu quero um iPad e os meus pais também me disseram a mesma coisa.

Paulo: Eu só não sei como posso economizar algum dinheiro. Há muitas coisas em que quero usar o meu dinheiro. E não sei se quero desistir de gastar.

Matias: É isso, Paulo. É difícil desistir de gastar, especialmente quando ainda não temos muito dinheiro.

Bernardo: Eu ouvi um indivíduo na TV, no outro dia, dizer que as pessoas devem primeiro pagar-se a si mesmas. Eu não entendo bem o que ele quis dizer com isso...

Perguntas para Discussão

Em pequenos grupos, discuta e registre as suas respostas às seguintes perguntas:

1. O que acha que significa a frase: "Pague-se a si mesmo primeiro"?
2. Quais são algumas das razões pelas quais as pessoas pouparam?
3. Comprar produtos com desconto (por exemplo, nos saldos) significa poupar?
4. Ter pouco dinheiro significa que não se consegue poupar?
5. Que formas de poupança conhece e como funcionam?
6. O que é uma conta-poupança? E o que são os juros da poupança?
7. Poupar é o mesmo que desistir de gastar?
8. As pessoas que pouparam são mais cuidadosas com os seus orçamentos?
9. Que ideias poderá dar sobre como poupar para comprar um iPad ou uma bicicleta?

Adaptado de Council for Economic Education (<http://lei.councilforeconed.org/>)



5. PARA CONCLUIR

A motivação que levou o grupo de docentes da UALG a preparar e a implementar o programa que acabámos de apresentar assentou na identificação de graves lacunas, em vários setores da população, relativamente à Educação Financeira (Banco de Portugal, 2011 e 2016). Vários estudos mostram que as diferenças de conhecimento financeiro podem atuar como um multiplicador de desigualdade. Assim, a literacia financeira é um importante elemento de promoção da inclusão financeira, tem um efeito positivo nos comportamentos financeiros individuais, e é um importante elemento de estabilidade económica e financeira dos indivíduos e da economia (Lusardi, 2015; Shim, Xiao, Barber & Lyons, 2009; Sukumaran, 2015).

A tarefa que foi proposta a adultos que frequentavam cursos de formação no IIEP ou estavam reclusos colocava os formandos numa situação hipotética, mas foi prontamente transportada para a sua própria realidade. Tornou-se num objeto de reflexão sobre o quotidiano e os formandos compreenderam a sua pertinência. Mas também aproveitaram estes momentos formativos para questionarem processos que usam para gerir os seus orçamentos e mesmo para exporem estratégias pessoais que utilizam. A orientação pedagógica didática utilizada permitiu a aquisição de mais conhecimentos sobre literacia

financeira, proporcionou a troca de saberes e de experiências, e também a oportunidade para que epistemologias pessoais fossem validadas.

A observação da tarefa tornou evidente que a faixa etária pré-determina diferentes atitudes e entendimentos sobre o que é gerir um orçamento familiar. Para os mais jovens gerir o orçamento familiar parece muito distante das suas preocupações e da sua prática quotidiana. Isto é, a situação de dependência financeira e a falta de autonomia parecem perpetuar uma certa ingenuidade (ou iliteracia), que se reflete em questões tão triviais como a falta de noção de quanto é uma despesa “normal” com eletricidade ou com água. Para os adultos mais velhos, muito embora avaliassem a tarefa como muito positiva, mostraram uma maior consciência acerca da necessidade de se priorizarem despesas, uma noção mais realista sobre o custo de muitos bens de consumo e, sobretudo, validaram práticas usuais de gestão de recursos financeiros e partilharam, uns com os outros, estratégias que utilizam no seu quotidiano.

A formação prestada em contexto de Oficina, destinada a professores e a educadores, apontou para um território de intervenção educativa pouco explorado no nosso sistema educativo, a Educação Financeira, bem como para as inúmeras potencialidades pedagógico-didáticas que esta área pode explorar em qualquer ciclo de escolaridade. As tarefas que foram realizadas por estes formandos não eram, obviamente, para testar os seus conhecimentos na área da Educação Financeira, mas para “experimentarem” estratégias a utilizar com os seus alunos. Tornou-se evidente que para além do carácter transdisciplinar que a Educação Financeira aporta, este tipo de tarefas requer modalidades de trabalho de grupo, que ativam a construção de competências nos alunos, e, sobretudo, partem de situações reais e do quotidiano, ingredientes fundamentais para que os processos de aprendizagem se concretizem.

REFERÊNCIAS

- Alsemgeest, L. (2015). Arguments for and against financial literacy education: where to go from here? *International Journal of Consumer Studies*, 39, 155-161.
- Banco de Portugal (2011). Relatório do Inquérito à Literacia Financeira da População Portuguesa: 2010. Banco de Portugal, Eurosistema, Lisboa, www.bportugal.pt
- Banco de Portugal (2016). Relatório do Inquérito à Literacia Financeira da População Portuguesa: 2010. Banco de Portugal, Eurosistema, Lisboa, www.bportugal.pt
- Banco de Portugal (2013). Políticas de Inclusão e Formação Financeira. Banco de Portugal, Eurosistema, Lisboa, www.bportugal.pt
- Borden, L., Lee, S., Serido, J. & Collins, D. (2008). Changing college student's financial knowledge, attitudes, and behaviour through seminar participation. *Journal of Family and Economic Issues*, 29, 23-40.
- Dias, A., Oliveira, A., Pereira, C., Abreu, M., Alves, P., Basto, R., Silva, R. & Narciso, S. (2015). Referencial de Educação Financeira para a Educação Pré-Escolar, o Ensino Básico, o Ensino Secundário e a Educação e Formação de Adultos. Ministério da Educação e Ciência.
- Huston, S. (2010). Measuring financial literacy. *The Journal of Consumer Affairs*, 44, 296-316.
- Lusardi, A. (2012). Financial Literacy and Financial Decision-Making in Older Adult. *Journal of the American Society on Ageing*, 36(2), 25-32.
- Lusardi, A. & Mitchell, O. (2014). The economic importance of financial literacy: theory and evidence. *Journal Economic Literature*, 52(1), 5-44
- Lusardi, A. (2015). Financial Literacy Skills for the 21st Century: Evidence from PISA. *Journal of Consumer Affairs*, 49(3), 639-659.
- Monticone, C. (2010). How much Does Wealth in the Acquisition of Financial Literacy. *The Journal of Consumer Affairs*, 44(2), 403-422.
- OCDE (2005). Improving Financial Literacy: Analysis of Issues and Policies. Paris: OECD Publishing.
- OCDE (2014), PISA 2012 Results: Students and Money: Financial Literacy Skills for the 21st Century (Volume VI), PISA, OECD Publishing. <http://dx.doi.org/10.1787/9789264208094-en>
- OCDE (2016). Household debt (indicator). DOI: 10.1787/f03b6469-en (Accessed on 13 June 2016).
- Silva, A., Powell, A. (2013). Um Programa de Educação Financeira para a Matemática Escolar da Educação Básica. Anais do XI Encontro Nacional de Educação Matemática – ISSN 2178-034X
- Remund, D. (2010). Financial Literacy Explicated: The Case for a Clearer Definition in an Increasingly Complex Economy. *The Journal of Consumer Affairs*, 44(2), 276-295.
- Scheresberg, C. (2013). Financial Literacy and Financial Behaviour among Young Adults: Evidence and Implications,” Numeracy: 6(2), disponível em: <http://scholarcommons.usf.edu/numeracy/vol6/iss2/art5>.
- Schuchardt, J., Hanna, S., Hira, T., Lyons, A., Palmer, L. & Xiao, J. (2009). Financial Literacy and Education Research Priorities. *Journal of Financial Counselling and Planning*, 20, 84-95.

- Shim, S., Xiao, J., Barber, B. & Lyons, A.C. (2009). Pathways to Life Success: A Conceptual Model of financial Well-being for Young Adults. *Journal of Applied Developmental Psychology*, 30, 708–723.
- Sukumaran, K-, (2015). Financial Literacy – Concept and Practice. *Journal for Contemporary Research in Management*, 59-65.
- Varum, C., Santos, E., & Afreixo, V. (2014). Recent Trends and New Evidence in Economics Literacy Among Adults. *Journal of Economic and Economic Education Research*, 15(2), 187- 205.
- Wood, W. e Doyle, J. (2002). Economic Literacy Among Corporate Employees. *Journal of Economics Education*, 33 (3), 195-205.

ATIVIDADES EXPERIMENTAIS NO ENSINO DAS CIÊNCIAS: REAÇÕES DOS PROFESSORES NO ÂMBITO DE UM CURSO DE FORMAÇÃO CONTINUADA

Ana Paula Dick
Centro Universitário Univates, Brasil
(anadick7@gmail.com)

Nélia Amado
Universidade do Algarve & UIDEF, Instituto de Educação, Universidade de Lisboa
(namado@ualg.pt)

Maria Madalena Dullius
Centro Universitário Univates, Brasil
(madalena@univates.br)

RESUMO

O presente estudo tem como uma das suas motivações a necessidade de melhorar e promover o ensino das Ciências a partir dos anos iniciais. Para tal foi proposto um curso de formação continuada, intitulado Atividades experimentais no ensino e aprendizagem de Matemática e das Ciências, no contexto dos anos iniciais no Ensino Fundamental e da Educação Infantil, com a duração de 20 horas que envolveu 24 professoras de uma escola da região do Rio Grande do Sul, Brasil. Nesta comunicação analisamos alguns episódios desse curso de formação, a partir das vozes dos participantes. Os dados mostram que os professores reconhecem a importância da experimentação no ensino das Ciências e Matemática, como forma de ultrapassar um ensino baseado exclusivamente na transmissão e memorização de conteúdos, mas reconhecem dificuldades para desenvolver tais atividades. A análise dos dados revela que os professores estavam carentes de ajuda e mostram insegurança em desenvolver atividades experimentais, por entenderem que não dominam os conteúdos específicos de cada disciplina.

Palavras-chave: Formação Continuada, Atividades Experimentais, Anos Iniciais, Matemática, Ciências.

1. INTRODUÇÃO

Os Anos Iniciais do Ensino Fundamental constituem-se como um valioso período na formação do cidadão. No Brasil, as crianças geralmente ingressam neste nível de ensino aos seis anos de idade, permanecendo nele até os onze anos. É nessa fase que as crianças “são frequentemente curiosas, buscam explicações para o que veem, ouvem e sentem” (Brasil, 1997), além de já terem “noções informais sobre numeração, medida, espaço e forma, construídas em sua vivência cotidiana” (Brasil, 1997).

Entretanto, mediante a constatação de que muitos alunos chegam aos Anos Finais do Ensino Fundamental com uma aversão a algumas disciplinas específicas, tais como a Matemática, a Física e a Química, entendemos ser imprescindível refletir sobre como estão sendo desenvolvidos os conhecimentos nestas áreas e pensar em estratégias que possam ser exploradas nos primeiros anos de escolarização. Lorenzato (2010) e Carvalho (1998) consideram que a relação que as crianças estabelecem com a Matemática e as Ciências nos primeiros anos escolares, é determinante para a relação que estas crianças terão futuramente com as referidas áreas de conhecimento.

Nesse contexto, os professores dos Anos Iniciais tornam-se o foco principal de uma investigação desenvolvida no âmbito do Mestrado Acadêmico em Ensino, do Centro Universitário Univates. Esta pesquisa teve como objetivo principal analisar como os professores dos Anos Iniciais interagem com situações em que são propostas atividades experimentais para o ensino da Matemática, Física e Química e perceber como encaram o seu uso em sala de aula.

Dessa forma, foi planejado e desenvolvido um curso de formação continuada, com foco na problematização da interação dos professores com as atividades experimentais. O curso de formação continuada foi desenvolvido em uma escola privada do Rio Grande do Sul, tendo a participação de 24 professores do educandário. No presente trabalho, iremos nos deter em três atividades desenvolvidas na formação, sendo elas: Quebra-Cabeça com sólidos; Submarino; e Leite Psicodélico.

2. REFERENCIAL TEÓRICO

Quando nos referimos ao termo atividades experimentais, estamos subentendendo:

[...] atividades práticas como aquelas tarefas educativas que requerem do estudante a experiência direta com o material presente fisicamente, com o fenômeno e/ou com dados brutos obtidos do mundo natural ou social. Nesta experiência, a ação do aluno deve ocorrer – por meio da experiência física –, seja desenvolvendo a tarefa

manualmente, seja observando o professor em uma demonstração, desde que, na tarefa, se apresente o objeto materialmente (Andrade e Massabni, 2011).

Especificadamente em Matemática, Lorenzato (2010, p. 72) aponta que “Inicialmente, a experimentação pode ser concebida como ação sobre objetos (manipulação), com valorização da observação, comparação, montagem, decomposição (separação) distribuição”, enfatizando que experimentar é um processo natural do ser humano, especialmente para as crianças. O autor enfatiza ainda que “A experimentação é o melhor modo para se conseguir a aprendizagem com significado, uma vez que ela realça o “porquê”, a explicação e, assim, valoriza a compreensão” (Lorenzato, 2010).

Sobre a experimentação, Martins *et al.* (2007) alerta que

Não é a simples manipulação de objectos e instrumentos que gera conhecimento. É necessário questionar, reflectir, interagir com outras crianças e com o professor, responder a perguntas, planear maneiras de testar ideias prévias, confrontar opiniões, para que uma actividade prática possa criar na criança o desafio intelectual que a mantenha interessada em querer compreender fenómenos, relacionar situações, desenvolver interpretações, elaborar previsões.

Nesse sentido, Carvalho *et al.* (1998) também destacam a importância de propor aos alunos problemas que estes possam discutir e propor soluções. Segundo Carvalho *et al.*:

“É exatamente isso o que queremos com nossas atividades: primeiramente, criar condições em sala de aula para que os alunos consigam “fazer”, isto é, resolver o problema experimentalmente; depois, que eles compreendam o que fizeram, isto é, que busquem, agora em pensamento, o “como” conseguiram resolver o problema e o “porquê” de ele ter dado certo” (Carvalho *et al.*, 1998).

Ainda para este autor “Os professores das primeiras séries não precisam estar preocupados em sistematizações fora do alcance dos alunos: assim como a Ciência evoluiu nos séculos, também nossos alunos irão evoluir e reconstruir novos significados para os fenômenos estudados” (Carvalho *et al.*, 1998).

No entanto, alguns investigadores que defendem a realização de atividades experimentais desde os Anos Iniciais, constatarem em suas investigações que pouco tem mudado no ensino das Ciências (Rickmann, 2009; Silva, 2013; Santos, 2011; Moreira, 2010; Tavares, 2009) e da Matemática (Oliveira, 2014; Silveira, 2012) nos últimos anos, prevalecendo ainda um ensino baseado na exposição de conteúdos pelo professor.

Os mesmos pesquisadores convergem para a importância do ensino dessas disciplinas desde os primeiros anos de escolarização, verificando em suas pesquisas que muitos professores reconhecem a necessidade de ultrapassar a exposição de conteúdos, mas confessam não saber como o fazer. Dessa forma, apontam como uma alternativa a formação continuada de professores que lecionam nesse nível de ensino, visto a formação inicial não contemplar os aspectos relacionados com a prática de sala de aula.

Dessa forma, nos desafiamos a pensar numa formação para os professores dos Anos Iniciais que permita estabelecer uma relação entre a teoria e a prática de sala de aula. No entanto, para que esta formação fosse útil e permitisse ressignificar o ensino de Matemática e de Ciências por parte dos professores, entendemos a necessidade de manter a formação centrada na profissão, como prevê Nóvoa (2007):

A formação do professor é, por vezes, excessivamente teórica, outras vezes excessivamente metodológica, mas há um déficit de práticas, de refletir sobre as práticas, de trabalhar sobre as práticas, de saber como fazer. É desesperante ver certos professores que têm genuinamente uma enorme vontade de fazer de outro modo e não sabem como. Têm o corpo e a cabeça cheios de teoria, de livros, de teses, de autores, mas não sabem como aquilo tudo se transforma em prática, como aquilo tudo se organiza numa prática coerente. Por isso, tenho defendido, há muitos anos, a necessidade de uma formação centrada nas práticas e na análise dessas práticas.

Sendo assim, de nada servem cursos de formação que estão descentralizados da escola ou que visem à acumulação de conhecimentos e técnicas. A preocupação deve estar centrada na reflexão crítica das práticas pedagógicas, afinal, mais do que um lugar de aquisição de técnicas e de conhecimentos, a formação de professores é o momento-chave de socialização e da configuração profissional (Nóvoa, 1995).

3. A PARTICIPAÇÃO DAS PROFESSORAS NO CURSO DE FORMAÇÃO CONTINUADA

O curso de formação continuada, intitulado de “Atividades experimentais no ensino e aprendizagem de Ciências Exatas, no contexto dos Anos Iniciais do Ensino Fundamental e da Educação Infantil”, envolver 24 professoras de vários níveis de ensino de uma mesma escola. É importante esclarecer que forma convidadas a participar nesta formação todas as professoras desde as que lecionam a educação infantil até aos anos finais, uma vez que a escola prioriza o diálogo constante entre os diferentes níveis de ensino, além agregar as discussões durante os encontros. Também fizeram parte do grupo as coordenadoras pedagógicas dos Anos Iniciais e da Educação Infantil.

Nesse trabalho, iremos nos deter em três atividades desenvolvidas durante a formação, intituladas de Quebra-Cabeça com sólidos, Submarino e Leite Psicodélico. A escolha destas atividades para apresentação neste artigo deve-se ao interesse que as professoras demonstraram na sua utilização em sala de aula, tendo inclusive, duas delas sido exploradas pelas professoras em

suas turmas durante o período de realização da ação. Dessa forma, vamos relatar as observações feitas durante os encontros de formação e o relato das professoras que desenvolveram tais atividades em sala de aula.

A Atividade Quebra-cabeça com sólido tem o objetivo de encaixar duas peças para formar uma pirâmide de base triangular. Contudo, a construção das duas peças que constituem o quebra-cabeça, que são dois pentaedros não regulares, pode tornar-se um momento de revisão de diferentes conteúdos geométricos. Isso porque a planificação é formada a partir de um triângulo equilátero, o qual é dividido em outros dois triângulos menores, um quadrado e dois trapézios.

Para o desenvolvimento da atividade experimental na sessão de formação, optamos por sua construção junto às professoras, utilizando para isso slides de *power point*, para conduzir as etapas da construção.

A construção da planificação do sólido a ser utilizado como quebra-cabeça constituiu um momento rico de revisão de nomenclaturas e definições, como, por exemplo, a diferenciação dos triângulos de acordo com o tamanho de seus lados. O primeiro desenho a ser realizado pelas professoras era um triângulo equilátero, com lados medindo 18 cm. Tal tarefa constituiu um desafio, visto que se procurava colocar as perguntas corretas para que elas percebessem como fazer em vez de lhes dizer o que fazer. Um exemplo de tal situação ocorreu quando a formadora colocou a seguinte questão: “Me ajudem a pensar numa estratégia para vocês comecem a desenhar, que, com certeza, vai garantir que cada lado tenha 18 cm. Porque eu posso fazer uma linha de 18, uma linha de 18 e não necessariamente quando eu ligar os dois pontos vai ter 18 cm”.

As professoras trocaram ideias entre si, até que uma respondeu: “Tem que achar um meio”, e outra complementou: “Tem que achar um meio, pontilhado para cima, pontilhado para cima, junta as pontas em cima”. As professoras estavam se referindo à altura do triângulo e haviam encontrado uma boa estratégia para garantir a igualdade dos lados.

Enquanto as professoras desenhavam a altura, percebemos que algumas a estavam medindo, talvez tentando utilizar também 18 cm. Aproveitamos para interrogar: “Quanto é a altura? Será que é 18?”, sendo que um conjunto de professoras já havia se dado conta e respondeu: “Não.”, enquanto outras olharam desconfiadas, até que uma perguntou: “Como eu sei quanto dá?”. Nesse momento, explicamos que existem diferentes estratégias para descobrir, sendo uma delas através do Teorema de Pitágoras. No entanto, este não era necessário, pois elas poderiam fazer uma linha pontilhada e depois apagar o excedente, como algumas já haviam feito.

Seguimos com a construção (IMAGEM 1), orientando passo a passo, até obter toda a planificação desejada.

Imagem 1 – Participante realizando a planificação



Fonte: das autoras

Em diferentes etapas durante o processo, algumas professoras perceberam que o seu desenho não estava de acordo com os das colegas, uma vez que elas não haviam feito as medidas de forma rigorosa. Algumas corrigiram, mas duas decidiram recomeçar a atividade, pois tinham desenhado o triângulo equilátero inicial, sem que os seus lados medissem 18 cm.

Devido a algum desânimo das professoras que estavam a reiniciar, aproveitamos para argumentar que esse era um processo natural, que, em determinadas situações, é necessário recomeçar. O grupo concordou e relatou diferentes vivências ocorridas em sala de aula quando desenvolveram algum tipo de desenho ou dobradura com seus alunos, constatando que “Eles não têm paciência”. Discutimos tais situações, chegando à conclusão de que é preciso incentivar tais atividades, pois a paciência é uma habilidade que também precisa ser desenvolvida no contexto escolar.

Enquanto discutíamos, as demais professoras recomeçaram ou corrigiram seus desenhos. Quando todas as planificações estavam prontas, foi colocada a seguinte questão: “Pergunto para vocês antes de recortar, o que a gente tem que observar num sólido planificado se nós temos a intenção de montá-lo?”.

As professoras rapidamente responderam: “As abinhas”. A formadora acrescentou: “Outra pergunta, eu preciso deixar abas em torno de todo ele?”, as professoras sinalizaram que não e, então, foi perguntado por que não e uma respondeu: “Porque tu vai fechar. Só que na dúvida de onde deixa, tu deixa em todas e vai cortando depois”. Esta estratégia relatada pela professora é interessante e, embora tenhamos incentivado o grupo a pensar nos locais que necessitavam de abas, as professoras preferiram deixar todas as abas possíveis e recortar as que sobrassem na hora da colagem.

Depois de colados, todas as professoras estavam com seus pentaedros não regulares, como pode ser visto na Imagem 2. Então explicamos que o quebra-cabeça resultante da atividade que construíram até aquele momento consistia em juntar duas peças construídas, para então formar um tetraedro regular, ou seja, uma pirâmide de base triangular. Para facilitar,

mostramos um tetraedro feito de acrílico, para as professoras entenderem a solicitação. Rapidamente, elas juntaram-se em duplas e começaram a trabalhar.

Imagem 2 – Término na montagem



Fonte: das autoras

Em duplas, elas ficaram virando as peças a fim de montarem o tetraedro, mas esse processo não ocorreu rapidamente e, algumas duplas se mostraram desmotivadas. Quando a primeira dupla encontrou a solução, conforme a Imagem 3, as demais se entusiasmaram e tentaram também resolver o desafio.

Sobre essa mesma atividade, Lorenzato (2010) faz uma ressalva sobre a importância de tomar cuidado com aquilo que nos parece simples, óbvio, fazendo referência a um “Como são só duas peças, a solução parece ser fácil, mas a experiência tem revelado que não é, a não ser para quem já a conhecia”.

Imagem 3 – Solução encontrada



Fonte: das autoras

Após a conclusão da proposta pelos pares, passamos à sua discussão, em grande grupo. Um dos aspectos que mereceu particular atenção na discussão foi a forma de a propor aos alunos dos Anos Iniciais. Algumas professoras trouxeram sugestões para adaptação da tarefa para esses anos, como, por exemplo, trazer a planificação pronta ou utilizar o Tetraedro em acrílico existente na biblioteca de modo a permitir aos alunos visualizarem o que deveriam fazer. Algumas professoras mostraram preocupação com o grau de dificuldade questionando se seus alunos conseguiriam realizar a atividade. Uma das professoras mostrou-se decidida a realizar com os seus alunos e afirmou: “Mas eu vou fazer”. A determinação dessa professora, que leciona no 3.º ano, acabou por encorajar e influenciar as colegas, que pareciam não acreditar que os seus alunos fossem capazes de resolver a tarefa. Por fim, ficou decidido dedicar um momento ao relato da realização desta atividade experimental nas aulas pelas professoras que tivessem oportunidade de propô-la.

A atividade do Submarino consiste na construção de um mini submarino, utilizando materiais alternativos, tais como: garrafa pet, tampa de caneta esferográfica e plasticina. Na formação, optou-se por não fornecer roteiro do experimento mas um conjunto de instruções produzidas pela própria formadora, os quais foram previamente pensados. Também é importante destacar que a atividade foi realizada no Laboratório de Física da instituição, o qual era desconhecido por muitas participantes, até o momento da formação.

Sendo assim, inicialmente orientou-se as professoras a montarem seus “submarinos” em duplas: deveriam acoplar uma pequena esfera de plasticina na extremidade da tampa da caneta, como pode ser observado na Imagem 4.

Imagem 4 – Construção do “submarino”



Fonte: das autoras

Cada dupla foi instruída a colocar o submarino a “navegar” dentro da garrafa com água e a tapar a garrafa com a respectiva tampa. Posto isto, a formadora solicitou às duplas para pressionarem a garrafa e observarem o que acontecia. O fenômeno pode ser observado como ilustra a Imagem 5.

Observou-se o submarino afundando.

Imagem 5 – “Submarino” afundando



Fonte: das autoras

O grupo ficou maravilhado quando a primeira professora conseguiu afundar seu submarino, motivando todas as restantes a alcançarem o mesmo objetivo. À medida que cada uma fazia a sua tentativa, foram surgindo as mais variadas reações e discussões, algumas das quais não tinham sido previstas. Alguns dos submarinos teimaram em não afundar, para surpresa de todas.

Algumas participantes não haviam vedado bem a tampa na hora de fechar a garrafa, o que comprometeu o resultado. Contudo, logo que perceberam esse fato, fecharam bem a garrafa e conseguiram fazer funcionar os seus submarinos. Uma das professoras, entretanto, não conseguiu fazer seu submarino afundar, o que deixou todo o grupo intrigado, uma vez que parecia que todos os passos tinham sido corretamente executados.

O grupo começou então a dar sugestões, procurando ajudar a colega a alcançar o objetivo proposto. A primeira sugestão apresentada foi a de diminuir a quantidade de platicina, no entanto, após a experimentação, esta hipótese rapidamente foi rejeitada. Em seguida, foi sugerido aumentar a esfera de massinha, o que feito pela professora e levou ao funcionamento do submarino. Deste modo, as professoras rapidamente perceberam que o tamanho da esfera tinha um papel decisivo no resultado desta experiência.

Assim, a discussão iniciou-se de imediato em torno do tamanho da esfera, na forma como determinar o tamanho ideal e como explicar, aos alunos, qual seria a dimensão ideal, na hora de realizarem a experiência. O grupo rapidamente concluiu que a melhor opção era deixar os alunos fazerem as suas tentativas e, nos casos em que não funcionasse, fossem eles próprios a levantar as hipóteses e a colocá-las em prática, tal como ocorreu na formação com as professoras.

Uma das professoras que estava decidida a realizar a experiência em sala de aula com seus alunos, argumentou: “Eu acho que o mais legal é isso, né, por que isso não desceu?”, referindo-se a permitir que os alunos descobrissem a relação do tamanho da esfera.

Após todas conseguirem realizar o experimento, a formadora questionou as professoras sobre as razões do afundamento do submarino. Uma professora opinou, dizendo: “Tem a ver com a pressão, talvez?”. A formadora questionou as participantes sobre o que entendiam por pressão, obtendo duas respostas: “É ar... não é alguma coisa com o ar?” e “É fazer força”. Assim, por meio de sucessivas questões, a formadora foi conduzindo as professoras ao conceito de pressão envolvido na situação referida, permitindo que elas se dessem conta de que, ao apertarem a garrafa plástica, exerciam pressão nela e, conseqüentemente, na água ali dentro, o que acarretava a compressão do ar presente no interior da tampa de garrafa. Com o ar comprimido, a água acabava ocupando uma parte do interior da tampa de garrafa, deixando o conjunto mais denso e fazendo com que o submarino afundasse. Quando se deixava de apertar a garrafa, o sistema voltava à organização inicial, fazendo com que a tampa voltasse a flutuar.

As professoras ficaram fascinadas com a explicação, seguindo na discussão do submarino. Uma delas questionou: “E se eu virar a garrafa de cabeça para baixo?”. Sem necessitar da intervenção da formadora, outra colega respondeu: “Vai entrar água na tampinha, não vai dar certo”. Não convencida, a professora decidiu testar no seu submarino, confirmando a colocação de sua colega e concordando com ela.

Outra professora aproveitou a situação para perguntar “Mas e como é que funciona quando eu vou nadar, eu não consigo nadar embaixo da água, eu subo logo?”. Juntas, as professoras foram criando hipóteses envolvendo o oxigênio e a densidade do corpo humano, estabelecendo, dessa forma, relações com outras áreas, em particular com Biologia.

O grupo presente na formação convergiu para a possibilidade de explorar a construção do submarino em diferentes anos de escolarização, uma vez que ela não apresenta etapas difíceis de serem realizadas pelas crianças. Ademais, a explicação dos fenômenos envolvidos pode ser facilmente adaptada e explorada, uma vez que o experimento permite visualizar cada um dos processos. Por exemplo, quando a garrafa é apertada, se o submarino for construído com uma tampinha transparente, as crianças poderão ver a água empurrando o ar que está lá dentro. Então, mesmo que não entendam os conceitos de pressão e densidade com clareza, perceberão que o submarino afunda somente com a entrada da água nele.

De acordo com Carvalho *et al.* (1998), o ensino de Física constitui-se como um desafio para os Anos Iniciais de escolarização, o qual não deve ser negligenciado. Segundo esse autor, “devemos trabalhar com problemas físicos que os alunos possam discutir e propor soluções compatíveis com seu desenvolvimento e sua visão do mundo, mas em um sentido que os levará, mais tarde, ao conhecimento científico” (1998, p. 13).

A última atividade a ser relatada neste trabalho, trata-se Leite Psicodélico é uma atividade muito simples, que consiste em colocar leite em um recipiente, como um prato, pingar corantes alimentícios sobre o leite e pingar detergente sobre o corante, para observar uma mistura de cores que acontece. Para o desenvolvimento da atividade experimental, as professoras foram conduzidas ao Laboratório de Química da instituição, sendo tomados alguns cuidados que o ambiente necessita, tais como o uso do jaleco.

Para o desenvolvimento na formação, optamos por entregar um roteiro e permitir que as professoras o desenvolvessem de forma autônoma. Nessa atividade, os grupos formados mostraram-se mais proativos do que em atividades anteriores desenvolvidas, provavelmente por estarem menos receosos quanto ao ambiente e materiais do Laboratório.

Durante o desenvolvimento da atividade (IMAGEM 6), algumas professoras relataram já conhece-la, mas não sabiam explicar o fenômeno. As professoras também fizeram algumas adaptações, utilizando, por exemplo, um palito para trabalhar com o detergente, o que facilita o manuseio dos pingos pelas crianças.

Imagem 6 – Leite psicodélico



Fonte: das autoras

A atividade consiste em verificar a solubilidade de substâncias polares e apolares, sendo o detergente um agente tenso ativo, capaz de inibir a tensão superficial existente entre o leite e o corante. Durante a explicação, as professoras entenderam que explicar esse fenômeno químico seria um tanto abstrato para as crianças e questionaram se essa atividade não poderia ser feita a título de curiosidade.

A formadora incentivou-as a desenvolverem a atividade, buscando uma explicação com palavras alternativas. Assim, à medida que os alunos fossem avançando, poderiam compreender com mais facilidade o ocorrido. Além disso, foi sugerida a

possibilidade de desenvolver outras atividades experimentais que envolvessem a solubilidade de substâncias, como a mistura de óleo com água, com o intuito de facilitar o entendimento de substâncias polares e apolares.

No último encontro da formação, teve lugar o relato das professoras sobre as atividades experimentais que estas desenvolveram com as suas turmas. Nessa oportunidade, percebemos que até aquele momento, a atividade do Submarino já havia sido explorada por uma professora numa turma do 4.º ano e a atividade do Leite Psicodélico havia sido explorada pela professora do último ano da Educação Infantil em conjunto com uma professora do 1.º ano do Ensino Fundamental.

De acordo com a professora do 4.º ano, para a construção do Submarino, toda a turma foi levada ao Laboratório de Física. A professora destacou o importante contributo de uma monitora para auxiliá-la, que esteve presente durante a realização da atividade experimental. Cada aluno fez o seu submarino, e a professora comentou que muitas hipóteses foram levantadas pela turma durante a construção do experimento, as quais foram confirmadas ou refutadas durante a prática. Terminado, a professora solicitou um relatório e surpreendeu-se com as constatações feitas pelos alunos, como percebemos na fala dela: “Depois nós fizemos um relatório, é bem interessante pra ver o vocabulário que eles usam. Como eles conseguem no quarto ano estabelecer uma sequência lógica, vai crescendo o vocabulário deles”.

Nesse sentido, Carvalho *et al.* (1998) explicam-nos que “quando os alunos são incitados a contar com resolveram o problema, começam a tomar consciência das coordenações dos eventos, iniciando-se a conceitualização”. Dessa forma, para estes autores, é imprescindível o registro da atividade experimental na forma de desenho e escrito.

Já a professora da Educação infantil, ao descrever a estratégia utilizada para desenvolver a prática do Leite Psicodélico com os alunos, revelou que avisou a turma no dia anterior, deixando-os curiosos para a “surpresa” que teriam no dia seguinte. Tal estratégia é amparada por Carvalho *et al.* (1998), os quais entendem que as atividades experimentais devem ser introduzidas de forma a despertar a curiosidade e o interesse dos alunos.

De acordo com a professora, a atividade do Leite Psicodélico, foi realizada integralmente pelos alunos, dando-lhes oportunidade para manusearem os materiais, o que os deixou a todos maravilhados, de tal forma que a experiência foi repetida várias vezes, até se esgotar o leite. A participante relatou ainda que estava muito preocupada com a explicação da atividade, mas que os alunos não se detiveram na teoria apresentada, pois estavam preocupados em fazer e mexer no experimento.

Interessante notar que a professora não utilizou o Laboratório de Ciências, tendo realizado a atividade mencionada na sala de aula. A professora explicou a razão pela qual decidiu não levar os seus alunos até ao laboratório. Por um lado a turma é muito numerosa, cerca de 28 alunos, por outro lado, está situada num espaço muito distante do prédio onde está situado o laboratório, o que dificultava a deslocação de todos os alunos com uma única professora. As palavras da professora deixaram evidente a possibilidade de desenvolver atividades experimentais com as crianças, mesmo na sala de aula. Durante o relato, ela revelou uma estratégia importante frente a uma turma numerosa, como pode ser percebido na fala dela: “Eles são muito da experiência, de fazer alguma coisa diferente, mas quando é muita gente e cada um precisa experimentar, meio que perde um pouco. Eu tentava geralmente pegar os mais quietinhos e deixar os outros só observando porque, depois que os mais agitados fazem, eles não querem prestar atenção, perdem o foco. Mas eles ficavam curiosos”.

Esta professora encontrou uma forma de manter a atenção dos alunos e possibilitar a realização do experimento por todos. Nesse momento, pudemos perceber que várias professoras mostravam uma expressão de aprovação do que esta professora dizia, entendendo-a como uma sugestão útil a todas, especialmente nos experimentos mais demorados.

Dando continuação aos relatos das experiências realizadas, uma professora do 1.º ano do Ensino Fundamental relatou ter explorado a atividade do leite psicodélico no Laboratório de Química. A professora explicou a sua opção pela escolha deste ambiente: “Acho que o laboratório é encantador, que é diferente de colocar o jaleco, de vir pra um ambiente diferente, isso cria uma imagem pra eles”.

A coordenadora pedagógica do nível complementou, afirmando: “Eles se sentem cientistas”. Concordando, a professora do 1.º ano retomou, falando: “É, e o preparo de vir até aqui é um acontecimento, então isso eu acho que torna mais importante a experiência”.

Esta professora relatou ainda a falta de interesse dos alunos na explicação teórica, a qual só pode ser feita no momento posterior, quando os alunos já estavam em sala de aula, pois, no laboratório, os alunos mostravam-se concentrados na prática. Percebendo a importância que a professora atribuía à explicação teórica, a formadora perguntou se, na sala de aula, os alunos tinham manifestado algum interesse pela explicação, questionando:

Formadora: Os alunos da Educação Infantil não se mostraram preocupados com a explicação, os teus estavam interessados na teoria?

Participante: Eu estava, tanto que assim. Em todos os nossos encontros, eu sempre te pergunto por quê, porque eu sempre penso que alguém vai perguntar, porque tem que ter uma razão do porquê eu estou fazendo isso. Eu sou assim, acho que é o pensamento do adulto, a criança não pensa assim. Ela, pelo simples fato de realizar a experiência, já é mágico, tanto que eles dizem vamos pegar e vamos fazer aquela mágica, aquilo que ficou pra eles. Mas eu acredito que eles entenderam, porque fizeram perguntas, e tudo que eles fizeram no relatório, foi com as palavras deles, até eles escreveram de um jeito e usaram os termos que eles costumam usar.

Ficou evidente, portanto, que o professor dos Anos Iniciais não precisa ter a preocupação de apresentar uma explicação rigorosa do ponto de vista científico, pois as crianças não possuem um repertório linguístico para poderem compreender os fenômenos envolvidos. Todavia, entendemos como importante propiciar um momento de reflexão, para que os alunos possam pensar sobre o que aconteceu. Para isso, o professor precisa buscar por palavras e expressões que os alunos sejam capazes de compreender, problematizando e contextualizando o experimento.

Outra diferença apresentada estava no relatório cobrado, o qual foi solicitado de forma escrita aos alunos depois do

experimento. De acordo com a professora, puderam ser desenvolvidas outras habilidades com base na atividade, as quais foram citadas: “Saber o que é uma lista, nomeando os materiais e escrever do jeito deles o que ocorreu”.

4. CONSIDERAÇÕES FINAIS

Acreditamos ter contribuído para a inserção de atividades experimentais nas aulas dos sujeitos envolvidos, uma vez que estes puderam vivenciar diferentes experimentos, tendo suporte teórico para entendimento dos fenômenos e oportunidade de sanar suas dúvidas. O estudo evidencia a importância de criar oportunidades de vivenciar a realização de atividades experimentais aos professores. O trabalho realizado ao longo das múltiplas sessões mostrou-se determinante para incentivar as docentes ao uso desse recurso na sua prática pedagógica. A partilha de experiências durante as sessões permitiu sanar dúvidas, testar suas hipóteses e trocar ideias com as colegas do curso e de escola.

Percebemos que, à medida que os professores foram experimentando as situações propostas, pudemos desmistificar o ensino das Ciências Exatas, principalmente no que diz respeito à Física e à Química, uma vez que percebemos o entusiasmo e a expectativa do grupo para cada atividade nova.

Ainda, mostrou-se essencial desenvolver a formação nas dependências da escola, uma vez que muitas professoras desconheciam a infraestrutura disponível para explorar as Ciências Exatas e, no decorrer do curso, permitiram-se realizar atividades nestes locais.

REFERÊNCIAS

- Andrade, M., & Massabni, V. (2011). O desenvolvimento de atividades práticas na escola: um desafio para os professores de ciências. *Ciência & Educação*, v.17, n. 4, p. 835-854. Disponível em: < <http://www.scielo.br/pdf/ciedu/v17n4/a05v17n4.pdf>>. Acesso em 8 dez. 2015.
- Brasil (1997). Secretaria de Ensino Fundamental. Parâmetros curriculares nacionais: Introdução aos Parâmetros Curriculares Nacionais. Brasília: MEC/SEF.
- Carvalho, A., Vannuchi, A., Barros, M. (1998). Ciências no ensino fundamental: o conhecimento físico. São Paulo: Scipione.
- Lorenzato, S. (2010). Para aprender matemática. Autores Associados, 3ª Ed.
- Nóvoa, A. (1995). *Os professores e a sua formação*. Lisboa: Dom Quixote.
- Nóvoa, A. (2007). Desafios do trabalho do professor no mundo contemporâneo. *Livreto do Sindicato dos Professores de São Paulo*, São Paulo.
- Rickmann, L. (2009). Ensino de ciências naturais: concepções de professoras das séries iniciais. Dissertação de Mestrado (Mestrado em Educação em Ciências e Matemáticas). Universidade Federal do Pará, Pará. Disponível em: http://bdtd.ibict.br/vufind/Record/UFGPA_964d9eb9891d70dd07f7bbd63ddcdcb0. Acesso em 12 jul. 2016.
- Santos, P. (2011). Ensinar ciências nos Anos Iniciais do Ensino Fundamental: o que dizem os professores. Dissertação de Mestrado (Mestrado em Ensino de Ciências Naturais e Matemática). Universidade Federal do Sergipe, São Cristóvão, 2011. Disponível em: <http://bdtd.ufs.br/handle/tede/1975>. Acesso em 12 jun. 2016.
- Silva, G. (2013). A alavanca, o prisma e a lâmpada: a história da Ciência e a experimentação nos anos iniciais. Dissertação de Mestrado (Mestrado em Educação em Ciências). Universidade Federal do Rio Grande do Sul, Rio Grande. Disponível em <http://repositorio.furg.br/handle/1/4814>. Acesso em 12 jun. 2016.
- Silveira, D. (2012). Professores dos Anos Iniciais: experiências com o material concreto para o ensino de Matemática. Dissertação (Mestrado em Educação em Ciências). Universidade Federal do Rio Grande, Rio Grande. Disponível em: <http://repositorio.furg.br/handle/1/2852>. Acesso em 06 out. 2016.
- Martins, et al. (2007). *Educação em ciências e ensino experimental – formação de professores*. Ministério da Educação, Direção-Geral de Inovação e Desenvolvimento Curricular. Portugal, 2ª ed, 2007. Disponível em: <http://www.dge.mec.pt/sites/default/files/Basico/Documentos/explorandoformacaoprofessores.pdf> Acesso em: 26 de jul de 2016.
- Moreira, S. (2010). *Ensino de Física nas Séries Iniciais: buscando entender as tensões vivenciadas pelos professores no ensino prático*. Dissertação (Mestrado em Ensino, Filosofia e História das Ciências). Universidade Federal da Bahia, Salvador, 2010. Disponível em: <http://repositorio.ufba.br/ri/handle/ri/16028>. Acesso em 14 jun. 2016.
- Oliveira, J. (2010). Contribuições e abordagens das atividades experimentais no ensino de ciências: reunindo elementos para a prática docente. *Acta Scientiae*, (12)1, p.139-153, jan/jun. Disponível em <http://w3.ufsm.br/laequi/wp-content/uploads/2015/03/contribui%C3%A7%C3%B5es-e-abordagens-de-atividades-experimentais.pdf>. (acedido em 12 set. 2015)
- Tavares, M. (2009). Um olhar sobre a educação continuada em Ciências de professores das Séries iniciais no Estado de São Paulo. Dissertação (Mestrado em ensino de Ciências). Universidade de São Paulo. Institutos de Química; Instituto de Física; Instituto de Biociências; Faculdade de Educação, São Paulo. Disponível em: www.teses.usp.br/teses/disponiveis/81/81132/tde.../Mari_Inez_Tavares.pdf. Acesso em: 20 jan. 2016.

THE USE OF A GLOBAL MANAGEMENT SIMULATOR TO CONSOLIDATE TRANSVERSAL KNOWLEDGE

Joaquim Manuel Baltazar Vaz

Escola Superior de Tecnologia e Gestão, Instituto Politécnico de Portalegre
(jbvaz@estgp.pt)

Maria José Varadinov

Escola Superior de Tecnologia e Gestão, Instituto Politécnico de Portalegre
(dinov@estgp.pt)

Cristina Dias

Escola Superior de Tecnologia e Gestão, Instituto Politécnico de Portalegre
Centro de Matemática e Aplicações, Universidade Nova de Lisboa (CMA)
(cpsd@estgp.pt)

Carla Santos

Instituto Politécnico de Beja
(carla.santos@ipbeja.pt)

ABSTRACT

Business decision-making in real context involves high risks and a long time to know the impact of decisions. Using the simulator, students know the results of decisions in a few hours, without incurring financial or personal risks. The management simulators were conceived for the training of corporate cadres, but they play an important role in the training of Management students. The business and market context is very complex and the simulators are able to reflect this reality, contributing to improve management practices.

It is intended to encourage students to manage a virtual company, analyzing the recent past, outlining strategies for the near future, evaluating results obtained, making decisions in the various functional areas of the company, taking into account the market situation and the competition, aiming to obtain better results to competitors. They are encouraged to integrate acquired knowledge, making decisions that will be submitted to the simulator in a previously established calendar. They analyze historical data, evaluate results obtained in the management reports produced by the simulator and received after each decision making; These reports reflect the impact of decisions taken on adjustments to accounting and various operational parameters. Then they validate or reformulate the strategy and evaluate the competition in the different markets.

Keywords: Simulator, Strategy, Decision, Diagnosis.

1. CONTEXT

Several authors argue that simulation-based training (SBT) makes it possible to fill a gap in management teaching regarding the combination of theory and practice in student training. For example Salas, Wildman and Piccolo (2009) believe that SBT can potentially convey theory and practice simultaneously and that the nature of management work in general lends itself to simulation-based training because many of the skills needed to be a Business manager can only be acquired through practice; Are the cases, for example, of leadership and strategic decision-making and communication skills. According to Cook and Swift (2006) and Lane (1995) SBT provides a more complex and realistic learning environment than other types of training ... and trainees can practice their skills. For Salas, Wildman and Piccolo (2009) one of the main objectives of simulation is to imitate real-life situations and allows learning to be based on a context that is directly relevant to management students.

The management simulators were designed with the purpose of training company cadres, but can play an important role in the training of students of the course of Business Management. The context of companies and markets is very complex and management simulators can reflect this complex reality, contributing to improve management practices. Decision-making in real context in companies involves high risks and a longer or shorter time until one knows the impact of decisions on the company and the market. Using a simulator, students get to know the results of their decisions in a few hours, without incurring financial risks, although they are subject to other risks inherent in the competition, which encourages them to consider risks in decision making. This is because all decisions have positive and negative impacts on the company. Thus, trainees will be more likely to think creatively and test various strategies to deal with high-risk situations.

According to Keys and Wolfe (1990), cited by Salas, Wildman and Piccolo (2009), in a simulation environment the learning curve can occur at an accelerated rate as students adopt decision-making processes and adjust their strategies because feedback is immediately provided allowing you to acquire the skills and competencies that would normally be gained

over years of experience. Each team will manage a company in the market where other competing companies operate and its members will develop new skills of: strategic management, decision making, teamwork and leadership.

The use of the management simulator in the consolidation of transversal knowledge is in line with Merrill (2002, pp. 44-45) that wrote: “training is promoted when students are involved in problem solving in the real world [,] .. when the existing knowledge is activated as a foundation for the new knowledge [,] ... demonstrated to the learner [,] ... applied by the learner [,] ... [and] integrated into the student world. “

2. DESCRIPTION OF THE PEDAGOGICAL PRACTICE

The main objective of the introduction of the simulator as a pedagogical tool was to increase the practical component of the Management course, with emphasis on the simulated practice, promoting a greater interdisciplinary between the curricular units and contributing to a greater student motivation in applying and integrating knowledge acquired in the previous curricular units attended during the course. The aim is to encourage students to manage a company, analysing the recent past and outlining the strategy for the near future, analysing the results obtained, making decisions in the various areas of the company (production, commercial, financial and human resources), taking into account the competitive situation and the economic situation of the market, in order to obtain the best results from its competitors. These results are mainly reflected in stock prices, market shares and company efficiency in terms of profitability and productivity, etc. Students are encouraged to integrate the knowledge acquired and to make their own decisions in teams of 3 to 5 elements, assuming responsibilities for the consequences of these decisions, which will be submitted to the simulator in dates and time previously established without any flexibility; the responsibility for meeting deadlines is the leader of each team. SBT makes it easier for reality to be simplified and manageable, its complexity attenuated and training flexibilised, so that simulator-powered competition is possible (Cook and Swift, 2006).

2.1 Target Audience

The simulator is being applied in the discipline of Business Simulation, 3rd year of the Management course, day and post-work students, at the School of Technology and Management of the Polytechnic Institute of Portalegre. The exchange of experiences between the students of the day course and the post-work course facilitates learning in a competition that implies decision making by the students as managers of a virtual company. Former students and entrepreneurs from the region have also participated in this global management competition with the objective of increasing the competitiveness of the competition and involving the local community. The SBT environment is sufficiently realistic to stimulate critical thinking and enable the student to acquire knowledge in a practical way while allowing sufficient control of the trainer on the situation to guide learning in the desired direction ... providing an environment to test and practice innovative techniques (Salas, Wildman and Piccolo, 2009).

2.2 Methodology

The curricular unit start with a training based on theoretical and theoretical-practical sessions to explain in detail the support manual for the construction of tools to support decision making based on the management techniques learned during the course in Management. Subsequently, the training is complemented with practical sessions to support each group throughout the simulation and with some theoretical-practical classes focused on specific themes pertinent to the management game. The challenge for the various student teams is to manage a virtual company that competes with 7 other companies in the European Union, NAFTA and Internet markets (global market) with 3 long-lasting products.

The participants (8 teams with a maximum of 5 elements) must analyze the past performance of the company, at the level of the internal diagnosis, make the external diagnosis and design the company for the future, defining strategic planning based on available resources (and to be obtained in the future), the strengths and weaknesses detected in the internal analysis and the opportunities and threats found in external diagnostics. There are 2 experimental decisions in which the students test the simulator, the decisions of the competitors and prepare for the competition that will begin with the 5 definitive decisions established in a pre-defined calendar.

Students have to analyze the company's historical data, evaluate the results obtained in the management reports they receive after each decision making, and which reflect the impact of the decisions taken with adjustments to company accounts and the various operational parameters related to each one of the functional areas. They must also validate or reformulate the strategy and assess competition in different markets.

The management reports inform the companies about the operational data: the Means of Production, Raw Materials, Human Resources, Sales Channels, Products, Transportation; And Financial Data: Balance Sheets, Income Statement, Administrative Expenses, Cash Flows and the Quotation Value of the Shares.

These reports, produced by the simulator after each decision, also present information (free and other paid separately) on the activities of competing companies in the areas of prices, total employees, salaries, agents and distributors, market shares, consumer opinions and Expenses incurred by competitors in areas such as Advertising, Research and Development and website efficiency.

The categories in which decisions are made (phased in 5 steps) are distributed across the various departments of the company: there are marketing, production and distribution decisions, finances and human resources. Decisions are also broken down into nine product / market strategic segments: 3 products placed in 3 different markets. Investment in each of the strategic segments, such as advertising and R & D, should be affected. Based on the simulator, this discipline becomes

very demanding, requiring students to justify, theoretically and with calculations in excel, in detail all the decisions made and strategies implemented, after a detailed diagnosis of the company, a detailed analysis of the variables that influence each decision and estimate its repercussions on the company.

This training can be used to simulate crisis events such as catastrophic business failures, providing a relatively free opportunity for management students to apply emergency measures without fear of negative personal problems or organizational consequences (Salas, Wildman and Piccolo, 2009).

2.3 Evaluation

The data generated by the simulator is very detailed, constituting a very useful management information to be explored in practical cases by the students in others disciplines, as for example in the Control of Management and Accounting of Management I and II. When students use the information generated by the simulator in previous disciplines, they have a greater ease of adaptation and integration in global management and strategy competition.

In the classroom context, the simulator reinforces the group spirit and the competitiveness among the teams, in addition to the students verifying that they are applying the knowledge acquired in several disciplines, testing this knowledge and obtaining, in real time (a few hours later), the results of decisions taken that resulted from the application of their knowledge. This feedback is made up of a management report for each team that is provided by the simulator.

In the end, the students are evaluated based on 5 decision making, pondering the quotation of the actions achieved by each company and the technical capacity in the justification / grounds of the decisions. Each team presents orally, after the fifth decision, the remaining teams and the teacher a summary of the decisions taken, the results obtained and the strategies adopted for discussion in the classroom.

According to Merrill (1975), SBT is a way of student-controlled training that learns at its pace, facilitating effective learning.

3. RESULTS

With the use of the simulator, students apply knowledge in new competitive situations, albeit in a simulated way. The winning team at the school level (and others who also wish to participate by finding a sponsoring company) competes with teams composed of staff from large national companies and students from other polytechnics and universities competing in the Global Management Challenge (GMC), contributing to the additional motivation and self-esteem of the students.

The results achieved contribute to the feeling that they have received adequate training to compete in the labor market, that is, the students feel more motivated and more prepared to face the active life and the business reality. The use of the simulator introduces an innovative differentiation in terms of learning and teaching methods in universities and polytechnics, providing students with a stimulating teaching / learning experience.

This teaching methodology has been a success, with positive feedback from students, and has resulted in greater personal achievement of most students. Students have adhered quite well to the simulation where dynamics group have worked perfectly, in most cases, and the competitiveness among students has been a factor enhancing their motivation that leads them to work many hours out of classes to give requirements of the management game. The students' learning is based on the sharing of work with their colleagues and with the teacher and on the active involvement in the teaching activities.

The best results obtained by ESTG students from Portalegre occurred in 2009/10 with the participation in the final of the Global Management Challenge and the conquest of the 4th place at the national level. In 2014/15 the team representing the school also participated in the final of the national GMC and in the following year the same team reached a second time the final of the national GMC, but representing Caixa Geral de Depósitos. In the 2008/09 and 2015/16 school years, the ESTG teams from Portalegre reaching the 2nd round of the national competition, although they did not reach the final.

4. TRANSFERABILITY

According to Salas, Wildman and Piccolo (2009) the SBT (Simulation-Based Training) is an ideal complement to improve the quality of management training ... an opportunity to improve existing management curricula ... allows the development of management skills at a pace much higher than usual, making it an ideal technique for management education programs ... perfect opportunity to improve the quality of our business sooner in the careers of graduates.

Based on the results obtained, and considering that it is intended to share pedagogical practices that prove to be successful, it is believed that the use of a management simulator should be considered in the curricular plans of the management courses of other higher education institutions. The practical application of knowledge related to the various curricular units of the Management course, their integration and interdisciplinarity, as well as teamwork, make this teaching methodology very dynamic and motivating.

According to Salas, Wildman and Piccolo (2009), the SBT (Simulation-Based Training) is an ideal complement to improve the quality of management training ... an opportunity to improve existing management curricula ... allows the development of management skills at a pace Much higher than usual, making it an ideal technique for management education programs ... perfect opportunity to improve the quality of our business sooner in the careers of graduates.

REFERENCES

- Cook, R. W., & Swift, C. O. 2006. The pedagogical efficacy of a sales management simulation. *Marketing Education Review*, 16: 37–46.
- Lane, D. C. 1995. On a resurgence of management simulations and games. *The Journal of Operational Research Society*, 46(5): 604–625.
- Merrill, M. D. 1975. Learner control: Beyond aptitude-treatment interactions. *AV Communications Review*, 23: 217–226.
- learner[,] ... [and] integrated into the learner's world" (pp. 44-45).Merrill, M.D. (2002), First Principles of Instruction. ETR & D. 50 (3), 43-59.
- Salas, E., Wildman, J. e Piccolo, D. (2009), Using Simulation-Based Training to Enhance Management Education, *Academy of Management Learning & Education*, Vol. 8, No. 4, 559–573.

ATTITUDES TOWARDS SOCIAL ROBOTS: THE ROLE OF GENDER, BELIEF IN HUMAN NATURE UNIQUENESS, RELIGIOUSNESS AND INTEREST IN SCIENCE FICTION

Jean-Christophe Giger

Universidade do Algarve and Research Centre for Spatial and Organizational Dynamics (CIEO)
(jhgiger@ualg.pt)

Daniel Moura

Universidade do Algarve
(daniel.moura.psi@gmail.com)

Nuno Almeida

Universidade do Algarve
(nasperalmeida@gmail.com)

Nuno Piçarra

Universidade do Algarve
(nuno.psicologia@outlook.pt)

This paper is financed by National Funds provided by FCT- Foundation for Science and Technology through project UID/SOC/04020/2013.

ABSTRACT

The growing presence of social robots (robots designed to interact and collaborate with people, engaging them at a socio-affective level, Breazeal, 2008), in everyday environments, requires a growing attention to how people will behave towards them. Research results suggest a link between attitudes towards social robots and people's intention to work with them (Piçarra *et al.*, 2015). This study (N= 216) investigates the role of the following variables: gender, belief in human nature uniqueness, religiosity and interest in science fiction, as precursors of the attitudes towards social robots. Effects of these variables were studied using multiple regression. Results show men have a more positive attitude towards interactions with robots than women. Belief in human nature uniqueness is a negative predictor of attitudes towards robots with emotions and attitudes towards interactions with robots. Interest in science fiction is a positive predictor of attitudes towards robots with emotions and attitudes towards interactions with robots. Religiosity is a negative predictor of attitudes towards interactions with robots. These results underline the role of individual factors in the successful deployment of social robots in everyday tasks.

Keywords: Social Robots, Negative Attitudes Towards Robots, Belief in Human Nature Uniqueness, Religiosity.

JEL Classification: O33

1. INTRODUCTION

As the presence of technology becomes more ubiquitous, grows the need to understand how people relate to these changes. One of these changes is the social robot. These are autonomous robots capable of interacting with humans in a naturalized fashion by detecting gaze, displaying emotions, establishing social relationships, and exhibiting distinctive personalities (Fong, Nourbakhsh, & Dautenhahn, 2003). One of the tools developed to explore this new relation is the negative attitude towards robots scale (NARS), developed by Nomura, Kanda & Suzuki (2004). This research explores the role of gender, belief in human nature uniqueness, religiosity and interest in science fiction as variables contributing to the formation of attitudes towards social robots.

2. THEORETICAL UNDERPINNINGS

2.1 Attitudes towards robots

Attitudes can be shortly defined as a systematic favorable or unfavorable predisposition, towards something (object or action). The idea that one's attitudes play a major role in determining one's behavior is as old as social psychology research

itself and the concept has been central to models intended to predict behavior and behavior change (See Ajzen & Fishbein, 2005 for a review). Given their role, both in appraising the world and in directing behavior, attitudes have been studied in a large variety of settings, from health (Rew & Wong, 2005) to politics (Pratto, Sidanius, Stallworth & Malle, 1994), from computer use (Selwyn, 1997; Al-Khaldi & Al-Jabri, 1998) to internet learning (Klobas & Clyde, 2000) and acceptance of technology (Davis, 1989).

One of the first attempts at using attitudes to understand people's thoughts and expectations about robots was by Nomura *et al.* (2004). These authors proposed the concept of negative attitudes towards robots, hypothesizing that these negative attitudes could prevent people from interacting with social robots. To measure this concept, the authors developed the Negative Attitudes Towards Robots Scale (NARS).

Several studies have shown that, participants with higher negative attitudes toward interaction with robots tend to take longer to talk to robots (Nomura, Kanda, Suzuki, & Kato, 2004), to have less self-disclosure, but express more emotion in their conversation (Nomura, Kanda, Suzuki, & Kato, 2007), and that responses on the NARS were correlated with different assumptions about robot type (Nomura, Kanda, Suzuki, & Kato, 2006). Additionally, cross cultural differences were found, with Dutch and Chinese participants having lower ratings on NARS than Japanese participants (Bartneck, Suzuki, Kanda & Nomura, 2007). The use of NARS in western countries, however, showed low reliability for some items and problems with factor structure (Syrdal, Dautenhahn, Koay & Walters, 2009; Riek, Adams, & Robinson, 2011). Given this, and the reported influence of nationality on attitudes towards robots, Piçarra, Giger, Pochwatko, and Gonçalves (2015), developed the Portuguese version of the NARS.

The Portuguese version of the NARS (PNARS) is composed of 12 items and 2 factors, negative attitudes towards robots with emotions and negative attitudes towards interaction with robots. The negative attitudes towards robots with emotions subscale (NATRE) is composed of items like, "Something bad might happen if robots developed into living beings"; "I would feel relaxed talking with robots.". The negative attitudes towards interactions with robots (NATIR) is composed of items like, "I would feel uneasy if I was given a job where I had to use robots"; "I would feel nervous operating a robot in front of other people." (see Piçarra *et al.*, 2015).

The authors report Cronbach alphas of .82 for the complete scale, 0.73 for NATRE and 0.75 for NATIR. In a subsequent study Pochwatko, Giger, Róžańska-Walczyk, Świdrak, Kukiela, Możaryn, & Piçarra (2015) confirmed the validity of the two-factor structure.

2.2 Essentialism. The belief in human nature uniqueness

Given the roles envisioned for social robots it is expectable to see the rules of social perception applied to them. One way of making sense of other social agents is through social categorization. That is, to each category is attributed a set of roles, characteristics and expected behaviors. Essentialism is the belief that the members of a given category share a deep, underlying natural essence. Haslam (1998) defines these categories as having a fixed membership, an inherent nature, a sharp boundary, defining features, and homogeneous members. These categories are informative about its members and are supposed to exist independent of human desire and culture. They are historically invariant. Research has shown essentialism to be associated with prejudice, perceived differences between groups, dispositional attributions, and justifications for social inequalities (Demoulin, Leyens, & Yzerbyt, 2006). Besides being used to differentiate social groups, essentialism also plays a role in the definition of what means to be human and the level of humanness attributed to others. Research has shown that, not only people make self-biased evaluations of themselves, but also tend to think of themselves as more human than average (Loughnan *et al.*, 2010).

Social robots occupy an ambiguous social space. They don't pertain to a well-defined category. Endowed with emotions and sometimes envisioned as companions, social robots don't represent just another step in technology, they represent a shift into another category, the quasi or proto Humans (Suchman, 2001). Besides being evaluated by their usefulness, social robots will also be evaluated by the way they display attributes that are judged as uniquely human. As such, the degree of uniqueness that a person attributes to human beings (i.e. belief in human nature uniqueness – BHNU), is bound to affect her judgment and evaluation of robots attempting to display human behavioral and psychological traits.

2.3 Religiosity

Religious traditions have long been recognized as one of the major social forces that shape our worldviews about the place of Human in the world, the meaning of life and what is moral or not. Consequently, religion influence people's perception of the natural world, science and scientific practice (Geraci, 2006). The possible relation between religious beliefs and the value attributed to robotics research has already received some attention (Drees, 2002). For example, Mark Jacob (cited in Metzler & Lewis, 2008) suggested that Shintoism and Buddhism seemed to be extraordinarily open to robots in people's lives. Similarly, in 2005, Anthony Faiola (cited in Metzler & Lewis, 2008) suggested that religion may influence people attitudes toward robots writing that "In Western countries, humanoid robots are still not very accepted, but they are in Japan," [...]. "One reason is religion. In Japanese (Shinto) religion, we believe that all things have gods within them. But in Western countries, most people believe in only one God." Indeed, the Catholic Church tends to perceive machines displaying humanlike features like emotions or moral reasoning, as raising moral and theological problems (Drees, 2002). Interestingly, the three religions of the Book (i.e., Judaism, Christianity and Islam) place Humanity at the center of creation, seeing any attempt to mimic life as immoral and dangerous. The tale of the Golem of Prague or the creature of Doctor Frankenstein, are illustrations of such dilemmas. Consequently, it is reasonable to expect that a person's level of religiosity will affect her judgment and evaluation of robots attempting to display human behavioral and psychological traits.

2.4 Science Fiction

Automatons, humanoid robots and synthetic humans are recurrent themes in science fiction. From Fritz Lang's *Metropolis* to Isaac Asimov's robot series or more recently James Cameron's *Terminator*, science fiction has explored the potential forms robots can take and their relation with human and humanness. Robots have been portrayed as willing to take over the world or wanting to be human (Bartneck, 2004, April). Research suggests that the more people have seen movies with robots, the more positive are their attitudes toward robots (e.g. Riek *et al.*, 2011). In short, science fiction works seem to afford a cultural backdrop against which to think the role of technology in daily life. As such, it is reasonable to expect that a person's level of interest in science fiction influences her judgment and evaluation of social robots.

3. PARTICIPANTS AND PROCEDURE

3.1 Participants

The convenience sample is composed of 216 Portuguese participants (Mean age = 25.88; σ age = 0.53) among whom 164 women and 52 men. Of the sample, 62 participants had below high school qualifications (28.7%), 62 were undergraduate (28.7%), 54 had complete high school (25%), 26 had a master title (12%), 8 were doctoral students (3.7%).

3.2 Procedure

Data were collected during the month of November 2012 through an online questionnaire placed on *Google Docs* platform. Upon access, participants were presented a brief description of the study and information about the duration of the study, data confidentiality and anonymity. Then participants were asked to fill out a set of scales measuring the variables used and socio-demographic information.

3.3 Material

Attitude towards robots was measured with the portuguese negative attitude towards robots scale (P-NARS (Piçarra *et al.*, 2015). The PNARS displayed a good internal reliability, with Chronbach alphas of .85 for the total scale, .76 for NATRE and .78 for NATIR. Participants responded on a 7-point scale (1 = totally disagree to 7 = totally agree), with higher scores indicating a more positive attitude towards robots.

The belief in human nature uniqueness scale (BHNUS; Piçarra, 2015; Piçarra, Giger, Pochatko, & Gonçalves, 2011, May) was used to assess the extent to which people deny the possibility of a human essence to robots. Participants responded on a 7-point scale (1 = totally disagree to 7 = totally agree) to the following six items: "Even if ultra-sophisticated... (1) a robot will never be considered as human being; (2) a robot will never feel the same emotions as a human being, (3) a robot will never use language in the same way as a human being; (4) a robot will always be a mechanical imitation of the human being; (5) a robot will never have consciousness; (6) a robot will never have morality." The scale displays a good internal reliability (Chronbach α = .85). A higher score reflects a stronger belief in human nature uniqueness.

Religiosity (Rel) was measured by four items. Participants were asked to answer on a 7-point scale, to the four following items: 1) how would you describe your belief; 2) to what extent do you consider yourself as religious?; 3) in my life I follow my religion's teachings thoroughly; 4) in my opinion, the teachings and rules of my religion should have a big influence on the model of the society in my country/in the world. The scale shows a good reliability (Chronbach α = .93). Higher scores reflect a stronger level of religiosity.

Interest in science-fiction (SciFi) was measured by two items. Participants were asked to report their liking for science films and books on a 7-point scale ranging from (1) I really dislike it to (7) I really like it. The two items showed a good reliability (Chronbach α = .86). Higher scores reflect a stronger interest for science-fiction.

4. RESULTS

4.1 Descriptive statistics

Table 1 displays the descriptive statistics for the variables used.

Table 1. Descriptive statistics

	Mean	Std. Deviation	Variance	Skewness	Kurtosis
NATRE	3.63	1.23	1.52	-.11	-.21
NATIR	4.82	1.15	1.31	-.31	-.13
BHNU	5.37	1.30	1.70	-.85	.33
Rel	3.20	1.72	2.96	.37	-.92
SciFi	4.57	1.68	2.82	-.42	-.66

Notes: NATRE= Negative attitudes towards robots with emotions; NATIR= Negative attitudes towards interactions with robots; BHNU=Belief in human nature uniqueness scale; Rel= Religiosity; SciFi= Interest in science fiction.

4.2 Correlational analyses

Table 2 displays the correlations between the variables studied. Gender is positively correlated with NATIR and SciFi. Both NATRE and NATIR are positively correlated with SciFi and negatively correlated with BHNU and REL. BHNU is positively correlated with Rel and negatively correlated with Sci-Fi. No relation was found between the level of BHNU and Sci-Fi.

Table 2. Correlations

	Gender	NATRE	NATIR	BHNU	Rel	SciFi
Gender	-					
NATRE	.11	-				
NATIR	.24***	.67***	-			
BHNU	-.08	-.49***	-.34***	-		
Rel	-.11	-.21**	-.26***	.21**	-	
SciFi	.20**	.24***	.33***	-.22***	-.08	-

Notes: Two tailed. * $p < .05$; ** $p < .01$; *** $p < .001$. NATRE= Negative attitudes towards robots with emotions; NATIR= Negative attitudes towards interactions with robots; BHNU=Belief in human nature uniqueness scale; Rel= Religiosity; SciFi= Interest in science fiction.

4.3 Regression analyses

In order to clarify the role of gender, BHNU, Rel and SciFi in the formation of attitudes towards social robots, a series of multiple regression analyses were conducted. Table 3 presents the results of the multiple regression analysis for NATRE and Table 4 presents the results for NATIR.

Table 3. Predictors of NATRE

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	5.54	.46		11.91	.000
BHNU	-.43	.06	-.45	-7.23	.000
Rel	-.07	.04	-.10	-1.64	.103
SciFi	.10	.04	.15	2.37	.019
Gender	.16	.18	.05	.91	.365

Notes: N=216, F (4, 203) = 20.31, $p = .000$, $R^2 = .29$; NATRE= Negative attitudes towards robots with emotions; BHNU=Belief in human nature uniqueness scale; REL= Religiosity; SciFi= Taste for science fiction; Gender coding:1- Female, 2- Male.

Analysis of the results for the model predicting NATRE, shows that BHNU, SciFi, REL and gender account for 29% of the explained variance. Analysis of the individual coefficients identify BHNU as a statistically significant negative predictor of NATRE ($\beta = -.45$), and SciFi as a statistically significant positive predictor of NATRE ($\beta = .15$). That is, a stronger belief in human nature uniqueness leads to a less positive attitude towards robots with emotions. On the other hand, as the level of interest in science fiction increases so does the favorable attitude towards robots with emotions.

Table 3. Predictors of NATIR

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	5.11	.46		11.20	.000
BHNU	-.22	.06	-.24	-3.80	.000
Rel	-.12	.04	-.17	-2.76	.006
SciFi	.16	.04	.23	3.63	.000
Gender	.44	.17	.16	2.56	.011

Notes: N=216, F (4, 203) = 15,78, $p = .000$, $R^2 = .24$; NATIR= Negative attitudes towards interactions with robots; BHNUS=Belief in human nature uniqueness scale; REL= Religiosity; Scifi= Taste for science fiction; Gender coding: 1- Female, 2- Male.

Analysis of the results for the model predicting NATIR, shows that BHNUS, Scifi, Rel and gender account for 24% of the variance in attitudes towards interactions with robots. Analysis of the individual coefficients shows that both BHNUS ($\beta = -.24$) and Rel ($\beta = -.17$) are statistically significant negative predictors of NATIR. Scifi is a statistically significant positive predictor of NATIR ($\beta = .23$). Gender has an effect on NATIR, with men presenting a more favorable attitude. That is, a stronger belief in human nature uniqueness and higher degree of religiosity, is associated with a less positive attitude towards interaction with robots. On the other hand, a stronger interest in science fiction is associated with a more favorable attitude towards interactions with robots. Men, in general, have a more positive attitude towards interactions with robots.

As a summary, BHNU, Rel, Sci-Fi and gender are predictors of attitudes towards robots. However, it must be noted that they perform differently if one is to predict attitudes towards robots with emotions or attitudes towards interactions with robots. Results also suggest that participants are more comfortable with the idea of interactions with robots (NATIR, $M = 4.82$), than with the idea of robots with emotions (NATRE, $M = 3.63$). Also noteworthy is the role of BHNU, that not only is a predictor of both NATRE and NATIR, but also the major predictor of NATRE. This latter aspect is of particular relevance for the deployment of social robots.

5. DISCUSSION

This research set out to explore the role of gender, belief in human nature uniqueness, religiosity and interest in science fiction as antecedents of attitudes towards social robots. The results reported in the previous section confirmed the role of these variables, explaining 29% of the variance of NATRE, and 24% of the variance of NATIR.

Analysis of the individual contribution of each variable shows that BHNU is a negative predictor of both NATRE and NATIR. That is, the degree of uniqueness that a person attaches to humankind has a considerable influence in both attitudes towards interactions with robots and attitudes towards robots with emotions. That is, the stronger the belief in human nature uniqueness, the less positive the attitude towards interactions with robots and towards robots with emotions.

Interest in science fiction is a positive predictor of both NATRE and NATIR. As mentioned in a previous section, given the role of science fiction as cultural backdrop against which to think the role of technology in daily life, it makes sense that people with more interest in science fiction see social robots as a positive challenge, rather than a menace and thus have a more positive attitude both towards robots with emotions and interactions with robots.

Religiousness is a negative predictor of NATIR. As mentioned earlier, western religious traditions don't have a very favorable position towards robots (Drees, 2002; Metzler & Lewis, 2008), which can in part explain this result. Nonetheless it is not to exclude that part of this effect of religiousness is shared with BHNU, as the idea of humans as unique creatures, is a central tenet of western religions.

Finally, gender has an effect on NATIR, with men showing a more favorable attitude towards interactions with robots than women.

These results underline the significance of individual factors in the formation of attitudes towards social robots. If the relevance of attitudes towards robots in human-robot interactions has received some empirical confirmation (Nomura, Kanda, Suzuki & Kato, 2004; Nomura *et al.*, 2007), little is still known about the factors underlying the formation of those attitudes. The present study suggests that personal beliefs about what it means to be human may play a significant role. These results are even more pertinent if we consider that the current trend is towards the use of robots in household and social care tasks, and towards the humanization of robot interfaces (Leite, Martinho, & Paiva, 2013).

On the other hand, given the considerable amount of unexplained variance left, there are probably other factors unaccounted for, requiring further research.

REFERENCES

- AI-Khaldi, A. & Al-Jabri, I. (1998). The Relationship of Attitudes to Computer Utilization: New Evidence From a Developing Nation. *Computers in Human Behavior*, 14, 23-42.
- Ajzen, I., & Fishbein, M. (2005). The Influence of Attitudes on Behavior. In D. Albarracin, B. Johnson & M. Zanna (Eds.), *The Handbook of Attitudes* (pp. 173-221). Lawrence Erlbaum Associates.
- Bartneck, C. (2004, April). From Fiction to Science - A cultural reflection on social robots. Proceedings of the CHI2004 Workshop on Shaping Human-Robot Interaction, 1-4. Vienna.
- Bartneck, C., Suzuki, T., Kanda, T., & Nomura, T. (2007). The Influence of People's Culture and Prior Experiences with Aibo on their Attitude Towards Robots. *AI & Society*, 21, 217-230.
- Breazeal, C., Takanishi, A., & Kobayashi, T. (2008). Social robots that interact with people. In B. Siciliano & O. Khatib (Eds.), *Springer handbook of robotics* (pp. 1349-1369). Springer: Berlin Heidelberg.
- Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of technology. *MIS Quarterly*, 13, 319-340.
- Demoulin, S., Leyens, J., & Yzerbyt, V. (2006). Lay Theories of Essentialism. *Group Processes and Intergroup Relations*, 9, 25-42.

- Drees, W. (2002). Human Meaning in a Technological Culture - religion in an age of technology. *Zygon*, 37, 597-604.
- Fong, F., Nourbakhsh, I., and Dautenhahn, K. (2003). A survey of socially interactive robots. *Robotics and Autonomous Systems*, 42, 143-166.
- Geraci, R. (2006). Spiritual Robots: Religion and Our Scientific View of the Natural World. *Theology and Science*, 4, 229-246.
- Haslam, N. (1998). Natural kinds, human kinds and essentialism. *Social Research*, 65, 291-314.
- Klobas, J. & Clyde, L. (2000). Adults Learning to Use the Internet: A Longitudinal Study of Attitudes and Other Factors Associated with Intended Internet Use. *Library & Information Science Research*, 22, 5-34.
- Leite, I., Martinho, C., & Paiva, A. (2013). Social robots for long-term interaction: a survey. *International Journal of Social Robotics*, 5(2), 291-308.
- Loughnan, S., Leidner, B., Doron, G., Haslam, N., Kashima, Y., Tong, J. & Yeung, V. Universal biases in self-perception: Better and more human than average. *British Journal of Social Psychology*, 49, 627-636.
- Metzler, T. & Lewis, L. (2008). Ethical Views, Religious Views, and Acceptance of Robotic Applications: A Pilot Study. *Association for the Advancement of Artificial Intelligence*, 15- 22.
- Nomura, T., Kanda, T., & Suzuki, T. & Kato, K. (2004). Psychology in Human-Robot Communication: An Attempt through Investigation of Negative Attitudes and Anxiety toward Robots. *Proceedings of the 13th IEEE International Workshop on Robot and Human Interactive Communication (RO-MAN)*, 35-40.
- Nomura, T., Kanda, T., & Suzuki, T. & Kato, K. (2006). Altered attitudes of people toward robots: Investigation through the Negative Attitudes toward Robots Scale. *Proceedings of the AAAI - 06 Workshop on Human Implications of Human Robot Interaction*, 29-35.
- Nomura, T., Kanda, T., & Suzuki, T. & Kato, K. (2007). Prediction of human behavior in human – robot interaction using psychological scales for anxiety and negative attitudes toward robots. *IEEE Transactions on Robotics*, 24, 442-451.
- Nomura, T., Kanda, T., & Suzuki, T. (2004). Experimental investigation into influence of negative attitudes toward robots on human–robot interaction. *AI & Society*, 20, 138-150.
- Piçarra, N. (2015). *Predicting intention to work with social robots* (Doctoral dissertation). Retrieved from <http://sapientia.ualg.pt/handle/10400.1/6854>
- Piçarra, N., Giger, J. C., Pochatko, G. & Gonçalves, G. (2011, May). O Robô Humano: Efeitos do need for cognition, da tomada de perspectiva e das crenças na unicidade da natureza humana na antropomorfização de um robô social [The human robot: effects of the need for cognition, perspective taking and beliefs in human nature on social robot anthropomorphism], *X encontro de psicologia no Algarve*, Faro.
- Piçarra, N., Giger, J.-C., Pochwatko, G., & Gonçalves, G. (2015). Validation of the Portuguese Version of the Negative Attitudes Towards Robots Scale. *Revue Européenne de Psychologie Appliquée/ European Review of Applied Psychology*, 65, 93-104.
- Pochwatko, G., Giger, J.-C., Róžańska-Walczyk, M., Świdrak, J., Kukiela, K., Możaryn, J., & Piçarra, N. (2015). Polish Version of the Negative Attitude Toward Robots Scale (NARS-PL). *Journal of Automation, Mobile Robotics & Intelligent Systems*, 9, 65-72.
- Pratto, F., Sidanius, J., Stallworth, L. & Malle, B. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, 67, 741-763.
- Rew, L. & Wong, Y. (2005). A systematic review of associations among religiosity/spirituality and adolescent health attitudes and behaviors. *Journal of Adolescent Health*, 38, 433-442.
- Riek, L., Adams, A., & Robinson, P. (2011). Exposure to Cinematic Depictions of Robots and Attitudes Towards Them. In *Proceedings of International Conference on Human-Robot Interaction, Workshop on Expectations and Intuitive Human-Robot Interaction*. Lausanne, Switzerland.
- Selwyn, N. (1997). Students' attitudes toward computers: validation of a computer attitude scale for 16-19 education. *Computers & Education*. 28, 35-41.
- Suchman, L. (2011). Subject objects. *Feminist Theory*, 12, 119-145.
- Syrdal, D., Dautenhahn, K., Koay, K., & Walters, M. (2009). The Negative Attitudes towards Robots Scale and Reactions to Robot Behaviour in a Live Human-Robot Interaction Study. AISB 09 Convention: Adaptive and Emergent Behaviour and Complex Systems. Edinburgh, Scotland.

WHO WANTS TO WORK WITH SOCIAL ROBOTS? USING THE THEORY OF REASONED ACTION AND THE THEORY OF PLANNED BEHAVIOR TO PREDICT INTENTION TO WORK WITH SOCIAL ROBOTS

Jean-Christophe Giger

Universidade do Algarve; Research Centre for Spatial and Organizational Dynamics (CIEO)
(jhgiger@ualg.pt)

Nuno Piçarra

Universidade do Algarve
(nuno.psicologia@outlook.pt)

This paper is financed by National Funds provided by FCT- Foundation for Science and Technology through project UID/SOC/04020/2013.

ABSTRACT

With a growing number of robots designed to assist people, while displaying social awareness and competence, the answer to the question what are the factors underlying a person's intention to work with social robots becomes central to human-robot interaction studies. The following study uses the framework proposed by the theory of reasoned action (TRA) and its development, the theory of planned behavior (TPB) to understand a person's intention to work with social robots in the near future. For that purpose, 60 volunteers were shown a short video displaying a social robot. Participants were randomly distributed by two conditions, mechanical or android social robot. Results suggest that attitudes towards working with a social robot is the main predictor for both models (TRA: $\beta = .66$; TPB: $\beta = .55$). Subjective norms and perceived behavioral control did not present significant effects. Comparison of the two models showed no differences in their predictive value, with both accounting for 46% of the variance. These results underline the role of attitudes towards working with social robots in the development of the intention to work with social robots in the near future.

Keywords: Social Robots, Theory of Reasoned Action, Theory of Planned Behavior, Intention to Work.

JEL Classification: O33

1. INTRODUCTION

The growing trend in the automation of everyday tasks, is pushing robots from the confines of science fiction books to the pages of leading international newspapers and newsmagazines. For example, Thomas Friedman asks in the New York Times "How did the robot end up with my job?" (Friedman, 2011, January 10). The Economist reports on the development and use of robots that collaborate and work alongside humans (2013). In Foreign Affairs, Brynjolfsson, McAfee & Spence (2014, November 7), point that "machines are substituting for more types of human labor than ever before". If opinions diverge about the economic effects of the automation of work, they tend to converge when it comes to the need to accept the idea of a future, living with robots and automation (see Brynjolfsson & McAfee, 2012; 2014; Manjoo, 2011, September 26).

The present research explores the usefulness of the theory of reasoned action (TRA, Fishbein & Ajzen, 1975) and the theory of planned behavior (TPB, Ajzen, 1991), as theoretical frameworks to understand people's intention to work with social robots in the near future. Social robots are designed to interact and collaborate with people, and to engage them at an interpersonal and socio-affective level (Breazeal, Takanishi, & Kobayashi, 2008). Unlike computers and industrial robots, social robots given their physical and social presence create a sense of agency akin to that of a living entity (Young *et al.*, 2011). Their introduction in the work place will confront workers with a significant professional and personal challenges. The comprehension of the socio-cognitive factors that underlie and determine people's intention to work with a social robot, is of the utmost importance allowing the development of organizational strategies that promote a smoother transition to this new environment.

2. THEORETICAL FRAMEWORK

Albeit the growing interest in social robots, their presence is still very limited. As such, evaluating peoples' interest in using social robots will have to draw on models that account for pre-volitional and future oriented socio-cognitive variables. One of such variables is intention to perform a behavior. Behavioral intention (BI) has been identified by research in social

psychology as the proximal psychological determinant of overt behavior (Fishbein & Ajzen, 1975; Bagozzi, Baumgartner & Yi, 1989; Webb & Sheeran, 2006 for a review). When a person declares having the intention to perform a given act (e.g. working with social robots in the near future), that person is assigning a subjective probability to the action. BI constitutes a plan of action in pursuit of the behavioral goal (Ajzen, 1985). "Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior. As a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance" (Ajzen, 1991, p. 181). To sum up, BI is a measure of how willing a person is to perform a behavior.

2.1 Theory of Reasoned Action (TRA)

According to Fishbein and Ajzen (1975) the TRA main purpose is to predict BI. According to it, BI is the combined product of attitude and subjective norm towards the target behavior (i.e. the behavior to be performed). All the other variables (e.g. demographic variables, personality traits) would exert their influence on BI indirectly through attitude and subjective norm.

In the TRA attitude is defined as attitude towards a behavior, "the individual's attitude toward performing a particular act in a given situation with respect to a given object..." (Ajzen & Fishbein, 1969, p. 402). Attitude towards a behavior is determined by a person's subjective expectation of a behavior producing a certain outcome, and the subjective value attributed to that outcome, that is, attitudes are determined by a set of behavioral beliefs (Ajzen, 1985). "From an expectancy-value perspective, therefore, attitudes have an emergent quality. They develop in the course of acquiring information about the attitude object, and they keep evolving as existing beliefs change and new beliefs are formed" (Ajzen & Fishbein, 2000, p. 6).

The subjective norm can be understood as the perceived social pressure to perform (or not) a certain action. A person's normative beliefs are a function of the perceived attitude of the relevant others toward the behavior or object in question. "For example, just as a person's attitude toward a given behavior was related to his beliefs about the consequences of performing that behavior and his evaluation of those consequences, his perception of attitudes of relevant others was related to his perception of their beliefs about the consequences of performing the act and his perception of their evaluation of those consequences" (Ajzen & Fishbein, 1972, p. 8).

In summary, the TRA deals with the prediction of a specific behavioral intention in a well-defined circumstance, and assuming the person has complete control over performing the behavior.

It is hypothesized that (H1): Intention to work with a social robot in the near future, is a function of attitude towards working with a social robot and subjective norm (see Figure 1).

2.1.1 Predictive power of the TRA

Since it was first formulated the TRA has been used both in theoretical and applied research, receiving empirical support and proving itself useful in a diverse number of settings, from health behavior (e.g. Beadnell *et al.*, 2008 use the TRA to predict heterosexual men's intention to use condom), to education (e.g. Vincent, Peplau, & Hill, 1998 use the TRA to predict career behavior) and business ethics (e.g. Kurland, 1995 uses the TRA to predict insurance agent's ethical intentions towards their clients). The TRA has also been used to predict several technology related behaviors like the use of a word processor software (Davis, Bagozzi & Warshaw, 1989), acceptance of an expert systems for accountants (Liker & Sindi, 1997), use of internet banking (Yousafzai, Foxall, & Pallister, 2010) and software piracy (Aleassa, Pearson and McClurg, 2011).

2.2 Theory of Planned Behavior (TPB)

One of the central contentions of the previously presented TRA is that the model is only fit to predict behavior that is under complete volitional control. In order to overcome this limitation Ajzen (1985, 1991) advanced the TPB. According to it, perceived behavioral control (PBC), would account for the person's perception of her personal competencies and material resources. The perception of how easy or difficult it will be to perform a particular behavior. "Perceived behavioral control in the theory of planned behavior refers generally to people's expectations regarding the degree to which they are capable of performing a given behavior, the extent to which they have the requisite resources and believe they can overcome whatever obstacles they may encounter" (Ajzen, 2002, p. 676). PBC accounts both for internal or external, real or imagined obstacles and resources. They are the person's perception of the factors that might facilitate or hinder the performance of the behavior. That is, PBC can result from realistic and "not so realistic" evaluations. A high level of perceived behavioral control strengthens the intention, increasing effort and perseverance, thus affecting behavior through BI.

In short, according to the TPB, behavior is a function of intention, which is the combined expression of attitude, subjective norms and perceived behavioral control. The relative importance of these three will vary across situations, behaviors and time.

It is hypothesized that (H2): Intention to work with a social robot is a function of attitude towards working with a social robot, perceived behavioral control and subjective norm (see Figure 1).

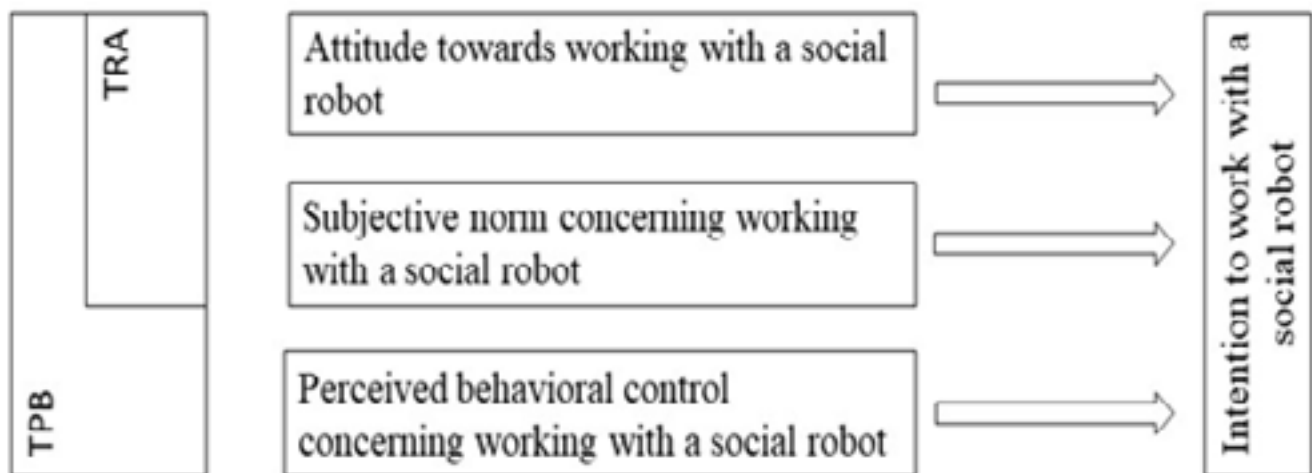
2.2.1 Predictive power of the TPB

Like the TRA, the TPB has received ample empirical confirmation of its usefulness, both in theoretical and applied fields of research (e.g. Ajzen, 1991; Armitage and Conner, 2001). The TPB has been used in the prediction of behaviors like: exercise (see Blue, 1995; Godin, 1994 for reviews), health related behaviors (see Cooke & French, 2008; Godin & Kok, 1996;

McEachan, Conner, Taylor, & Lawton, 2011), sexual behavior (Albarracín, Johnson, Fishbein, & Muellerleile, 2001) buying behavior (Cannière, Pelsmacker, & Geuens, 2009) and consumer adoption intentions (Taylor & Todd, 1995).

The TPB has also been applied to behaviors related to the use of technology, namely, intention to use a spreadsheet software (Mathieson, 1991), online shopping (Hansen, Jensen & Solgaard, 2004), e-commerce adoption (Grandón, Nasco & Mykytyn, 2011), use of social networking sites (Baker & White, 2010), digital piracy (d'Astous, Colbert & Montpetit, 2005; Kwong & Lee, 2002; Liao, Lin & Liu, 2010; Yoon, 2011, 2012) and acceptance of social robots (Tay, Jung & Park, 2014). Albeit several of these studies use modified versions of the TPB (e.g. Baker & White, 2010; d'Astous, Colbert & Montpetit, 2005; Kwong & Lee, 2002, January; Liao, Lin & Liu, 2010; Yoon, 2011), results generally support the TPB model, with attitude towards behavior, subjective norm and perceived behavioral control explaining between 35% and 81% of behavioral intention variance.

Figure 1. The theory of reasoned action and the theory of planned behavior (based on Fishbein & Ajzen, 1975; Ajzen, 1985, 1991)



3. METHOD

3.1 Participants and procedure

The sample for this study is composed of 60 participants (33 males and 27 females) and was collected in the University of the Algarve, Gambelas campus. The mean age is 24 years (SD = 7.33). Ten participants attended science & technology degrees, while 48 attended degrees in social sciences (2 not reported). Forty six are full time students.

Participants were invited to contribute to an experiment about socio-psychological variables mediating the use of new technologies. After being informed about the conditions of participation and confidentiality of the data collected, participants were randomly assigned to one of two video conditions: a mechanical robot (Snackbot) or an android robot (Actroid DER). Participants were evenly distributed by the two conditions. The video was 1 minute and 50 seconds long and was projected on the wall facing the subjects using a ceiling video projector. This allowed for a close to real life size view of the robots. Before watching the videos, participants received the following instructions: "In the future it will be common to interact with robots. This will happen in public spaces (factories, offices, museums) and in our houses. We are going to show you a video with one of those social robots. Your task is to imagine yourself working with this robot in the near future and forming an opinion about it". During the video a female voice narrated the following: "Hello, my name is Snackbot (or Actroid) and I'm a social robot. A social robot is a robot created to interact with people in a natural fashion. In order to do that, my creators included in my design human characteristics like eyes, mouth, language and the capacity to understand and perform social behaviors. In the future, I will be performing such jobs as a hotel receptionists, personal trainer or office clerk. Some even say that in the future I will be responsible for caring for the elders. Goodbye and see you in the future."

At the end of the experiment the participants received more information about the research project and were asked for feedback about the experiment and the theme of social robots.

3.2 Material

Behavioral Intention (BI). Measures the effort a person is willing to invest in order to work with the social robot presented in the video (e.g. I'm willing to try hard to work with this robot in the future: disagree/agree).

Attitude towards working with a social robot (ATW). Measures a person's attitude towards working with the social robot presented in the video (e.g. working with this robot will be useless/ useful).

Subjective norms (SN). Measures the person's beliefs about significant others attitude towards him working with the social robot presented in the video in the future (e.g. people close to me, would approve/ disapprove that I work with robots in the future).

Perceived behavioral control (PBC). Measures the extent that a person sees himself as capable of operating the social robot presented in the video (e.g. It would be easy to work with this robot: disagree/agree).

All the measures are based on Perugini and Conner (2000). Items are measured on a 7-point Likert type scale (1 = minimum to 7 = maximum). Higher scores indicate a higher or more positive level of the variable.

Control variables. In order to control for the possible effects of robot's movement and action during the video the following measures were used, animacy (e.g. inert/ interactive) and likeability (e.g. awful/ nice). All two measures are comprised of 5 items each. These measures are adapted from the godspeed scale, developed by Bartneck, Kulic, Croft and Zoghbi (2009). Animacy (ANI) is defined as the quality of "being alive". Likeability (LIK) is the positive impression about the robot. All the items were measured on a 7-point Likert type scale (1 = minimum to 7 = maximum). Higher scores reflect a higher level of the attribute.

Social Robots used in the video. The manipulation of the level of human-likeness of the robot (mechanical vs. android) was done through the use of videos of two different social robots, Snackbot (https://www.youtube.com/watch?v=5f57dDq5_VQ), an assistive social robot developed at Carnegie Mellon University, and Actroid DR (<https://www.youtube.com/watch?v=ssVvUX7pORc>) a full body humanlike female social robot with a corporate look developed by the Japanese corporation Kokoro.

4. RESULTS

4.1 Preliminary analyses

A first analysis of the data was conducted in order to control for the effects of gender. For that purpose, a multiple analyses of variance (MANOVA) was conducted. No differences were found between genders ($V = 0.06$, $F(4, 55) = 0.83$, $p = .512$).

This study assumes that the effects of robot type are due to the external appearance of the social robots presented in the videos, mechanical versus android. The measures of likability (LIK), and animacy (ANI) are used in order to control for other factors like robot's movements and actions during the video. Results of the MANOVA show that both robots were perceived as having a similar degree of animacy and likeability ($V = 0.07$, $F(2, 57) = 2.01$, $p = .143$).

Research on human-robot interaction suggests that robots' physical appearance, like the presence of limbs (Syrdal, Dautenhahn, Woods, Walters & Koay, 2007), face's shape and size (DiSalvo, Gemperle, Forlizzi & Kiesler, 2002), or height (Lee *et al.*, 2009; Walters, Koay, Syrdal, Dautenhahn & Boekhorst, 2009), affects users' perception of the robot qualities. In order to assess the effects of the social robot appearance (mechanical vs. android) a MANOVA was conducted using ATW and PBC as outcome variables. Analysis of Pillai's trace indicates no statistically significant effects for type of robot ($V = 0.00$, $F(2, 57) = 0.11$, $p = .894$). Analysis of the univariate tests confirmed these results.

4.2 Descriptive statistics

Table 1 shows the descriptive statistics for the scales used in the study. All scales show good reliability results (all $\alpha > .70$).

In order to seize a general impression of participant's characteristics and participant's evaluation of the robots shown in the video, a one sample t-test was conducted, comparing the variables means to the medium point of the scales (i.e., 3.5; see table 1 for results of the t-test).

Table 1. Descriptive statistics

	<i>M</i>	<i>SD</i>	<i>N</i>	Potential Range	Actual Range	Cronbach alpha	Skewness	Kurtosis
ATW	4.21***	1.28	60	1-7	1-7	.93	-0.06	-0.45
SN	3.98*	1.43	60	1-7	1-7	.86	-0.29	-0.31
PBC	4.22***	1.37	60	1-7	1-7	.87	-0.44	-0.58
BI	2.91**	1.39	60	1-7	1-6	.79	0.46	-0.58
ANI	3.60	1.23	60	1-7	1-6	.79	0.36	-0.27
LIK	4.49***	1.23	60	1-7	2-7	.83	0.19	-0.46

Note. Means differ from the middle point of the scale (i.e., 3.5) at * $p < .05$, ** $p < .01$, *** $p < .001$. ATW= attitude towards working with the social robot; SN= subjective norm; PBC= perceived behavioral control; BI= behavioral intention; ANI= animacy; LIK= likability.

There is a general good impression (LIK, $M = 4.49$) and a positive attitude towards working with the social robot presented (ATW, $M = 4.21$), and participants' think it will be easy to work with it (PBC, $M = 4.22$). The idea of working with robots seems to be socially acceptable (SN, $M = 3.98$). Despite the positive attitude toward working with robots, the mean of BI ($M = 2.91$) is significantly below the medium point of the scale. This suggests that although in general people are favorable to the idea of social robots and working with them, at a personal level they may not be particularly interested in doing so.

4.3 Correlations between the components of TRA and TPB

In order to obtain an overview of the strength and direction of the relations between the variables of the TRA and TPB a two-tailed Pearson correlation was conducted (see table 2).

Table 2. Correlations for the measures of TRA and TPB

	ATW	PBC	SN	BI
ATW	-			
PBC	.76*	-		
SN	.66*	.52*	-	
BI	.69*	.59*	.49*	-
Note. * all correlations are significant at $p < .001$. ATW= attitude towards working with the social robot; PBC = perceived behavioral control; SN = subjective norms; BI= behavioral intention.				

As it would be expected from the theoretical models and previous research, attitude towards working with a social robot, perceived behavior control and subjective norms are strongly correlated with intention to work with a social robot in the near future. All the variables show correlation values close to, or above .50, indicating strong positive and significant correlations.

4.4 Regression analyses. Comparing the TRA and the TPB

In order to compare the two models and understand the role of these variables in determining the intention to work with a social robot in the near future, a hierarchical multiple regression analysis was conducted. Variables entered in the first block were ATW and SN (*i.e.* the determinants of intention according to the TRA). Variables entered in the second block were ATW, SN and PBC (*i.e.* the determinants of intention according to the TPB).

Table 3. Predicting intention to work with a social robot using the TRA and the TPB

			BI		
	B	SE B	β	t	Sig.
TRA:					
Constant	-0.30	0.47		-0.63	.528
ATW	0.71	0.14	.66	5.17	.000
SN	0.05	0.12	.05	0.43	.669
TPB:					
Constant	-0.40	0.48		-0.84	.405
ATW	0.60	0.18	.55	3.29	.002
SN	0.05	0.12	.05	0.40	.692
PBC	0.14	0.15	.14	0.94	.351
TRA:	R= .69	R ² = .48	R ² _{adj} = .46	F (2, 57) = 26.36, p = .000	
TPB:	R= .70	R ² = .49	R ² _{adj} = .46	F (3, 56) = 17.83, p = .000	
Difference between models:		F (1, 56) = 0.88, p = .351			
Note. ATW= attitude towards working with the social robot; SN = subjective norms; PBC= perceived behavioral control; BI= behavioral intention.					

The results of the regression analysis (see table 3) indicate that the TRA explains 46% of the variance of intention to work with social robots ($R^2_{adj} = .46$, $F(2, 57) = 26.36$, $p = .000$). Analysis of the beta values indicates that ATW ($\beta = .66$) is a significant positive predictor of the intention to work with a social robot in the near future. That is, the more positive the attitude towards working with a social robot, the stronger the intention to work with a social robot in the near future. On the other hand, no statistically significant effects were found for SN. This apparent lack of effect for SN is still in line with the model predictions, since it is contended that the two variables may have different weights, thus contributing differently to behavioral intention.

These results partly confirm H1: Intention to work with a social robot is a function of attitude towards working with a social robot and subjective norms.

The results of the regression analysis (see table 3) indicate that the theory of planned behavior explains 46% of the variance of intention to work with a social robot ($R^2_{adj} = .46$, $F(3, 56) = 17.83$, $p = .000$). Analysis of the Beta values indicates that ATW ($\beta = .55$) is a significant positive predictor of the intention to work with a social robot in the future. That is, the more positive the attitude towards working with a social robot, the stronger the intention to work with a social robot in the

future. No statistically significant effects were found for PBC and SN. These results partly confirm H2, that the intention to work with a social robot is a function of attitude, perceived behavioral control and subjective norms.

Both models explain the same amount of variance (46%). This is explained by the fact that only ATW has a significant effect on BI. As discussed in the theoretical part, the weight of the variables in the prediction of intention is not fixed, so it is not totally unexpected a situation where the contribution of SN and PBC is negligible. This aspect nevertheless, underlines the importance of measuring all the variables in the model prior to delineating a strategy to increase (or decrease) the intention to perform a behavior. In this case, an intervention drawn towards the change of normative beliefs or control beliefs would be ineffective in changing intention to work with a social robot.

5. DISCUSSION

Both the TRA and the TPB explain the same percentage of the observed variation of the intention to work with a social robot, 46%. In both cases the statistically significant contributor to the model is ATW. Neither SN, nor PBC showed statistically significant effects on intention to work with a social robot in the near future. This suggests that in some contexts assessing attitude towards working with a social robot may be enough to predict intention to work with a social robot.

It should be noted, however, that both models argue that, although behavioral intention is the product of attitudes towards the object and subjective norms (attitudes towards the object perceived behavioral control and subjective norms in the case of TPB), these variables may contribute with different weights, given different contexts. Thus, the fact that no statistically significant effects were identified for SN and PBC, does not mean that these variables are not relevant for the study of intention to work with a social robot in the near future, or that these variables will not prove to be the main predictors of intention in a different context.

The lack of effect for subjective norm may result from the limited presence, and lack of knowledge about social robots among the layperson. This may limit a person's expectations about what significant others think of the subject. The lack of effect for PBC may have the same cause. Given the limited chances to interact with a real robot, people may find difficult to evaluate their proficiency at doing so and judging what factors can constrain an effective interaction.

Contrary to previous research (e.g. Bartneck, Kanda, Mubin, & Al Mahmud, 2009; DiSalvo *et al.*, 2002; Ellis *et al.*, 2005; Powers, Kramer, Lim, Kuo, Lee, & Kiesler, 2005; Syrdal *et al.*, 2007) that suggests that robot design has an influence in the perception of its qualities (e.g. intelligence, competence and friendliness), this research found no effects. Several motives can account for this. First, most of these studies were using physical robots, which might have enhanced the effect of robot design. Second, given the limited access people have to social robots, it might be difficult to imagine how robot design is going to affect interactions. Third, none of these studies used the variables of the TRA/ TPB. It is possible that robot design has a negligible impact on these variables.

In brief, it can be said that both TRA and TPB are useful models to understand intention to work with social robots in the future, as both models account not only for personal tendencies, but also for the social impact that social robots will have in the person's social network. The fact that SN and PBC do not present statistically significant effects in the particular context of this study should not be interpreted as a limitation of the models but as an appeal for further research.

REFERENCES

- Ajzen, I. (1985). From intentions to actions: a theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.) *Action control. From cognition to behavior* (pp. 11-39). Berlin: Springer-Verlag.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Ajzen, I. (2002). Perceived Behavioral Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behavior. *Journal of Applied Social Psychology*, 32, 4, 665-683.
- Ajzen, I., & Fishbein, M. (1969). The prediction of behavioral intentions in a choice situation. *Journal of experimental social psychology*, 5, 400-416
- Ajzen, I., & Fishbein, M. (1972). Attitudes and normative beliefs as factors influencing behavioral intentions. *Journal of Personality and Social Psychology*, 21, (1), 1-9.
- Ajzen, I., & Fishbein, M. (2000). Attitudes and the Attitude-Behavior Relation: Reasoned and Automatic Processes. *European Review of Social Psychology*, 11, (1), 1-33.
- Albarracín, D., Johnson, B., Fishbein, M., & Muellerleile, P. (2001). Theories of reasoned action and planned behavior as models of condom use: a meta-analysis. *Psychological bulletin*, 127(1), 142-161.
- Aleassa, H., Pearson, J., & McClurg, S. (2011). Investigating Software Piracy in Jordan: An Extension of the Theory of Reasoned Action. *Journal of Business Ethics*, 98, 663–676.
- Armitage, C., & Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40, 471–499.
- Bagozzi, R. P., Baumgartner, J., & Yi, Y. (1989). An investigation into the role of intentions as mediators of the attitude-behavior relationship. *Journal of Economic Psychology*, 10 (1), 35-62.

- Baker, R., & White, K. (2010). Predicting adolescents' use of social networking sites from an extended theory of planned behaviour perspective. *Computers in Human Behavior*, 26, 1591–1597.
- Bartneck, C., Kanda, T., Mubin, O., & Al Mahmud, A. (2009). Does the Design of a Robot Influence Its Animacy and Perceived Intelligence? *International Journal of Social Robotics*, 1 (2), 195-204.
- Bartneck, C., Kulic, D., Croft, E., & Zoghbi, S. (2009). Measurement Instruments for the Anthropomorphism, Animacy, Likeability, Perceived Intelligence, and Perceived Safety of Robots. *International Journal of Social Robotics*, 1, 71–81.
- Beadnell, B., Baker, S., Gillmore, M., Morrison, D., Huang, B., & Stielstra, S. (2008). The theory of reasoned action and the role of external factors on heterosexual men's monogamy and condom use. *Journal of Applied Social Psychology*, 38 (1), 97–134.
- Blue, C. (1995). The predictive capacity of the theory of reasoned action and the theory of planned behavior in exercise behavior: An integrated literature review. *Research in Nursing & Health*, 18, 105 - 121.
- Breazeal, C., Takanishi, A., & Kobayashi, T. (2008). Social robots that interact with people. In B. Siciliano & O. Khatib (Eds.) *Springer handbook of robotics* (pp. 1349-1369). Berlin, Heidelberg: Springer.
- Brynjolfsson, E. & McAfee, A. (2014). *The second machine age. Work, progress, and prosperity in a time of brilliant technologies*. New York: W.W. Norton & Company.
- Brynjolfsson, E., & McAfee, A. (2012). Thriving in the Automated Economy. *The Futurist*. Retrieved from http://ebusiness.mit.edu/erik/ma2012_brynjolfsson_mcafee.pdf
- Brynjolfsson, E., McAfee, A., & Spence, M. (2014, November 7). New world order. Labor, capital and ideas in the power law economy. *Foreign Affairs*. Retrieved from <http://www.foreignaffairs.com/articles/141531/erik-brynjolfsson-andrew-mcafeeand-michael-spence/new-world-order>
- Cannière, M., Pelsmacker, P., and Geuens, M. (2009). Relationship Quality and the Theory of Planned Behavior models of behavioral intentions and purchase behavior. *Journal of Business Research*, 62, 82–92.
- Cooke, R., & French, D. P. (2008). How well do the theory of reasoned action and the theory of planned behaviour predict intentions and attendance at screening programmes? A meta-analysis. *Psychology & Health*, 23, 745-765.
- D'Astous, A., Colbert, F., & Montpetit, D. (2005). Music Piracy on the Web – How Effective Are Anti-Piracy Arguments? Evidence From the Theory of Planned Behaviour. *Journal of Consumer Policy*, 28, 289–310.
- Davis, F., Bagozzi, R., and Warshaw, P. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management science*, 35, (8), 982-1003.
- DiSalvo, C., Gemperle, F., Forlizzi, J., & Kiesler, S. (2002) All robots are not created equal: the design and perception of humanoid robot heads. *Proceedings of the 4th conference on Designing interactive systems processes practices methods and techniques*, 321-326. ACM.
- Ellis, L. U., Sims, V. K., Chin, M. G., Pepe, A. A., Owens, C. W., Dolezal, M. J., Shumaker, R., *et al.* (2005). Those A-Maze-Ing Robots: Attributions of Ability are Based on Form, not Behavior. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 49 (3), 598-601.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. London: Addison-Wesley Publishing Company.
- Friedman, T. (2011, January 10). How did the robot end up with my job? *The New York Times*. Retrieved from http://www.nytimes.com/2011/10/02/opinion/Sunday/friedman-how-did-the-robot-end-up-with-my-job.html?_r=0
- Godin, G. & Kok, G. (1996). The theory of planned behavior: a review of its implications to health related behaviors. *American journal of health promotion*, 11 (2), 87-98.
- Godin, G. (1994). Theories of reasoned action and planned behavior: usefulness for exercise promotion. *Medicine and science in sports and exercise*, 26, (11), p. 1391-1394
- Grandón, E., Nasco, S. and Mykytyn, P. (2011). Comparing theories to explain ecommerce adoption. *Journal of Business Research* 64, 292–298.
- Hansen, Jensen and Solgaard, (2004). Predicting online grocery buying intention: a comparison of the theory of reasoned action and the theory of planned behavior. *International Journal of Information Management* 24, 539–550.
- Kurland, N. (1995). Ethical intentions and the theories of reasoned action and planned behavior. *Journal of Applied Social Psychology*, 25, 297-313.
- Kwong, T. & Lee, M. (2002, January). *Behavioral Intention Model for the Exchange Mode Internet Music Piracy*. Proceedings of the 35th Hawaii International Conference on System Sciences, HICSS, 2481-2490. IEEE.
- Lee, M. K., Forlizzi, J., Rybski, P. E., Crabbe, F., Chung, W., Finkle, J., Glaser, E., *et al.* (2009). The snackbot: documenting the design of a robot for long-term human-robot interaction. *Proceedings of the 4th ACM/IEEE international conference on Human robot interaction*, 7-14. ACM.

- Liao, C., Lin, H.-N., & Liu, Y.-P. (2010). Predicting the Use of Pirated Software: A Contingency Model Integrating Perceived Risk with the Theory of Planned Behavior. *Journal of Business Ethics*, 91, 237–252.
- Liker, J. & Sindi, A. (1997). User acceptance of expert systems: a test of the theory of reasoned action. *Journal of engineering and technology management*, 14, 147-173.
- Manjoo, F. (2011, September 26). Will robots steal your job? You're highly educated. You make a lot of money. You should still be afraid. *Slate Magazine*. Retrieved from http://www.slate.com/articles/technology/robot_invasion/2011/09/will_robots_steal_your_job.html
- Mathieson, K. (1991). Predicting User Intentions: Comparing the Technology Acceptance Model with the Theory of Planned Behavior. *Information Systems Research*, 2, (3), 173-191.
- McEachan, R., Conner, M., Taylor, N., & Lawton, R. (2011). Prospective prediction of health-related behaviours with the Theory of Planned Behaviour: a meta-analysis. *Health Psychology Review*, 5, (2), 97-144.
- Perugini, M. & Conner, M. (2000). Predicting and understanding behavioral volitions: the interplay between goals and behaviors. *European Journal of Social Psychology*, 30, 705 -731.
- Powers, A., Kramer, A., Lim, S., Kuo, J., Lee, S., & Kiesler, S. (2005). Eliciting Information from People with a Gendered Humanoid Robot. *IEEE International Workshop on Robot and Human Interactive Communication ROMAN*, 158-163, 2005. Retrieved from <http://www.aaronpowers.com/PowersEtAlRoman2005.pdf>
- Syrdal, D., Dautenhahn, K., Woods, S., Walters, M., & Koay, K. (2007). Looking Good? Appearance Preferences and Robot Personality Inferences at Zero Acquaintance. *Proceedings of AAAI Spring Symposia*, 86-92. Retrieved from: <https://www.aaai.org/Papers/Symposia/Spring/2007/SS-07-07/SS07-07-019>
- Tay, B., Jung, Y., & Park, T. (2014). When stereotypes meet robots: The double-edge sword of robot gender and personality in human–robot interaction. *Computers in Human Behavior* 38, 75–84.
- Taylor, S. & Todd, P. (1995). Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *International Journal of Research in Marketing*, 12, 137-155
- Vincent, P., Peplau, L., & Hill, C. (1998). A longitudinal application of the theory of reasoned action to women's career behavior. *Journal of Applied Social Psychology*, 28, (9), 761-778.
- Walters, M. L., Koay, K. L., Syrdal, D. S., Dautenhahn, K., & Te Boekhorst, R. (2009). Preferences and perceptions of robot appearance and embodiment in human-robot interaction trials. *Procs of New Frontiers in Human-Robot Interaction*, 136-143.
- Webb, T. L., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin*, 132(2), 249-268.
- Yoon, C. (2011). Theory of Planned Behavior and Ethics Theory in Digital Piracy: An integrated Model. *Journal of Business Ethics*, 100, 405–417.
- Yoon, C. (2012). Digital piracy intention: a comparison of theoretical models. *Behaviour & Information Technology*, 31(6), 565–576.
- Young, J., Sung, J., Voids, A., Sharlin, E., Igarashi, T., Christensen, H., & Grinter, R. (2011). Evaluating Human-Robot Interaction. Focusing on the Holistic Interaction Experience. *International Journal of Social Robotics*, 3, 53 –67.
- Yousafzai, S., Foxall, G., & Pallister, J. (2010). Explaining Internet Banking Behavior: Theory of Reasoned Action, Theory of Planned Behavior, or Technology Acceptance Model? *Journal of Applied Social Psychology*, 40 (5), 1172–1202.

PEDESTRIAN AND CYCLING ROUTES AND PATHS: TOURIST ANIMATION IN THE ALGARVE

Isabel Teotónio

University of the Algarve, School of Management, Hospitality and Tourism
(iteotonio@ualg.pt)

Ana Isabel Renda

University of the Algarve, School of Management, Hospitality and Tourism
(arendaa@ualg.pt)

ABSTRACT

Environmental and cultural resources are widely recognized as the most important way to promote a destination, a tourism experience and to revitalize natural and rural areas. In fact, paths and routes for walking and cycling, are getting more and more adepts everywhere (Tovar and Carvalho, 2011).

This paper intends to comprehensively examine the most important tourism routes in the Algarve, from the perspective of tourist animation agents. The aim of the study is to characterize tourism agents based in the Algarve, that offer animation products and services in the three main routes of the region: Rota Vicentina, Rota do Guadiana and Via Algarviana.

As a methodology a questionnaire applied to the agents of tourist animation in the Algarve is used. The study considers all the agents that are registered on the national tourism register (Turismo de Portugal, 2015a) as tourist animation companies and maritime tourist operators. Data is processed in Statistical Package for the Social Sciences (SPSS), version 22.

The study analyses two different aspects: the legal form, the typology of the agents, the qualifications of its managers and employees and the existing or non-existing partnerships between them and with other stakeholders. On the other hand, the areas in which agents carry out their activity, the tourist activities/experiences they offer, the frequency, season, duration of the activities and the profile of the participants.

The results reveal the diversity and also the fragmentation of the tourism industry in the animation area. There is also a need to improve partnerships with regional, national and international agents.

Keywords: Routes, Walking and Cycling, Tourism, Animation.

JEL Classification: Q26, Z39

1. INTRODUCTION

Nowadays, there is a consensus that the most important way to promote a destination, to provide a memorable tourist experience and to revitalize natural and rural areas is to develop and promote environmental and cultural resources. In this context, paths and routes for walking and cycling, are getting more and more adepts everywhere. People want to contact with nature, to be part of a new social and cultural reality, to do exercise, to be healthy and to run away from the massification of the cities.

As Rodrigues (2006) affirms, trekking has been gaining prominence as a leisure and tourism activity in many countries. This activity has great growth potential in Portugal, since the country has resources of great interest. This paper presents the supply in the pedestrian rails in the Algarve in what concerns animation touristic products. It is important to consider that this kind of tourism infrastructure can contribute, in a sustainable way, to the development of tourism in rural and natural areas. In this context it is necessary to know the desires and needs of the tourists segments, both for practitioners and non-practitioners to adapt services to their expectation.

It is important to understand the profile of the Portuguese and the foreign walkers because there are some significant differences for example in their behaviour and environmental attitude, in the context of vacations. However we believe that it is essential first to identify who is working in this area and what are the results of that work experience to promote pedestrian paths, tourist infrastructures and sustainable management adapting to the preferences and fears of each group.

This paper intends to comprehensively examine the most important tourism routes in the Algarve, from the perspective of tourist animation agents. The study pretends to characterize tourism agents based in the Algarve that offer animation products and services in the three main routes of the region: Rota do Guadiana, Rota Vicentina and Via Algarviana.

2. LITERATURE REVIEW

2.1 Legal framework

Tourist animation services have been growing significantly in recent years (Sousa, 2014). For that reason a gradual effort has been developed to regulate the activity.

Portuguese legislation consider tourist animation all the recreational, sports or cultural activities, which include outdoor and cultural tourism that can benefit the region (n.º 3, Decreto-Lei n.º 95/2013). The outdoor activities (also called active tourism or adventure tourism), are the activities that take place predominantly in natural spaces. Those activities represent diverse tourist experiences, the opportunities to discover the nature and the landscape and a new form of space fruition. They could take place in physical facilities designed for this purpose or in any other location in the region. The outdoor activities should be logistically organized, must have supervision by the suppliers and they also require a physical interaction between tourists and the environment.

The same law clarifies further that cultural tourism activities are pedestrian or transported activities that promote contact with the cultural and natural heritage through a mediation between the tourist and the cultural resource in order to share knowledge. These categories do not include: (a) the organization of holiday camps; (b) the organization of shows, exhibitions, congresses, events of any kind (c) the rental of animation equipment.

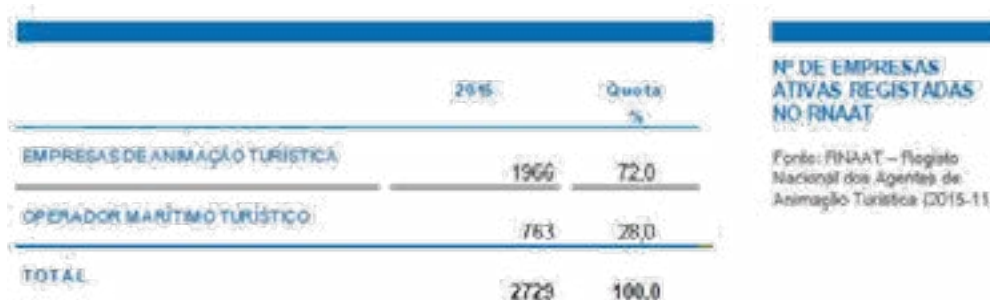
Tourist animation must be recognized as nature tourism (n.º 20, Decreto-Lei n.º 95/2013) when integrated into the National System for Classified Areas (SNAC) and when they are not located in the urban perimeters or in the national, regional and local roads.

The same law mentions tourist entertainment activities, classified as tourist-maritime activities. Those activities could integrate: a) the maritime tourist rides; b) rent a boats with or without crew; d) services performed by river or sea taxi; e) tourist fishing; f) maritime-tourism services provided through the use of boats (moored or anchored and without means of propulsion or sealed); g) hire or use of jet skis and small boats, exempt from registration; h) other services, in particular those relating to equipment trailer services recreational character (i.e. bananas, parachutes, water skiing). All the equipment used in maritime activity-tourism must attend to the requirements and technical procedures, particularly in terms of security.

2.2 Tourist agents in Portugal

According to the information provided by the RNAAT- National Register of Tourist Agents (Turismo de Portugal, 2015a), 2729 companies were in activity in November 2015 (more 593 companies than in November 2014). 72 % of these were tourist animation companies and 28% were maritime operators (Figure 1).

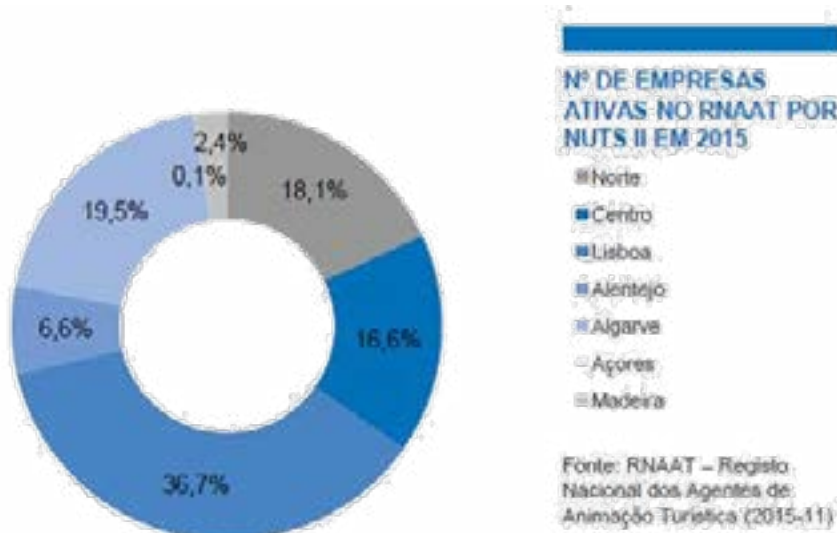
Figure 1 – Active companies registered in RNAAT



Source: Turismo de Portugal (2015b)

The Lisbon and Algarve regions are the ones with the highest number of registered companies, with 37% and 20%, respectively (Figure 2).

Figure 2 – Registered companies by region



Source: Turismo de Portugal (2015b)

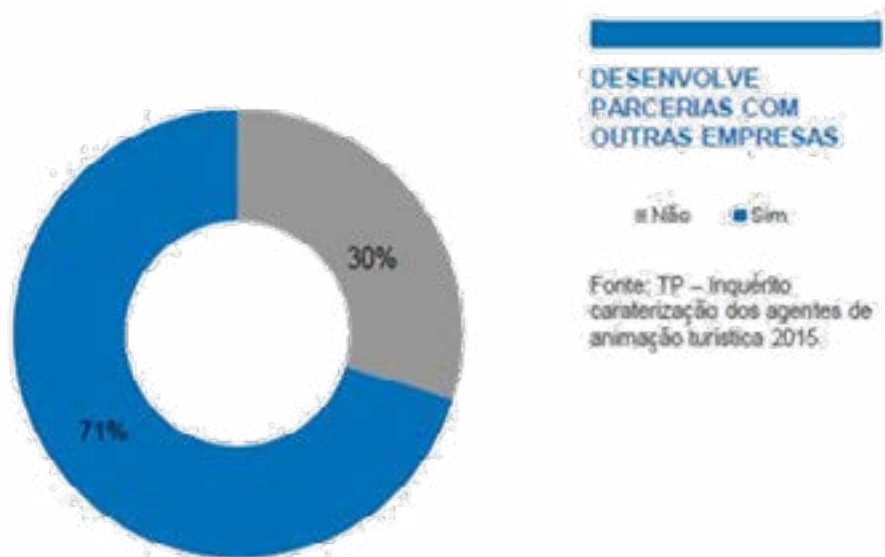
The survey carried out shows that most companies have diverse codes of economic activities (CAE). Only 35% of those companies indicated the CAE 93293, corresponding to the organization of tourist activity as the main activity.

When questioned about their turnover, 38% of tourist animation companies mentioned that they had a turnover around 10,000€, in 2014, and 23% claim to have had above 100,000€. More than a half reported that, in 2014, their turnover increased 51%, compared with the previous year. Approximately 63% of the companies expected to increase the turnover in 2015.

With regard to communication, 80% of tourist animation companies claim to have a website and 85% say they are present in a social network.

According to the companies that participated in this study, 71% claim to have partnerships with other entities for the definition of new tourist products (Figure 3). The regions where these partnerships are more frequent, the North of the country (80%), the Alentejo region (78%) and the Center of Portugal (77%). On the contrary, in the Algarve and in Madeira there is less investment in this strategy (58% and 54%, respectively).

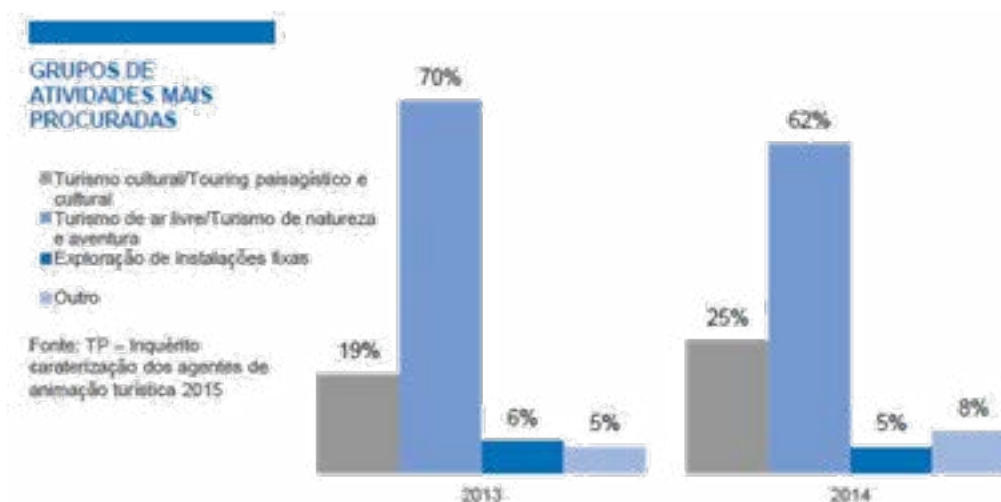
Figure 3 – Partnerships with other companies



Source: Turismo de Portugal (2015b)

The companies interviewed claim that tourism outdoors activities /nature and adventure tourism are the most sought activities (62%) (figures 4 and 5). Furthermore, the companies include as the most important activities the maritime tours, guided tours to museums, monuments, and other sites of patrimonial relevance, and the rental of vessels with crew.

Figure 4 – Most searched activities



Source: Turismo de Portugal (2015b)

Figure 5 – The 5 most searched activities



Source: Turismo de Portugal (2015b)

The companies affirm the average duration of the programs is less than a day (57%) and only 23 % of companies claim to have programs that last longer than one day. With regard to the number of clients, 54% of the companies refer not more than 500 customers per year, and only 11% claim to have more than 10,000 customers/participants in 2014.

For 42% of those companies, the demand increased in 2014. They add that most customers who are looking for this kind of activity are between the ages of 25 and 54 years (67%) and, to 89% of the companies, customers are individual participants.

In 2014 an increase in the weight of the international market is recognized (from 49% in 2013 to 54% in 2014). United Kingdom and Spain are mentioned as main markets and France and Germany are in the 3rd and 4th position in the ranking.

2.3 Tourist animation

Nowadays tourist animation is a fundamental element in any destination (Almeida, 2003). Increasingly tourism destinations must be dynamic, diverse and complete. Thus, the tourist agents should work with other important stakeholders such as tourist accommodation, catering, transport and other support services. This coordinated supply can provide a competitive composite tourism product (Vieira, 2006, p. 27).

In this context, the tourist entertainment can be considered an integrated part of tourism supply, particularly important in nature tourism, eco-tourism or rural tourism in which tourists seek, above all, authentic experiences. Tourist animation should be geared to awareness, preservation and protection of natural, historical and cultural heritage. The promotion of endogenous resources (e.g. fauna, flora, gastronomy, crafts) is also a very important element to develop tourism in natural or rural areas. This kind of activity can contribute to strengthening the sense of belonging of the community and therefore to the enhancement of its identity. This animation activity can contribute to innovation, attractiveness of the tourist destination, new job and additional income opportunities and can also encourage longer stays at the destination.

To Krippendorff (1989, p. 223), the animation should “(...) provide the courage to externalize, to touch on forgotten resources, inform, suggest, encourage, create favourable conditions and lead by example. Anyway, free human beings, give you the freedom to become active.” The author adds that this activity requires the reduction of barriers and develops the pleasure of discovery and the desire for cultural contact, encouraging personal effort, individual creativity and spirit of initiative.

Animation can be defined as the set of activities offered to tourists by public or private entities, with the purpose of restoring physical and emotional balance. These could be related to culture, recreation, sports, training, dissemination or leisure (Chaves and Mesalles, 2001). “In places where animation is more than just the supply of rooms and organization, it is necessary for it to overcome for some tourists the discrepancies between wishes and abilities.” (Medlik, 1991, p. 233).

2.4 Hiking routes

According to the European Ramblers Association (ERA, 2017), walking is moving on foot in the outdoors. It is a free-time activity with physical movement of different intensities which supports both mental and physical well-being. We can consider that a typical walk has a duration of more than one hour, has been planned in advance, use appropriate resources and may require suitable equipment.

The practice of hiking and outdoor activities in Europe has been growing. The organized groups are also increasing and, in many cases, the reasons for the strong demand is related to easy access and the low cost associated with their practice. Hall and Page (1999) reported that in addition to the financial availability there are other factors that influence the demand for this type of tourism. Seasonality and weather conditions influence the practice of outdoor activities. In the case of hiking, too much heat, rain or snow are unfavourable conditions. The gender is also a powerful factor for this practice. In fact, since women with children have less free time and tend to participate less in leisure activities, the hiking activity is an exception

because women join the hiking programs in family, with small children. The same authors argue that more qualified the people, with higher income and their own transport, the more they tend to seek more active leisure forms and a variety of activities, both in and outside their residence area.

Tourism associated with walking is today considered, as referred by Kouckner and Lyard (2001), as a challenge to local development. This is a very common activity among the north European population.

Its practice has been changing. It goes from an informal stroll to an organized activity, a benefit enhancer in the area of the residence and beyond.

The walk trails could be the main or a complementary tourist product in a destination. In any case it is a kind of activity that enriches tourist experience.

There are specialized tourist operators in this kind of product. They can offer all included services such as self-guided possibilities, travellers, place of accommodation, with daily departures to different routes, individual services.

The implementation of pathways is often a form of revitalization of old paths. It is extremely important in a pedestrian path to be well signposted, able to be traversed without maps or descriptive texts. This implementation involves the preparation of a safe and comfortable experience and several entities may be responsible for its creation and implementation (public, private sector and non-profit organizations).

2.5 Marks used in hiking routes

The main infrastructure for the practice of hiking are the hiking routes, or railings, i.e. roads, promoted and disseminated for this purpose.

E-Paths are the European long distance paths (figure 6) which link the countries from North Cape to Crete and from the Atlantic Ocean to the Carpathians and the Black Sea. There are 12 E-Paths, bearing the names of E1 to E12. These E-Paths are waymarked and maintained by the members of the European Ramblers Association (ERA-EWV-FERP). The E-Paths run on existing national or regional trails with their own marking. However, it has been agreed to identify them also with a uniform marking: a blue shield with the yellow stars of Europe, in the middle of which is the letter E and the corresponding number of the E-path. Under the shield is also included the website address of the European Ramblers Association. <http://www.era-ewv-ferp.com/walking-in-europe/e-paths/>.

Each route should be clearly marked and it is usual to find published guides that provide information about directions, time required, conservation state, security, cultural and natural values and relevant landscape.

Figure 6 - European long distance paths



Source : <http://www.era-ewv-ferp.com/walking-in-europe/e-paths/>

The walking routes are classified as linear pathways/open: those that begin and end in different locations; circular/closed - those that begin and end in the same place.

The Great Routes (GR) cover more than 30 kilometres. There are trans-European routes, such as the Atlantic Way (GR-E9) which starts in St. Petersburg in Russia and crosses the whole of Europe. For this kind of route is not possible to travel on a single day. The registration and allocation of the number of the major routes are made at a national level. When these routes are trans-European (starting or ending in Portugal and more than three countries), the numbering is supplemented by the letter E (Europe) and its European numbering.

Small Routes (PR) are less than 30 kilometres long, can be travelled on a single day, and are typically set in one municipal area. They are registered by municipalities. If a route takes place in the territorial division space of two municipalities, it is assigned the numbering referring to the county with more territory covered. The numbering should be complemented with the designative letters of the municipality.

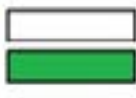
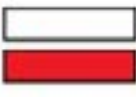
Local Routes (PL) just cover short distances.

The colours used to indicate these three different pathways are red and white (GR), yellow and red (PR), and green and white (PL), respectively.

The routes are signposted with a range of equipment, including poles and direction arrows, informative arrows and interpretation panels. In the routes, at the beginning and/or end of each section there are interpretative panels to inform walkers about that location, including the natural and cultural heritage, and accommodation and food facilities available there.

The maps in these panels have a set of symbols for each information item mentioned above, described in the following figure 7.

Figure 7 – Signaling for local, small and great routes

		Correct way	Wrong way	Change of direction		temporarily coincides with the great route (GR)	temporarily coincides with the small route (PR)
Local Route	PL			Turn left	Turn right		
							
Small Route	PR			Turn left	Turn right		
							
Great Route	GR			Turn left	Turn right		
							

Source: own elaboration based on <http://www.fcportugal.com/Percursos.aspx>

2.6 Pedestrian routes in the Algarve

The signposted footpaths in Portugal have to be approved by the Federation of Camping and Mountaineering. This is an essential element in the routes because the well-defined routes offer security to all who follow them. Walking is an activity within the reach of anyone who just needs to follow the signs on the ground in order to not getting lost.

The signage used in Portuguese territory to mark pedestrian routes is registered by the Federation of Camping and Mountaineering of Portugal at the National Institute of Industrial Property (INPI) (Tovar, 2010) of Great, Small or Local Routes Route, internationally recognized and accepted, as we mentioned before. This signposted are similar to the ones used by the countries of southern Europe (for example Spain or France).

The Algarve is known because of the beaches and the golf courses and not for his nature tourism, ecotourism or integrated forms of tourism that promote walking and cycling. Despite this, the region also has a lot to resources in these areas. The pedestrian routes that we consider in this study are a very good example of the resources and tourism product potentiality: Via Algarviana, Rota do Guadiana and Rota Vincentina.

These routes, as well as the surrounding areas, have distinctive features and tourist resources to tourism activity, some of them already developed, others in the developing stage. Those territories are characterized by its proximity from the main tourist area but, at the same time, by the low demographic density levels due to migration flow to the coastal areas and to foreign countries, the abandonment of traditional lands, activities and practices.

Via Algarviana (figure 8) has been developed by Almargem, a non-governmental organization, to generate sustainable economic opportunities. With this goal it is intended to attract activities and population. It is the main pedestrian route in the Algarve and it crosses all the region through the inland, establishing the connection between the Rota do Guadiana and the Rota Vincentina (the other two routes that we consider in this research).

Every year, Via Algarviana attracts thousands of pedestrians and provides a new way of life for local businesses. Most of the businesses located in the geographic area are tourism accommodation and restaurants.

Figure 8 – Via Algarviana



Source: <http://radicalflow-adventure.blogspot.pt/2013/01/caminhadas-planeamento-e-dicas.html>

The Rota do Guadiana (figure 9), smaller than the previous route, stretches from Vila Real de Santo António to Alcoutim. In Alcoutim it connects with Via Algarviana. It is located in a poor territory, with a low population density.

Figure 9 – Rota do Guadiana



Source : <http://escritocomluz.blogspot.pt/2016/01/gr-15-grande-rota-do-guadiana.html>

The Rota Vincentina, managed by Associação da Rota Vincentina, presents distinct features. It integrates the private sector and it is in a different stage of tourism development, if compared with the other routes, in terms of product life cycle (Butler, 1980).

Figure 10 – Rota Vincentina



Source : <http://adphaa.blogspot.pt/2012/09/a-rota-vicentina-e-via-algarviana-estao.html>

However, all the three sub regions need more development. The design of new tourism products to complete and add value to the areas associated to the sustainable use of the resources is also necessary.

3. METHODOLOGY

After an initial stage, based mainly on the analysis of secondary data to understand the dynamics of tourist animation in Algarve environmental areas, the authors adopted the method of observation in the exploratory stage of the research. This technique allowed the researchers to observe, in real time, how agents operate with tourists in the animation activities in the territory.

The use of this kind of methodological approach does not easily guarantee the validity of the data and consequent generalization. For this reason, it was decided to apply a questionnaire to the animation agents from the Algarve region, so that data triangulation could be possible.

All the agents that are registered on the national tourism register (Turismo de Portugal, 2015a) are considered, namely the tourist animation companies and maritime tourist operators. Data is processed in Statistical Package for the Social Sciences (SPSS) version 22.

The main aim of the study is to understand those agents, to know their products and services portfolio and to recognize the places where animation agents operate in the Algarve. In particular it is essential to know if they operate in these three major routes in the region: Rota do Guadiana, Rota Vincentina and Via Algarviana.

Thus the study analyses two different aspects: (1) the legal form, the typology of the agents, the qualifications of its managers and employees and the existing or non-existing partnerships between them and with other stakeholders; (2) the areas in which agents carry out their activity, the tourist activities/experiences they offer, the frequency, season, duration of the activities and the profile of the participants.

A questionnaire was prepared consisting of several sections, arranged sequentially and underlying themes: (1) profile of agents; (2) profile of participants in the activities/tourist experiences; (3) profile of employees; (4) profile of those responsible.

The questionnaire consists of open and closed questions in which respondents are asked to indicate the characteristics associated with each of the profiles.

It is considered, as the population of the study, all the tourist agents listed in the national register of tourism (Turismo de Portugal, 2015a), a total of 584. An e-mail was sent to these companies, with the link to the questionnaire in October 2016. Until February 2017, 32 responses were received representing a response rate of 5.5%. It should be noted that, in order to gather more responses, the questionnaire was sent back in November 2016 and in February 2017.

Bearing in mind that the sample obtained is not representative of the population under study due to its small size, it was decided to carry out a descriptive analysis of the results obtained not performing another kind of analysis.

To make the contents of the graphics less heavy in some cases only the categories with a percentage above 10% are presented.

4. RESULTS AND DISCUSSION

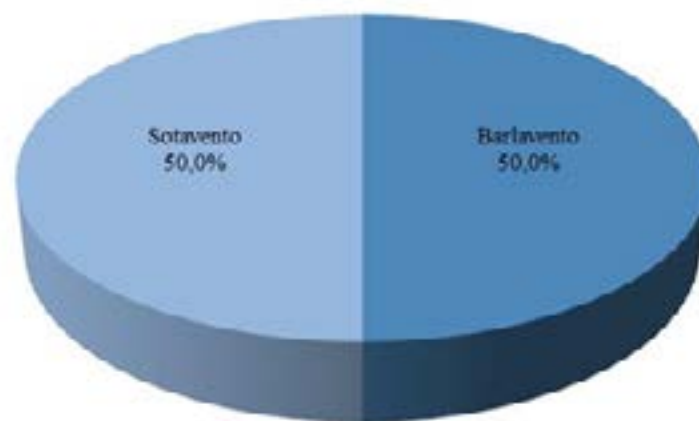
4.1 Profile of agents

Table 1 – Distribution of agents by municipality

	Count	%
Vila do Bispo	4	12.5%
Portimão	4	12.5%
Faro	4	12.5%
Silves	3	9.4%
Loulé	3	9.4%
Tavira	2	6.3%
Olhão	2	6.3%
Lagos	2	6.3%
Alcoutim	2	6.3%
Vila Real de Santo António	1	3.1%
Monchique	1	3.1%
lagoa	1	3.1%
Castro Marim	1	3.1%
Albufeira	1	3.1%
Aljezur	1	3.1%
São Brás de Alportel	0	0.0%
Total	32	100.0%

Source: own elaboration from SPSS

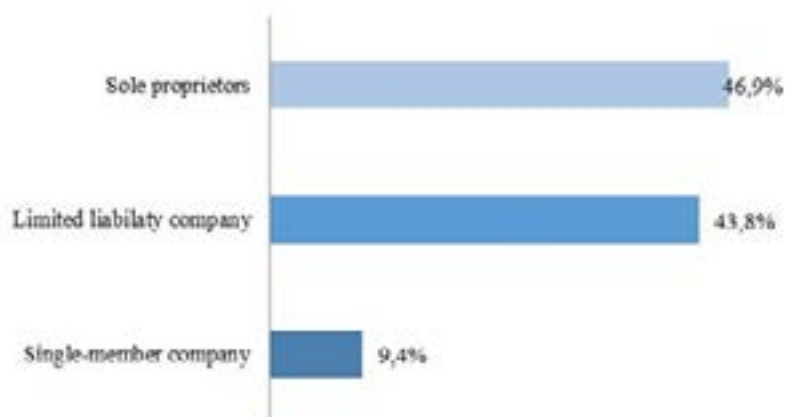
Chart 1 – Distribution of agents by region



Source: own elaboration from SPSS

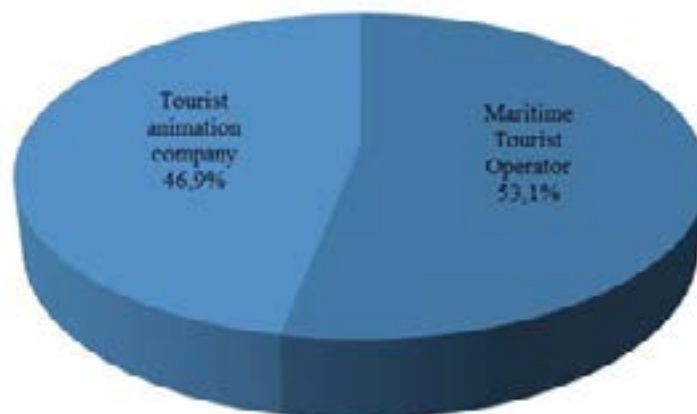
From table 1 we can see that the municipality of São Brás de Alportel is the only in which no agents are based. The municipalities with the highest number of agents are Faro, Portimão, Vila do Bispo, with 12.5% each, Portimão and Silves, with 9.4% each. To note that agents are equally distributed between the two regions in the Algarve – Sotavento and Barlavento – chart 1.

Chart 2 -Legal form of the agents



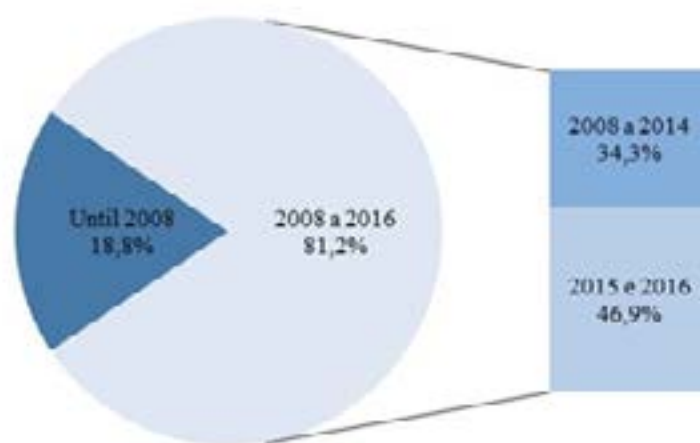
Source: own elaboration from SPSS

Chart 3 – Typology according to RNT



Source: own elaboration from SPSS

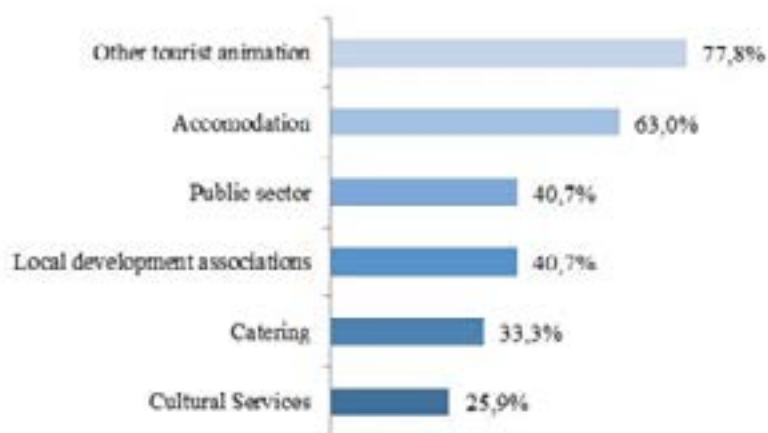
Chart 4 -Start year of activity



Source: own elaboration from SPSS

Most agents are sole proprietors (46.9%), belonging to the maritime tourist typology (53.1%) and initiated activity between 2008 and 2016 (81.3%) and nearly half (46.9%) initiated the activity in the last two years, charts 2, 3 and 4.

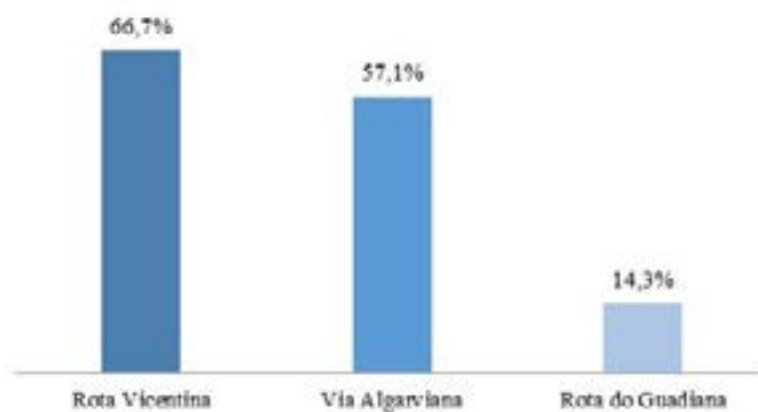
Chart 5 – Partnerships undertaken by agents



Source: own elaboration from SPSS

When asked about the partnerships (Chart 5), respondents reported that these are mainly with other companies of animation (77.8%) and accommodation companies (63.0%).

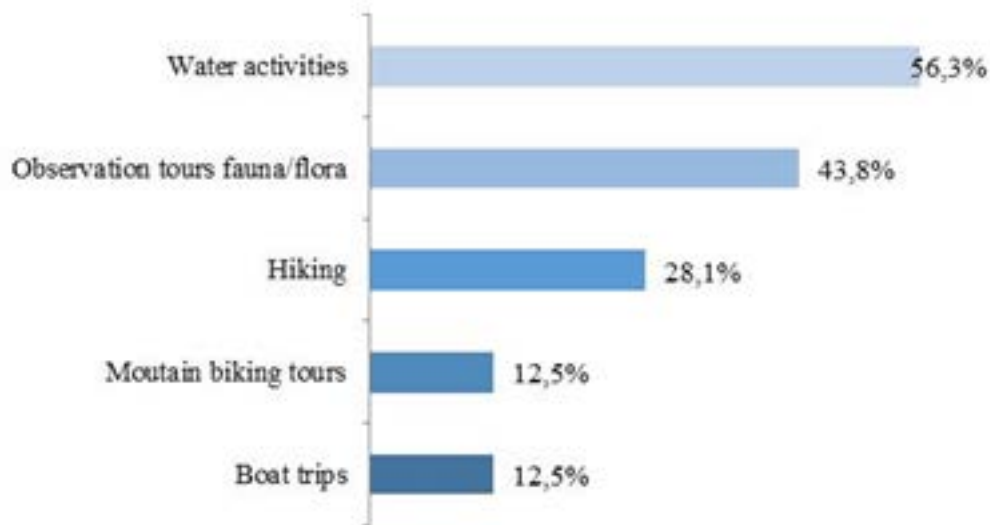
Chart 6 -Routes where products/services are offered



Source: own elaboration from SPSS

Analyzing the routes in the Algarve in which the agents provide services (chart 6), these are offered on all routes, but especially in the Rota Vicentina (66.7%).

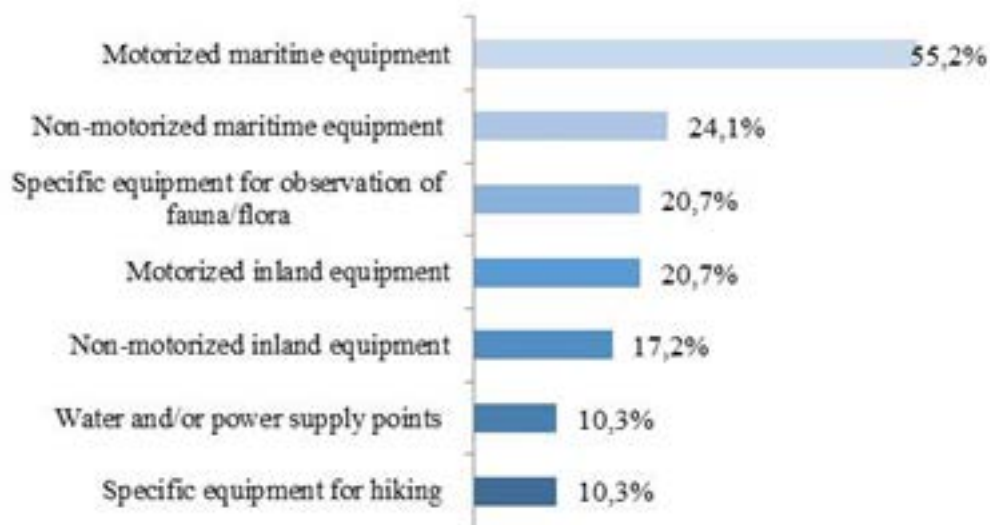
Chart 7 -Main activities offered



Source: own elaboration from SPSS

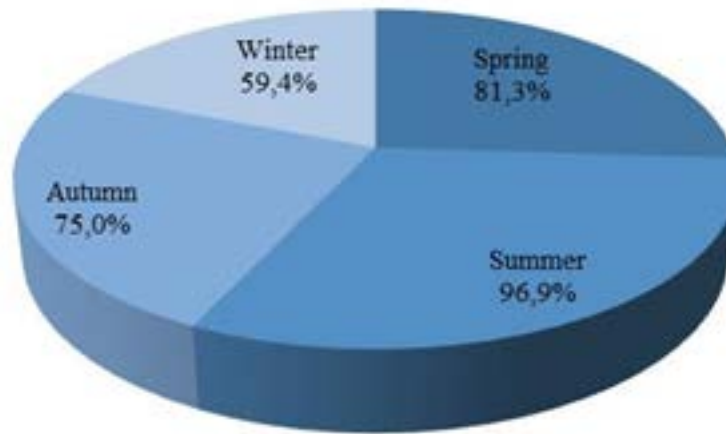
The main activities offered, as can be seen in chart 7, are: water activities (56.3%), observation Tours fauna/flora (43.8%), geological hiking (28.1%), mountain biking tours (12.5%) and boat trips (12.5%), which include visits to the caves, and cruises. This would be expected as the Algarve has a long coastline.

Chart 8 – Equipment available for the development of the activities



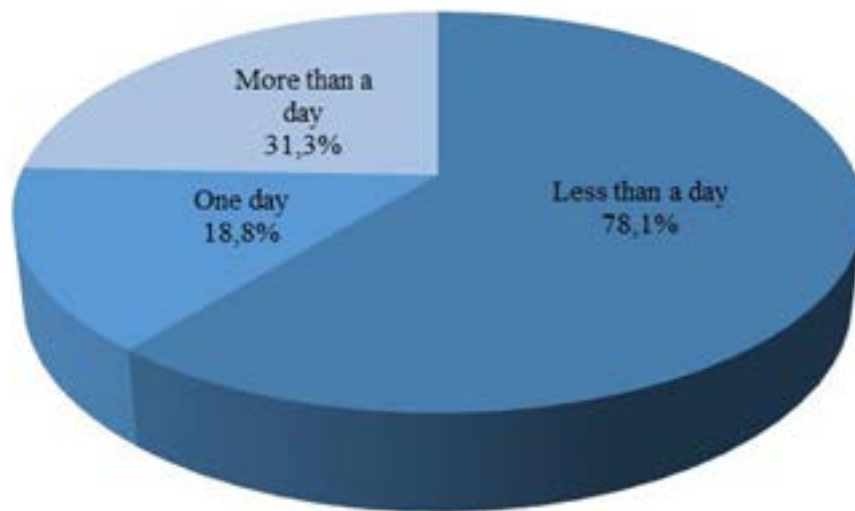
Source: own elaboration from SPSS

Taking into account the activities offered and according to chart 8, the major equipment provided by the agents is: motorized (55.2%) and non-motorized (24.1%) maritime equipment, equipment specific equipment for observing fauna/flora/(20.7%), motorized (20.7%) and non-motorized (17.2%) inland equipment, specific equipment for hiking (10.3%) and water and/or power supply points (10.3%).

Chart 9 -Season of carrying out the activities

Source: own elaboration from SPSS

Most agents perform the activities during the summer (96.9%), although a large number of agents (59.4%) also carry out their activities in the winter (chart 9). This shows some dispersion of activities throughout the year, in order to combat the seasonality associated with the Algarve.

Chart 10 -Average duration of activities

Source: own elaboration from SPSS

Table 2 -Descriptive Measures for activities with more than a day

Mean	7
Median	7
Mode	7
Maximum	14
Minimum	2
Standard Deviation	3.9

Source: own elaboration from SPSS

According to the chart 10 most activities lasts less than a day (78.1%). When the duration is more than a day, they last on average 7 days, and can range from 2 to 14 days (table 2).

Table 3 -Descriptive Measures for the average size of the Group

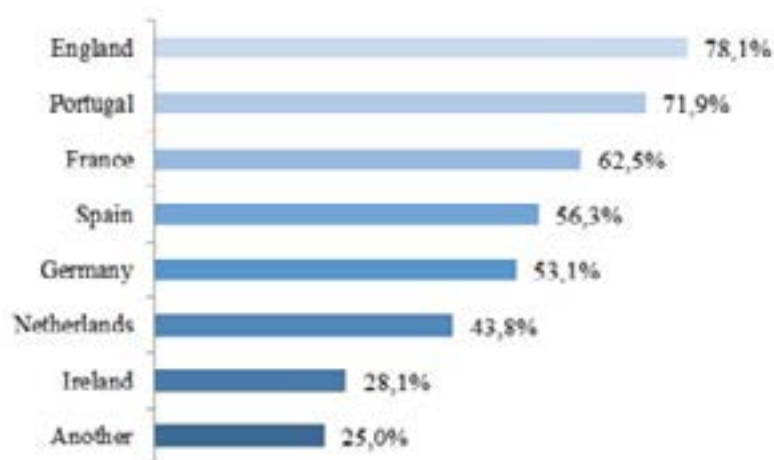
Mean	12
Median	7
Mode	4, 5, 8
Maximum	75
Minimum	2
Standard Deviation	15.1

Source: own elaboration from SPSS

Table 3 reveals that on average the groups are made up of 12 people, however these can go from 2 people up to 75. This is due to the variety of activities offered that allow the existence of different kinds of groups.

4.2 Profile of participants

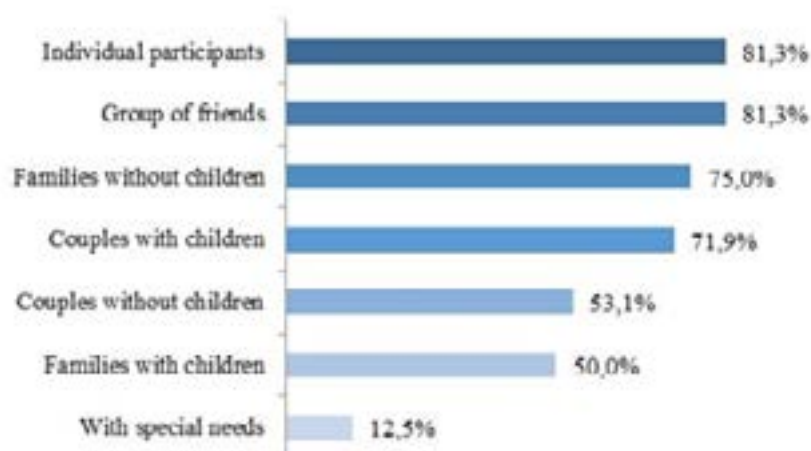
Chart 11 -Main origin of participants



Source: own elaboration from SPSS

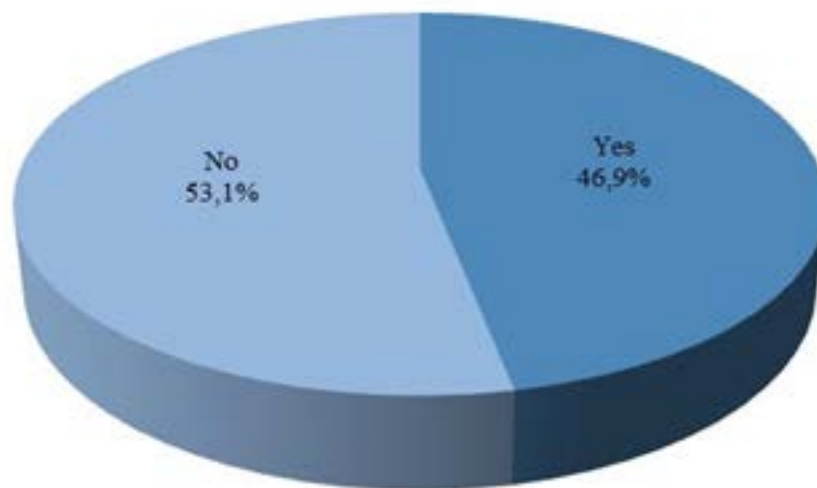
When asked about the provenance of the participants (chart 11) respondents reported that they are mostly from England (78.1%), Portugal (71.9%), France (62.5%), Spain (56.3%), Germany (53.1%) and Netherlands (43.8%).

Chart 12 -Typology of participants



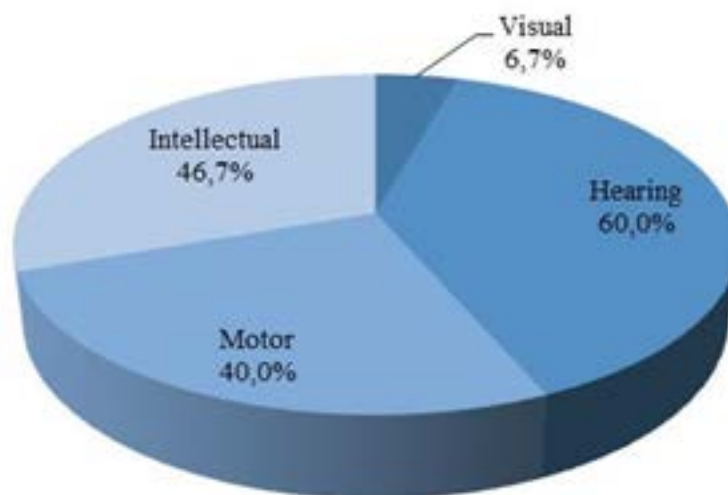
Source: own elaboration from SPSS

Chart 13 -The company has activities for participants with special needs



Source: own elaboration from SPSS

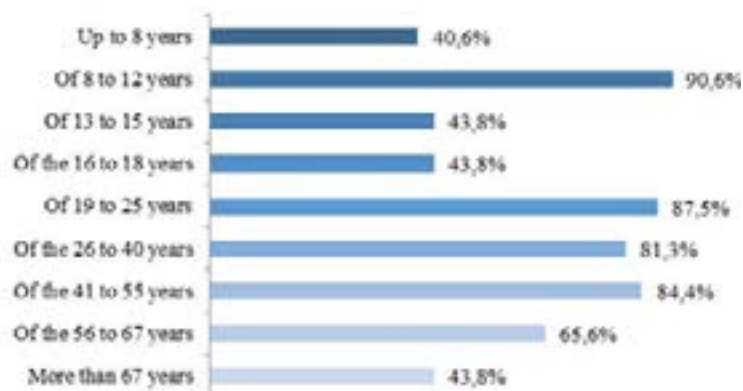
Chart 14 -Activities for participants with special needs



Source: own elaboration from SPSS

Analysing the issue concerning the typology of participants (chart 12) we see that only the category associated with the participants with special needs has a limited number of participants (12.5%). Although this group has a small size it turns out that almost half (46.9%) of the agents have specific activities for this group (chart 13), in particular to participants with hearing disability (60.0%) (chart 14). This kind of disability does not prevent participants from enjoying the main activities that are proposed.

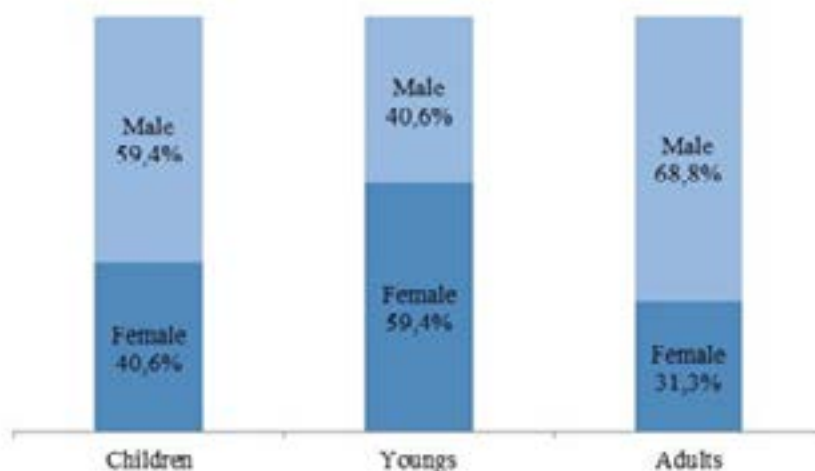
Chart 15 -Age groups of participants



Source: own elaboration from SPSS

There is a smaller, but significant, participation in activities offered by the age groups “up to 8 years” (40.6%), “of 13 to 18 years” (25.0%) and “more than 67 years” (chart 15). Probably because in the first case the parents consider that they are too young for these activities, as they may require some physical effort, the second because the young people no longer want to follow parents and last because people no longer consider that they have physical capacity for such activities.

Chart 16 -Gender of participants by age group



Source: own elaboration from SPSS

Only in adults there is a greater difference between the percentages of the two genders, this may be related with the roles that women (as mothers and wives) play within families.

4.3 Profile of employees

Table 4 -Descriptive Measures for the total number of employees

Mean	4
Median	3
Mode	4, 3
Maximum	13
Minimum	1
Standard Deviation	2.8

Source: own elaboration from SPSS

Table 5 -Descriptive Measures for the total number of employees by training area

		Mean	Median	Mode	Maximum	Minimum	Standard Deviation
Number of employees with higher education in	Tourism	2	1	1	5	1	1.6
	Tourist Animation	2	2	2	2	2	0.0
	Biology/Geology	2	2	1	3	1	1.0
	History	1	1	1	2	1	0.5
Number of employees with specific training in	Tourism	2	1	1	4	1	1.1
	Tourist Animation	1	1	1	3	1	0.8
	Another area	1	1	1	2	1	0.5
Number of employees without top or specific training		2	1	1	13	1	3.1

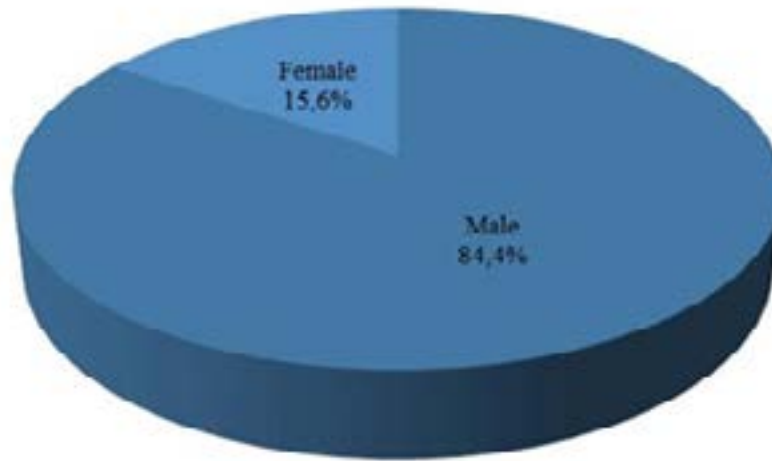
Source: own elaboration from SPSS

As we look at the number of employees (table 4) and related training (table 5), we have agents with only one employee to agents with 13 employees, on average the agents have 4 employees. In terms of either higher or specific training this is very

varied. In the category “another area” specific trainings within biochemistry, accounting and management, environmental education, can be noticed. This may be due to the need for people to search for their occupation outside the training area, due to lack of opportunities in their area.

4.4 Profile of the leaders

Chart 17 – Gender of the responsible



Source: own elaboration from SPSS

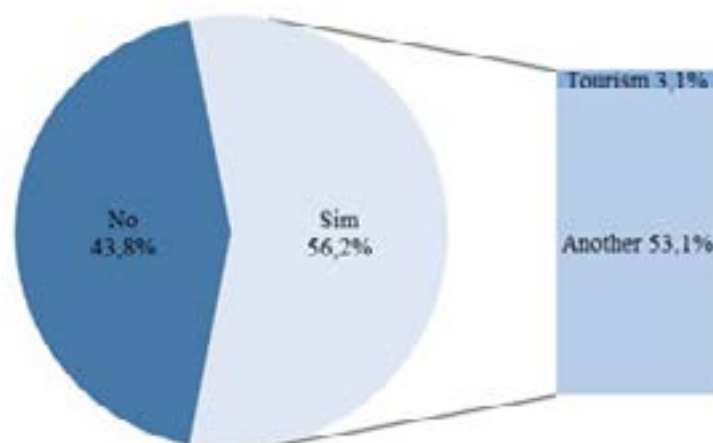
Table 6 -Descriptive Measures for the age of the responsible companies

Mean	44
Median	44
Mode	39, 55
Maximum	61
Minimum	32
Standard Deviation	8.3

Source: own elaboration from SPSS

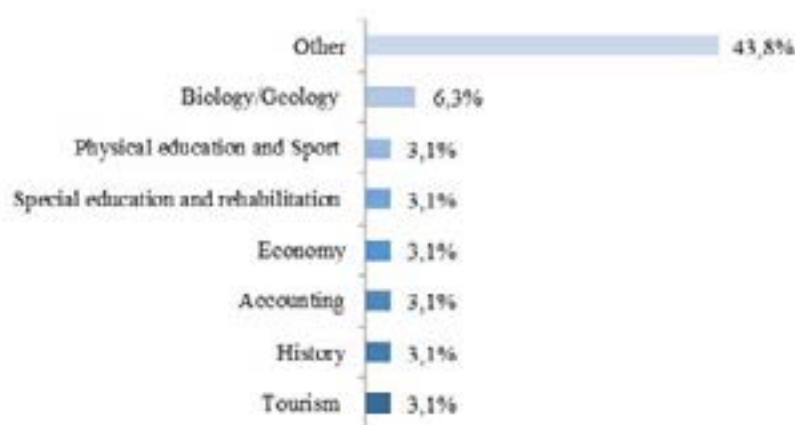
The responsables of the companies are mostly men (chart 17) with ages (table 6) ranging between 32 and 61 years. This may mean that the areas linked to tourism and in particular the tourist animation are quite attractive as an early career or to supplement the family income.

Chart 18 – The head of the company's higher education



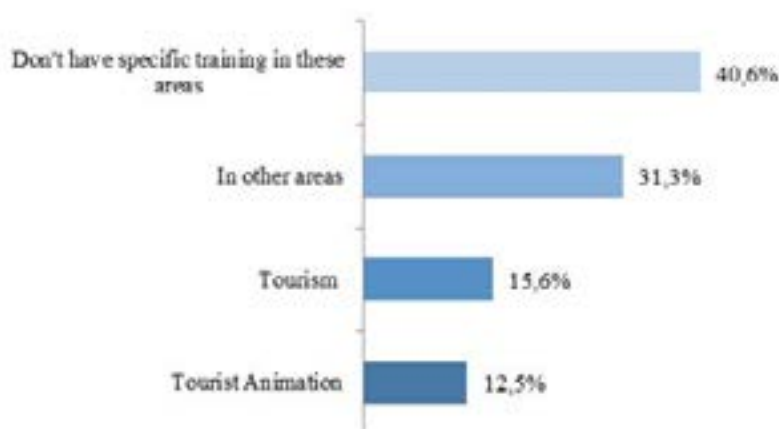
Source: own elaboration from SPSS

Chart 19 – Areas of higher education



Source: own elaboration from SPSS

Chart 20 -Professional training areas



Source: own elaboration from SPSS

When we analyse the question of training of leaders of the companies (chart 18) most (56.2%) have higher education in an area not connected to tourism and/or tourist animation (53.1%) and this includes very varied areas such as history or accounting (chart 19). Again this may be due to the fact that professional placement could not be found in the areas of training. However it turns out that 28.1% of those responsible try to address this shortcoming with the professional courses in tourism or tourism animation (chart 20).

5. CONCLUSION AND RECOMMENDATIONS

The paper shows the importance of tourism animation programs in tourism development and in particular the very important environmental resources that Algarve region has yet to be recognized also as an interesting and undiscovered destination to hiking experiences and environmental and cultural contact in the territory.

The existence of a large number of animation companies and maritime tourist operators that has been identified reveals the importance of animation for the tourist in the Algarve region.

Because it is a regional study, the results are not directly comparable with those presented in the literature review. As expected, as the Algarve is a region closely linked to the sea, most agents based there are maritime tourist operators. However there are no major discrepancies between the two groups when we compare the source of participants and the respective age group.

The results reveal the diversity and also the fragmentation of the tourism industry in the animation area. There is also a need to improve partnerships with regional, national and international agents.

With regard to the limitations of this study, particularly the reduced sample size, which does not allow the carrying out of statistical inference in order to obtain conclusions for the population. In the future, and in possession of a higher sample, other statistical techniques will be developed.

This study would have been more consistent if associated with other techniques of collection and processing of information that complement the data obtained with the application of the questionnaire. In this context, we highlight the relevance of exploratory interviews at an early stage of the research and the promotion of focus group between responsible/owners of tourist animation agents to realize the kind of relationship that is established between them.

REFERENCES

- Almeida, P. (2003). *A contribuição da animação turística para o aumento das taxas de ocupação de uma Região*. Master Dissertation in Universidade de Aveiro.p.247.
- Butler, R. W. (1980). The Concept of a Tourist Area Cycle of Evolution: Implications for Management of Resources. *Canadian Geographer*. 24: 5-12.
- Chaves, A.; Mesalles, L. (2001). *El animador cómo organizar las actividades de los clientes en un hotel divertido*. Laerts.
- Decreto-Lei n.º 95/2013 de 19 de julho: Animação Turística.
- ERA- *European Ramblers Association* (2017), Accessed in: <http://radicalflow-adventure.blogspot.pt/2013/01/caminhadas-planeamento-e-dicas.html>. 29/03/2016.
- Kouckner, F.; Lyard, J. (2001). *A valorização do turismo de passeio pedestre nos territórios rurais – Guia pedagógico para a elaboração e execução de um projecto de passeio pedestre*. *Inovação em meio rural*. 12. Accessed in: <http://ec.europa.eu/agriculture/rur/leader2/rural-pt/biblio/walking/walking.pdf>. 02/04/2017.p. 72.
- Krippendorf, J. (1989). *Sociology of tourism*. Rio de Janeiro: Editora Brazilian Civilization, SA.
- Medlik; S. (1991). *Managing Tourism*, England, Butterworth-Heinemann Publishing.
- Rodrigues, A. (2006). Os Trilhos Pedestres como uma Actividade de Lazer, Recreio e Turismo – Uma Análise Exploratória ao Mercado dos Trilhos Pedestres em Portuga. *Revista Turismo & Desenvolvimento*. N.º 6: 83 - 94.
- Sousa, T. (2014). *Fatores críticos de sucesso das empresas de animação turística da região autónoma dos Açores*. Master Dissertation in Universidade dos Açores.p.15.
- Tovar, N., Carvalho, P. (2011). *Percursos pedestres e turismo de passeio pedestre em Portugal*. *Turismo e Sociedade*. Curitiba, v. 4 (2): 305-322.
- Tovar, Z. (2010) *Pedestrianismo, percursos pedestres e turismo de passeio pedestre em Portugal*. Master Dissertation in Escola Superior de Hotelaria e Turismo do Estoril.p.145.
- Turismo de Portugal (2015a), Accessed in: <https://rnt.turismodeportugal.pt/RNT>.
- Turismo de Portugal (2015b) *Animação Turística em Portugal Caracterização das Empresas e da Procura*, 2014.
- Vieira, J. (2006). *Spatial planning and Tourism Planning: a strategic perspective*. Lisbon, Ed. Verbo.

THE RELEVANCE OF CROSS-BORDER COOPERATION (CBC) PROCESSES TO ACHIEVE TERRITORIAL COHESION AND SUSTAINABLE DEVELOPMENT

Rui Castanho

Environmental Resources Analysis Research Group
(ARAM). University of Extremadura
(alexdiabrown@gmail.com)

Jose Cabezas

Environmental Resources Analysis Research Group
(ARAM). University of Extremadura
(jocafer@unex.es)

Luís Loures

Polytechnic Institute of Portalegre; Research Centre for
Spatial and Organizational Dynamics (CIEO), University
of Algarve
(lcloures@esaelvas.pt)

Luis Fernández-Pozo

Environmental Resources Analysis Research Group
(ARAM). University of Extremadura
(luferpo@unex.es)

José Nunes

Polytechnic Institute of Portalegre
(ratonunes@esaelvas.pt)

José Gama

Polytechnic Institute of Portalegre
(zeigama@gmail.com)

ABSTRACT

Based on recent developments ongoing within European boundaries, such as: recent political decisions regarding the terrorism phenomenon in Europe; intentions of implementing new geographic boundaries; the ongoing economic crises in Europe; or even the latest, Brexit; among others developments that conduct us to an urgent need of finding new strategies and approaches, which allows to achieve greater territorial cohesion and cooperation between countries, once the previous project of EU seems to be disintegrated.

In this regard, the identification of critical factors for territorial success, since CBC projects can contribute not only to tackle the aforementioned problems but also to enable the creation of resilient and sustainable cities, strengthen the potential synergies and also common objectives for territorial development.

The present study aims to highlight six previous identified factors: (i) political commitment and transparency; (ii) breaking cultural barriers (extreme sense of belonging); (iii) life's standards; (iv) strong territorial cohesion; (v) proper use of EU funds; and (vi) common objectives.

The research has been carried out through a case studies methodology analysing and assessed European CBC projects. The results clearly show the importance of the cross-border cooperation to achieve territorial cohesion and sustainable development.

Keywords: Spatial Planning, Cross-Border Cooperation, Territorial Cohesion, Sustainable Development.

JEL Classification: R58

1. INTRODUCTION

By the time the Maastricht Treaty was established in 1992 (Treaty on the European Union, 1992), the project for a united and stronger Europe was still taken for granted. However, a quarter century later it is possible to denote an opposite reality, in which fragmentation, division and weakening of cohesion are increasingly growing in the European Consolidation Project (Nye, 2004; Keohane, 2007; Dale, 2016; Holmes, 2016).

To this contributed, and continue to contribute, issues such as the economic crisis of the 2000s, that shocked the world economy and particularly the European one; the relevant and persistent psychological barriers caused by previous conflicts in European territory; the attempt to redefine borders - jeopardizing national sovereignty - as the example of the Crimean Peninsula Annexation War, Ukrainian sovereign territory, by Russia (Martins, 2015; Dale, 2016; Holmes, 2016); the exit from the European project of the United Kingdom (Brexit); the phenomenon of terrorism climbing within Europe, contributing to a "dangerous" sense of belonging leading to a resurgence of nationalist extremists fractions and parties; the recent intentions of the current President of the USA of building a formal wall dividing USA and Mexico; among many other problems that Europe currently faces, have converged to the exposure of European design weaknesses (Mikail, 2011; Buti and Carnot, 2012; Martins, 2015).

In this regard, an increase of literature related to European CBC issues has been developed over the last decade (Medeiros, 2005, 2011, 2015; Fertner, 2006; Baycan-Levent *et al.*, 2010; Martín, 2013; Nicolini and Pinto, 2013; Namyslak, 2014; Domínguez *et al.*, 2015; Sohn and Giffinger, 2015; Castanho *et al.*, 2016, 2017; Castanho, 2017) focusing among others issues, some of the previously mentioned aspects.

2. RESEARCH QUESTIONS

Given the issues previously identified the research focused the clarification of two research questions, which aim to be answered throughout the use of an exploratory research based on case study analysis.

The developed research questions were defined as follow:

- How the CBC projects and strategies influences the territorial cohesion?
- Throughout the implementation of CBC projects the areas are definitely close to achieving a sustainable development?

3. METHODOLOGICAL APPROACH

Several scientific methods have been used through the present research, including indirect and direct methods and tools. In this regard, a significant amount of time and attention to the development of a proper methodological framework, as well to formulate the major questions for the research hypothesis mentioned above, by the authors have been carried out. The methodological approach was divided into three main phases (Figure 1), ending with the relevance of the CBC projects and strategies to achieve territorial success or failure.

Figure 1. Methodological approach scheme.



At this stage, should be highlighted the chosen method to assess the desired research question case study analysis, was put forward by Robert Yin (1994). This method is considered a powerful tool to analyze and obtain information for similar example, once it able to extracts the lessons learned (Francis, 1998; Levy, 2008).

In the scope of the research, a total of four CBC case studies were selected from a sample of a previous studies put forward by Castanho *et al.* (2016; 2017). The selection criteria focus European CBC case studies (Figure 2) in which it was possible to identified six critical factors for territorial success, namely:

- political commitment and transparency;
- it is present a high sense of belonging;
- increase life's standards;
- strong territorial cohesion;
- proper use of EU funds;
- common objectives between countries.

Figure 2. Selected case studies



(A)Newry ^(IE) – Dundalk ^(UK); (B) Valga ^(EE) – Valka ^(LV); (C) Vienna ^(AT) – Bratislava ^(SK); (D) La Línea de la Concepción ^(SP) – Gibraltar ^(GI)

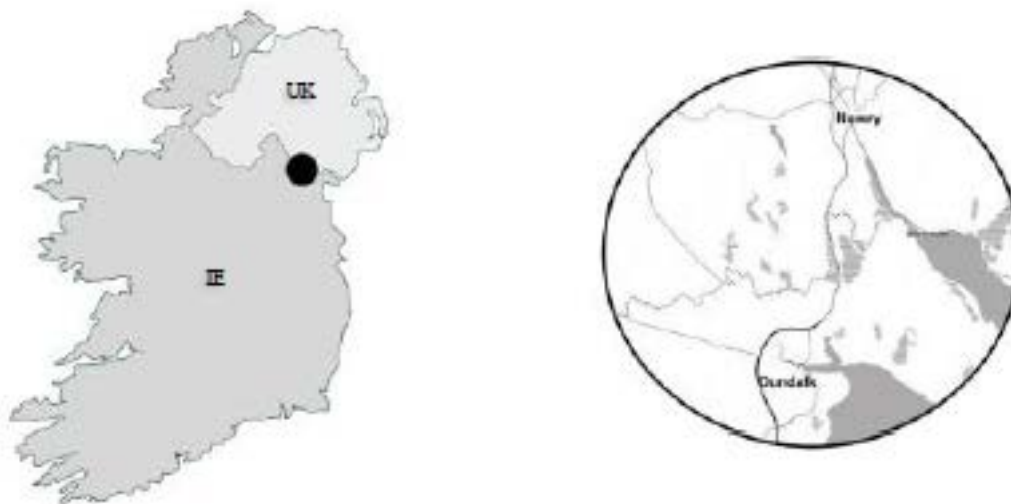
Seeking a powerful analysis and assess over the case studies, a Territorial Impact Assessment (TIA) principles - based on the information/data available ESPON (ESPON–European Spatial Planning Observation Network) and on existing literature (ESPON, 2012; Medeiros, 2013) - was developed, evaluating the policies and strategies that were implemented in the selected case studies. Thus, enabling the analysis of economic, social cohesion, environmental sustainability, territorial governance and spatial governance issues (Medeiros, 2014; Loures *et al.*, 2016).

4. CASE STUDY ANALYSIS

4.1. Newry^(UK) - Dundalk^(UK)

4.1.1 *An Insular Twin City, A Cooperation since 70's*

Figure 3. Location of the case study, in the Irish context as well as in the regional context.



The cities of Newry and Dundalk are linked to each other by major railways and roads that are crucial to the whole island (Ireland), as they connect Belfast to Dublin (LISER, 2015; MOT, 2017). The synergy, which has begun in the 1970s, was significantly accentuated during the 2000s, thanks to reports that encouraged the creation of the Twin Cities (MOT, 2017). The institutional cooperation is developed in the scope of the “*Newry-Dundalk Twin City Region*”, which plans to secure inward investment, aiming to provide a sustainable regional development and a better life’s quality standards for the population (Castanho, 2017).

4.1.2 *Problems and Solutions*

Strategically located in the Belfast-Dublin corridor, Newry and Dundalk provides pivotal requisites to attract entrepreneurship, improve the environment, generate a wide range of public and commercial services, and also promotes a well-managed environment for tourism and recreation (ICLRD, 2008). Nevertheless, this urban environment did not have always the same level of development, which has conducted the governments of Newry and Dundalk towards the creation of a Twin City Region. Those measures and policies able Newry and Dundalk to achieve their challenges by common goals and objectives, and thus becoming not only a pole of growth in itself but also a growth engine for the entire sub-region border, which has an estimated population of 170,000 (ICLRD, 2008; MOT, 2017).

4.1.3 *Open Issues | Future Challenges*

In future, and according to with the International Centre for Local and Regional Development (2008), the Twin City Region pretends:

- continue and improve the Joint Management Group;
- implement agreed on common strategic projects;
- develop and adopt a common strategic plan for the Newry-Dundalk Twin City Region;
- identifying potential areas for future cooperation to the proper implementation of the strategic plan.

4.1.4 *Lessons Learned*

Throughout the creation of the Twin City of Newry-Dundalk has been possible to reach an integrated sustainable development strategy of cross-border ideology, and even the creation of a crucial corridor on the eastern seaboard (Castanho, 2017; MOT, 2017). These have shown many practical and mutual benefits of voluntary cooperation, which can have demonstrated by cost savings in the economic infrastructures; the sharing of knowledge; the exchange of good practices and efficiencies in business and sustainable development and management of the unique natural heritage of the Twin City Newry-Dundalk.

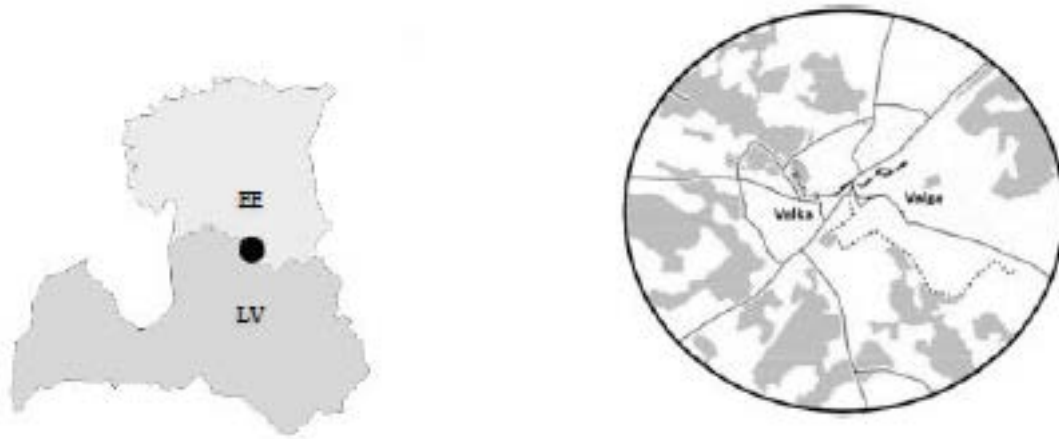
4.1.5 Identified Factors

Stronger territorial cohesion; political commitment; life's standards; proper use of EU funds; common objectives; marketing and advertisement of the Eurocity.

4.2. Valga^(EE) – Valka^(LV)

4.2.1 The Power of the Sense of Belonging vs the Geopolitics

Figure 4. Location of the case study, on the Estonian - Latvian context as well as in the regional context.



The Twin City of Valga-Valka is located at the South of Estonia and at the North of Latvia. Besides their small size, the twin cities present a large cultural diversity. Valga-Valka has a large history and also a resilient cultural life (Valga, 2016). These Twin City has experienced several historical fractures associated with geopolitics issues (García, 1991). Created has a single city, a first division has taking place after the I World War. However, under the Soviet regime, which lasts 50 years, they have reunified (Martins, 2015).

4.2.2 Problems and Solutions

After the independence of the Baltic States, the studied cities have divided once again. Which leads to an increase of the political ambition, aiming to build a transboundary urban center with the major goal of reunifying and increase the sense of belonging near the population but at the same break some cultural barriers, that have been survived until today, and finally in this regard generate a well and sustainable growth. Against this framework, a common master plan for the cities has been carried out in 2007, as well as a common territorial marketing strategy.

4.2.3 Open Issues | Future Challenges

With the 2007 common master plan, the cities expect do not duplicate infrastructures in all the Twin City area and surroundings; it is also expected that the common marketing strategy works as a magnet to investors to the Twin City, and thus conducts to an increase of the regional GDP/*per capita*, the same is expected regarding the increase of the life's standards of the resident population.

4.2.4 Lessons Learned

Throughout this case study, it is possible to demonstrate, the relationship with the success or failure of a CBC project and the level of sense of belonging those populations/inhabitants presents. It is an acquired data that that kind of close relationships, among populations and their increased sense of belonging it, is always a complex issue to be managed by the main actors and policies that should be carried out; any attempt of apart from these demarked feelings presented in the populations may conduct to the failure of any CBC approach. The authors believe these factor - break cultural barriers/ increase the sense of belonging - should be taken as pivotal for a CBC project with characteristics like these particular case have shown. Based on those principles, the politicians have developed a common territorial plan, officialised in 2007.

4.2.5 Identified Factors

Stronger territorial cohesion; political commitment; life's standards; proper use of EU funds; common objectives; sense of belonging; marketing and advertisement of the Eurocity.

4.3 Vienna^(AT) – Bratislava^(SK)

4.3.1 The Growth Corridor Along Danube

Figure 5. Location of the case study, on the Austrian -Slovakian context, as well as in the regional context.



Institutional relationships between the capital cities of Vienna and Bratislava are driven primarily by the desire to promote economic development (Ivanička and Ivanička, 2007). With the end of the transitional period - which limited the right of Slovakian workers to enter the labor market in the European Union (Lichtenberger, 1993) – in 2011, the level of cross-border cooperation between the two cities has increased. Actually, the leading entity in terms of cross-border cooperation is clearly the Centrope¹, which includes territories of Hungary and Czech Republic (Program INTERREG Europe, 2016). One of the main objectives of the Centrope 2013+ Strategy It is to define a coordinated approach to regional planning to improve accessibility in this vast region in infrastructure and services (LISER, 2015; Program INTERREG Europe, 2016).

Within the framework of development strategies several investments in the construction and rehabilitation of areas of the city of Bratislava were made, once the city of Bratislava compared to Vienna, in terms of public space, it showed significant differences (Fertner, 2006; Spirkova, and Ivanička, 2009; Castanho, 2017).

4.3.2 Problems and Solutions

Transportation in Bratislava, after the boom in the construction of the 90's, is a growing problem, as nearly 200,000 people move to Bratislava every day at their workplaces (Ivanička and Ivanička, 2007). The catchment areas are the entire region of Bratislava, part of the Trnava region, and actually also the border area with Austria and Hungary. Highlighting this theme can be quoted the authors Spirkova and Ivanička (2009): “The city also was not prepared for the opening of the borders and the consequent increase of the foreign traffic.”

As it happens in other cities in Eastern Europe, is the huge growth of individual transport in Bratislava (Vulevic 2013; Vulevic, 2016). This situation deeply increased the traffic intensity, as well as static transport (Vulevic, 2016), while the development of the communication network was lagging behind due to insufficient public funding mechanisms (Fertner, 2006; Spirkova and Ivanička, 2009; Sohn and Giffinger, 2015).

The Bratislava master plan established in 2007, with the active collaboration of Vienna, aims to fill those gaps throughout their implementation (Stadt Wien, 2016). According to the Stadt Wien (2016), the master plan intends the construction of the ring road, which would mean the additional connection to Vienna.

4.3.3 Open Issues | Future Challenges

Vienna and Bratislava not only have a shared history but are also connected by the Danube and the Danube National Park. The Danube wetlands are the last large, untouched, floodplain plains in all of Central Europe (Niculescu *et al.*, 2016; Stoica *et al.*, 2016). What leads to the development of ecological preservation plans of the area, which become the basis for the sustainable improvement of the quality of life (Stadt Wien, 2016).

It is also open the question of the construction of the railway corridor for high-speed trains from Paris to Budapest via Vienna, with a connection to Bratislava (TE-T 17), expected to be financed by European funds. The construction of the railway branch to Bratislava involves the construction of the 6km tunnel under the city, which may influence the development of the city around the new transport axis (Fertner, 2006; Izvolt *et al.*, 2016; Castanho, 2017).

4.3.4 Lessons Learned

Bratislava is perhaps one of the best examples of urban growth in the era of globalization (Fertner, 2006; Spirkova and Ivanička, 2009; Sohn and Giffinger, 2015). Thus occurs, mostly, by them “geographical position”, once it is in the heart of a fast European growth, showing interesting indicators of future for the resident population - regarding new opportunities and prospects (Castanho, 2017).

The development of the common master plan has been critical to achieving the territorial success on this case study, particularly, for the less developed city which is Bratislava.

¹ Centrope is an Interreg IIIA project, which aims to establishes a multinational region on the heart of Europe, through an active CBC carried out by four countries: Slovakia; Austria; Hungary and Czech Republic (Program INTERREG Europe, 2016).

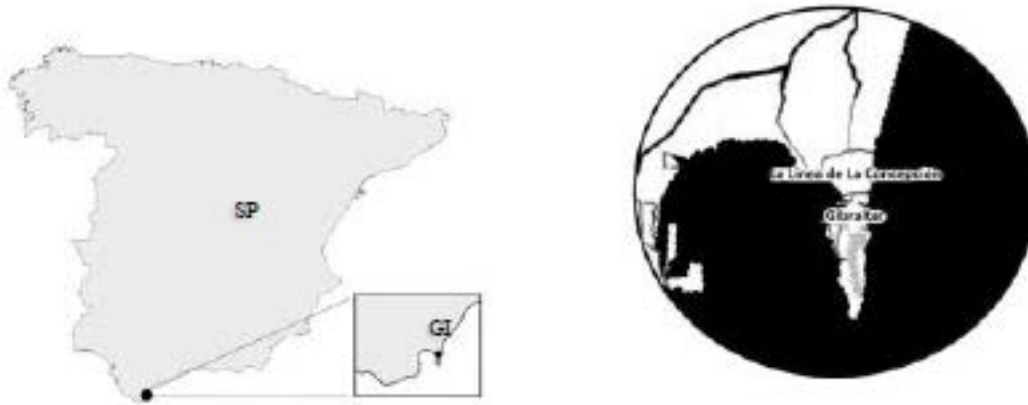
4.3.5 Identified Factors

Stronger territorial cohesion; political commitment; common objectives; connectivity-movement between cities.

4.4 La Línea de la Concepción^(SP) – Gibraltar^(GI)

4.4.1 The Strait of the “no” Cooperation

Figure 6. Location of the case study, in the Iberian Peninsula context, as well as in the regional context.



La Línea de la Concepción is a Spanish city located in the province of Cadiz. It is in this city that is the border between Spain and the British colony of Gibraltar – which is a British overseas territory located on the southern tip of the Iberian Peninsula. Gibraltar corresponds to a small peninsula with a small land border with North, even limited by the Mediterranean Sea and also by the Gibraltar Strait and Bay (D’Agostino, and Favale, 2016). However, despite the short distance separating the territories, the CBC is incredibly low, or even non-existent (Girling, 2015). Such issues, leads to the interest in this particular case study, once it able an approach from a different point of view - from the “no” cooperation one.

4.4.2 Problems and Solutions

The problems related to this small territory are too many, from the claim of territory by Spain, the constant news of bad relations between the territories, such as:

- disputes over maritime space;
- suspected trafficking and money laundering in the territory²;
- overzealous on border control³;
- policies divergences.

4.4.3 Open Issues | Future Challenges

The uniformity of European standards for the territory of Gibraltar seems to be in the EU’s agenda (Government of Gibraltar, 2016). The resolution of the internal problems of the territories is pivotal to fostering a common development strategy (Castanho, 2017).

4.4.4 Lessons Learned

In this case study, probably the implementation of a common regional development strategy would mean win-win-situations for the territories, however, it is seen as one of the most difficult areas for CBC at a European level. Thus, occurs due to the lack of transparency of the Gibraltar territory and also by the political divergences between the territories.

The interest in cross-border cooperation by territories with such characteristics seems to be very low or even inexistent.

Yet some initiatives approach occasionally occurs, such as cooperation in the educational field, even very tenuously (Government of Gibraltar, 2016).

4.4.5 Identified Factors

Political commitment and transparency; sense of belonging.

4.5 Case study results summary

The results summarized, and listed below are provided by the analysis methods applied to the case studies.

² Gibraltar have been considered since a long time as a tax haven, however recent policies seems to conduct to a major transparency within the territory (npr, 2017).

³ España belongs to the Schengen Area, while the territory of Gibraltar is a non-Schengen area.

Table 1 – Summary of the analyzed topics on each case study

CASE STUDY	Population	Distance between cities (Km)	Strategy of territorial development	Border typology	Languages	Currency	GDP/ <i>capita</i> (million euros)
Newry	26 800	20	Twin City Newry-Dundalk	No Schengen Area	Irish, English	EUR GBP	58 000
Dundalk	31 100						53 300
Valga	12 200	5	Common Spatial Plan	Schengen Area	Estonian, Russian, Latvian	EUR	12 000
Valka	6 000						10 000
Vienna	1 740 000	55	Centroepe Strategy 2013	Schengen Area	Austrian, German, Slovakian	EUR	337 161
Bratislava	415 500						78 070
La Línea Gibraltar	63 300	3	—————	No Schengen Area	Spanish, English	EUR GBP	15 800
	30 000						33 500

(UN, 2013; Eurostat, 2016; PORDATA, 2016)

Table 2 – Summary of the influence of the identified factors on the case studies

Identified Factors	Selected Case Studies			
	Newry - Dundalk	Valga - Valka	Vienna - Bratislava	La Línea de La Concepción - Gibraltar
Stronger territorial cohesion	X	X	X	
Political commitment	X	X	X	
Life's standards	X	X		
Proper use of EU funds	X	x		
Common objectives	X	x	X	
Sense of belonging		X		X
Political commitment and transparency				X
Marketing and advertisement of the Eurocity	x	x		
Connectivity-movement between cities			x	

X – major influence; x –minor influence

5. DISCUSSION AND CONCLUSIONS

The performed analysis enabled us to identify that while the synergies identified in Newry-Dundalk similar to the ones observed in Vienna-Bratislava, however, the values of GDP/*per capita* and population are closer in Newry-Dundalk, turning win-win-situations more evident, or at least more balanced, once in the case of Vienna-Bratislava even if the results also demonstrated win-win-situations – i.e. the labour-market and easier of access to services (Bezák and Neumannová, 2011), since the values of GDP/*per capita* and population dynamics are clearly more unbalanced, it also reflects on the win-win-situations, favour greatly the Slovakian city. Such results conduct to the hypothesis, that, when this scenario is present – of the unbalance between cities' dimensions – normally the smallest cities is the one which benefits the most. Still is must be emphasized how the synergy between the Austrian and Slovakian territories have worked positively to increase cohesion and to achieve a greater level of development for both cities (Spirková and Ivanička, 2009), not only on the regional scale but also at a European one. Such synergic achievements considered by the authors as a successful example of which should be a well-developed CBC project or strategy.

Throughout the analysis of the case study of Valga-Valka it was possible to identify another critical factor - the sense of belonging; thus, to reach the desired territorial success, political power as well as the main actors of the whole process, are somehow “hostages” of the extreme sense of belonging to the citizens (Dujisin, 2014; Martins, 2015). It was found that, since this typology of CBC is too fragile, it must be managed meticulously, as well as the deliberated policies should also be carefully analyzed and assessed in order not to jeopardize the success of the CBC project or strategy. Similar scenarios (with extreme sense of belonging) were identified in other CBC projects along Europe – i.e. Bayonne (France) – San Sebastian (Spain), Haparanda (Finland) – Tornio (Sweden) and/or Frankfurt Oder (Germany) – Slubice (Poland) (Castanho *et al.*, 2016), showing similar results.

In the Iberian case study of La Línea de la Concepción-Gibraltar, similarly to that occurred in others CBC projects and strategies previously studied by Castanho *et al.* (2016), as is the case of Nice-Monaco, cities with “independent” governments, as the British colony of Gibraltar or the Principality of Monaco, face similar problems particularly for issues related to fiscal transparency and economic commitment. Another aspect found in this case study was the great unbalanced regarding GBP/*per capita* between Gibraltar and La Línea; always favouring, at a large scale, the city with its own government – scenario which is similar in the Monaco-Nice CBC project (Castanho, 2017). However, in the Iberian case, this scenario is even more evident considering that Gibraltar has approximately half of the population that La Línea de la Concepción but has the double of the GBP/*per capita*. This data made clear that in such cases, a strong political commitment and transparency are critical factors to achieve territorial success and cohesion.

Through the analysis of Table II is possible to endorse factors with a major influence on each of the analysed case studies, but also other critical factors, not highlighted in the present research, once they have been considered as presenting minor influence to the CBC project, as is the case of the connectivity-movement between cities and marketing and advertisement of the Eurocity. However, and according to Castanho *et al.* (2017): “*to achieve a sustainable, well-developed and abiding CBC project, all the mentioned factors, even the ones that have been assigned as having a minor influence, should be considered and not be underestimated*”.

However, those minor influence factors have been considered pivotal by several studies and authors – i.e. Lewis and Maund, 1976; Antrop, 2000, 2004; Craglia *et al.* 2004; Ballas, 2013; fact, which corroborates with the idea that no factor should be underestimated.

As final remarks, and taking into account the research questions exposed in the present research, throughout the analyzed case studies it was possible to answer to identified questions and to confirm the direct influence that CBC projects have over their influence territories. CBC projects contribute not only to reinforce several benefits related to social, cultural, environmental and economic aspects enabling the redefinition of the role of key actors in this process, placing territories closer to achieve a lasting sustainable development and well-structured growth – giving future generations the freedom to choose which planning principles should be implemented on their own territories less bounded by previous actions.

ACKNOWLEDGEMENTS

The authors would like to acknowledge financial support given by National Funds provided by FCT—Foundation for Science and Technology through project UID/SOC/04020/2013, and also to the Junta de Extremadura/FEDER for the support to the research Group ARAM - 1. Environmental Resources Analysis Research Group (GR15149).

REFERENCES

- Antrop, M., (2000). *Changing patterns in the urbanized countryside of Western Europe*. Landsc. Ecol., 15, 257– 270.
- Antrop, M., (2004). *Landscape change and the urbanization process in Europe*. Landsc. Urban Plan. J., 67, 9–26.
- Ballas, D., (2013). What makes a “happy city”? Cities J., 32, S39–S50.
- Baycan-Levent, T., Ahu Gülümser Akgün, A., Kundak, S., (2010). *Success Conditions for Urban Networks: Eurocities and Sister Cities*. Eur. Plan. Stud., 18, 1187–1206.
- Bezák, B. and Neumannová, M., (2011). *Modeling of Cross-Border Interaction in Central Danube Region*. 8th International Conference Environmental Engineering. 2011. Vinius, Lithuania.
- Buti, M., and Carnot, M. (2012). *The EMU Debt Crisis: Early Lessons and Reforms*. Journal of Market Common Studies.
- Castanho, R., Loures, L., Fernández, J., and Fernández-Pozo, L., (2016). *Identifying critical factors for success in Cross Border Cooperation (CBC) development projects*. Habitat International.
- Castanho, R., (2017). *Sustainable Urban Planning in Transboundary Areas – Analysis of Critical Factors for Territorial Success*. Ph.D. Thesis. University of Extremadura. Badajoz, Spain.
- Castanho, R., Loures, L., Fernández, J., and Fernández-Pozo, L., (2017). *Cross Border Cooperation (CBC) in Southern Europe - An Iberian Case Study*. The Eurocity Elvas-Badajoz. Sustainability, 9,360; DOI:10.3390/SU9030360.
- D’Agostino, M., and Favale, A., (2016). *The Port of Taranto towards its Future*. European Transport – Transpoti Europei (62), 8.
- Dale, G., (2016). Karl Polanyi: *A Life on the Left*. Columbia University Press. New York, USA.
- Domínguez, J.A., De Noronha, T., Vaz, E., (2015). *Sustainability in the trans-border regions? The case of Adalusia—Algarve*. Int. J. Glob. Environ. Issues , 14, 151–163.
- Dujisin, M., (2014). *Eles eram muitos Cavalos y las búsquedas del realismo actual*. Revista Chilena de Literatura. (88) 215-234.
- ESPON, (2012). *Territorial Impact Assessment of Policies and EU Directives. A Practical Guidance for Policymakers and Practitioners Based on Contributions from ESPON Projects and the European Commission*; ESPON: Luxembourg, Luxembourg.
- Eurostat, (2016). *Eurostat – Statistics Explained*. Available online: <http://www.ec.europa.es>. (Accessed on 14 November of 2016).

- Fertner, C., (2006). *City-regional Co-operation to strengthen Urban Competitiveness. A report on Cross-border Co-operation in the regions of Copenhagen-Malmö and Vienna-Bratislava*. Master thesis in the fields of spatial planning at the Vienna University of Technology. Vienna, Austria.
- Francis, M., (1998). *A Case Study Method for Landscape Architecture*. Urban Land Institute, University of California: Davis, CA, USA.
- García, A., (1991). *La Independencia de los Estados Balticos (1918-1922)*. Universidad Complutense de Madrid. Madrid, Spain.
- Girling, J., (2015). *Spanish diversion tactics on border with Gibraltar are pointless*. The Parliament Politics, Policy and People Magazine. Gibraltar, Gibraltar.
- Government of Gibraltar, (2016). *Minister for Education Hosts La Linea Visit to University*. Press Release. Gibraltar, Gibraltar.
- Holmes, R. (2016). *Fascism* 2. *Anthropology Today* 32 (2): 1-3.
- ICLRD, (2008). *The Newry-Dundalk Twin City Region. Supporting the Implementation of Cross Border Collaborative Frameworks*. International Center for Local and Regional Development. Armagh, Northern Ireland.
- Ivanička, sr., K. and Ivanička, jr., K. (2007). *Regional growth dynamics in Central and Eastern Europe in the socio-economic and geographic context of a post-socialist reality*. The Post-Socialist City. Urban Form and Space Transformations in Central and Eastern Europe after Socialism.
- Izvolt, L., Smalo, M. and Malchova, J., (2016). *The quality evaluation of the ballastless track construction in the area of Bratislava tunnel no.1*. 5th International Scientific Conference Integration, Partnership and Innovation in Construction Science and Education. Matec Web of Conferences, 86, UNSP 05001.
- Keohane, R., (2007). *Big Questions in the Study of World Politics*. Oxford Handbook of International Relations, June 2007. Oxford.
- Levy, J., (2008). *Case Studies – Types, Designs and Logics of Inference*. *Confl. Manag. Peace SCI.* 25, 1-18.
- Lichtenberger, E., (1993). *Internationalization and Restructification of the Real-Estate Market, the Labor-Market and the Housing-Market. Comparative Research in Vienna, Budapest and Prague*. Osterr Geograph Gesellschaft, Karl-Schweighofer-Gasse 3, A-1071 Vienna, Austria.
- Loures, L., Panagopoulos, T., Burley, J., (2016). *Assessing user preferences on post-industrial redevelopment*. *Environ. Plan. B Plan. Des.* 2016, 43, 871–892.
- Lewis, G., and Maund, D., (1976). *The urbanization of the countryside: A framework for analysis*. *Geogr. Ann.*, 58B,17–27.
- Martín, G., (2013). *Border Space as a Vehicle for Territorial Cooperation in the new Programming Period 2014-2020, OTALEX-C*. Dirección General de Transportes, Ordenación del Territorio e Urbanismo. Consejería de Fomento, Vivienda, Ordenación del Territorio y Turismo; Junta de Extremadura: Badajoz, Spain.
- Martins, S., (2015). *Labirintos Mundiais: as revoluções pós-modernas e os caminhos da incerteza global*. ISBN: 978-972-618-804-9. Lisbon.
- Medeiros, E., (2005). *A Coesão Territorial nas NUTS III de Fronteira de Portugal Continental. A Iniciativa Interreg III-A e o Desenvolvimento Regional. O caso da NUT III do Alentejo Central*. Faculdade de Letras, Master Thesis, University of Lisbon: Lisbon, Portugal.
- Medeiros, E., (2011). *Efeito Barreira e Cooperação Transfronteiriça na Raia Ibérica. Impactos Territoriais do Interreg-A*. Centro de Estudos Geográficos: Lisbon, Portugal.
- Medeiros, E., (2013). *Assessing territorial impact of the EU Cohesion Policy: The Portuguese case*. *Eur. Plan. Stud.*, 22, 1960–1988.
- Medeiros, E., (2014). *Territorial Impact Assessment (TIA). The Process, Methods and Techniques*. Centro de Estudos Geográficos: Lisbon, Portugal.
- Medeiros, E., (2015). *Territorial Impact Assessment and Cross-Border Cooperation*. *Reg. Stud. Reg. Sci* (1), 97-115.
- Mikail, B. (2011). *Syria: the limits of external influence*. Policy Brief. ISSN: 1989-2667.
- MOT, (2017). *Newry-Dundalk*. Available online: [http:// espaces-transfrontaliers.org](http://espaces-transfrontaliers.org). (Accessed on 6 March of 2017).
- Namyslak, B., (2014). *Cooperation and Forming Networks of Creative Cities: Polish Experiences*. *J. Eur. Plan. Stud*, 22, 2411–2427.
- Nicolini, E.; Pinto, M., (2013). *Strategic Vision of a Euro-Mediterranean Port City: A Case Study of Palermo*. *Sustain. J.*, 5, 3941–3959.
- Niculescu, S., Lardeux, C., Grigoras, I., Hanganu, J. and David, L., (2016). *Synergy Between LiDAR, RADARSAT-2, and Spot-5 Images for the Detection and Mapping of Wetland Vegetation in the Danube Delta*. *Journal of Selected Topics in Applied Earth Observations and Remote Sensing*. DOI: 10.1109/JSTARS.2016.2545242.
- npr, (2017). *Once A Tax Haven, Gibraltar Now Says It's Low-Tax*. Available online: [http:// www.npr.org](http://www.npr.org). (Accessed on 8 March of 2017).
- Nye, S., (2004). *Soft Power - The Means to Success in World Politics*. Public Affairs Press. New York, USA.

- PORDATA, (2016). *PORDATA – Base de Dados Portugal Contemporâneo*. Available online: [http:// www.pordata.pt](http://www.pordata.pt). (Accessed on 14 November of 2016).
- Program INTERREG Europe (2016). *Program INTERREG Europe*. Available online: <http://www.interregeurope.eu/> (Accessed on 24 July 2016).
- Spirkova, D., and Ivanicka, K. (2009). *Dynamics of Bratislava urban and housing development. New models for innovative management and urban dynamics*. University of Algarve: Faro, Portugal.
- Stadt Wien, (2016). *Wien Masterplan*. Available online: <http://www.wien.gv.at>. (Accessed on 14 November of 2016).
- Stoica, C., Camejo, J., Banciu, A., Nita-Lazar, M., Paun, I., Cristofor. S., Pacheco, O. and Guevara, M., (2016). *Water quality of Danube Delta systems: ecological status and prediction using machine-learning algorithms*. Journal of Water Science and Technology. DOI: 10.2166/wst.2016.097.
- Treaty on European Union, (1992). *Maastricht Treaty*. Luxembourg: Office for Official Publications of the European Communities. ISBN 92-824-0959-7.
- UN, (2013). *United Nations Statistics Division, Demographic Statistics*. Available online: [http:// www.unstats.un.org](http://www.unstats.un.org) (Accessed on 14 November of 2016).
- Valga, (2016). *Valga*. Available online: [http:// www.valgalv.ee](http://www.valgalv.ee). (Accessed on 16 November of 2016).
- Vulevic, A, (2013). *Infrastructural Corridors and their Influence on Spatial Development Example Corridor VII in Serbia*. Ph.D. dissertation. University of Belgrade – Faculty of Geography. Belgrade, Serbia.
- Vulevic, A., (2016). *Linkage between Regional Accessibility, Economic Development, and Logistic Infrastructure*. Book Sustainable Logistics and Strategic Transportation Planning, Tomaž Kramberger, Vojko Potočan and Vesna Mia Ipavec, DOI:10.4018/978-1-5225-0001-8.ch012
- Yin, R. (1994). *Case Study Research – Design and Methods*. Sage Publications, London.

QUALITY OF LIFE OF STUDENTS IN AN UNDERGRADUATE NURSING COURSE FROM A PORTUGUESE PUBLIC SCHOOL

Thiara Amanda Corrêa de Almeida

Acadêmica de Enfermagem, Escola de Enfermagem da Universidade Federal de Minas Gerais – UFMG, Brasil
(thiaramanda@hotmail.com)

Maria José Baltazar dos Reis de Pinto Gouveia

Escola Superior de Saúde da Universidade do Algarve – UAlg, Portugal
(mjgouveia@ualg.pt)

Mônica Ribeiro Canhestro

Escola de Enfermagem da Universidade Federal de Minas Gerais, UFMG, Brasil
(mrcanhestro@gmail.com)

Rogério Manuel Ferrinho Ferreira

Escola Superior de Saúde – Instituto Politécnico de Beja, IPB, Portugal
(ferrinho.ferreira@ipbeja.pt)

ABSTRACT

The operationalization of this study aims to investigate the quality of life of nursing students from a portuguese public university (Universidade do Algarve). This is a descriptive ...and study with quantitative and transversal approach, which used as a method of data collection the application of a scale for measuring quality of life called WHOQOL-Bref. All the participants of the study were students of the degree course in nursing at the School of Health Sciences, University of Algarve, comprising a sample of 118 students. The data collected underwent statistical tests using the Statistical Package for Social Sciences (SPSS). This study adopts the ethical assumptions for investigative research and follow the rules for research involving humans. The study results shows the quality of life index of nursing students; those students considered their quality of life “Good”, being observed a decrease in the mean score of quality of life as they progress up the graduation. It has been found correlation between quality of life and age.

It is expected that the results of this research may provide subsidies for later interventions within this problematic, generating discussions and reflections on training in the field of nursing.

Keywords: Quality of Life, Nursing, Schools, Nursing, Students, Nursing Education.

1. INTRODUCTION

In the context of nursing, the result of measuring people's quality of life has great relevance and can be considered as a tool for the formulation of actions aimed at improving people's lives.

The interest in the study of the quality of life of undergraduate students in nursing arose from the academic experience and the contact with this public, taking the attention to the investigation of this theme. It is known that entry into higher education is a critical period due to the numerous challenges, responsibilities, crises and obstacles, which can lead to some feeling of lack of control over our quality of life. Thus, it is justified to study this theme, when we consider that the quality of life has great influence on the way of living and meet the requirements of a nursing degree.

The present study aims to verify the quality of life of the students of the nursing course of a public nursing school in the Algarve (Portugal). In addition, this study intends to determine if there are significant differences in the quality of life of undergraduate students in nursing due to graduation year, professional activity, marital status, age and gender.

This research allowed us to have the perception about quality of life (QoL) of nursing undergraduate students from the School of Health of the University of Algarve (ESSUAlg).

The results obtained through it, provide us with subsidies for subsequent interventions in the scope of this problem, provoking discussions and reflections about nursing.

2. THEORETICAL CONTEXTUALIZATION

The entrance into higher education is a critical period due to the numerous challenges, responsibilities, crises and obstacles, which can lead to some sense of lack of control over our quality of life. Thus, it is justified to study this theme when we consider that the quality of life has great influence in the form of living and facing the requirements of a degree in nursing.

Quality of life is one of the main themes that has been debated in current clinical trials, according to Nobre (1995).

However, despite its broad discussion, there is still no single definition of what it means to have a quality life, since that term is related to the “subjective perception of the level of happiness and satisfaction in relation to the different aspects of life” (Kimura and Silva, 2009). That is, quality of life is a subjective concept, which involves the perceptions of each individual, and various factors such as culture, product or service provided, needs and expectations. Thus, it is concluded that quality of life is a complex concept, which has countless meanings, varied theoretical approaches and several methods of measurement, as said by Kimura and Silva (2009).

According to the World Health Organization (WHO) quality of life group, quality of life can be defined as “the individual’s perception of their position in life in the context of the culture and value systems in which he lives and in relation to its objectives, expectations, standards and concerns” (1995). That is, the concept of quality of life has several dimensions, since it encompasses objective, subjective aspects of cognitive ability, emotional well-being and abilities (Nunes, 2006).

The evaluation of the quality of life implies the study of sociodemographic, economic, political, health, health promotion and well-being indicators, as well as different levels of analysis: individual, group, community, In society in general and in transcultural approaches (Nunes, 2006).

In the context of nursing, it is understood that the result of the measurement of the quality of life of the people, represents an aid to formulate actions aimed at improving the life of individuals (Nunes, 2006).

We also emphasize the relevance and importance of the WHOQOL group, designed to assess quality of life - WHOQOL 100 and WHOQOL-Bref. The WHOQOL-100 was developed in the second half of the 1990s and evaluates six domains (physical, psychological, independence, social relations, environment and spirituality). It consists of 100 questions, which represents a disadvantage for its application. For this reason, the WHOQOL group felt the need to create a shorter instrument that could be filled in a shorter time but retain the satisfactory psychometric properties of the WHOQOL-100. Thus, the WHOQOL-Bref appears (abbreviated version of WHOQOL-100); A generic, multicultural and multidimensional measurement instrument that allows the subjective evaluation of the quality of life of healthy individuals or with psychological or physical disorders, age 18 years or older or who play the social role of an adult.

3. METHODOLOGY

This is a quantitative, descriptive and transversal study.

The *a priori* referred study was conducted by the pupils taking the degree in Nursing of the Escola Superior de Saúde do Algarve, composing a sample of 118 students.

The program SPSS was used for data processing.

3.1 Instruments and data collection

The data collection was done using an auto-administered questionnaire composed by two parts. The first one contains information such as age, gender, residence area, schooling, year of degree, professional activity, civil state and vises the population’s characterization. Then the second part consists in the WHOQOL-Bref, Portuguese (from Portugal) version, with 26 questions, in which two regard to general quality of life and the 24 others are directed to the investigation in 4 different domains: physical, psychological, social relations and the environment (Canavarró *et al.*, 2006; Vaz Serra *et al.*, 2006). Such instrument is built in the Likert type scale that is a type of scale of psychometric response used regularly in surveys, being the most used scale in opinion researches. The Likert type scale is composed by a group of sentences (items), in which the subject that is being evaluated is asked to show his/her level of agreement and his/her perception in relation to the certain question. (Cunha, 2007).

For each answer there is a numeric value (level) attributed, therefore being, each one of them comprehended in the 1 to 5 interval, 1 being the most negative value and 5 the most positive value, except for the questions 3, 4 and 26 that are inversely organized. It is very important to enhance that such instrument shows variables that are irrelevant in the context of the investigated population by this study. This because, the sample presents itself very homogeneous in relation to diverse characteristics, in between them, the age, the civil state and the professional activity.

The data referring to the answers of the WHOQOL-Bref were processed in a data base and submitted to statistic testing in the Statistical Package for Social Sciences (SPSS) program version 15.0 for Windows. Absolute and relative frequencies analysis was also performed and also non parametric tests (Kruskal Wallis), vising to compare two or more variables. In this kind of test, it is considered that when the calculated significance level is superior to 0,05, there is no relation between the variables; but, if the significance level is below 0,05, it shows that there is a relation between the analyzed variables. The average values of the studied domains and of the QV were presented in a scale of 0 to 100 to make the interpretation of the results and the comparison with other validated instruments easier. Such study contemplates the ethical assumptions preconized to researches of investigation and follows the international ethical norms. The researcher was granted permission by the ESSUAlg for the realization of the research and, beforehand to the signing of the Informed Consent Term (ICT), the participants were enlightened about the research project, and the compromise to maintain the anonymity and the sigil of the information was highlighted.

3.2 Study Hypotheses

The hypotheses consist in what is pretended to demonstrate or verify with the study. After the analysis of the results, either the initial hypotheses are rejected or accepted.

The present study has the following hypothesis:

- Statistically significant differences exist in regard to the quality of life in the various years of the degree in Nursing;
- Statistically significant differences exist in regard to the Nursing student's quality of life depending on the professional activity;
- Statistically significant differences exist in regard to the Nursing student's quality of life depending on the civil state;
- Statistically significant differences exist in regard to the Nursing student's quality of life depending on age;
- Statistically significant differences exist in regard to the Nursing student's quality of life depending on gender;

4. RESULTS

The sample's characterization contemplates the variables age, gender, year of the degree, profession and civil state. In order to make the obtained data analysis easier, it was organized in charts.

Chart 1 – Sample distribution in regard to gender

Gender	N	%
Male	20	16,9
Female	98	83,1
Total	118	100,0

The sample is predominantly of the female gender (83,1%). The remaining 16,9%, corresponds to the male gender (Chart 1).

Chart 2 – Sample characterization according to age

Age	N	Minimum	Maximum	Average	Pattern Deviation
	118	17	60	21,27	5,087

The Nursing students' age is comprehended between 17 and 60 years old. The average age is approximately 21 (with a pattern deviation of 5,087), as can be verified in Chart 2, located above.

Chart 3 – Sample distribution in regard to year of degree

Year of degree	N	%
Year 1	34	28,8
Year 2	30	25,4
Year 3	22	18,7
Year 4	32	27,1
Total	118	100,0

In what regards to the sample's distribution relatively to the year of the degree, this was composed by 118 students, in which 34 were in Year 1, 30 in Year 2, 22 in Year 3 and 32 in Year 4, as presented in Chart 3.

Chart 4 – Sample distribution in regard to civil state

Civil State	N	%
Single	112	95,0
Married	5	4,2
Separated	1	0,8
Divorced	0	0,0
Widower	0	0,0
Total	118	100,0

As presented in Chart 4, most of the enquirees are single (112), 5 are married or live together with their partner and 1 is separated.

Chart 5 – Sample distribution in regard to the exercise of a professional activity

Professional Activity	N	%
No	111	94,1
Yes	5	4,2
Did not answer	2	1,7
Total	118	100,0

According to the data presented in Chart 5 above, 5 participants work, while 111 do not exercise any professional activity. Next are presented the results, taking in consideration the 26 questions of the survey.

Chart 6 – Sample distribution (absolute frequencies) in regard to the year of the degree and the global quality of life

Question 1 How do you evaluate your quality of life?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very bad	0	0	0	0	0
Bad	0	1	1	0	2
Nor good nor bad	3	4	1	10	18
Good	26	19	16	21	82
Very good	5	6	4	1	16
Total	34	30	22	32	118

In relation to global quality of life, the majority of students (82) classifies their quality of life as being “Good” and no student referred to it as being “Very bad” (Chart 6).

Chart 7 – Sample distribution (absolute frequencies) in regard to the year of degree and the global perception of health

Question 2 To which extent are you satisfied with your health?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	0	0	0	0	0
Unsatisfied	0	1	0	1	2
Nor satisfied nor unsatisfied	1	2	4	8	15
Satisfied	26	20	14	19	79
Very Satisfied	7	7	4	4	22
Total	34	30	22	32	118

By analyzing the Chart above, it is verified that the majority (79) of the enquirees affirms to be “Satisfied” with their health and 22 say they are “Very Satisfied”. Of the total of participants, 5 adopted a neutral attitude facing this question, affirming to be “Nor satisfied not unsatisfied” with their health and 2 considered themselves as “Unsatisfied”. None of the students said they were “Very unsatisfied” with their health.

Chart 8 – Sample distribution (absolute frequencies) in regard to the year of degree and the pain and discomfort

Question 3 In what measure does your (physical) pain prevent you to do what you need to?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
In any way	25	16	6	15	62
A little	5	9	9	7	30
Nor little nor much	2	4	7	6	19
Much	2	1	0	4	7
Very much	0	0	0	0	0
Total	34	30	22	32	118

According to Chart 8, 62 participants affirmed that their physical pain doesn't prevent them "In any way" to do what has to be done and only 7 referred that their pain influences much the realization of their tasks.

Chart 9 – Sample distribution (absolute frequencies) in regard to the year of degree and the dependency on medical care to live their day-to-day life

Question 4 In what measure do you need medical care to live your day-to-day life?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Any	25	27	11	17	80
Little	8	1	7	12	28
Nor little nor much	1	2	4	1	8
Much	0	0	0	2	2
Very much	0	0	0	0	0
Total	34	30	22	32	118

According to chart 9 the majority of the Participants (80) refers not to need "any" medical care to live their day-to-day life.

Chart 10 – Sample distribution (absolute frequencies) in regard to the year of degree and the love of life

Question 5 To which extent do you love life?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
No	0	0	0	0	0
Little	0	1	0	0	1
Nor little nor much	3	1	2	2	8
Much	16	13	8	18	55
Very much	15	15	12	12	54
Total	34	30	22	32	118

According to Chart 10 it is verified that 55 and 54 participants referred to like "Much" and "Very much" their life, respectively. Besides that only one student informed to like their life "little".

Chart 11 – Sample distribution (absolute frequencies) in regard to the year of degree and the meaning of life

Question 6 To which extent do you feel your life has a meaning?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
No	0	1	0	0	1
Little	0	0	0	1	1
Nor little nor much	5	2	4	5	16
Much	20	15	9	13	57
Very much	9	12	9	13	43
Total	34	30	22	32	118

By analyzing the chart above it is possible to verify that 57 participants consider their life having "much" meaning and 43 affirm that their life has "very much" meaning. Besides that it is important to highlight that only one participant referred that their life has "no" meaning.

Chart 12 – Sample distribution (absolute frequencies) in regard to the year of degree and the ability to concentrate

Question 7 To which extent are you able to concentrate?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Nothing	0	1	0	0	1
Little	1	2	1	1	5
Nor little nor much	13	7	8	10	38
Much	18	19	12	17	66
Very much	2	1	1	4	8
Total	34	30	22	32	118

According to chart 12 the majority of the enquirees (66) informs to be able to concentrate themselves “Much” meanwhile only one participant considers he/she can concentrate “nothing”.

Chart 13 – Sample distribution (absolute frequencies) in regard to the year of degree and the day-to-day security

Question 8 To which extent do you feel safe in your daily basis?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Not	0	1	0	0	1
Little	1	0	0	1	2
Nor little nor much	6	5	3	6	20
Much	24	20	18	24	86
Very much	3	4	1	1	9
Total	34	30	22	32	118

By analyzing chart 13 it is verified that the majority of the participants (86) feels “much” safe and only one informs to feel “not” safe in their day to day basis.

Chart 14 – Sample distribution (absolute frequencies) in regard to the year of degree and the physical environment

Question 9 To which extent is your physical environment healthy?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
No	0	0	0	0	0
Little	0	1	1	1	3
Nor little nor much	6	5	3	7	21
Much	26	22	15	21	84
Very much	2	2	1	3	8
Did not answer	0	0	2	0	2
Total	34	30	22	32	118

According to the chart 14 it is possible to affirm that students of nursing in their majority (84) consider that their physical environment is “much” healthy and only three participants (one in year 2, one in year three and one in year four) informed that their physical environment is little healthy. No participant characterised their physical environment as “not” healthy.

Chart 15 – Sample distribution (absolute frequencies) in regard to the year of degree and the energy for their daily life

Question 10 Have you got enough energy for your daily life?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
No	0	0	0	0	0
Not really	1	0	0	0	1
Moderately	9	8	11	11	39
Quite	18	12	9	16	55

Completely	6	10	2	5	23
Total	34	30	22	32	118

By analyzing the table above it is possible to conclude that relatively to the energy for their daily life, 55 participants consider “quite” having energy, 39 “moderately” having energy and 23 refer to “completely” having energy for the performance of their tasks.

Chart 16 – Sample distribution (absolute frequencies) in regard to the year of degree and the ability to accept their physical appearance

Question 11 Are you capable of accepting your physical appearance?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
No	0	0	0	0	0
Not really	3	0	2	4	9
Moderately	4	6	5	7	22
Quite	19	16	12	14	61
Completely	8	8	3	7	26
Total	34	30	22	32	118

As suggested by chart 16, from the total of the enquiries 61 informed to be “quite” capable of accepting their physical appearance and no student refers not to accept their physical appearance.

Chart 17 – Sample distribution (absolute frequencies) in regard to the year of degree and the money to satisfy their needs

Question 12 Have you got enough money to satisfy your needs?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
No	1	0	0	0	1
Not really	3	1	2	5	11
Moderately	17	16	15	23	71
Quite	9	8	4	3	24
Completely	3	5	1	1	10
Did not answer	1	0	0	0	1
Total	34	30	22	32	118

From the total of the participants, 71 consider “moderately” having money to satisfy their needs and only one student informed not to have any money to satisfy their needs (chart 17).

Chart 18 – Sample distribution (absolute frequencies) in regard to the year of degree and the access to necessary information for the organization of their daily lives

Question 13 To which extent do you have easy access to the necessary information to organize your daily life?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
No	0	0	0	0	0
Little	0	1	0	0	1
Moderate	7	2	2	7	18
Much	21	21	17	23	82
Complete	6	6	3	2	17
Total	34	30	22	32	118

According to chart 18, it is verified that 82 participants consider having “much” access to the necessary information for the organisation of their daily life, while only one student referred that his/her access to information is “little”.

Chart 19 – Sample distribution (absolute frequencies) in regard to the year of degree and the opportunity to enjoy leisure activities

Question 14 To which extent do you have opportunity to enjoy leisure activities?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
No	1	0	1	1	3
Little	3	6	4	3	16
Moderate	17	13	9	14	53
Much	13	6	8	13	40
Complete	0	5	0	1	6
Total	34	30	22	32	118

From the analysis of chart 19 it is possible to conclude that in regard to the opportunity to enjoy leisure activities, the majority of the enquirees (53) informed to have “moderate” opportunity while three referred have “no” opportunity.

Chart 20 – Sample distribution (absolute frequencies) in regard to the year of degree and the ability to move and to dislocate themselves on their own

Question 15 How would you evaluate your mobility? (Capacity to move and dislocate yourself on your own)?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very bad	0	0	0	0	0
Bad	0	0	0	0	0
Nor good nor bad	0	2	0	0	2
Good	9	5	10	17	41
Very good	24	23	11	15	73
Did not answer	1	0	1	0	2
Total	34	30	22	32	118

Analyzing the chart above, it is verified that the majority of the participants (73), considers that their capacity to move and dislocate themselves on their own is “very good”. No student evaluated their mobility as being “bad” or “very bad”.

Chart 21 – Sample distribution (absolute frequencies) in regard to the year of degree and sleep satisfaction

Question 16 To which extent are you satisfied with your sleep?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	2	1	0	0	3
Unsatisfied	5	5	5	6	21
Nor satisfied nor unsatisfied	8	7	5	9	29
Satisfied	16	15	7	16	54
Very satisfied	3	2	5	1	11
Total	34	30	22	32	118

From the total of participants, 54 informed to be “satisfied” with their sleep and three referred to be “very unsatisfied” (chart 21).

Chart 22 – Sample distribution (absolute frequencies) in regard to the year of degree and the ability to perform their day-to-day activities

Question 17 To which extent are you satisfied with the ability to perform your day-to-day activities?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	1	0	0	0	1
Unsatisfied	1	2	0	0	3
Nor satisfied nor unsatisfied	2	9	2	7	20
Satisfied	24	16	18	20	78
Very satisfied	6	3	2	5	16
Total	34	30	22	32	118

The majority of participants (78) affirmed to be “satisfied” with their capacity to perform the activities of their day-to-day and only one student informed to be “very unsatisfied” (chart 22).

Chart 23 – Sample distribution (absolute frequencies) in regard to the year of degree and the work ability

Question 18 To which extent are you satisfied with your work ability?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	1	1	0	0	2
Unsatisfied	2	2	1	1	6
Nor satisfied nor unsatisfied	9	10	6	7	32
Satisfied	17	17	15	19	68
Very satisfied	5	0	0	5	10
Total	34	30	22	32	118

According to chart 23, the majority of the enquirees (68) considered themselves “satisfied” with their ability to work, existing only two students that informed to be “very unsatisfied”.

Chart 24 – Sample distribution (absolute frequencies) in regard to the year of degree and the satisfaction with themselves

Question 19 To which extent are you satisfied with yourself?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	1	1	0	0	2
Unsatisfied	1	2	1	1	5
Nor satisfied nor unsatisfied	6	8	3	7	24
Satisfied	20	16	16	21	73
Very satisfied	5	3	2	3	13
Did not answer	1	0	0	0	1
Total	34	30	22	32	118

From the analysis of the chart above, it is verified that the majority of the participants (73) considered to be “satisfied” with themselves, 13 affirmed to be “very satisfied” and 2 declared to be “very unsatisfied”.

Chart 25 – Sample distribution (absolute frequencies) in regard to the year of degree and the satisfaction with their personal relationships

Question 20 To which extent are you satisfied with your personal relationships?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	0	1	0	0	1
Unsatisfied	0	3	1	0	4
Nor satisfied nor unsatisfied	4	4	4	5	17
Satisfied	22	14	14	21	71

Very satisfied	7	8	3	6	24
Did not answer	1	0	0	0	1
Total	34	30	22	32	118

Chart 25 points out that the majority of students (71) consider is that their personal relationships are satisfactory, existing only one participant that affirmed to be “very unsatisfied” with his/her personal relationships.

Chart 26 – Sample distribution (absolute frequencies) in regard to the year of degree and their sex life satisfaction

Question 21 To which extent are you satisfied with your sex life?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	0	1	1	2	4
Unsatisfied	2	0	0	3	5
Nor satisfied nor unsatisfied	12	6	7	9	34
Satisfied	14	17	8	10	49
Very satisfied	6	6	6	8	26
Total	34	30	22	32	118

From the analysis of the chart above, it is possible to conclude that the majority of the participants (49) declare themselves “satisfied” with their sex life. Besides that, nine students responded either “unsatisfied” or “very unsatisfied” to this question.

Chart 27 – Sample distribution (absolute frequencies) in regard to the year of degree and the satisfaction with the support they receive from their friends

Question 22 To which extent are you satisfied with the support that you receive from your friends?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	0	1	0	0	1
Unsatisfied	0	2	0	0	2
Nor satisfied nor unsatisfied	5	5	2	4	16
Satisfied	18	12	14	10	54
Very satisfied	11	10	6	18	45
Total	34	30	22	32	118

From the total of participants, 54 and 45 responded to be “satisfied” and “very satisfied” respectively with all the support they receive from their friends. Only one student informed to be “very unsatisfied” (chart 27).

Chart 28 – Sample distribution (absolute frequencies) in regard to the year of degree and the conditions and facilities of the place where they live

Question 23 To which extent are you satisfied with the conditions that the place where you live offers?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	0	0	0	0	0
Unsatisfied	0	2	0	1	3
Nor satisfied nor unsatisfied	3	1	3	6	13
Satisfied	18	14	11	16	59
Very satisfied	13	13	8	9	43
Total	34	30	22	32	118

According to chart 28, the majority of participants (59) finds themselves “satisfied” with the conditions that the place where they live offers. Only three students marked the “unsatisfied” option for this question.

Chart 29 – Sample distribution (absolute frequencies) in regard to the year of degree and the satisfaction with the access they have to health services

Question 24 To which extent are you satisfied with the access you have to health services?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	0	0	0	0	0
Unsatisfied	1	0	3	2	6
Nor satisfied nor unsatisfied	15	4	10	8	37
Satisfied	12	22	6	20	60
Very satisfied	5	4	3	2	14
Did not answer	1	0	0	0	1
Total	34	30	22	32	118

By the analysis of the chart 29, we can observe that the majority of participants (60) finds themselves “satisfied” with the access they have to health services, existing six students that informed to be “unsatisfied” with it.

Chart 30 – Sample distribution (absolute frequencies) in regard to the year of degree and the satisfaction with the transports they ride in

Question 25 To which extent are you satisfied with the transports you ride in?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Very unsatisfied	0	0	1	0	1
Unsatisfied	3	2	3	2	10
Nor satisfied nor unsatisfied	7	5	5	8	25
Satisfied	18	16	9	18	61
Very satisfied	6	7	4	4	21
Total	34	30	22	32	118

From the total of participants, 61 finds themselves “satisfied” with the transports they ride in, 21 inform to be “very satisfied” and only one student referred to be “very unsatisfied” (chart 30).

Chart 31 – Sample distribution (absolute frequencies) in regard to the year of degree and the frequency of negative feeling appearances

Question 26 How often do you have negative feelings, such as sorrow, despair, anxiety or depression?	Year of Degree				Total
	Year 1	Year 2	Year 3	Year 4	
Never	1	1	1	0	3
Seldom	17	12	8	10	47
Sometimes	12	14	10	16	52
Frequently	2	3	3	6	14
Always	1	0	0	0	1
Did not answer	1	0	0	0	1
Total	34	30	22	32	118

According to the chart 31, from the total of participants, 52 affirmed that “sometimes” they experiment negative feelings, 47 declared that they have these feelings “seldom” and only one participant referred to “always” having feelings like sorrow, despair, anxiety or depression.

Chart 32 – Average values of the domains and average value of quality of life per year of degree

Year of Degree	General domain	Physical domain	Psychological domain	Social network domain	Environment domain	Quality of Life
Year 1	78,03	77,97	71,88	75,33	68,15	73,97
Year 2	76,47	76,57	71,83	72,23	71,53	73,73
Year 3	75,64	73,43	71,68	73,86	65,09	71,98
Year 4	69,34	74,59	70,75	75,59	66,41	71,34
All individuals	74,83	75,85	71,52	74,33	67,97	72,82

Chart 33 –Kruskal Wallis test to determine if there exists a relation between the variable quality of life and the year of degree

Null Hypothesis	Significance level	Decision
There is no relation between the quality of life and the year of degree	0,353	Retain the null hypothesis

Test Statistics^{a,b}

	QUAL
Chi-Square	3,263
df	3
Asy mp. Sig.	,353

a. Kruskal Wallis Test

b. Grouping Variable: TURMA

By analyzing chart 32, we can observe that the environment domain was the one that showed the smallest values of average, meaning that for all the years of degree this is the domain that possesses the worst results in relation to quality of life. Besides that for all the individuals that were investigated, the average quality of life was 72, 82 (with a Std. Deviation of 10, 06). Although the results point to decreasing values from 1st to 4th year of degree, in what refers to the average quality of life, the Kruskal Wallis test shows that, statistically, there is no possible relation between the quality of life and the year of degree, which is evidenced by the significance level superior to 0,05 (0,353) (Chart 33).

Chart 34 – Average quality of life by professional activity

Professional Activity	Quality of life
No	72,70
Yes	78,28
Did not answer	65,70

Chart 35 – Kruskal Wallis test to determine if there is a relation between the variable quality of life and the existence of a professional activity

Null Hypothesis	Significance level	Decision
There is no relation between the quality of life and the existence of a professional activity	0,209	Retain the null hypothesis

Test Statistics^{a,b}

	QUAL
Chi-Square	1,581
df	1
Asymp. Sig.	,209

a. Kruskal Wallis Test

b. Grouping Variable: PROFISSÃO

Chart 34 points out that students that exercise some professional activity possess a greater quality of life. Meanwhile, the Kruskal Wallis test indicates that, statistically, there is no relation between the quality of life and the existence of a professional activity, which is evidenced by the level of significance superior to 0,05 (0,209) (Chart 35). Such result can be explained by the fact that a small number of sample subjects (5 from 118) exercise some professional activity (Chart 5), which makes the hypothesis test an inconclusive one.

Chart 36 – Average quality of life by civil state

Civil State	Quality of life
Single	72,88
Married / Together with the partner	73,20
Separated	64,40
Divorced	-
Widower	-

Chart 37 –Kruskal Wallis test to determine if there exists a relation between the variable quality of life and the civil state

Null Hypothesis	Significance level	Decision
There is no relation between the quality of life and the civil state	0,530	Retain the null hypothesis

Test Statistics^{a,b}

	QUAL
Chi-Square	2,211
df	3
Asymp. Sig.	,530

a. Kruskal Wallis Test

b. Grouping Variable: ESTADO CIVIL

The results of chart 36 indicate that the students that are married or together with their partner present a greater quality of life, while the ones that are separated show themselves with smaller values, when both the data are compared with the single group's. However, chart 37 points out that, statistically, there is no difference in the quality of life depending on the civil state, which is evidenced by the level of significance superior to 0,05 (0,530). This result can be justified by the small number of married (five) and separated (one) when compared to the single subject number (112) (chart 4), making the hypothesis test inconclusive.

Chart 38 – Average quality of life per age

Age	N	Quality of life
17 years old	2	75,00
18 years old	22	73,85
19 years old	25	75,46
20 years old	20	72,16
21 years old	22	69,69
22 years old	5	75,77
23 years old	1	59,00
24 years old	2	73,70
25 years old	4	76,85
26 years old	5	77,84
27 years old	2	70,20
28 years old	4	76,60
29 years old	1	75,40
37 years old	1	29,20
40 years old	1	58,00
60 years old	1	64,40
All individuals	118	72,82

Chart 39 –Kruskal Wallis test to determine if there exists a relation between the variable quality of life and age

Null hypothesis	Significance level	Decision
There is no relation between quality of life and age	0,271	Retain the null hypothesis

Test Statistics^{a,b}

	QUAL
Chi-Square	17,839
df	15
Asymp. Sig.	,271

a. Kruskal Wallis Test
b. Grouping Variable: IDADE

Chart 38 shows three students with advanced ages (37, 40 and 60 years old) in relation to the average of the sample (21,27 years old) (chart 2). Such individuals possess a small quality of life (29, 20; 58,00 and 64,40) when compared with the global result (72, 82). Meanwhile, according to the Kruskal Wallis test it is not possible to affirm that the older individuals have worse quality of life, because the significance level was superior to 0,05 (0,271) (Chart 39). This result can be explained because of the fact that these students constitute a very small number (three) in relation to the total of participants (118), which makes the hypothesis test inconclusive.

Chart 40 – Average quality of life per gender

Gender	Quality of life
Female	72,44
Male	74,72

Chart 41 –Kruskal Wallis test to determine if there exists a relation between the variable quality of life and gender

Null Hypothesis	Significance level	Decision
There is no relation between quality of life and gender	0,165	Retain the null hypothesis

Test Statistics^{a,b}

	QUAL
Chi-Square	1,926
df	1
Asy mp. Sig.	,165

a. Kruskal Wallis Test
b. Grouping Variable: SEXO

The results indicate that female gender students have worse quality of life when compare to the male gender (chart 40). Meanwhile the Kruskal Wallis test shows that, statistically, the quality of life does not depend on gender, which is verified by the significance level superior to 0,05 (0,165) (Chart 41).

5. CONCLUSIONS

We emphasize the limitations related to sample size, because although the study sample was composed by 118 students, this population was not enough to allow us to make generalizations. Therefore, for future work, it is suggested to increase the size of the sample, in order to obtain a number of individuals to achieve more consistent and conclusive results.

It would be interesting to develop new studies comparing, for example, with Nursing students from other institutions of public education, as well as their comparison with studies in the particular teaching.

However, it is very important to emphasize its relevance in relation to its impact in relation to the contributions that have brought us in the deepening of the problem studied.

This study showed that the average quality of life for all grade years was high, although a drop occurred as the student progresses in their training. It has also been proven that quality of life worsens as age increases. These results do not rule out the need for interventions in the field of nursing education with the purpose of helping students to deal with the activities and requirements of academic life, such as the situations of pain and suffering resulting from the practice of caring. In this sense, the adoption of Individualized monitoring of student mechanisms, as well as the introduction of a form of supervision of individualized support, aiming to reduce existing conflicts, distress and suffering. This study allowed a reflection on the area of education in nursing, regarding the curricula and pedagogical practices fundamental in nursing training.

Educational institutions should be concerned with their students about the factors that influence their quality of life, since they have a strong relationship with the ability of students to manage their education and their professionalization. Prospective professionals who recognize that external factors influence their own quality of life may possibly act to minimize the impact of such factors on the quality of life of their patients, will have a positive impact.

REFERENCES

- Bampi, L. N. S., Baraldi, S., Guilhem, D., Pompeu, R. B., & Campos, A. C. O. (2013). Percepção sobre qualidade de vida de estudantes de graduação em enfermagem. *Revista Gaúcha de Enfermagem*, 34(1), 125-132.
- Brito, A. M. R., Brito, M. J. M., & Silva, P. A. B. (2009). Perfil sociodemográfico de discentes de enfermagem de instituições de ensino superior de Belo Horizonte. *Escola Anna Nery Revista de Enfermagem*, 13(2), 328-333.
- Canavarro, M. C., Pereira, M., Moreira, H., & Paredes, T. (2010). Qualidade de vida e saúde: Aplicações do WHOQOL. In Tavares, D., Grilo, A., Andrade, G., Raposo, H., Rita, J., Santos, M., Guimarães, T. (Orgs.), *Alicerces* (p. 243-268). Lisboa, Portugal: Colibri.
- Costa, C. S. N. (2012). *Qualidade de vida dos estudantes de enfermagem da Universidade Fernando Pessoa*, Porto (Dissertação para obtenção do grau de Licenciatura). Faculdade de Ciências da Saúde da Universidade Fernando Pessoa, Porto.
- Ecave, C., Nadal, C. S., Aplewicz, J. G. F., Laurindo, M. A., Padilha, L. A., & Junior, G. B. V. (2009). Nível de qualidade de vida de universitários. *Revista do Centro de Pesquisas Avançadas em Qualidade de Vida*, 1(1).
- Eurich, R. B., & Kluthecovsky, A. C. G. C. (2008). Avaliação da qualidade de vida de acadêmicos de graduação em Enfermagem do primeiro e quarto anos: influência das variáveis sociodemográficas. *Revista de Psiquiatria do Rio Grande do Sul*, 30(3), 211-220.

- Fleck, M. P. A., Louzada, S., Xavier, M., Chachamovich, E., Vieira, G., Santos, L., & Pinzon, V. (2000). Aplicação da versão em português do instrumento abreviado de avaliação da qualidade de vida "WHOQOL-bref". *Revista de Saúde Pública*, 34(2), 178-183.
- Kimura, M., & Silva, J. V. (2009). Índice de Qualidade de Vida de Ferrans e Powers. *Revista da Escola de Enfermagem da USP*, 43(Esp), 1098-1104.
- Meneguci, J., Valim-Rogatto, P. C., & Rogatto, G. P. (2013). Qualidade de vida de estudantes de graduação em Educação Física: comparação entre períodos do curso. *Revista Digital EFDesportes*, 18(186).
- Nunes, A. P. M. (2006). *Qualidade de vida do aluno-trabalhador do curso de habilitação profissional técnica de nível médio em enfermagem* (Dissertação de Mestrado). Universidade Guarulhos, Guarulhos.
- Oliveira, B. M., Mininel, V. A., & Felli, V. E. A. (2011). Qualidade de vida de graduandos de enfermagem. *Revista Brasileira de Enfermagem*, 64(1), 130-135.
- Oliveira, M. R., & Orsini, M. (2008). Escalas de avaliação da qualidade de vida em pacientes brasileiros após acidente vascular encefálico. *Revista Neurociências*, in press, 1-7.
- Saupe, R., Nietche, E. A., Cestari, M. E., Giorgi, M. D. M., Krah, M. (2004). Qualidade de vida dos acadêmicos de enfermagem. *Revista Latino-Americana de Enfermagem*, 12(4), 636-642.
- Spíndola, T., Martins, E. R. C., & Francisco, M. T. R. (2008). Enfermagem como opção: perfil de graduandos de duas instituições de ensino. *Revista Brasileira de Enfermagem*, 61(2), 164-169.
- The WHOQOL Group. (1995). The World Health Organization Quality of Life Assessment (WHOQOL): position paper from the World Health Organization. *Social Science & Medicine*, 41(10), 1403-1409.
- World Health Organization. (1997). *WHOQOL: Measuring Quality of Life*. Geneva.

INNOVATION AS AN ALLY OF STRATEGIC MANAGEMENT IN SMALL AND MEDIUM BUSINESS ENTERPRISES: A CASE STUDY OF BRAZIL

António Meireles
Instituto Politécnico de Bragança
(meireles_inter@hotmail.com)

Cláudia Miranda Veloso
UNIAG; Instituto Politécnico de Bragança; Universidade de Aveiro;
(claudiamiranda@ipb.pt; cmv@ua.pt)

António Duarte
UNIAG; Instituto Politécnico de Bragança
(aduarte@ipb.pt)

ABSTRACT

The current globalized scenario has placed Brazilian small and medium enterprises (SMEs) under pressure from new competitive forces. Given that their budgets are usually shy, they do not allow them access to major consultants in order to devise a strategy capable of generating competitive advantages. The major challenge for managers is to anticipate the market using innovation and technology suited to their product. The present study, carried out in a Brazilian poor performing SME in the meat industry, had, as its central objective, to outline a model for the formulation of strategies within the scope of small companies interlinking theory and practice into managerial competencies. Considering the size of the company facilities and its production system, and aiming at a substantial reduction of costs, we suggest several changes in the layout and operations organization, in order to increase production flow. On the other hand, and considering the results of the strategic diagnosis, we suggest the Balanced Scorecard as a model of performance measurement to support of the organization's management.

Keywords: Strategy Management, Small and Medium Business Enterprises, Innovation, Balanced Scorecard.

JEL Classification: M10, M20, M31

1. INTRODUCTION

Faced with an increasingly competitive and globalized scenario, it is no longer enough for companies, especially SMEs, to seek competitive advantages through orthodox strategies because they no longer guarantee effective responses to sustainable growth. Thus, to resort to innovation as allied to the management of a company is perceived as important, or even essential, since it is used as a central strategy that guides investments, defines the focus of research and new developments from the point of view from the market.

Thus, under the effects of globalization, companies have been entering into disturbed and competitive environments, seeking to increase their participation in the markets, both nationally and internationally. In this sense, many firms seek strategic alternatives and action programs aiming at competitive advantages, better performance, and even survival in the market in which they are inserted. With a broader market opening, that is to say, worldwide, it also obliged Brazilian meat companies to look for new technologies and strategies to obtain competitive advantages, both in order to face the internal and external markets.

On the other hand, the macroeconomic situation in Brazil, especially during the 1980s and 1990s, contributed substantially to the reduction of meat exports, due to the inflationary pressure that reduced the competitiveness of Brazilian companies. This situation influenced all segments of economic activity and negatively affected the systemic determinants of competitiveness (Pedrozo, Begnis and Estivalete, 2005).

The competitiveness caused by globalization makes Brazil use agribusiness as a strategy for insertion in world markets in the face of its competences, such as favorable edaphoclimatic conditions and technological advances, mainly in the areas of animal and plant management and production (Sobrinho, 2007).

In 2008, with the emergence of the global economic crisis, started in the American real estate sector and, with the United States of America as a country having influence over the world economy, the Brazilian economy again resents itself, especially the Small and Medium Enterprises (SMEs), given that one of the greatest consequences of this crisis was the difficulty in accessing resources to finance the productive chain, and they were most in need. However, small companies have the advantage of being more agile, of being able to offer a more personalized service to their clients, and also of having their employees reach higher levels of motivation and involvement, which helps to minimize difficulties.

In contrast, large organizations typically have substantial amounts of resources that enable them to invest in Research and

Development (R&D), developing studies and innovations on a large scale, and using technology acquisition (Tidd, Bessant and Pavitt, 1997).

In the current business scenario marked by rapid changes in consumer behavior, shorter product lifecycles, and increased competition both locally and globally, the company that is the subject of this study needs to improve its position in the market in order to take advantage of business opportunities while trying to limit or mitigate the main threats.

Accordingly, the present research aims to collect data for a Strategic Diagnosis and elaboration of the Strategic Map, which will serve as a basis and as a suggestion for the elaboration of the Balanced Scorecard model for the organization.

In order to fulfill the objectives proposed in the research, the methodology had a qualitative, descriptive and exploratory approach. The data were collected through bibliographic research (secondary sources) and within the company, through interviews, with the General Manager and the Administrative Manager (primary sources), carried out in the second half of 2016, as well as the application of a strategic diagnostic survey.

This research is structured in four points, in addition to this brief introduction. Following are the main concepts that guided the investigation, followed by the analysis and discussion of the results constituting the core of the present research, and finally, the conclusions, limitations and suggestions of future research on the subject under analysis.

2. THEORETICAL FRAMEWORK

2.1 Strategic and Balanced Scorecard Positioning

In order to meet the best strategic option that leads the organization to success, it is necessary, initially, to carry out a comprehensive survey of data that allows a diagnosis, capable of accurately reflecting its real situation, namely with regard to its potential, their position in relation to competition, their ability to innovate and what they foresee for their future (Russo, 2009).

The tool that is best suited for this purpose, according to many authors, is the adaptation of a Balanced Scorecard (BSC) model. The BSC is designed through scenario analysis, culminating in the development of the SWOT analysis that demonstrates the organization's threats and opportunities. In addition to the SWOT analysis, other tools, such as the Porter 5 Forces Model and the Boston Consulting Group (BCG) Matrix, were also used in the diagnostic data collection.

According to Russo (2009), the strategy of action must be focused on the future of the company. Moreover, before choosing the option, you have to take into account your mission (reason for being), define the vision (where it goes), its core values, as well as the critical success factors.

Ansoff (1977) is traditionally regarded as one of the pioneers of the study of strategy, when analyzing the importance of markets and products for the organization. For this, it discusses the possibilities of a process to program objectives and strategies based on the analysis of opportunities of the environment. This is because the organization restricts its position in terms of products and markets in the effort to gain competitive advantage. The so-called growth vector becomes the common link in the relationship between products and markets (present and future) and the purpose of the company (current and new), making it possible to define in which direction the organization is heading.

The current global economic context requires organizations that have in their daily dynamics the culture of seeking continuous improvement, eliminating waste and developing skills and competences in their human capital (Gonçalves, Prado and Campos, 2014). Votto and Fernandes (2014) reinforce this context when they mention that companies, exposed to adverse market conditions, have sought modern production management strategies to improve the flow of production and minimize the inconveniences inherent in their production systems.

Johnson, Scholes and Whitting (2011) emphasize the importance of using strategic management because it does not come about on its own; it involves people and especially the managers who implement the strategies. Strategic management includes understanding the strategic position of the organization, strategic choices for the future, and strategy management in action. It is important to emphasize that only so-called excellence organizations will be prominent if they reflect and respond to some vital issues such as: What are we? Where are we? Where do we go? And how will we go?

According to Porter (1989), a company with a good positioning is able to obtain a very good return, even if the industrial structure leaves much to be desired. The basis for good long-term market performance is the competitive advantage. Porter (1989) states that competitive advantage is the value that the company can provide to its consumers, which is larger than the cost of manufacturing.

According to Akis (2015), quality and production costs in the past were determinants of the competitiveness power, today these factors are being replaced by innovation.

According to Apak and Atay (2014), innovation is the result of a combination of knowledge, information and creativity, and is being the backbone of the changing economy due to the great competitive advantages it has been giving to companies.

2.2 Strategic Management Tools

2.2.1 *Swot Analysis*

The SWOT analysis is a tool used to make the analysis of the environment, being used as a basis for the management and strategic planning of an organization, but due to its simplicity, it can be used for any kind of environmental analysis (Oliveira, 2006). SWOT analysis is a simple system for positioning or verifying the strategic position of the company in the environment in question. Strategies for planning through SWOT analysis should maintain strengths, weaknesses should have the vision of reduction, take advantage of opportunities and protect against threats (Oliveira, 2001).

According to Oliveira (2001), the internal points are intended to highlight the deficiencies and qualities of the company being analyzed. This information is within the organization and has immediate and specific implications for the organization's administration. However Oliveira (2001) defines that the external points, aim to study the relationship between the company and the environment in terms of opportunities and threats. In this sequence, business organizations should know both their internal and external environment well and make an effort to improve their skills.

2.2.2 Porter's Five Forces Model

The Porter Five Force model (1986) can be understood as a tool that helps to define the company's strategy and takes into account both the external and the internal environment. Knowledge of the sources of competitive pressure is the pillar of the strategic agenda for action. It highlights the company's strengths and weaknesses, inspires its positioning in the industry, illuminates areas where strategic changes may provide the greatest return, and identifies where sector trends are most significant in terms of opportunities and threats.

2.2.3 BCG Matrix

In 1963 the Boston Consulting Group, better known as BCG, was founded. Bruce Henderson, the founder, added to strategy services the function of discovering "meaningful quantitative relationships" between a company and the markets it chooses (Red, 2005). Its goal is to support product or business unit portfolio analysis based on the product lifecycle concept (CVP). It is used to allocate resources in brand management activities. The matrix allows to classify the business units or products according to their market share and the growth rate in the market they operate (Maximiniano, 2008). The BCG matrix provides insight into three key areas: (1) Analysis of the strategic situation of the company; (2) Determination of the financial needs of each business unit, with a view to the whole company, balancing the cash flow; And (3) Approach in each quadrant of the BCG matrix to meet certain standard strategies, which will serve as guidelines for the formulation of policy measures.

An essential concept that supports the BCG Matrix is the Experience Curve, which specifies that for each doubling of cumulative production, the unit costs resulting from the increase in value added will fall by a fixed percentage, typically by 20%. Products with a high relative market share should therefore have a cost advantage over their competitors.

The matrix has two dimensions: market growth rate and market share (which is the participation of the company in relation to the participation of its largest competitor), the products must be positioned in the matrix and classified according to each quadrant of the matrix.

The greater the market share of a product or the faster the market for a product grows, the better for the company. This method is based on the product life cycle (CVP) and is used to prioritize the different products of a company (BCG, 2012).

In this sequence, the question marks involve decisions to withdraw the product from the market or to make greater investments in them. For star products, in this strategy, investment is recommended. For cash cows the strategy recommendation is to take advantage of the high profitability and invest in other products.

Dogs are products do not make a profit and a withdrawal from them is necessary. Thus, according to Weise, Schultz and Rocha (2010), the strategy recommends disinvestment. The BCG matrix is useful for two purposes: (1) Decisions about desirable market share positions; And (2) Allocation of strategic funds in the product portfolio (Ansoff & McDonnell, 1993).

2.2.4 The Balanced Scorecard (BSC)

Kaplan and Norton (1996), in their publications, showed that managers of large American companies had already realized that the assessment of organizational performance centered on financial indicators was becoming obsolete. Moreover, since they are predominantly short-term, they lack the link to the strategy, not making clear the ability of organizations to create value.

Authors such as Speckbacher, Bischof and Pfeiffer (2003) and Lee and Yang (2011) classified the BSC into three different types:

Type 1: This is the initial phase of the BSC in which an organization, combining financial and non-financial measures, covers the four perspectives (financial, customers, internal processes and learning and growth). This type of BSC is used to assess organizational performance and can establish indicators that show a cause and effect relationship.

Type 2: In addition to considering financial and non-financial measures, it describes strategy and measures that use cause and effect relationships. In this type of BSC, achievement of strategic objectives is rewarded in terms of values for meeting financial and non-financial goals.

Type 3: This is the last step of the BSC, when it reaches the maturity stage. It is characterized by a system that focuses on strategy, including a reward-based performance measurement system, establishing a cause and effect relationship between measures.

This model aims at balancing financial and non-financial indicators, so that organizations should balance accounting and financial results with non-financial indicators from three perspectives: clients; internal processes; learning and growth (Kaplan and Norton, 1992).

According to Saraiva and Alves (2014), in the final phase of the twentieth century there was a need to change the way of assessing the performance of organizations, which until then was strictly done by a financial perspective, culminating in

this way with the emergence of the Balanced Scorecard (BSC), developed by Kaplan and Norton. Wanderley, Cullen, and Tsamenyi (2013) identified the three main political characteristics of BSC.

First, the BSC is presented as politically neutral in its exercise of domination by the top management of the company, preventing managers from asking about the legitimacy of the proposed strategy or about the power that top management exercises over managers.

The BSC considers managers as neutral agents that maximize results. This assumption is based on neoclassical economic theory, which differs from the sociological view which emphasizes that managers do not merely seek to maximize their utility function but are influenced by cultural, political and social aspects (Norreklit & Melander, 2006). In the BSC project, the main task in the management process is to achieve the balance of all aspects related to the company's performance to ensure the organization's long-term survival (Modell, 2012). Third, BSC is a hierarchical top-down system (Norreklit and Mitchell, 2007).

3. RESEARCH METHODOLOGY

The theoretical framework providing the concepts necessary to the constitution of the problem of this research is based on two approaches. In the first, the phases through which the company undergoes are shown in a generic way. In the second, the components of a management system (finalization, organization, animation) are presented.

According to Collis and Hussey (2005, p. 26), the approach used was qualitative, "it is more suggestive and involves examining and reflecting perceptions to obtain an understanding of social and human activities." According to Gil (1991), quoted by Silva and Menezes (2001, p. 21), the objective is to describe the characteristics of a given population or phenomenon or the establishment of relations between variables "and, which also aims to provide greater familiarity with the problem in order to make it explicit or to construct hypotheses."

In relation to technical procedures, this is a case study based on bibliographical research, because according to Silva and Menezes (2001), the case study "involves the deep and exhaustive study of one or a few objects in a way that allows his ample and detailed knowledge "(p. 21).

Data collection took place in two moments. At first, a literature review was carried out through bibliographical research. The literature review allowed the understanding of the tools used in the elaboration of the strategic diagnosis, as well as understanding the relevance of SMEs to the Brazilian economy, since these are in greater numbers among the total of the operating companies, but still with small participation in the exports of the country. In order to change this picture, SMEs are seeking to form networks and consortia in order to share the costs of exports with each other and thus to find strategies that allow them to access a new market. In a second moment, interviews were carried out with the General Manager and the Administrative Manager of the company during the second half of 2016, as well as the application of a Strategic Diagnostic Inquiry.

4. CHARACTERIZATION OF THE ACTIVITIES OF THE CD COMPANY AS A PERISHABLE FOOD INDUSTRY

The company is located in the state of Rio de Janeiro since 2011, carrying out its activities in a meat processing industry under lease, counts in its industrial process with a system that vertically integrates all phases of meat processing, namely, carcasses, boning, preparation of cuts, cooling, freezing and the manufacture of sausages.

As it is a small business, its business structure is composed of the first level by a general manager, the second level composed of the administrative manager who also accumulated the functions of financial, commercial manager and industrial manager, and finally the employees.

Meat processing plants are air-conditioned, with an ambient air-conditioning temperature not exceeding 16°C, and the operations of breaking up the carcasses into pieces, both swine and cattle, can only be carried out after they have undergone the cooling process. The company has in the area of cold cuts its main source of income. Its production line is a continuous process (there is no interruption of the steps in the manufacturing process), and it has machines and equipment which, although not of the latest generation, can be said to offer a high degree of technology. Also the manufacturing process (flavoring, selection and preparation of the meats, injection and brine, curing, forming and cooking), is grounded in high technology. As additional activities, one has the sausages (sausages, mortadella, etc.) and the manufacture of hamburgers.

With respect to equipment, these comply with the standards and characteristics determined by the Ministry of Agriculture, Livestock and Food Supply (MAPA), and are controlled by the Federal Inspection Services (SIF) or State Inspection Service (SIE), and are arranged to discipline the elaboration of the hams.

The company strives to ensure that its activities meet the legal requirements and, as well, its corporate requirements, for which it already promotes training and awareness programs with its employees.

5. STRATEGIC DIAGNOSIS OF THE CD COMPANY

5.1 Swot Analysis

In order to prepare a diagnosis of the potentialities and weaknesses of the company in this study, and in order to achieve the above mentioned objectives, an extra-accounting analysis was carried out, namely a SWOT analysis. In order to do so,

we first used an analysis of the macroeconomic environment and the specific environment through Porter's 5 forces. Table 1 below summarizes the main macroeconomic forces that have an impact on the company's activities.

Table 1. Macroeconomic Forces Affecting the Company

Macro Forces	Opportunities / Threats
Policies	In Brazil one of the great difficulties faced by companies refers to the collection of high levels of taxes, which constitutes a threat; Another point to consider is the political instability that has become recurring, negatively impacting the consumer markets to which the company operates;
Economic	The world economy has faced a strong recession, which causes interest rates to rise to contain inflation, posing a real threat to the company; The devaluation of the currency against the dollar allows greater exports to the big producers opening space internally, constituting as a potential business opportunity.
Social	Gradually, there is a change in the habit of consumers caused by the economic crisis, which causes that consumers consume less of the products offered by the company constituting as a potential threat; Another point to consider is the increased mobilization of labor union entities that sometimes induce employees to behave badly to the company.
Technological	Large companies are constantly increasing their production and reducing costs through technology in the productive process and management. Regarding this factor, the company has a disadvantage, because its equipment and Management Systems are inferior to the main players in the market; Another factor to consider is the scarcity of resources to obtain cutting-edge technology.
Ecological	Increasing people's awareness of environmental issues leads them to adopt certain types of behavior that favor companies that are obviously concerned about the environment and sustainability. The CD company that has a concern with these issues, is in this way positioned to enjoy this opportunity.

Porter's Five Forces model (1986) can be understood as a tool that helps to define the strategy of the company and takes into account both the external and internal environment. Thus, the application of Porter's Five Forces model in the CD company is presented as follows:

- **Barriers to entry of new competitors:** economies of scale; high levels of initial investment; legal barriers; high logistical costs; and difficulty in accessing distribution channels.
- **Presence of substitute products:** a large number of substitute products, such as chicken, certain types of fish, products and by-products of cattle and pork from the region.
- **Rivalry in Industry:** competitors already established and of considerable size; competition based on product quality; and price-based competition.
- **Bargaining power of buyers:** buyers have considerable bargaining power, since they have many options for substitute products and for other companies with the same products.
- **Bargaining power of suppliers:** suppliers have considerable bargaining power since there is a large universe of companies that buy their products.

Table 2 shows the strategic combinations from the SWOT matrix. All combinations were made by relating the strengths and weaknesses encountered with the threats and opportunities observed in the general and specific environment of the company.

Table 2. Matrix Strategic – Swot Combinations

Internal/ External	Threats	Opportunities
Strengths	Use expertise and differentiate yourself from competitors; Develop product lines that meet <i>all</i> market segments; Use the sales force and channels of customer interactions to try to reduce the level of buyers debt; Take advantage of the good strategic location to intensify customer service; Use the flexibility and adaptability to meet the challenges posed by the difficulty in obtaining loans; Make use of speed in decision-making to limit the harmful effects of union pressures.	Take advantage of channels of interaction with suppliers and government funds to develop a pilot program for exporting the CD company's main products; Use channels of interaction with established customers (distributors) to take advantage of opportunities in new market niches; Use the facility in the relationship with local authorities to request tax exemption due to the relevance of the contribution to the local economy through the creation of jobs.

Weaknesses	Train employees; Establish partnerships with suppliers for the implementation of distribution centers that facilitate access to raw materials without the need for large investments by the CD company; Develop a contingent capital fund to meet the financial needs arising from borrowing difficulties; Establish collective agreements with the unions in order to provide more advantageous working conditions for employees while benefiting the company by differentiating it from the competition.	Implement quality certification programs with a view to increasing the competitiveness of the CD company; To seek from the authorities funds for the development of partnerships with suppliers for the implementation of the distribution centers with the aim of supplying raw materials in adequate quantities at the right time, in addition to contributing to the reduction of logistical costs; Seeking to enter new market niches where the competition is not so strong.

5.2 Product lines and contribution margins

The large number of products within a company, such as the CD company, require product policy decisions to be made at three different product levels, namely, product item, product line, and product compound. Given that these three levels are interconnected, an explanatory approach will be made on product item and product compound, developing in a deeper way the product line as it is a very important information to achieve the objectives of the present study, to know:

- Product Item: a specific version of a product that has a separate designation in the sales catalog.
- Composite of products: the composition of products offered for sale by a company or a business unit.
- Product line: a group of products that are closely related, whether because they meet a needs category or because they are used together, or because they are sold to the same customer segments. They are brought to market through the same types of points of sale or enter the same price range.
- Baked ham is a product item. The cold cuts, is a product line, and counts on: cooked ham, smoked ham and hors d'oeuvres. In the different types of products of the cold cuts, the raw materials, the condiments and the packaging, are elements that constitute the product. These elements are common to all products in the different product lines.
- Product composite: the different product lines. The product compound may be described as having a certain extent, depth and consistency.

The extent refers to how many different product lines are within the company. The company CD has several product lines among which are cited: the cold cuts, the sausages, hamburgers, salted and frozen cuts. The depth of product compound refers to the average number of items offered by the company within each product line. As an example, the company under study has eight types of sausages that are produced in order to serve different market segments, whether to meet *all* purchasing power or to meet any other requirements. The consistency of the product compound refers to the degree of relationship of the various product lines in terms of end-use, production specifications, distribution channels or otherwise.

In the company, the product lines are very consistent, since they are consumer goods that reach consumers through the same distribution channels. Normally each product line is managed by a person in charge to follow the whole process, from the conditions in which the equipment is up to the sale of each item of its line, and also how it behaves in relation to the lines of other competing products.

The success of the manager is directly linked to the degree of his knowledge and dedication, above all, what is related to his product line, because the better the universe of his functions, the faster you will find the solutions for the Issues that may arise during the process. The person in charge of the product line must know the percentage of the total sale and the profit of each line item.

Baked ham, although representing 30% of total sales within the cold cuts, contributes with 50% of the profit. On the other hand, the hams represents 50% of the total sales and contributes only with 30% in the profit. The sum of the last two items (smoked and fattened hams) represents 20% in both line sales and profits. The sales manager should pay special attention to the first two items, since they are the main products of the cold cuts segment. The evolution of competing products must be monitored, both in terms of quality and price, so that there is no abrupt drop in sales and profitability. The hams item, which represents 10% of sales and only 5% of profit, would be the item that the buyer could eliminate if there was a need to sacrifice some of the items.

One problem faced by product line managers is finding the optimal extent of their line. A product line will be very restricted if one can increase the profit by adding new items. On the other hand it will be extensive if the manager increases the profit by eliminating some items.

With the globalization of the economy, product lines tend to expand more and more, to better meet the consumer's wishes, otherwise sales will certainly decline. It is clear that the creation of new products does not only depend on the person in charge of the line but, above all, on the general policy of the company. The widening of the product line can happen both down and up. The expansion downwards is when the company starts at the top end of the market so, shortly afterwards, direct their attention to the product lines to the bottom of the market. In the expansion upwards, the company is positioned in the lower segments in the market and later enters the upper segments.

5.3 Application of the BCG matrix in the CD company

As mentioned previously, the BCG Matrix is a tool that enables the positioning of a company's product portfolio, based on their life cycle, in order to provide useful information, above all, to which products should be invested and divested, accordingly, this section deals with the application of the BCG Matrix in the CD company. However, due to the impossibility of obtaining enough data for the calculation of the Relative Market Quota of the Company as well as accurate data on the Average Market Growth Rate, it was decided to make exclusive use of the life cycle of the products of the CD company, placing them in the BCG Matrix in theoretical terms, which does not significantly alter their relevance to the study in question. In this way, the main products that compose the company's product portfolio and their respective stages in the Product Life Cycle are set out in the following Table 3:

Table 3. Product Group vs Stage in the Product Life Cycle

Product Group	Stage in the Life Cycle
Cooked hams (Cold cuts)	Growth
Burgers	Growth
Smoked Hams	Start
Mortadella	Start
Sausages	Maturity
In Natura Products	Maturity
Sausages	Decline
Salamis	Decline
Salty	Decline
Bovine small parts	Decline

Table 4 presents the application of the BCG Matrix to the CD company, based on the life cycle of its products.

Table 4. Application of the BCG matrix in the company CD

		Relative Market Quota	
		High (>1)	Reduced (<1)
Market Growth	High	Stars	Question Marks
		Boiled Hams	Smoked Hams
		Burgers	Mortadella
	Reduce	Cash Cows	Dogs
		Sausages	Sausages
		<i>In Natura Products</i>	Salamis
			Salty Bovine small parts

Cooked hams (cold cuts), located in the of stars quadrant, will gradually move toward the cash cows quadrant, as the mortadella is approaching the of stars quadrant. The main reason for this change is due to the fact that there is a reduction in the Market Growth Rate of cooked hams. Another reason is directly related to the intention of the company to try to add more value, through industrialization, to certain types of meat, which are now converted into In Natura Products, and will leave the cash cows quadrant.

In relation to the cash cow, In Natura Products, it will turn into dog due to no longer justify injections of capital so that it remains in its position, which, in fact, has already led the company to decrease its offer to the market, due to its low profitability.

With regard to the products located in the dogs quadrant, namely, sausages, salami, salted and bred, are generating some losses, however, the company cannot do without them because they contribute to the dilution of fixed costs and also, as a way to help maintain the loyalty of its key customers.

5.4 Definition of strategic objectives and strategy

In the current business scenario marked by rapid changes in consumer behavior, shorter product lifecycles, and increased local and global competition, the CD company needs to achieve market positioning in order to take advantage of Business opportunities while trying to limit or mitigate the main threats.

In the light of the analysis carried out in the present work, the analysis of the general and specific environment, an analysis of the company's internal resources and capacities, an analysis of the product line and the margin of contribution of the company, as well as the application of the BCG Matrix, we present in this section possible strategies that could be undertaken by the CD company in order to obtain competitive advantages. Among the possible strategies for the CD company we propose "Market Development", "New Product Development", "Internationalization" and "Strategic Cooperation".

The market development strategy is justified by the fact that sporadic market areas, such as market niches, arise due to a gap left by the big competitors, as they opt for increased exports backed by fluctuations in the real-dollar exchange rates.

The new product development strategy is based on the fact that the company has a good location vis-à-vis consumers, potentially increasing the company's total revenue, with a higher market share.

Another strategy that could be employed by the CD company would be internationalization, justified by government incentives and the saturation of the local market dominated by large players. Nevertheless, a cooperation strategy could be implemented both to carry out internationalization and to carry out activities and operations in the local market, especially with companies of the same size. It should be noted that a cooperation strategy would be of the utmost importance for the CD company because it divides risks and revenues, mainly due to the difficulties in obtaining loans and high level of buyers debt.

5.5 Proposal of a strategic development monitoring model for the strategic map of the CD company

In order to deepen the analysis made in the present work, the following is a map of the company's general strategic diagnosis, in which the areas described in Table 5 were analyzed by means of Performance versus Importance Matrix, which will serve as the basis for the strategic development monitoring model for the implementation of the strategic map.

Table 5. CD company areas Analyzed by Strategic Diagnosis

Areas Analyzed	Components
Strategic administration	SA1 - Strategic administration
	SA2 - Organizational structure
	SA3 - Performance indicators
Human capital	HR1- Human Resources Strategy
	HR2 - Human resource Management
	HR3 - Education and training
	HR4 - Human Resources Indicators
Finance and Costs	FC1 - Financial management
	FC2 - Financial indicators
	FC3 - Cost Management
	FC4 - Cost Indicators
Sales and marketing	SM1 - Market Assessment
	SM2 - Marketing Policy
	SM3 - Performance Analysis
Foreign trade	FT1 - Export Engineering
	FT2 - Company Export Plan
	FT3 - Government Programs for Export Assistance
	FT4 - Export Process
Product and Manufacturing	PM1 - Product development
	PM2 - Innovation management
	PM3 - Manufacturing Process
	PM4 - Quality and Indicators

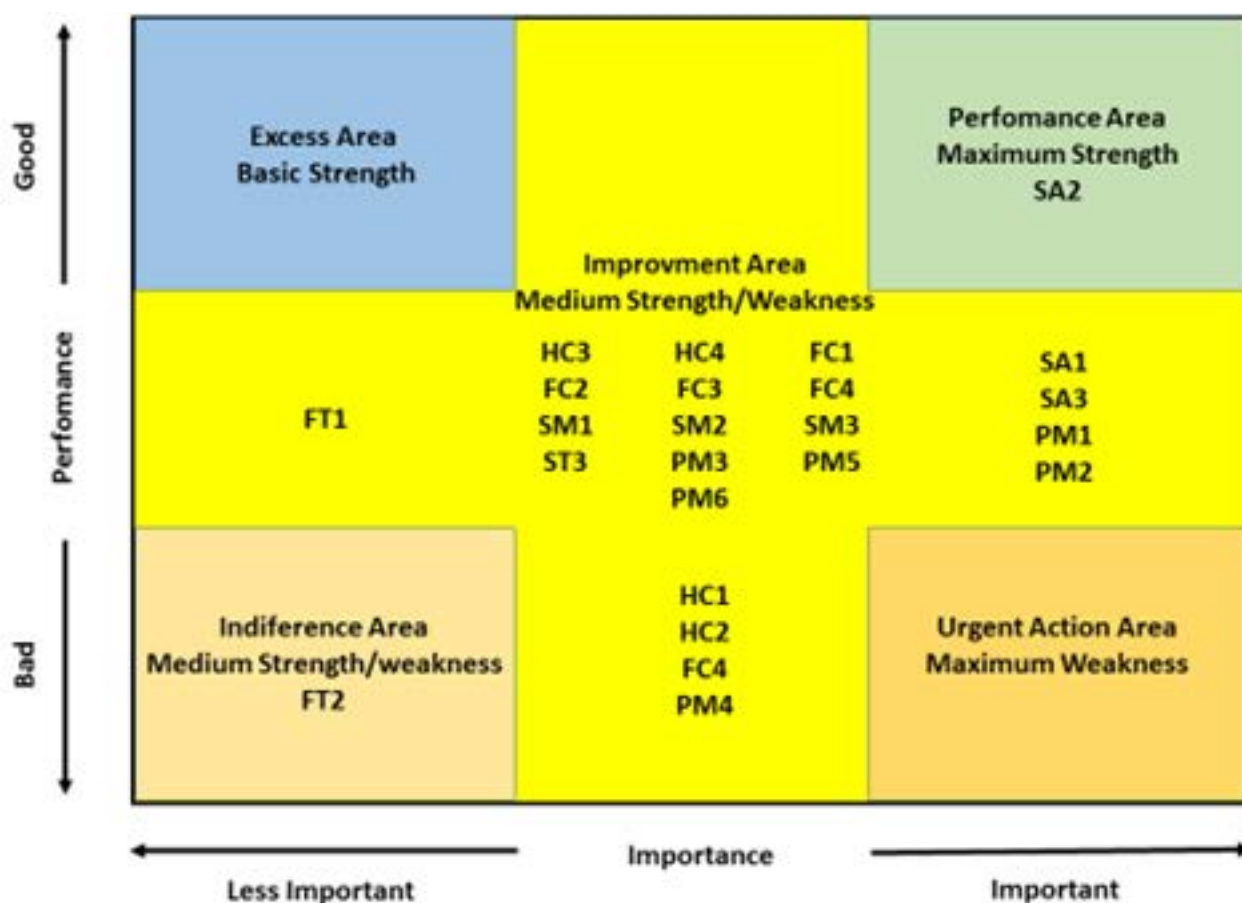
	PM5- Energy Efficiency
	PM6 - Strategic Efficiency

Based on the analysis made by the strategic diagnosis to the different areas of the CD company, according to Figure 1, together with the analysis of the Performance vs. Importance Matrix, the strategic development monitoring model will now be elaborated, which will allow the construction of the strategic map.

Considering that the Performance versus Importance Matrix is consolidated in the elements obtained from the analysis resulting from the application of the tools in the company, namely the BCG Matrix, the SWOT analysis and the Five Porter Forces, whose elements after being processed and punctuated in the checklist were positioned in the matrix. This allows us to say that we have in it the actual situation of the company in a synthesized way and that provides the way for the Strategic Development Monitoring model, according to the location of those elements in the matrix.

Figure 1: shows the result of applying the Performance versus Importance Matrix, where it can be observed that all areas of the company, with the exception of the Organizational Structure component, which is part of the Strategic Administration, need improvements since they are located in the quadrant whose performance is does not met degree of importance.

Figure 1. Performance versus Importance Matrix of the CD company



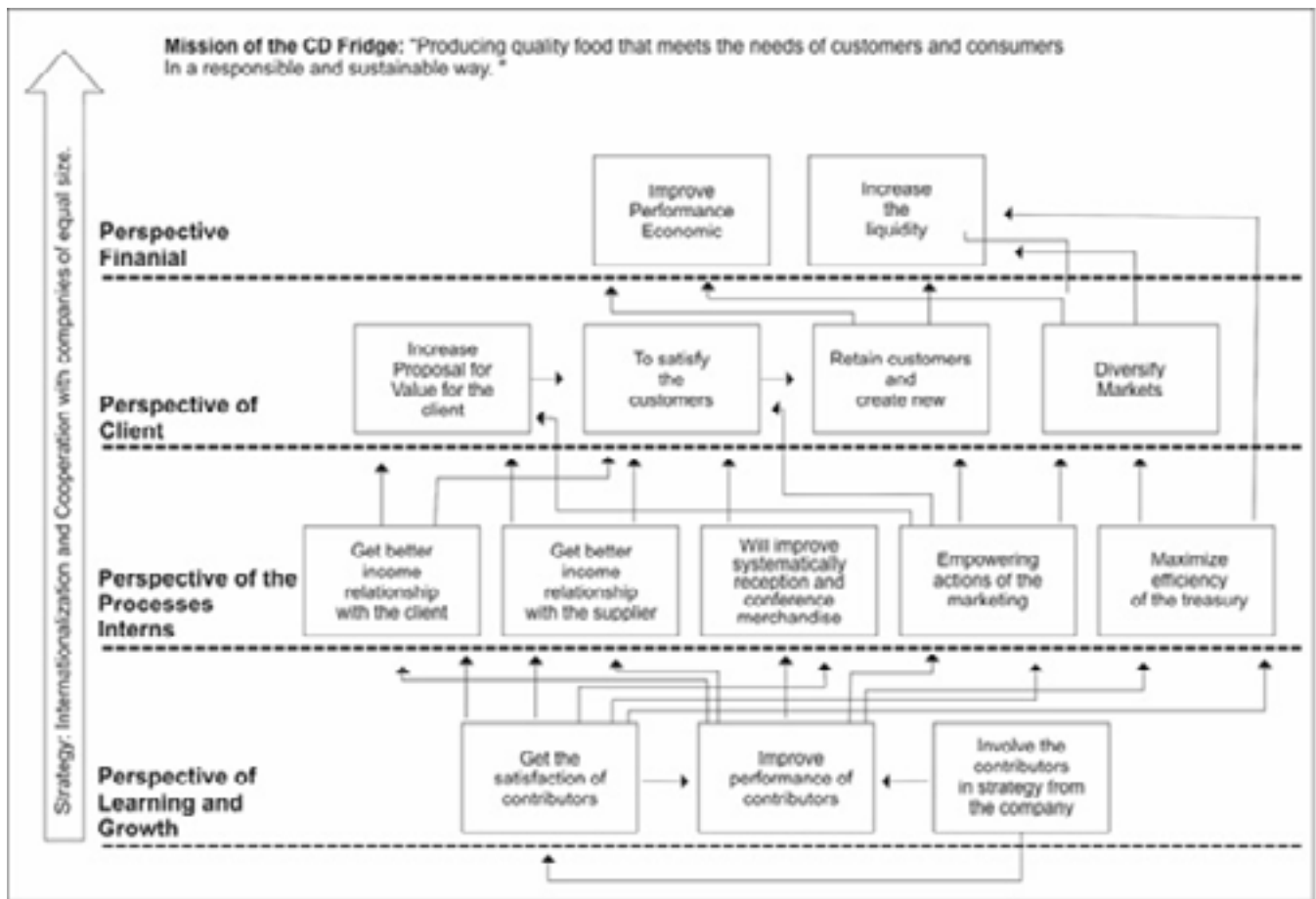
Thus, the points in the different areas must be worked in order to compensate for the adverse effects of the national and international economic environment, which has degraded the purchasing power of consumers and which, as a consequence, has caused a decrease in the activities and liquidity of the market, whose effects are most felt by Small and Medium Enterprises. To achieve this improvement in performance and for the CD company to achieve the objectives it proposes in the short and medium term, it is necessary to take into account what the analysis resulting from the application of the different tools recommend us.

Given that the BSC is based on the four perspectives proposed by Kaplan and Norton (1992), and after having defined their objectives based on the strategic diagnosis of the company and according to the desired economic objective, the following objectives are suggested for each one of the BSC's perspectives:

- Financial perspective:** improving economic performance and increasing liquidity.
- Customer perspective:** increase the value proposition for the client; satisfy customers; retain current customers and create new ones, and diversify markets.
- Perspective of the internal processes:** to obtain better profits in the relationship with the client; obtain better benefits in the relationship with the supplier; improve the systematics of receiving and checking the merchandise in the warehouse; leveraging marketing actions, and maximizing financial efficiency.
- Learning and growth perspective:** obtaining employee satisfaction; improve employee performance; and involve employees in the company's strategy.

After all the previous considerations and related objectives for each perspective for the balanced scorecard, the strategic map presented in Figure 2: is proposed.

Figure 2. Strategic Map for the CD company



6. CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

At the conclusion of this study, we can see that, with the globalization of the economy, gaining productivity has become a decisive and indispensable issue for the life of the company. Therefore, it is fundamental that the company behaves very well in relation to the scenario where it operates, and that there is a joint effort of all employees, so that they act in a systemic way and without ever losing sight of their competitive participation in the regional and national level.

The main objective of this work was to provide a framework to the CD Company management, so that it could take decisions on the various angles of the administration, taking into account the fact that it is located in a region that has one of the major consumption points, and the company has a high know-how in the area of meat processing and its derivatives, which can provide the tripod of trade: quality, price and distribution logistics.

In the marketing mix, it was concluded that the price and distribution strategy is of fundamental importance for the CD company. The price issue can be treated from the quality of the raw materials, looking for serious and quality committed suppliers using modern methods of industrialization aimed at the competitiveness of the final product. The logistics stand out, because it is possible to well supply the various points of sales because of the proximity of the company with them.

As in the last decade, the national and international economies have been experiencing a great slowdown, consequently, a reduction in the income of the populations, therefore less consumption, and therefore, less sales. The company will need to find its differentiation in the market by the quality of the service and rendering of services. In this, the sales force plays an important role, which will put the company's products in direct contact with the consumer. In general, all companies, with few exceptions, have been affected by the global economic crisis, but small and medium-sized enterprises are taking the worst of it because their greater vulnerability.

Thus, in addition to the suggestions for greater productivity presented in this work, the management of the CD company, to increase the competitiveness, should, as soon as possible, put into practice the suggested strategy, namely, internationalization and cooperation with companies of the same size, since companies that do not seek new markets and new forms of commerce become less competitive and lose market share to their competitors.

The literature review allowed the understanding of the relevance of SMEs to the Brazilian economy and reported their predominance among the number of operating companies, but still with a small share in the country's exports. However, the challenges to internationalization for small and medium-sized enterprises are also many, ranging from their size and volume, far below the larger companies in the sector, to the complexity and costs of export operations.

One of the ways to minimize the impact on SMEs for access to the external market is through an association between companies creating networks or export consortia. This relationship of trust and partnership will generate advantageous conditions for the participants, allowing them to gain scale in sales and the exchange of market experiences.

Concerning the costs of a high strategic SME diagnosis, we found in the course of this study that if the company has been able to access good external consultants for a global approach to management problems, the CD company would be in a better performing situation.

Before concluding this study, the following is a brief summary of the most important points of the strategic diagnosis, in order to present the most suitable proposals for the CD company.

In the analysis of the macroeconomic environment, it is worth noting: high levels of taxes; political instability; world economy in recession; devaluation against the dollar; change in consumer habits; mobility of labor unions; presence of high-tech enterprises; scarce resources to obtain technology; and raising people's awareness of environmental issues. In this analysis at the level of proposals, it is suggested: to take advantage of the business opportunities occupying the space left open by the exporters; seek a good relationship with the unions; and seek to enjoy preference with consumers, since the company has great concerns for the environment.

The Porter's Five Forces model is a tool that helps to define the strategy both in relation to the external and internal environment, considering: barriers to entry of new competitors; presence of substitute products; rivalry in industry; bargaining power of buyers; and Bargaining power of suppliers. As proposals, it is suggested: quality products; search for market niches that large companies do not meet; form an effective sales force; and, internally, give good training and encouragement to its employees.

With the Performance versus Importance Matrix, it is possible to observe that the areas of the company, with the exception of the Organizational Structure, component that is part of the Strategic Administration, need improvement, since they are located in the quadrant, whose performance does not meet the degree of importance.

Although this work has achieved the outlined objective, that is to know the strategic diagnosis of the CD company and the presentation of recommendations for the problems detected, it is expected that this study will help the management of the organization to better understand the strategic diagnosis of the company. And also, to evaluate the pertinence of the implementation of the proposed measures. In order to improve its performance, it is also suggested that the directors should continue the work started here with the development of a specialized tool to reduce the costs of diagnosis and to make the intervention more financially accessible for this company, and to serve as an example to other small and medium-sized enterprises.

REFERENCES

- Akis, E. (2015). Innovation and Competitive Power. *Social and Behavioral Sciences*, 195, 1311-1320.
- Ambrósio, V. (2005). A matriz BCG: Passo a Passo. *Revista da ESPM*, 4 (1), 92-102.
- Ansoff, H. (1993). *Administração e estratégia*. São Paulo: Atlas.
- Ansoff, H. (1977). *Estratégia empresarial*. São Paulo: McGraw-Hill.
- Apak, S., & Atay, E. (2014). Global Innovation and Knowledge Management Practice in Small and Medium Enterprises (SMEs) in Turkey and the Balkans. *Social and Behavioral Sciences*, 150, 1260-1266.
- Boston Consulting Group (2012). Boston Consulting Group (BCG) Website. Acedido em 07 de Outubro de 2016, em <http://.bcg.com>.
- Collis, J. & Hussey, R. (2005). *Pesquisa em administração: Um guia prático para alunos de graduação e pós-graduação*. Porto Alegre: Bookman.
- Gonçalves, M., Prado, A., & Campos, F. (2014). Logística, cadeia de suprimentos e pensamento enxuto nas organizações: uma análise bibliométrica. *Espacios*, 35 (13), 13.
- Gil, A. (1991). *Como elaborar projetos de pesquisa*. São Paulo: Atlas.
- Johnson, G., Scholes, K. & Whitting, R. (2011). *Fundamentos de Estratégia*. Porto Alegre: Bookman.
- Kaplan, R., & Norton, D. (1996). *Translating strategy into action-The Balanced Scorecard*. Boston: Harvard Business School Press.
- Kaplan, R., & Norton, D. (1992). *The BSC: Measures that Drive Performance*. Harvard Business Review. July – August, 172-180.
- Lee, C., & Yang, H. (2011). Organization structure, competition and performance measurement systems and their joint effects on performance. *Management Accounting Research*, 22 (2), 84-104.
- Maximiano, A. (2008). *Teoria Geral de Administração: da Revolução Urbana à Revolução Digital*. São Paulo: Atlas.
- Modell, S. (2012). The politics of the balanced scorecard. *Journal of Accounting and Organization Change*, 8 (4), 475-489.
- Norrekliit, H. & Melander, P. (2006). US 'fair contract' performance management models in a Danish environment. *Financial Accountability and Management*, 22 (3), 213-234.

- Norreklit, H., & Mitchell, F. (2007). The balanced scorecard. In T. Hopper, R. W. Scapens, & D. Northcott (Eds.), *Issues in management accounting*. Harlow: Financial Times Prentice Hall.
- Oliveira, D. (2006). *Planejamento estratégico: conceitos, metodologias e práticas*. (16 Ed.) São Paulo: Atlas.
- Oliveira, L. (2001). *Apostila do curso de manutenção centrada em confiabilidade*. Foz do Iguaçu: DNV Principia.
- Pedroso, E., Begnis, H., & Estivalete, V. (2005). Análise do ambiente competitivo como determinantes das escolhas estratégicas no agronegócio: um estudo de caso em uma unidade de produção avícola. Contexto, Porto Alegre.
- Porter, M. (1986). *Estratégia competitiva: técnicas para análise de indústrias e da concorrência* (17ª.Ed.). Rio de Janeiro: Editora Campus.
- Porter, M. (1989). *Vantagem competitiva: criando e sustentando um desempenho superior*. Rio de Janeiro: Campus.
- Rojo, C. (2005). Modelo para a simulação de cenários: Uma aplicação em instituição de ensino superior privado. Tese de Doutorado em Engenharia de Produção - Departamento de Engenharia de Produção e Sistemas, Universidade Federal de Santa Catarina, Florianópolis.
- Russo, J. (2009). *Balanced Scorecard para PME e pequenas e médias instituições* (5ª ed.). Lisboa: Lidel Edições Técnicas.
- Saraiva, H., & Alves, M., (2014). Evolução do Balanced Scorecard-comparação com outros sistemas e evoluções recentes. *XXIV Jornadas Luso Espanholas de Gestão Científica*, Espanha.
- Silva, E., & Menezes, E. (2001). Metodologia da Pesquisa e elaboração de Dissertação. Florianópolis: Universidade Federal de Santa Catarina – UFSC.
- Speckbacher, G., Bischof, J., & Pfeiffer, T. (2003). A descriptive analysis on the implementation of Balanced Scorecards in German-speaking countries. *Management Accounting Research*, 14 (4), 361-388.
- Sobrinho, R. (2007). Cadeia Produtiva da Carne bovina: fatores de encerramento de empresas frigoríficas no estado do Rio Grande do Sul. In *XLV Congresso da sociedade brasileira de economia, administração e sociologia rural, Londrina*. Anais Londrina: SOBER.
- Tidd, J., & Bessant, J. (1997). *Managing Innovation: Integrating technological, market and organizational change*. Nova Jersey: Wiley.
- Votto, R., & Fernandes, F. (2014). Produção enxuta e teoria das restrições: proposta de um método para implantação conjunta na Indústria de Bens de Capital sob Encomenda. *Gestão & Produção*, 21(1), 45-63.
- Wanderley, C., Cullen, J., & Tsamenyi, M. (2013). Diffusion and variations in management accounting practices: the balanced scorecard adaptation. In *Annals of the 9th International Management Control Research Conference*. Nyeronde, Netherlands.
- Weise, A., Schultz, C., & Rocha, J. (2010). Um modelo de estratégia institucional para la cooperación. *Espacios*, 31 (3), 1- 4.

INNOVATION MANAGEMENT IN MICRO AND SMALL COMMERCIAL ENTERPRISES: AN ANALYSIS OF THE LEVEL OF INNOVATION

Cicero Eduardo Walter

Federal Institute of Education, Science and Technology from Piauí
(eduardowalter@ifpi.edu.br)

Cláudia Miranda Veloso

UNIAG; Instituto Politécnico de Bragança; Universidade de Aveiro
(claudiamiranda@ipb.pt; cmv@ua.pt)

Paula Odete Fernandes

UNIAG; Instituto Politécnico de Bragança; NECE
(pof@ipb.pt)

ABSTRACT

Micro and Small Enterprises (MSE), mostly the Commercial MSE are considered the most dynamic and elastic forms of activity. In the economy, the foundation and development of these are important for the creation of the so-called “normal” economic environment. In the recent past, it was enough for enterprises to meet their needs in a profitable way to stay on the market, but that scenario has changed dramatically. The key to longevity and business competitiveness lies in innovation. Accordingly, the main objective of this research was to present a conceptual model of innovation research in Commercial MSE to analyse (1) the innovation level of Commercial MSE, (2) how the innovation presents itself in the Commercial MSE as a result of its business environments. For this the study was based on a sample of 213 Commercial MSE of the State of Piauí. The data were collected through the application of the Innovation Radar conducted by the SEBRAE Local Innovation Agents program. Statistical techniques of descriptive, exploratory and inferential nature were used. The results showed that MSE have innovation capacity between “Little Innovative” and “Occasional Innovative”.

Keywords: Micro and Small Commercial Enterprises, Innovation, Brazil, Management.

JEL Classification: M10, M20, M31

1. INTRODUCTION

In the recent past it was enough for companies to meet their needs in a profitable way to stay in the market, but that scenario has changed dramatically. It's no longer enough simply to meet needs in a profitable way; at present it's necessary to be one step ahead towards the future, because the strategies that have succeeded in the past are not guarantees of sustainable success, which can be exemplified by Tidd, Bessant and Pavitt (2005, p. 42) asserting that “organizations build capacities around a particular trajectory, and those that may be strong at a later (specific) stage of an established trajectory find, in general, next”.

Accordingly, organizations should seek tools and capabilities to assist them in gaining competitive advantages, which in Martín and López (2007, p. 267) conception refer to a “situation of superiority or favourable conditions that one thing has over another”, or as the authors themselves point out, “the concept of competitive advantage is understood as any characteristic of the company that differentiates it from the others, placing it in a relative position of superiority to compete” (p. 267), which Tidd *et al.* (2005) effectively elect as innovation, although a competitive advantage may arise from size or heritage, among other factors, the scenario gradually shifts in favour of those organizations that continuously manage to mobilize knowledge, what they already have; Information, or what is available in the environment, and the creativity to design the creation of novelties in their offerings, be they products or services, and the ways in which they create and launch these offers.

An innovation according to the Oslo Manual, which is a reference in the subject in several countries, is the implementation of a new or significantly improved product or service, or a process, or a new marketing method, or a new method organization of the workplace or in external relations (OCDE & FINEP, 2005).

Innovation is the specific instrument of business activity. It's the action that endows the resources of a new capacity to create wealth. Innovation actually creates the resource. A “resource” is something that does not exist until man discovers a use for something existing in nature and thus endows with economic value (Drucker, 1987).

Ultimately, as Tidd *et al.* (2005, p. 30), “the truth is that, whatever the technological, social or market conditions involved, the key to creating - and maintaining - competitive advantage tends to belong to those organizations that innovate continuously”. However, it should be noted that there are significant differences in the way large organizations innovate compared to their smaller counterparts, particularly Micro and Small Enterprises (MSE). Large organizations may have large resources invested

in Research and Development (R&D) or market research, which is almost impossible for MSE due to their financial fragility and the strong competitive pressure from the globalization of markets. While large organizations are apt to develop large-scale innovations, MSE often adopt innovation strategies through technology acquisition (Tidd *et al.*, 2005).

Given the importance attributed to innovation, the present research has the primary objective of verifying how the innovation presents itself in the Commercial MSE of the State of Piauí, considering that innovation is now considered as the key to obtaining competitive advantages, creating positive results both for the companies involved in the innovation process and for the economy as a whole.

Besides this brief introduction, the article is structured in four points. The following is the framework of the study, where the main concepts that guided the investigation are explained. Subsequently, the conceptual model and the research hypotheses are presented. Next, the methodology and the analysis of the results are presented, being this the core of the present investigation and, finally, the contributions of the accomplishment of this investigation.

2. THEORETICAL FRAMEWORK

2.1 Concepts of Innovation

Reichert, Camboim and Zawislak (2015) postulate that innovation is the result of the capacity of companies, taking into account the technological and market patterns in each branch of activity, of absorbing, adapting and transforming knowledge into technology and this into operational, managerial routines and commercial practices that lead companies to achieve superior performance, in keeping with Drucker's (1987) thinking that innovation is action that provides the resources of a new capacity to create wealth. In the words of Drucker (1987, p. 42), "Innovation creates, in fact, the resource. A resource is something that doesn't exist until man discovers a use for something existing in nature, and thereby endowing it with an economic value".

Schumpeter (1997), considered by some authors (*e.g.*, Titu, Raulea and Titu, 2015; Bayarçelik, Tasel and Apak, 2014; Tidd *et al.*, 2005) as a pioneer in innovation studies, states that innovation would be a spontaneous and discontinuous change in the flow channels, disturbance of equilibrium, which forever changes and shifts the pre-existing state of equilibrium, a new combination of elements in the economic system, a "creative destruction", as the result of this combination would break with the existing standards giving rise to new standards that would be followed by all the economic agents who could adapt to the new circumstances. It's a dynamic process in which new technologies replace old ones.

For OCDE and FINEP (2005) innovation can be understood as the implementation of a new or significantly improved product (product or service), or a process, or a new marketing method, or a new organizational business practices, the organization of the workplace or in external relations. The minimum requirement for defining an innovation is that the product, process, marketing method, or organizational are new (or significantly improved) for the company. This includes products, processes and methods that companies are the pioneers to develop and those that have been adopted by other companies or organizations (OCDE & FINEP, 2005).

2.2 Innovation and Competitive Advantage

The concept of competitive advantage is related to any characteristic of the company that differentiates it from the others, placing it in a position of relative superiority to compete. Martín and López (2007), explain that a competitive advantage must meet three criteria, must be related to a key factor of success in the market, must be substantial enough to give the company a differential and be sustainable in the face of changes in the environment. Although in the long run none is totally free from attacks by competitors.

In today's economy, which is considered to be a knowledge-intensive economy, innovation management is becoming one of the main drivers of change and gaining competitive advantage (Apak and Atay, 2014).

Thus, given the current competitive conditions in the markets, the only form of competitive advantage is continuous innovation at a faster pace than rival organizations (Toivonen, 2015).

Rusu (2016, pp. 166-167) states that "successful companies to survive and thrive introduce innovations that generate change within companies by implementing processes that have consequences on their business model enabling profit generation".

It's clear that the company of the present century is operating in an increasingly globalized environment, and that resources and capabilities and innovation should be considered as key elements in the strategy and in the maintenance and development of competitive advantages (Molano and Campo, 2014). For Seo and Chae (2016, p. 708), "the business world harbours a number of threats and uncertainties requiring a high degree of innovation as a factor of success. A strong degree of innovation can cover several risks when facing the market".

Specifically, innovation means efforts by companies to create economic value for consumers by positively increasing the difference between the perceived value of consumers and the economic costs incurred by companies. Companies will have a competitive advantage when they can create marginal economic value greater than their competitors. Thus, innovation can be a source of competitive advantage (Hamdani and Wirawan, 2012).

The competitiveness of a company in the market depends on the ability to "capture the market" using ideas and marketing innovation through business relationships. In this way, the competitiveness of the markets demands of the companies an innovative position, especially in what concerns the marketing (Gupta, Malhotra, Czinkota and Foroudi, 2016).

2.3 Innovation in Micro and Small Enterprises

Innovation and the development of innovative capabilities in MSE entails a number of difficulties, as Rovere (2001, p. 22) states “the innovative capacity of MSE depends on several factors related to the organization of the sector and the system of innovations in which they meet”. Paula (2014) says that for MSE it's possible to notice a greater difficulty in the innovation process, because they have less access to sources of information on technologies and sources of financing, complemented by the lack of resources, few or non-existent investments in Research and Development (R&D), strong dependence on technology acquisition (Machinery and equipment) and limited managerial capacities (Demonel and Marx, 2015; Reichert *et al.*, 2015; Taborda, Estevão and Nunes, 2013), which leads them to operate with equipment and technologically outdated facilities, carrying out low investment in Research and Development, being slow and reluctant to adopt managerial and organizational innovations (Rodrigues, 2003).

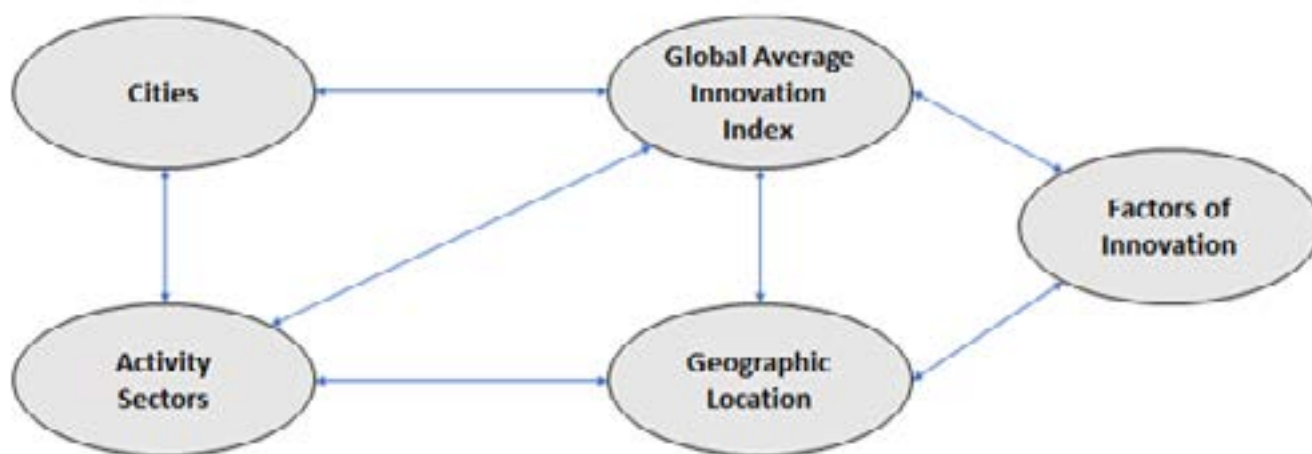
Pereira, Grapeggia, Emmendoerfer and Trê (2009) argue that, even though MSE have difficulties in assimilating managerial professionalization, precarious levels of control, financial problems such as lack of working capital and incipient knowledge of the market in which they operate, most MSE entrepreneurs associate innovation less with the differentiated elaboration of products and services and more as a business model.

As a result of this context, innovation in MSE presents itself as the result of simple actions, in some cases with its own development, acquisitions of new equipment, adoption of innovation management practices and, usually, incremental innovations, presenting as an alternative types of advantages, resulting from attributes such as quality, processes, offer of new products that promote the differentiation of the organization, since they have particularities that are presented as sources of competitive advantage when compared to large companies. They usually have a leaner and more flexible organizational structure, placing them in closer contact with their clients, as well as carrying out activities with low capital intensity and high labour intensity, which can lead to differentiated production conditions (Rodrigues, 2003; Paula, 2014).

2.4 Conceptual Model and Research Hypotheses

The Figure 1 presents the conceptual research model proposed to evaluate how innovation presents itself in Commercial MSE. The proposed model was developed based on recommendations of the Oslo Manual (OECD & FINEP, 2005), considering innovation as a system of interactions and interdependencies.

Figure 1. Conceptual Model



The justification of the model is based on Skibinski and Sipa (2015). They claim that MSE because they have limited internal resources should make use of external knowledge sources. In this way, the ability to exploit and use the knowledge that comes from abroad becomes a key element and predictor of successful innovation, which makes the environment in which they are located and the development of appropriate tools to exploit it. The general and classic models of innovation presented by Rothwell (1994) define innovation as a set of processes that should be undertaken by the organizations in isolation for the development of innovations, especially in the development of new products. Recent models of innovation such as Cooper (1988), Khurana and Rhosental (1997), Koen *et al.* (2001), Flynn, Dooley, O'sullivan and Cormican (2003), Boeddrich (2004), Reid and Brentani (2004), Wihtney (2007), Brem and Voigt (2009) and Kurkkio, Frishammar and Lichtenthaler (2011), besides being strictly theoretical, focused on large companies and on processes that companies must undertake in isolation, they also emphasize the development of products to the detriment of the development of other types of innovation, such as services, processes, marketing and organizational. The theoretical model presented in this paper differs from the models listed by (i) being a model that seeks to investigate how the degree of innovation is configured to the detriment of the business environment, having a more comprehensive perspective than the company object alone, as is the case with the above mentioned models; (ii) to characterize itself as a suitable model for the investigation of innovation in Micro and Small Enterprises by presenting a system of interactions between Micro and Small Enterprises and their business environments, thus enabling the investigation of the degree of innovation according to location geographical; (iii) to provide information on Micro and Small Enterprises innovation in a global way, not limited solely to the development of products.

Accordingly, with the main objective of the study the conceptual model, the following research hypotheses were established:

H_1 : The Micro and Small Commercial Enterprises of the State of Piauí present themselves as little innovative.

The conceptual framework of the research hypothesis 1 is based on Demonel and Marx, (2015), Reichert *et al.* (2015) and Taborda *et al.* (2013), because they say that innovation in MSE entails greater difficulties related to lack of resources, scarce or nonexistent investments in Research and Development (R&D), strong dependence on technology acquisition (Machinery and equipment) and limited managerial capacities. Nevertheless, in developing countries (DC), as Rojas and Carrillo (2014) point out, market failures such as imperfect competition, externalities and information asymmetries have a negative impact on companies' capacity for innovation, that they assume defensive and merely reactive strategies

H_2 : Innovation in Micro and Small Commercial Enterprises in the State of Piauí presents itself differently due to its business environments.

$H_{2,1}$: The Global Average Innovation Index is different by cities;

$H_{2,2}$: The Global Average Innovation Index is different by geographic location.

The conceptual framework of the 2nd research hypothesis is based on Aarstad, Kvitastein and Jakobsen (2016), since they point to the geographic environment as an important factor influencing growth, profits and business development, including survival and innovation performance. In this sense, as established by Skibinski and Sipa (2015), innovation in MSE may be associated with its ability to explore and use the knowledge that comes from its environment.

2.5 Methodology

The instrument used for data collection was a questionnaire survey. The instrument is composed of 32 items that evaluate 13 dimensions of the innovation, resulting from an adaptation made by Bachmann (2011) for application in MSE of the Innovation Radar, of Sawhney, Wolcott and Arroniz (2006), originally constituted of 12 (Twelve) dimensions. The innovation dimensions assessed by the Innovation Radar are: (1) Supply; (2) Platform; (3) Brand; (4) Customers; (5) Solutions; (6) Relationship; (7) Value Aggregation; (8) Processes; (9) Organization; (10) Supply Chain; (11) Presence; (12) Network and (13) Innovative Ambience.

The study was conducted with a sample of 213 Micro and Small Commercial Enterprises of the State of Piauí, Brazil, during the months of October 2014 to October 2015. For the treatment, analysis and interpretation of the data were used the software SPSS Statistics in its version 22 and Numbers in its version 3.1. The statistical techniques used were descriptive, exploratory and inferential in order to describe, analyse and interpret the behaviour of the attributes under study. Thus, in the first phase we chose to calculate the Global Average Innovation Index (GAII), obtained by means of the simple arithmetic mean of the above mentioned 13 (Thirteen) dimensions of Innovation Radar (Equation 1).

$$GAII = \frac{1}{n} \sum_{i=1}^n X_i \quad [1]$$

Where, n , corresponds to the number of independent variables of the Innovation Radar;

X_i , corresponds to the independent variables of the Innovation Radar ($i = 1, \dots, 13$)

$$GAII = \frac{1}{13} \sum_{i=1}^{13} X_i \quad [2]$$

Where,

X_1 , Supply; X_2 , Platform; X_3 , Brand; X_4 , Customers; X_5 , Solutions; X_6 , Relationship; X_7 , Value Aggregation; X_8 , Processes; X_9 , Organization; X_{10} , Supply Chain; X_{11} , Presence; X_{12} , Network; X_{13} , Innovative Environment.

A sample error of 6,71% and a significance level of 5% was used to calculate the sample size.

In order to make the decisions regarding the differences of research hypotheses, a 5% of significance level was assumed throughout the analysis.

2.6 Analysis and Presentation of Results

The study sample consists of 213 Commercial MSE distributed among six cities in the State of Piauí, as follows: Teresina 118 (55,4%); Bom Jesus 24 (11,3%); Floriano 11 (5,2%); Piripiri 21 (9,9%); Picos 18 (8,5%) and Parnaíba 21 (9,9%).

Regarding the location, 55,4 % of the Commercial MSE in the sample are located in the state capital, while 44,6% are located in the interior of the State. In order to answer the first research hypothesis, the Global Average Innovation Index (GAII) was calculated by means of the simple arithmetic mean of the 13 dimensions of the Innovation Radar, whose overall mean value was 2.00 points (deviation standard of 0.93), denoting globally that the Commercial MSE of the study sample have innovation capacity between “Little Innovative” and “Occasional Innovative”, according to the adapted classification of Neto and Teixeira (2011), in which the final average score 1 (One) means “Little Innovative”; The final average score 3 (Three) means “Occasional Innovative” and the final average score 5 (Five) means “Systemic Innovative”. The mean standard deviation of 0.93 indicates that the firms analysed responded to questions related to the Innovation Radar in the same sense, that is, there was little variability around them.

Since the Commercial MSE of the sample have a GAII of 2,00 points (standard deviation of 0,93), indicating that they are between “Little Innovative” and “Occasional Innovative”, responding to research hypothesis 1, we intend to verify if there are differences in the GAII average for cities and geographic location to answer the research hypothesis 2.

The verification of the existence of differences in the GAII average for the cities is done through the application of One-Way ANOVA. In order to be a parametric test, some assumptions need to be validated, namely if the variables follow the normal distribution in the different independent groups (using the Kolmogorov-Smirnov test), homogeneity of variances (Levene test), and Independency between groups, assuming a significance level of 5%. Considering the normality test, Kolmogorov-Smirnov test, it was concluded that at a significance level of 5% there is enough statistical evidence to state that the study variable does not follow a normal distribution in the independent groups under study.

Given the violation of the first assumption for the application of the parametric test, the non-parametric alternative, in the case in question, was immediately applied to the Kruskal-Wallis test, in order to compare the GAII distributions in the six cities (Independent groups).

Using the Kruskal-Wallis test, considering that the obtained value was less than 0,001, it can be concluded that there is statistical evidence at the significance level of 5% to state that at least one of the GAII distributions is different for the six cities.

In order to verify if there are differences in the GAII mean for the Geographic Location, the t-Student parametric test was used for two independent samples, where application assumptions are normal population or $n \geq 30$ observations and unknown standard deviation.

However, once the sample size is different in both groups, the Levene test was applied to verify if the variances were homogeneous assuming a significance level of 5%. From the results obtained it's concluded that there is not enough statistical evidence to affirm that the variances are significantly different for a level of significance of 5%, since the obtained value was 0,930, higher than the level of significance assumed. In relation to the t-Student, considering that the test value is 0,132, higher than the level of significance assumed, it is concluded that there is enough statistical evidence to affirm that the average GAII is equal for the Commercial MSE comparing the interior and the capital, at a level of significance of 5%.

Based on what has been presented previously, it's concluded that the first research hypothesis have not been validated, that is, since the Average Global Innovation Index obtained through the average of the 13 dimensions of the Innovation Radar applied in the 213 Commercial MSE of the State of Piauí was 2.00 (standard deviation of 0.93), the Commercial MSE of the sample under study had an innovative capacity between “Little Innovative” and “Occasional Innovative”, resulting in a non-validated research hypothesis 1. Because the GAII distribution is the not the same among cities, but though the GAII average is the same for geographical location, the research hypothesis 2 is valid since there is sufficient statistical evidence to affirm that the innovation not presents itself totally homogenized for the Commercial MSE of the study, using the control variables City and Geographic Location.

Šoltés and Gavurová (2014) argue that the effective development of innovation requires a functional innovation system composed of institutions, policies and tools to create conditions that promote innovation. After all the inferential analysis carried out, contrary to the literature on the subject (e.g., Demonel and Marx, 2015; Taborda *et al.*, 2013) that present Commercial MSE as not very innovative, it is possible to state that there are indications that the functional innovation system that promotes the promotion of innovation by Commercial MSE is to a certain extent present in the State of Piauí, although in an incipient form, since Commercial MSE have innovation capacity between “Little Innovative” and “Occasional Innovative”, leaving room for fundamental improvements in the degree of innovation, and that this capacity is homogenized for the Commercial MSE of the study.

2.7 Research Contributions

As mentioned above, the main objective of the present investigation was to verify how the innovation presents itself in the Commercial MSE of the State of Piauí, so that the following hypotheses of investigation were established: H_1 : The Micro and Small Commercial Enterprises of the State of Piauí present themselves as little innovative; H_2 : Innovation in Micro and Small Commercial Enterprises in the State of Piauí presents itself differently due to its business environments (Cities and Geographical Location).

Overall, the Commercial MSE of the sample under study has innovation capacity between “Little Innovative” and “Occasional Innovative”, since the Average Global Innovation Index (IGMI) obtained through the average of the 13 dimensions of the applied Innovation Radar in the 213 Commercial MSE of the State of Piauí was 2.00 (standard deviation 0.93). Since the classification usually adopted establishes that the final average score 1 (One) means “Little Innovative”; The final average score 3 (Three) means “Occasional Innovative” and the final average score 5 (Five) means “Systemic Innovative”, it can be affirmed that the Commercial MSE of the sample under study have innovative capacity between “Little Innovative” and “Occasional Innovative”, resulting in a non-validated the research hypothesis 1.

In order to verify in a general way how the GAI of the Commercial MSE presents as a result of the variables of control City and Geographic Location, using inferential analyzes, it was observed that the distribution of GAI is not the same between Cities and that the GAI average is the same for geographic location. Because the GAI distribution is not the same among cities, but though the GAI average is the same for geographical location, the second research hypothesis is validated, since there is sufficient statistical evidence to affirm that the innovation not presents itself totally homogenized for the Commercial MSE of the study, using the control variables City and Geographic Location.

The results obtained provide an important practical contribution to the management and monitoring of innovation in Micro and Small Enterprises in a given region by presenting an indicator that reflects how much innovation is present, serving as a parameter for potential improvements both by companies and by the public power. As theoretical contributions, the presented model leads to useful and systematic information on how innovation presents itself in Micro and Small Enterprises in a global way as a result of its business environments, and can thus be useful as a model that serves as a parameter for the Improvement of innovation through public policies aimed at improving the business environment that increase the degree of innovation of the companies that constitute it, and therefore validate the theoretical model in the case in question. Possible public policies are the establishment of partnerships with universities and local research institutes, with a view to obtaining the necessary resources for innovation, the formation of innovation networks between Micro and Small Enterprises and financial subsidies by the government for companies that join the innovation networks.

The limitations of the study are the unavailability of information on the number of employees, turnover, investments in R&D and training efforts, which would be useful for more detailed analyses of the innovation capacity of the companies studied. In addition, although the theoretical model presents useful information of the global form as the innovation presents itself, it does not make it possible to identify in detail the types of innovation developed by the companies studied, considering the innovation as a homogeneous whole within a given business environment.

As future research, we intend to develop studies that identify the factors that serve as obstacles or that facilitate innovation in Commercial MSE, the relationship between innovation and economic development, and how the quality of human resources influences Commercial MSE innovation capacity.

REFERENCES

- Apak, S., & Atay, E. (2014). Global Innovation and Knowledge Management Practice in Small and Medium Enterprises (SMEs) in Turkey and the Balkans. *Procedia - Social and Behavioral Sciences*, 150, 1260-1266.
- Akis, E. (2015). Innovation and Competitive Power. *Procedia - Social and Behavioral Sciences*, 195, 1311-1320.
- Aarstad, J., Kvitastein, O., & Jakobsen, S. (2016). Related and unrelated variety as regional drivers of enterprise productivity and innovation: A multilevel study. *Research Policy*, 45, 844-856.
- Bayarçelik, E., Tasel, F., & Apak, S. (2014). A Research on Determining Innovation Factors for SMEs". *Procedia - Social and Behavioral Sciences*, 150, 202-211.
- Bachmann, D. L. (2011). *Metodologia para determinar o radar da inovação nas pequenas empresas*. Curitiba: (s.n.).
- Boeddrich, H. J. (2004). Ideas in the workplace: a new approach towards organizing the fuzzy front end of the innovation process. *Creativity & Innovation Management*, 13, 4, 274-285.
- Brem, A., & Voigt, K.I. (2009). Integration of market pull and technology push in the corporate front end and innovation management-insights from the German software industry. *Technovation*, 29, 5, 351-367.
- Cooper, R. G. (1988). The new product process: a decision guide for management. *Journal of Marketing Management*, 3, 3, 238-255.
- Drucker, P. (1987). *Inovação e Gestão: uma nova concepção de estratégia de empresa*. Lisboa: Editorial Presença.
- Demonel, W., & Marx, R. (2015). Gestão da Cadeia de Valor da Inovação em ambientes de baixa intensidade tecnológica. *Production*, 25, 4, 988-999.
- Flynn, M., Dooley, L., O'sullivan, D., & Cormican, K. (2003). Idea management for organisational innovation. *International Journal of Innovation Management*, 7, 4, 417-442.
- Gupta, S., Malhotra, N., Czinkota, M. & Foroudi, P. (2016). Marketing innovation: A consequence of competitiveness. *Journal of Business Research*, 69, 5671-5681.
- Hamdani, J., & Wirawan, C. (2012). Open Innovation Implementation to Sustain Indonesian SMEs. *Economics and Finance*, 4, 223-233.
- Koen, P. A., Ajamian, G., Burkart, R., Clamen, A., Davidson, J., D'amore, R., Elkins, C., Herald, K., Incorvia, M., Johnson, A., Karol, R., Seibert, R., Slavejkov, A., & Wagner, K. (2001). Providing clarity and a common language to the "fuzzy front end". *Research Technology Management*, 44, 2, 46-55.
- Khurana, A., & Rosenthal, S. R. (1997). Integrating the fuzzy front end of new product development. *Sloan Management Review*, 38, 2, 103-120.

- Kurkkio, M., Frishammar, J., & Lichtenthaler, U. (2011). Where process development begins: a multiple case study of front end activities in process firms. *Technovation*, 31, 9, 490-504.
- Martín, L. A., & López, J. M. (2007). *La Dirección Estratégica de la Empresa: teoría y aplicaciones*. Pamplona: Editorial Aranzadi.
- Molano, C., & Campo, J. (2014). Gerencia estratégica e inovação empresarial: referentes conceptuales. *Revista Dimensão Empresarial*, 12, 1, 107-116.
- Neto, A., & Teixeira, R. (2011). *Mensuração do Grau de Inovação de Micro e Pequenas Empresas: Estudo em Empresas da Cadeia Têxtil-Confeção em Sergipe*. XXXV ENANPAD, Rio de Janeiro, Setembro.
- OCDE & FIEP. (2005). Manual de Oslo. (3.ed.). Retirado de: <http://www.mct.gov.br/upd_blob/0011/11696.pdf>. Acedido em 02 de setembro de 2016.
- Paula, C. (2014). *Análise do grau de inovação das Micro e Pequenas Empresas do segmento alimentício atendidas pelo programa Agentes Locais de Inovação na Região Oeste do Estado de Goiás*. (Dissertação de Mestrado, Faculdades Alves Faria, Goiânia, GO, Brasil).
- Pereira, M., Grapeggia, M., Emmendoerfer, M., & Três, D. (2009). Fatores de inovação para a sobrevivência das Micro e Pequenas Empresas no Brasil. *RAI - Revista de Administração e Inovação*, 6,1, 50-65.
- Reichert, F., Camboim, G., & Zawislak, P. (2015). Capacidades e Trajetórias de Inovação de Empresas Brasileiras. *Ram-Revista de Administração Mackenzie*, 16, 5, 161-194.
- Rodrigues, A. (2003). *Cluster e Competitividade: um estudo da concentração de Micro e Pequenas Empresas de Alimentos no município de Marília/SP* (Tese de Doutorado, Universidade de São Paulo, São Carlos, SP, Brasil).
- Rothwell, R. (1994). Towards the fifth generation innovation process. *International Marketing Review*, 11, 7-31.
- Reid, S. E., & Brentani, U. (2004). The fuzzy front end of new product development for discontinuous innovations: a theoretical model. *Journal of Product Innovation Management*, 21, 3, 170-184.
- Schumpeter, J.A. (1997). *Teoria do Desenvolvimento Económico: uma investigação sobre lucros, capital, crédito, juro e o ciclo económico*. São Paulo: Editora Nova Cultura.
- Seo, Y., & Chae, S. (2016). Market dynamics and innovation management on Performance in SMEs: Multi-agent simulation approach. *Computer Science*, 91, 707-714.
- Šoltés, V., & Gavurová, B. (2014). Innovation policy as the main accelerator of increasing the competitiveness of small and medium-sized enterprises in Slovakia. *Economics and Finance*, 15, 1478-1485.
- Sawhney, M. Wolcott, R. C., & Arroniz, I. (2006). *The 12 Different Ways for Companies to Innovate*. MIT, Spring.
- Skibinski, A., & Sipa, M. (2015). Sources of Innovation of Small Businesses: Polish Perspective. *Economics and Finance*, 27, 429-437.
- Rusu, B. (2016). The Impact of Innovations on the Business Model: Exploratory Analysis of a Small Travel Agency. *Procedia - Social and Behavioral Sciences*, 221, 66-175.
- Rovere, R. L. (2001). Perspectivas das Micro, Pequenas e Médias Empresas no Brasil. *Revista de Economia Contemporânea*, 5, 20-38.
- Rojas, S., & Carrillo, A. (2014). Sistema para la evaluación de capacidades de innovación en pymes de países en desarrollo: caso Panamá. *Revista Facultad de Ciencias Económicas*, XXII, 2, Diciembre, 109-122.
- Tidd, J., Bessant, J., & Pavitt, K. (2008). *Gestão da Inovação*. (3.ed.). Porto Alegre: Bookman.
- Titu, A., Raulea, A., & Titu, S. (2015). Innovation a Challenge for the 21st. Century Managers. *Economics and Finance*, 27, 126-135.
- Toivonen, T. (2015). Continuous innovation-combining Toyota Kata and TRIZ for sustained innovation. *Engineering*, 131, 963-974.
- Taborda, C., Estevão, C., & Nunes, S. (2013). A gestão da inovação nas PME's da Beira Interior: as perspectivas dos gestores. *Tourism & Management Studies*, 9, 2, 124-129.
- Whitney, D. E. (2007). Assemble a technology development toolkit. *Research Technology Management*, 50, 5, 52-58.

SOCIEDADE ALGORÍTMICA, PLURIATIVIDADE E RENDIMENTO BÁSICO UNIVERSAL (RBU): UMA UTOPIA PARA O SÉCULO XXI?¹

António Covas

Universidade do Algarve, Faculdade de Economia; Centro de Investigação sobre o Espaço e as Organizações (CIEO)
(acovas@ualg.pt)

Maria das Mercês Covas

Universidade do Algarve; Centro de Investigação sobre o Espaço e as Organizações (CIEO)
(mcovas@ualg.pt)

RESUMO

Estamos a testemunhar uma sequência de inovações disruptivas de grande impacto nos mercados de trabalho do próximo futuro. De um lado, a revolução digital, a sociedade algorítmica e a economia das plataformas e aplicações tecnológicas na senda da chamada “uberização da sociedade”; de outro, a disrupção social nos mercados de trabalho e rendimento na senda da pluriatividade e do plurirrendimento. Não obstante, este é o contexto de uma grande promessa, já em curso, a chamada “economia colaborativa” e de uma possível utopia anunciada para o século XXI, o chamado Rendimento Básico Universal (RBU). Está em causa a organização social do mercado de trabalho, por isso, a emergência de novas modalidades de pluriatividade e plurirrendimento. É, também o caso do RBU.

Palavras-chave: Sociedade Algorítmica, Inovação Disruptiva, Pluriatividade, Plurirrendimento, Rendimento Básico Universal (RBU).

JEL Classification: Z13

1. INTRODUÇÃO

A sociedade global e cosmopolita em que vivemos sofreu alterações profundas nas últimas décadas do século XX. Actualmente, vivemos na chamada “sociedade algorítmica” marcada por novos problemas, dilemas, desafios e soluções. Ao longo do século XXI continuaremos a assistir a mudanças societais e civilizacionais de grande alcance. Paralelamente à emergência e/ou agravamento de problemas específicos, assistiremos, também, e em contrapartida, ao aprofundamento da economia simbiótica ou economia circular², ao aparecimento e aprofundamento da chamada “(i)conomia” e das redes colaborativas (Sociedade Co), assim como dos seus respectivos contributos, na abertura de novas perspectivas de contemporaneidade no que toca à resolução de problemas (*problem solving*), à inovação e ao desenvolvimento. Falamos de problemas específicos das sociedades seniores no mundo ocidental, dos efeitos perversos das alterações climáticas na gestão dos recursos naturais, da permanência de um desemprego estrutural, em consequência de uma profunda desconstrução do mercado laboral tal como o conhecemos na segunda metade do século XX, dos riscos globais próprios de um mundo multipolar e da mitigação do risco moral que eles provocam. Falamos da emergência do “4º sector” ou da recomposição de uma economia do quaternário³, que ganha cada vez mais espaço, associado ao universo das tecnologias da informação e comunicação e às redes sociais e, cada vez mais, na interface entre a economia pública convencional, a economia social e solidária e a economia dos bens comuns colaborativos. Assim, admite-se que uma parte importante da inovação e do desenvolvimento na dita sociedade algorítmica tenderá a passar pela emergência da sociedade colaborativa, pelo advento da “(i)conomia” e pela multiplicação da economia das redes e suas aplicações (economia das *apps*)⁴.

Em suma, vivemos, já, em plena sociedade algorítmica. É um dado adquirido. Ela faz parte do nosso quotidiano, por isso estamos a testemunhar uma sequência de inovações disruptivas de grande impacto, quer nos mercados de trabalho actuais, quer nos do próximo futuro. De um lado, a revolução digital e a economia das plataformas e aplicações tecnológicas na senda da chamada “uberização da sociedade”; de outro, a disrupção social nos mercados de trabalho e rendimento na senda da pluriatividade e do plurirrendimento. Não obstante, este é o contexto de uma grande promessa, já em curso, a chamada “economia colaborativa” e de uma possível utopia anunciada para o século XXI, o chamado Rendimento Básico Universal (RBU). Podemos dizer que está em causa a organização social do mercado de trabalho, por isso, a emergência de novas modalidades de pluriatividade e plurirrendimento. É, também o caso do RBU.

¹ Este texto está redigido de acordo com a antiga ortografia.

² Ver: EMF - ELLEN MACARTHUR FOUNDATION (2016) e Delannoy, I. (2015).

³ Ver Debonneuil, M. (2007).

⁴ Para aprofundar a discussão destas temáticas, nas suas múltiplas facetas teóricas, teórico-experimentais, de investigação-acção, assim como da sua aplicabilidade às diferentes realidades territoriais e contextos, quer rurais, quer urbanos, consultar as seguintes obras: Covas, A. e Covas, M.M. (2016a,b,c); (2015a,b,c,d); (2014a,b,c,d); (2013a,b,c,d); (2012a,b); (2011); (2010); Dallabrida, V. (2015); Dallabrida, V., Covas, M. M., e Covas, A. (2017); Farinós, J. D. (2011); Ferrão, J. (1996).

2. A MINHA VIDA UBERIZADA

A sociedade da informação e da comunicação é dominada pelas grandes plataformas tecnológicas, quais conglomerados empresariais reunidos sob as denominações GAFA (Google, Apple, Facebook e Amazon) e NATU (Netflix, Airbnb, Tesla e Uber). O modelo de negócio destas plataformas é geralmente conhecido por “uberização”, do nome da plataforma tecnológica UBER que, através de uma aplicação informática, conecta uma comunidade de prestadores e utilizadores de serviços de táxi. Esta intermediação tecnológica processada através de uma aplicação informática e administrada por uma empresa plataforma pode ser estendida a muitas áreas e serviços e, no limite, abranger e dominar a vida quotidiana dos cidadãos.

O texto que se segue procura ilustrar, embora com algum exagero e ironia, mas não longe da realidade, o que é uma vida “uberizada”. Então vejamos ou imaginemos:

São 7 horas da manhã, acordo ao som da internet das coisas (*internet of things*) (IOT). Tocam à porta, são os serviços de *baby-sitting* que tinha contratado a uma *start-up* no dia anterior. Tocam de novo, é o *pet-sitting* um serviço para tratar dos animais. Enquanto tomo o pequeno-almoço trato de encomendar *on-demand* as compras do hipermercado para me entregarem ao fim da tarde. De repente, o sensor IOT do esquentador diz-me que há uma fuga de gás, ligo o meu aplicativo “reparações” para um serviço especializado de canalização. Por causa deste pequeno incidente, contacto o meu espaço de *co-working* a dizer que vou chegar um pouco mais tarde. Enquanto aguardo pelo canalizador, aproveito para inscrever mais alguns activos ociosos que tenho em casa na *start-up* de aluguer de objectos de ocasião, sempre é um suplemento de rendimento interessante. Faço o mesmo com o aluguer do meu carro particular que está com uma utilização frequente enquanto, do mesmo passo, chamo um carro da *start-up* local de serviços de táxi para ir até à praça principal. Aqui apanho uma boleia que consegui através da aplicação-boleias. Enquanto estou no táxi uso a aplicação-serviços domésticos e jardinagem para contratar este serviço lá para casa.

Chego ao espaço comunitário de *co-working* por volta das 10:30h. Neste espaço sou o responsável da economia *crowd*, isto é, do *crowd funding* de pequenos negócios, de *crowd sourcing* e *crowd learning* para as áreas de formação e ensino. Temos em curso uma nova *start-up* na área da IOT para a casa inteligente e estamos a negociar um financiamento participativo para o efeito. Na minha *aplicação-funding-lending* tenho toda a informação necessária.

À hora de almoço um colega sugere que encomendemos uma refeição típica do seu país natal, a refeição é pedida na aplicação de refeições ao domicílio. Depois do almoço tenho uma sessão via *Skype* com um colega da *OuiShare* de Paris por causa de um *software* que estamos a produzir em “comum colaborativo”. Entretanto, recebo uma mensagem de casa, uma das crianças está com febre. Consulto a minha aplicação serviços-médicos e consigo arranjar um médico para ir a casa ao fim da tarde. Finalmente, para o *crowd learning* estou a preparar um MOOC (*massive online open course*) para um grupo que está inscrito no meu banco do tempo. A propósito, constato no meu banco do tempo que hoje tenho duas horas para dedicar ao voluntariado no hospital de Santo António. Porém, por causa do médico lá em casa, faço a troca com um colega. São horas de voltar a casa, chamo um táxi uberizado para me transportar a casa. Enquanto faço a viagem de regresso recebo informação dos meus objectos lá de casa. O esquentador está arranjado, as compras *on-demand* estão a caminho. Chego a casa, os serviços de *baby-sitting* e *pet-sitting* devolvem-me os filhos e os cães. Depois do jantar, confeccionado por mim através de uma aplicação “*do it yourself*”, os *gadgets* cá de casa tratam das últimas horas das crianças antes do deitar. Eu tenho de terminar um serviço independente em *open source* já a noite vai avançada por causa dos fusos horários. São horas de dormir, os sensores IOT prepararam o meu quarto para uma boa soneca, desde a boa temperatura até à música de embalar. Sim, por que amanhã é outro dia.

Complicado? Talvez; mas já há uma *start-up* a trabalhar em meta-aplicações.

Exagerado? Seguramente. Ficção? Talvez. Mas ainda há mais!... Vejamos, apenas, mais um aviso à navegação:

E quanto ao *mix* de rendimentos desta vida uberizada? Aqui também há várias possibilidades. O *mix* de rendimentos pode contemplar um rendimento salarial a tempo parcial por conta de outrem; um rendimento variável de trabalho independente *on-demand*; um rendimento em espécie (*voucher*) pelo trabalho colaborativo e voluntário na comunidade local; um rendimento igualmente variável pelo aluguer e/ou venda de bens de ocasião; e, quem sabe, um “rendimento básico universal” (RBU) no próximo futuro. Para salvaguardar o máximo de possibilidades é, porém, necessário que os efeitos cruzados de reputação destas várias actividades não causem danos colaterais irremediáveis em alguma destas modalidades de rendimento.

Uma tarefa ciclópica? Sem dúvida. Trata-se de um tema complexo. Não admira, por isso, que em alguns países esteja em curso uma grande discussão sobre o RBU.

3. VEM AÍ A CIBERCULTURA DA SOCIEDADE ALGORÍTMICA!

O que se escreveu anteriormente faz parte da cibercultura da sociedade digital e algorítmica. Entre a literatura produzida mais recentemente sobre esta matéria encontramos autores como Stiegler (2015), Sadin (2015) e Serres (2012). Todos eles se debruçaram sobre a sociedade automática e as consequências da automatização sobre a organização social do emprego e do trabalho. Stiegler (2015) escreveu sobre a vida algorítmica e a crítica da razão digital; Sadin (2015) escreveu sobre os novos humanos da sociedade imaterial e Serres (2012) que se situa na mesma linha. A leitura das suas obras suscitam-nos algumas reflexões que passamos a partilhar com o leitor.

- 1) A revolução digital confunde-se, cada vez mais, com o advento da sociedade automática e da automatização, se quisermos, dos procedimentos de cálculo automático ou sociedade algorítmica. De que trata, então, a “governança algorítmica”? De plataformas tecnológicas, de redes sociais, de dados brutos extraídos dessas redes sob a forma de sinais infra pessoais, de procedimentos de cálculo e correlações estatísticas sob a forma de padrões de comportamento.
- 2) No plano estrutural, a sociedade algorítmica alimenta-se de uma cibercultura, de um vasto ambiente informacional, da hiperinteligência dos dispositivos tecnológicos (a “smartificação”), da gestão do *Big Data* e do *Cloud Computing* e, obviamente, da “adição digital” provocada junto dos utilizadores.
- 3) No plano do conhecimento, a sociedade algorítmica “sabe lidar melhor” com a complexidade, essa é “a sua verdade”, isto é, uma objectividade totalmente colada ao real, produzida em tempo real e sucessivamente reconfigurada por uma massa imensa de dados permanentemente atualizados.
- 4) No plano operacional, o sistema *Big Data* faz a limpeza, triagem, categorização e cálculo algorítmico dos dados. Não interessa o contexto, a singularidade, a significação desses dados. Os indivíduos são “agregados temporários de dados brutos”, quantificáveis e sucessivamente reconfigurados a uma escala industrial, se quisermos, uma espécie de coisificação dos indivíduos; tudo fica indexado a um qualquer indicador quantitativo, para os fins da sociedade hipercompetitiva e performativa.
- 5) No plano da teoria crítica, estamos perante uma espécie de “modelo extractivista” em que os cidadãos internautas, utilizadores de redes e plataformas, são produtores e fornecedores de uma gigantesca massa de informação pessoal, muita dela subliminar, num ambiente informacional vertiginoso e hipnótico, que tem tanto de benignidade como de toxicidade.
- 6) No plano da relação de poder, a sociedade algorítmica é, aparentemente, uma nova forma de gerir a incerteza e a insegurança políticas; todavia, ela procede por inversão dos termos da equação, isto é, são os meios (o sistema técnico e tecnológico) que tomam conta dos fins; como a inovação política e social corre muito mais lentamente há o risco de ficar prisioneira da elevada toxicidade da sociedade algorítmica.
- 7) No plano das métricas territoriais, a sociedade algorítmica permite-nos introduzir e distinguir duas métricas importantes: a métrica dos territórios-zona (T-Z) e a métrica dos territórios-rede (T-R). A primeira reporta-se ao poder vertical dos territórios convencionais, a segunda ao poder horizontal ou lateral dos territórios inteligentes que cultivam a inteligência colectiva por intermédio das novas plataformas digitais. As plataformas colaborativas e a economia dos bens comuns são uma esperança para todos os territórios, sobretudo os mais desfavorecidos⁵.
- 8) No plano cognitivo do saber-conceptual, a sociedade algorítmica, na sua exuberância calculatória, transforma os algoritmos em próteses cognitivas, que provocam não apenas a exteriorização do saber mas, também, a proletarianização de algumas / muitas classes profissionais e intelectuais. A sociedade algorítmica é, portanto, uma sociedade altamente paradoxal com inúmeros conflitos políticos e sociais no horizonte próximo.
- 9) No plano do sujeito individual, os nossos “duplos algorítmicos” podem ser muito úteis se os soubermos manipular em nosso benefício; no resto, o nosso rasto, a nossa traçabilidade, serão explorados exaustivamente em ordem a produzir padrões supra individuais que “antecipam e orientam” o nosso comportamento, tudo garantido pela racionalidade algorítmica.
- 10) No plano da organização social do emprego e do trabalho, a sociedade algorítmica da automatização é uma tecnologia verdadeiramente disruptiva, isto é, cria a breve prazo um forte desemprego estrutural. Mas é também uma grande oportunidade para a inovação social e política que chegará, estamos certos, à boleia da sociedade automática e algorítmica.

4. O MERCADO DE TRABALHO PLURIACTIVO E O RENDIMENTO BÁSICO UNIVERSAL

A sociedade global, digital e cosmopolita em que vivemos deixa prenunciar mudanças culturais e civilizacionais de grande alcance durante o século XXI. Lembremos essas mudanças. As alterações demográficas e os problemas específicos das sociedades envelhecidas (seniores), as alterações climáticas e os problemas de abastecimento local e segurança alimentar, as alterações dos mercados de trabalho e o desemprego estrutural de dois dígitos nas faixas etárias mais jovem e na de idade activa mais avançada, os riscos geopolíticos globais próprios de um mundo multipolar e os recursos crescentes despendidos em cooperação e segurança internacionais para controlar e mitigar o risco sistémico e moral dos actores nele envolvidos. Finalmente, nos últimos anos, emerge um grande desafio sob a forma de uma nova economia associada ao universo das tecnologias da informação e comunicação, às plataformas digitais e às redes sociais.

⁵ Para aprofundar a discussão de temáticas relacionadas com: 1) Processos de construção de territórios-zona (T-Z) e de territórios-rede (T-R); 2) Políticas públicas e processos de desenvolvimento territorial; 3) Processos de construção de uma nova inteligência territorial; 4) Processos de governança regional e de criação de uma racionalidade territorial multiníveis; consultar as seguintes obras: Dallabrida, V., Covas, M. M., e Covas, A. (2017); Caravaca, I. B. e García, A. (2009); Covas, A. e Covas, M.M. (2016a,b,c); (2015a,b,c,d); (2014a,b,c,d); (2013a,b,c,d); (2012a,b); Ferrão, J. (1996).

4.1 A emergência de novas correntes do pensamento

É no interior deste complexo enquadramento global e tecnológico que emergem novas correntes de pensamento e geografias económicas mais inteligentes e imateriais associadas à internet e à tecnologia das redes e plataformas digitais. São movimentos muito recentes, liderados pelas gerações que se movem à vontade no ecossistema tecnológico próprio dos sistemas interactivos de comunicação web 2.0 e web 3.0. A culminar esta pluralidade de correntes do pensamento em redor de uma economia das redes e dos recursos imateriais temos a revolução silenciosa da economia dos bens comuns colaborativos (Jeremy Rifkin, 2014), se quisermos, uma espécie de quarto sector pós-capitalista que cresce e alastra na zona de interface entre a economia pública das infra-estruturas e dos bens e serviços públicos mais convencionais, a economia social e solidária das instituições particulares de assistência social e a novel economia dos bens comuns colaborativos (a “Sociedade Co”).

Nesta linha de argumentação, a “Sociedade Co” é a sociedade do conhecimento, colaboração, comunicação, comunidade, comunhão, isto é, a “sociedade dos comuns” mas, também, da cooperação, confiança, contribuição, convivialidade e congratulação. O universo “Co” contempla uma gama muito variada de bens e serviços comuns: os consumos colaborativos de recursos ociosos (*sharing idle resources*), a produção social pelos pares (*peer to peer production*), os serviços partilhados pelas comunidades de utilizadores (*sharing economy*), o financiamento participativo (*crowdfunding*), os espaços comuns de criação criativa (*coworking e makerspaces*), a aprendizagem e a formação colaborativas (*opensourcing*), as moedas criativas e complementares (*local currencies e creative money*), entre outros empreendimentos da chamada economia colaborativa e contributiva (*collaborative ou contributive economy*).

Para darmos conta do crescimento exponencial da economia colaborativa nos últimos anos e, sobretudo, após a grande crise de 2008, referimos, apenas, alguns dos muitos autores que mais contribuíram para essa emergência e as respectivas áreas em que desenvolveram o seu pensamento e áreas de estudo. Então vejamos:

- Manuel Castells (1999) debruçou-se a era da informação, a sociedade em rede e o poder da identidade;
- Yochai Benkler (2006) analisou a riqueza das redes e ou como a produção social transforma os mercados e a liberdade;
- Lawrence Lessig (2004, 2003, 1999) trabalhou sobre a cultura livre e o código versão 2.0);
- Michel Bauwens (2015) estudou a economia política da produção social pelos pares);
- Vasilis Kostakis e Michel Bauwens (2014) debruçaram-se sobre a sociedade em rede e os cenários futuros para a economia colaborativa);
- Pierre Levy (1997) elabora o seu pensamento e escreve sobre a inteligência colectiva e a cibercultura);
- Rachel Boltzman e Roo Rogers (2010) desenvolvem a lógica da economia partilhada e o consumo colaborativo);
- Lisa Ganski (2012) elabora e escreve sobre a economia *mesh* ou a economia partilhada;
- Bernard Stiegler (2010) desenvolve o seu pensamento sobre a economia contributiva;
- André Gorz (2003) dubrou-se sobre o trabalho imaterial;
- Howard Rheingold (2003, 1993) elaborou o seu pensamento sobre a comunidade virtual e os *smart mobs*;
- Clay Shirky (2010, 2009) debruçou-se sobre o excedente cognitivo e ou a criatividade numa era conectada;
- Don Tapscott e Anthony D. Williams (2008) desenvolveram as suas ideias sobre a wikinomics ou como a colaboração em massa muda tudo;
- Chris Anderson (2012, 2008) fala-nos sobre a cauda longa, os *makers*, e a nova revolução industrial;
- Jeremy Rifkin (2014a, 2014b) escreveu obras esclarecedora sobre a 3ª revolução industrial e a sociedade do custo marginal zero).

Esta lista poderia continuar.

Posto isto, qual é a substância ou estrutura comum a este movimento polissémico mas convergente? Infra-estruturas de banda larga ou auto-estradas da informação, cultura digital disseminada, *start-ups* e plataformas tecnológicas, redes sociais e sistemas de comunicação interactivos, programação e *software open source* e modelos de negócio abertos.

Ao contrário das grandes transições civilizacionais anteriores, da oralidade para a escrita e da escrita para a imprensa, feitas sempre no universo dos átomos e moléculas, a transição da imprensa para a computação e as redes, para o mundo dos *screenagers*, é feita dos átomos para os *bits*, isto é, estamos a desmaterializar a próxima grande mutação civilizacional e a eliminar, em boa medida, as referências espaciotemporais anteriores. É assim que os novos modelos de negócio da era e da cultura digitais exprimem cada vez mais esta mutação fundamental. Numa mutação onde as plataformas tecnológicas desempenham o papel principal, pois são a placa giratória de todos os interesses em presença, estamos a assistir à transição paradigmática da sociedade dos objectos e das mercadorias para a sociedade dos ícones, dos signos, sinais e símbolos, isto é, a uma transição para a (*i*)conomia. Na nova sociedade da informação, da inteligência, da internet, da imaginação, da inovação, dos bens intangíveis e imateriais, assistiremos a um *trade off* permanente entre a “velha economia dos produtos industriais e materiais” e a “nova *iconomia* dos serviços imateriais”, numa troca constante entre produto e serviço e entre propriedade e acesso e na qual a (*i*)conomia acrescentará cada mais valor à economia convencional que se reduzirá do mesmo passo.

4.2 Uma revolução em curso no mundo do trabalho

Face a este novo ecossistema da era digital, pode legitimamente perguntar-se:

- quem será o homem do tempo novo que se avizinha? Será o homem das redes e dos écrans, da (*i*)conomia e da “Sociedade Co”?

Vejamos as tendências pesadas, sobretudo no campo dos países do chamado mundo ocidental:

- em primeiro lugar, por razões de competitividade, a economia pública reduzirá a despesa pública para poder reduzir os impostos. Pelo meio reduzirá o emprego público, substituindo funcionários públicos por prestadores de serviços em *outsourcing*;
- em segundo lugar, a economia social e solidária passará por uma forte racionalização e contracção na medida em que depende dos subsídios públicos. Pelo meio reduzirá o emprego social e muitas das suas funções serão externalizadas para as comunidades locais da Sociedade “Co”;
- em terceiro lugar, a economia privada capitalista, devido à automatização e à concorrência feroz dos mercados globais, reduzirá ainda mais o emprego convencional e externalizará muitas tarefas que passarão a ser oferecidas pela economia *on-demand* para onde se transferirão muitos trabalhadores em regime de *freelance*;
- em quarto lugar, a economia “Co”, em sentido amplo, será uma espécie de lugar geométrico de todas as externalidades, positivas e negativas, das várias economias. Nesta enorme placa giratória o mais importante é mesmo a adesão aos valores “Co”. Se essa adesão for sincera e entusiástica, a “Sociedade Co” será muito provavelmente a grande casa comum para a maioria dos cidadãos. Nesta “Sociedade Co” circularão, muito provavelmente, para além da moeda oficial, várias moedas locais e criativas.

No final, não surpreenderia que este “cidadão multifunções” e adepto dos bens comuns colaborativos acumulasse rendimentos, monetarizados e não-monetarizados, com diversas proveniências, a saber: um emprego em *part-time* num serviço público e/ou numa empresa privada; uma prestação de serviço em regime de *freelance* numa empresa *on-demand*; algumas horas num banco do tempo local em troca de um *voucher*; e, finalmente, uma “inscrição” numa *startup* colaborativa de uma parte dos seus recursos ociosos (*idle resources*) em troca de uma receita eventual.

Como facilmente se comprova, estaremos num futuro não muito longínquo, devido à quebra estrutural do emprego, condenados a uma sociedade de regimes laborais muito diversos, uns em *part-time*, outros em regime de *freelance*, outros ainda em regime contributivo e colaborativo, sob muitos formatos, condições e reputações, se quisermos, uma sociedade onde o indivíduo “se produz a si próprio” numa espécie de *corporate individualism*. Estamos em crer que regressaremos ao “homem dos sete ofícios” que o capitalismo industrial tinha desconstruído para construir o profissional especializado do capitalismo industrial da nova era. E porquê novamente o “homem dos sete ofícios” na era da internet?

- Em primeiro lugar, por que a auto-formação, oferecida em *opensourcing* estará muito próxima do custo marginal zero.
- Em segundo lugar, por que a escassez de empregos obrigará a repartir os horários de trabalho e a oferecer um leque mais diversificado de oportunidades.
- Em terceiro lugar, por que todo o mercado de trabalho se tornará muito mais volátil e adaptativo.
- Em quarto lugar, por que se tornará absolutamente imprescindível a complementaridade de rendimentos, monetarizados ou não.
- Em quinto lugar, por que as actividades da economia colaborativa e contributiva permitirão ensaiar novas experiências, novos saberes e novas ocupações.

Quer dizer, através da economia colaborativa e contributiva, as diferentes comunidades de utilizadores e fornecedores organizarão novos formatos de prestação de serviços com suporte em plataformas tecnológicas cujas aplicações informáticas serão instaladas nos telefones móveis dos jovens e menos jovens que desejam entrar no “mercado de trabalho”. É aqui que entra, progressivamente, “o homem dos sete ofícios”. De acordo com as suas faculdades, capacidades e experiências ele irá inscrever-se em diferentes “aplicações” (*apps*), geridas muito provavelmente por uma *start-up* tecnológica recém constituída, nas modalidades horário, tempo de trabalho, pagamento, qualidade de serviço, que a sua “presumida reputação” lhe permitir oferecer. Poderão ser sete ofícios, mais ou menos, mas dificilmente serão sete profissões. Entretanto, enquanto aguarda por uma chamada, poderá continuar, em sua casa, a formação permanente num MOOC (*massive open online course*) a custo zero. É o maravilhoso mundo novo que chega!!!!

4.3 O decoupling (separação) entre trabalho e rendimento e o rendimento básico universal (RBU)

Aqui chegados, abre-se um campo imenso de possibilidades que cruza várias acepções de pluriactividade e plurirrendimento. Doravante, em matéria socio-laboral e no espaço público, os termos da discussão serão, entre outros, os seguintes:

- polarização e bipolarização do mundo do trabalho;
- fraccionamento dos horários e do tempo de trabalho;
- intermitência e descontinuidade das relações laborais;
- empregabilidade e formação ao longo da vida;
- polivalência e multifuncionalidade das competências pessoais;
- um direito universal de protecção social em vez de um simples direito socio-laboral;
- um direito de pluriactividade horizontal em vez de um simples direito laboral;
- um direito fiscal que tenha em devida conta o plurirrendimento e a pluriactividade;
- um direito comercial que tenha em devida conta a intermitência e o trabalho independente;
- finalmente, emergirá no debate público a discussão em redor do conceito de rendimento básico universal e/ou incondicional, um rendimento mínimo garantido desligado da actividade económica convencional associada a uma relação laboral.

Esta evolução do universo sócio laboral não tem, por enquanto, um guião ou argumento conhecido e, sobretudo, não se conhecem bem as circunstâncias em que irá decorrer. Suspeitamos, porém, que os percursos profissionais passarão por um

período de forte turbulência sócio laboral e sócio familiar e, nesta exacta medida, o próprio RBU terá uma história muito atribulada, com inúmeros afloramentos no espaço público e versões muito mitigadas que se confundirão com rendimentos mínimos garantidos e rendimentos sociais de inserção, até versões mais elaboradas e completas, inclusive no espaço europeu como medida complementar de estabilização financeira. Seja como for, a utopia permanecerá e alimentará o debate no espaço público em redor do Estado-Providência do século XXI.

5. NOTAS FINAIS

Chegados aqui, estamos certos de que por detrás da exuberância tecnológica, da economia das aplicações e dos “empreendedores startups” há uma revolução silenciosa em curso, uma revolução do bom senso, da inteligência colectiva e da convivialidade. Por isso, está em curso, também, o lado mais utópico da cibercultura, em versões muito variadas: a denominada sociedade colaborativa; a economia do 4º sector (o dom, o voluntariado, a comunhão, a contribuição); a organização dos bens comuns colaborativos; as moedas sociais e complementares; a inteligência colectiva territorial e a formação de actores-rede; o rendimento básico de existência (a grande utopia do século XXI); a plena aplicação dos princípios da economia circular; e uma nova organização do trabalho mais criativa e inovadora.

Para finalizar, em tempo de cibercultura, sociedade automática e governação algorítmica, atrevemo-nos a acrescentar um último tópico para debate:

- Trata-se do debate essencial que está por fazer acerca das relações de causalidade entre a métrica das redes digitais e a métrica dos territórios hierárquicos, sobretudo político-administrativos, muito em especial os territórios mais remotos e desfavorecidos do interior do país.

Sobre este tópico levantamos as seguintes interrogações:

- deve-se optar por serviços públicos fixos e permanentes e devidamente municipalizados ou por serviços públicos polivalentes, itinerantes e multimunicipais?
- o que é que a sociedade digital, as comunidades *online* e a governação algorítmica podem fazer por estes territórios remotos e esquecidos e pelas comunidades reais do país oculto?
- Abandonam, reocupam, retalham, privatizam?

Teremos de voltar mais vezes ao assunto.

REFERÊNCIAS

- Anderson, C. (2012). *Makers: The New Industrial Revolution*. New York. Crown Publishing Group.
- Anderson, C. (2008). *The long tail*. New York. Hyperion.
- Aydalot, P. (1986). *Milieux Innovateurs en Europe*. Paris. GREMI.
- Barquero, A. V. (2011). Los territorios innovadores, espacios estratégicos del desarrollo. In: Curbelo, J.L., Parrilli, M.D. Albuquerque, F., (coords.) (2011). *Territorios innovadores y competitivos*. Madrid. Marcial Pons Ediciones Jurídicas y Sociales S.A., p. 75-88.
- Bauwens, M. e Lievens, J. (2015). *Sauver le monde. Vers une économie post-capitaliste avec le peer-to-peer*, Paris. Éditions Les Liens qui libèrent. 268 p.
- Benkler, Y. (2006). *The wealth of networks: how social production transforms markets and freedom*. New Haven and London. Yale University Press.
- Boisier, S. (2010). Decodificando el desarrollo del siglo XXI: subjetividad, complejidad, sinapsis, sinergia, recursividad, liderazgo y anclaje territorial. In: Curbelo, J. L.; Parrilli, M. D.
- Boltsman, R. e Rogers, R. (2010). *What's Mine Is Yours: The Rise of Collaborative Consumption*. New York. Harper Collins Publishers.
- Camagni, R. (ed.) (1995). *Innovation networks. Spatial perspectives*. London. GREMI-Belhaven Press.
- Caravaca, I. B. e Garcia, A. (2009). El debate sobre los territorios inteligentes: el caso del área metropolitana de Sevilla. *Revista Eure*, Vol. XXXV, N° 105 (agosto): 23-45.
- Castells, M. (1999). *A Era da Informação: Economia, Sociedade e Cultura*. 3ª Edição. Volume I - *A Sociedade em Rede*. Volume II - *O Poder da Identidade*. Volume III - *O Fim do Milénio*. São Paulo. Editora Paz e Terra.
- Crevoisier, O. (1993). *Industrie et région: les milieux innovateurs de l'Arc jurassien*. Neuchâtel. EDES.
- Covas, A., e Covas, M. M. (2016a). Os territórios inteligentes e criativos da 2ª ruralidade: um ensaio exploratório em redor da dieta mediterrânica. *Políticas Públicas para a Agricultura PÓS 2020 – Atas do ESADR 2016*. Autor: Vários. Coordenadores: Maria de Fátima Lorena de Oliveira & Maria Leonor da Silva Carvalho, pp. 461-479. APDEA. Acessível em: <http://www.apdea.pt/esadr2016/>

- Covas, A. e Covas, M. M. (2016b). Cultura Digital, Inteligência Colectiva e Interdisciplinaridade. In: *Proceedings of the International Congress on Interdisciplinarity in Social and Human Sciences*: 79-88. CIEO, Faro, Universidade do Algarve, 5-6 de maio.
- Covas, A. e Covas, M. M. (2016c). Dos territórios-zona (TR) aos territórios-rede (T-R): um instrumento para a 2ª ruralidade pós-productivista. Comunicação ao *I Coloquio Internacional de Geografia Rural - Colorural2016 - XVIII Colóquio de Geografia Rural da AGE*: 590-604. Ciudad Real. https://www.researchgate.net/publication/307974511_Treinta_anos_de_Politica_Comun_en_Espana_Agricultura_y_multifuncionalidad_en_el_contexto_de_la_nueva_ruralidad
- Covas, A. e Covas, M. M. (2015a). Sociedade do conhecimento, escalas de governo e governança territorial: a sociedade portuguesa em transição. *Actas do II Congresso Internacional SETED-ANTE*, Santiago de Compostela, 1-3 de Julho.
- Covas, A. e Covas, M. M. (2015b). *Multiterritorialidades I: Temas e problemas de governança e desenvolvimento territoriais*. Lisboa. Editora Colibri.
- Covas, A. e Covas, M. M. (2015c). Sociedade do conhecimento, escalas de governo e governança territorial – um ensaio exploratório e prospectivo para a sociedade portuguesa. *Desenvolvimento Regional em debate*, 5, (2): 25-47. Acessível em <http://www.periodicos.unc.br/index.php/drd>
- Covas, A. e Covas, M. M. (2015d). Sociedade do conhecimento, escalas de governo e governança territorial – um ensaio exploratório e prospectivo para a sociedade portuguesa, DRd – Desenvolvimento Regional em debate 5 (2): 25-47. *Revista electrónica do Programa de Mestrado em Desenvolvimento Regional da Universidade do Condestado (UnC)*. Acessível em <http://www.periodicos.unc.br/index.php/drd>.
- Covas, A. e Covas, M. M. (2014a). *Os territórios-rede: a inteligência territorial da 2ª ruralidade*. Lisboa: Editora Colibri.
- Covas, A. e Covas, M. M. (2014b). *A construção social dos territórios-rede: A inteligência territorial da 2ª ruralidade*. Brasil, Editora Liber Ars, [eBook Kindle].
- Covas, A. e Covas, M. M. (2014c). Os territórios-rede: uma nova inteligência territorial em Portugal. In: Dallabrida, V. R. (Org.). *Desenvolvimento territorial: políticas públicas brasileiras, experiências internacionais e a Indicação Geográfica como referência*. São Paulo. LiberArs: 97-119.
- Covas, A. e Covas, M. M. (2014d). Da microgeoeconomia aos territórios-rede, in *X Coloquio Ibérico de Estudios Rurales. Territorios rurales, Agriculturas locales y Cadenas alimentarias*, (X CIER), Editorial, Universitat Politècnica de València (UPV): 137-140. Editado por: Asociación Española de Economía Agraria, Editorial Universitat Politècnica de València, www.lalibreria.upv.es / Realizado em Palencia, 16-17 de outubro. https://riunet.upv.es/.../X%20Coloquio%20Ibérico%20de%20Estudios%20Rurales_61...
- Covas, A. e Covas, M. M. (2013a). A caminho da 2ª ruralidade: a microgeoeconomia de novos sistemas territoriais – A experiência do Projecto Querença”. *1st International Meeting – Geography & Politics, Policies and Planning*. CEGOT. E-book_Geography&PPP.pdf. Nº1: 528-540. <https://docs.google.com/file/d/0B8tVjRNsUilbZk52OVNIIdzU0WEE/edit?pli=1>
- Covas, A. e Covas, M. M. (2013b). Em busca de uma racionalidade territorial multiníveis nos processos de governança regional: o exemplo da região do Algarve. *Desenvolvimento Regional em debate*, 3, (2): 66-85. Acessível em: <http://www.periodicos.unc.br/index.php/drd/issue/view/20>
- Covas, A. e Covas, M. M. (2013c). A construção social dos territórios-rede da 2ª ruralidade dos territórios-zona aos territórios-rede construir um território de múltiplas territorialidades. *Revista de Geografia e Ordenamento do Território*, n.º 3 (30 de Junho). Centro de Estudos de Geografia e Ordenamento do Território (CEGOT): 43-66. Acessível em: cegot.org/ojs/index.php/GOT/article/viewFile/2013.3.003/33.
- Covas, A. e Covas, M. M. (2013d). Territórios-rede: Uma nova estratégia para a reocupação de espaços rurais em estado de necessidade, *Actas do VII Congresso APDEA – V Congresso SPER – I Encontro Lusófono Economia, Sociologia, Ambiente e Desenvolvimento Rural (ESADR 2013)*. ESADRE 2013 – *Alimentar mentalidades, vencer a crise global*. Évora, Universidade de Évora, pp: 2471-I-XXIII. Évora, 15-19 de Outubro de 2013. Link para aceder às atas_proceedings_esadr2013: <https://www.dropbox.com/1/rfTUD5sCy7nawmx2HsACa>
- Covas, A. e Covas, M. M. (2012a). O Projecto Querença: a microgeoeconomia das baixas densidades – missões de intervenção e resgate em áreas rurais remotas. *Actas do IX Colóquio Ibérico sobre Estudos Rurais (IX CIER)*, - (I)Mobilidades e (Des)Envolvimentos: O Rural Desafiado” / *Inérvias, Câmbios Y “Desarrollos”: desafios para el medio rural*, Lisboa, (SPER, CEG/IGOT-UL).
- Covas, A. e Covas, M. M. (2012b). *A caminho da 2ª ruralidade: uma introdução à temática dos sistemas territoriais*. Lisboa. Editora Colibri.
- Covas, A. e Covas, M. M. (2011). *A Grande Transição: Pluralidade e diversidade no mundo rural - elementos para um novo contrato social*. Lisboa. Editora Colibri.
- Covas, A. e Covas, M. M. (2010). *Ruralidades V: Modernização Ecológica, Serviços Ecossistémicos e Riscos Globais – a ruralidade do nosso tempo*. Faro. Edições da Universidade do Algarve.
- Curbelo, J.L., Parrilli, M.D. Albuquerque, F., (coords.) (2011). *Territorios innovadores y competitivos*. Madrid. Marcial Pons Ediciones Jurídicas y Sociales S.A, p. 51-73.

- Dallabrida, V., Covas, M. M., e Covas, A. (2017). Inovação, desenvolvimento e espaço urbano: uma relação necessária mas não suficiente. *Revista Brasileira de Estudos Urbanos e Regionais (RBEUR)*, 19, (2) (Maio-Agosto): 360-378. <https://doi.org/10.22296/2317-1529.2017v19n2p360>
- Dallabrida, V. (2015). Governança territorial: do debate teórico à avaliação da sua prática. *Análise Social*. 215, 1 (2.º): 304-328.
- Debonneuil, M. (2007). *L'espoir économique. Vers la révolution du quaternaire*. Paris. Éditions Bourin.
- Delannoy, I. (2015). *Atelier Symbiotic*. <http://www.economie-symbiotique.fr/le-club-de-leconomie-symbiotique-2/2015>.
- EMF - ELLEN MACARTHUR FOUNDATION (2016). *Intelligent Assets: unlocking the circular economy potential*. Isle of Wight.
- Farinós, J. D.(2011). Inteligencia Territorial para la planificación y la gobernanza democráticas: los observatorios de los territorios. *Proyeccion 11*, v. 5 (set): 45-69.
- Ferrão, J. (1996). Educação, sociedades cognitivas e regiões inteligentes: uma articulação promissora. *Inforgeo - Revista da Associação Portuguesa de Geógrafos*, n. 11: 97-104.
- Gansky, L. (2012). *The Mesh: Why the Future of Business Is Sharing*. New York. Portfolio Penguin.
- Gorz, A. (2003). *L'immatériel*. Paris. Galilée.
- Kostakis, V. e Bauwens, M. (2014). *Network Society and Future Scenarios for a Collaborative Economy*. Palgrave Macmillan UK.
- Lessig, L. (2004). *Free Culture*. New York. Penguin, USA.
- Lessig, L. (2003). *The Future of Ideas*. New York. Vintage Books Editions.
- Lessig, L. (1999). *Code: And Other Laws Of Cyberspace*. New York. Basic Books.
- Levy P. (1997). *Collective Intelligence: Mankind's Emerging World in Cyberspace*. Cambridge. Mass: Perseus Books.
- Rheingold, H. (2003). *Smart Mobs: The Next Social Revolution*. Cambridge. Basic Books.
- Rheingold, H. (1993). *Virtual community*. Reading. MA: Addison-Wesley Publishing Company.
- Rifkin, J (2014a). *The zero marginal cost society: the internet of things, the collaborative commons, and the eclipse of capitalism*. New York. Palgrave Macmillan.
- Rifkin, J. (2014b). *A Terceira revolução industrial*. Lisboa. Bertrand.
- Sadin, E. (2015). *La vie algorithmique: critique de la raison numérique*. Paris. Éditions L'Échappée (1^{er} trimestre).
- Serres, M. (2012). *Petite poucette*. Paris. Éditions Le Pommier.
- Shirky, C. (2010). *Cognitive Surplus: How Technology Makes Consumers into Collaborators*. New York. Penguin Press.
- Shirky, C. (2009). *Here comes everybody: the power of organizing without organizations*. New York. Penguin Press.
- Stiegler, B. (2015). *La société automatique (1 – L'Avenir du travail)*. Paris. Éditions Fayard.
- Stiegler, B. (2010). *Manifeste 2010*. Disponível em: www.arsindustrialis.org/manifeste-2010.
- Tapscott, D. e Williams, H. (2006). *Wikinomics: How Mass Collaboration Changes Everything*. New York. Penguin Books

COMO OS ALUNOS JOVENS VÊM A ESCOLA DO SÉCULO XXI?

Daniela Diesel

Centro Universitário UNIVATES, Brasil
(danieladiesel@universo.univates.br)

Nélia Amado

Universidade do Algarve; UIDEF, Instituto de Educação, Universidade de Lisboa
(namado@ualg.pt)

Suzana Feldens Schwertner

Centro Universitário UNIVATES, Brasil
(suzifs@univates.br)

RESUMO

Vários estudos mostram que a escola está longe de preparar os jovens para os desafios da sociedade atual. Neste sentido parece importante dar voz aos jovens de forma a conhecer a sua visão acerca da escola e do processo de ensino aprendizagem, em simultâneo, perceber como projetam a escola no século XXI. Esta comunicação apresenta resultados de um estudo em desenvolvimento no Brasil para o qual foram realizados *focus groups* com jovens de 15 anos. Os alunos defendem uma aproximação mais afetiva do professor onde prevaleça confiança e respeito mútuo e aclamam por aulas que privilegiem a experimentação, a manipulação, ambicionam aulas dinâmicas, que ultrapassem os limites da sala de aula. Defendem também uma sala de aula mais consistente com a atualidade, onde sejam permitidas as ferramentas tecnológicas que favorecem a aprendizagem. As narrativas apresentam percepções dos alunos sobre a necessidade de dinamizar as práticas do professor para além da sala de aula; a importância das relações afetivas e interpessoais entre professor/aluno; a possibilidade de o conhecimento ser oriundo tanto de alunos quanto dos professores. O estudo busca, com estas contribuições, pensar o estudante como ator e protagonista do processo de ensino e aprendizagem.

Palavras-chave: Prática Docente, Alunos, Ensino e Aprendizagem, Escola.

1. INTRODUÇÃO

Estamos em um tempo de reconfiguração dos processos de ensino e aprendizagem onde o papel da escola e do professor têm sido cada vez mais questionados. Nossas escolas, atualmente, constituem-se por alunos intensamente conectados e aclamando mudanças tanto de cunho prático como curricular, pois estes pedem mudanças nas metodologias de ensino, na forma de aprender, nos conteúdos que lhes são ensinados e na maneira que são lhes transmitidos esses ensinamentos.

As atribuições dos professores se tornam cada vez mais numerosas no contexto da escola contemporânea. Entretanto, essas atribuições são diferentes daquelas que lhe foram ensinadas durante a sua formação, o que coloca em discussão a forma de ensinar do professor. Ao tentar pensar a partir do olhar dos jovens estudantes, emergem questionamentos sobre como estes percebem a ação docente na contemporaneidade. Como os estudantes veem a escola do século XXI? Como estes se sentem na escola? Como ensinar essa geração de alunos que, muitas vezes, não está de acordo com a forma de aprender que lhes é imposta? Ou que não quer aprender através do método tradicional de ensino que ainda permanece sendo ofertado na maioria das escolas? O que estes jovens têm a dizer sobre a prática de ensino que os professores vêm utilizando nas suas aulas?

O presente estudo objetiva refletir, a partir do olhar de estudantes adolescentes, acerca da escola e do processo de ensino aprendizagem, assim como, perceber como os adolescentes projetam a escola no século XXI e a importância do professor no processo de ensino e aprendizagem. A temática aqui abordada emergiu a partir das discussões realizadas em grupos focais com estudantes do segundo ano do Ensino Médio em escolas brasileiras.

2. APORTE TEÓRICO

Vivemos em meio a era contemporânea onde a escola encontra-se em um momento histórico de muitas incertezas e desafios. A escola enfrenta um período de crise de identidade, o que pode ser entendido a partir das reestruturações que vêm ocorrendo ao longo das últimas décadas. Autores como Canário (2006), Ramos de Ó e Costa (2007) e Sibília (2012) ajudam-nos a pensar o cenário atual da escola contemporânea por meio de seus discursos sobre este período de incertezas que a escola vem enfrentando.

Para tentar entender o período pelo qual passamos, faz-se necessário recorrer aos períodos que antecederam tal crise, conforme explica Sibília (2012, p. 13):

“Entre tantas perguntas em aberto e cada vez mais difíceis de responder, em função de sua crescente especificidade e da dificuldade de imaginar alternativas para o nosso futuro, uma certeza é quase óbvia e poderia servir aqui como ponto de partida: a escola está em crise. Por quê? Os fatores que levaram a essa situação são inúmeros e sumamente complexos, mas um caminho para compreender os motivos desse mal-estar consiste em recorrer à sua genealogia”.

A autora Sibília (2012), explica que a escola, pode ser considerada como uma máquina antiquada por compor-se de um funcionamento que não se encontra em sintonia com os jovens do século XXI. Pois a escola, está moldada e caracterizada fisicamente como as escolas do século XIX, e permanece com o ensino de forma similar ao do século XX, onde prevalece métodos que requerem quase exclusivamente, resultados quantitativos. Em contrapartida, os estudantes atuais nasceram numa era tecnológica, e possuem anseios e expectativas compatíveis com uma sociedade tecnológica, porém encontram-se aprisionados a um sistema educativo que se encontra no século XIX.

Assim, a autora também afirma que:

“[...] Por um lado, então, temos a escola, com todo o classicismo que ela carrega nas costas; por outro, a presença cada vez mais incontestável desses “modos de ser” tipicamente contemporâneos. Tornou-se muito difícil evitar tamanha desarticulação com um olhar para o outro lado, ou um fingir que não há nada acontecendo, ou em buscar em vão remendar esse artefacto abstruso que, ao que tudo indica, parece ter perdido boa parte de sua eficácia e seu sentido ao se deparar com a nova paisagem que cresceu a seu redor” (Sibília, 2012, p. 16).

Para tal, é importante analisar o cenário atual das nossas escolas e o contexto que as envolve. Cabe perguntar: Quem são os sujeitos que constituem a escola? Como os adolescentes veem a escola? Compete refletir sobre os desafios que a escola enfrenta nos dias de hoje. Acredita-se que um dos maiores desafios está vinculada com a forma de ensinar aos alunos do século XXI. Neste sentido, Ramos de O e Costa (2007, p. 112) afirmam que estamos perante uma espécie de guerra entre gerações, de linguagem e de tecnologia:

Há aqui um conflito que não é apenas de gerações; é primordialmente de linguagem. Fatalmente temos que nos adaptar aos artefactos da tecnologia e utilizá-los como recurso para a transformação da nossa mundividência. Isso porque o mundo tornou-se muito mais extenso, mais complexo, sobretudo, através das novas tecnologias, não fazendo mais sentido, por exemplo, opor natureza e cultura.

Para ajudar a entender a divergência que existe na falta de entendimento entre jovens e a escola, Sibília (2012) destaca que enquanto os alunos de hoje vivem em meio aos inúmeros dispositivos eletrônicos e digitais, a escola continua em seus métodos e linguagens analógicos. Desta forma, necessita-se direcionar o olhar para aqueles que estão diretamente ligados com essas transformações, que são os alunos. Sabemos que os adolescentes por si só possuem inúmeros anseios, porém pouco tem se parado para ouvi-los, para de fato, dar voz ativa dentro de um sistema educativo, dentro do processo que eles são os protagonistas. Como são os nossos estudantes adolescentes? Como estes gostariam de participar do processo de ensino e de aprendizagem? O que estes querem dizer a seus professores?

Perante a sociedade, os adolescentes são vistos e rotulados através de suas condutas e, conseqüentemente, sofrem algum tipo de pré-julgamento, sem sequer realizar ato em si. Importante destacar que a compreensão da juventude e da adolescência são fenômenos históricos, políticos e culturais. O surgimento do termo ‘adolescência’, assim como o de juventude, está associado ao nascimento da modernidade (Berté, 2013), e tão logo assumem a definição de problema social e a fase da crise.

No caso deste estudo, usamos a terminologia adolescência fase que é caracterizada pela transição entre o período da infância e a vida adulta. São ouvidas expressões corriqueiras em nosso dia a dia, como ‘a adolescência é uma fase conturbada’, ‘fase de crises’, fase de dúvidas. Os estereótipos são inúmeros, segundo Berté (2013), na tentativa de caracterização, conceituação e adjetivação da adolescência, que visam dar a ela uma única identidade.

A identidade do adolescente, pode ser compreendida na teoria do psicanalista Erik Erickson, que ao longo do século XX preocupou-se em estudar e desenvolver uma teoria do desenvolvimento, trazendo três aspetos principais para a construção da identidade e a dimensão psicossocial do indivíduo: o processo biológico, o processo psíquico e processo social (Erikson, 1976). Assim, o autor desenvolveu a teoria psicossocial de desenvolvimento humano, dividida em oito estágios que definem a personalidade humana.

Como conceito da sua teoria, Erikson (1976) destaca a noção de *crise* ou *conflito* que o indivíduo vive ao longo dos diferentes períodos da vida. Essa crise ocorre em dois polos distintos, sendo um positivo e outro negativo. Para o autor, a crise da identidade é um marco da adolescência, que vive seu quinto estágio de desenvolvimento, denominada por ele como o estágio da *identidade/ confusão da identidade* (dos 13 aos 18 anos). Este estágio é evidenciado pela preocupação que o adolescente possui em encontrar um papel na sociedade, provocando uma confusão na sua identidade.

Para tal, cabe compreender o que significa ser adolescente na contemporaneidade, que para Berté (2013) é uma fase atravessada por características que são próprias a este tempo, nas relações que o adolescente estabelece com o mundo a sua volta, relações que estão “[...] permeadas pela mobilidade, fluidez, inatualidade, mudança, transformação, rapidez e também mediadas pelos mecanismos tecnológicos que intensificam a troca de informações e ampliam as conversações”.

É nesse sentido que se encontram as singularidades dos adolescentes. Enquanto, por um lado, há a crítica ao esvaziamento da imagem adolescente, operada pelos discursos que objetivam a busca de uma identidade fixa e única a partir da comparação com as gerações passadas, são visualizadas, por outro, maneiras próprias de ser, de agir e de estar diante do mundo em que vivem (Berté, 2013).

No século XXI, tem-se visto alunos cada vez mais questionadores, assumindo e ganhando espaço para a sua 'voz', assim a escola e a figura do professor começam a serem questionadas, examinadas, confrontadas pelos adolescentes. Diante disso, cabe novamente questionar, quais são as esperanças para o ensino de adolescente na escola contemporânea? Mas será que, ao invés de pensar em como frear esses corpos em crises, não caberia aos professores se aliarem a estes alunos?

Na perspectiva de pensar em possíveis alternativas para o ensino, projetou-se este estudo com o intuito de dar voz a jovens estudantes sobre como estes percebem o cenário escolar atual e como sob olhar destes pode-se buscar alternativas para a melhorar o processo de ensino e aprendizagem.

3. METODOLOGIA

Este é um estudo de caráter qualitativo (Biklen & Bogdan, 1994), onde utilizou-se como principal instrumento de recolha de dados a técnica de grupo focais. Para tal, estiveram envolvidos vinte e dois estudantes adolescentes de duas escolas de Ensino Médio de um município do interior do estado do Rio Grande do Sul, Brasil. A recolha de dados decorreu ao longo do primeiro semestre de 2016. A análise de dados se deu através da análise textual discursiva (Moraes, 2011).

A escolha pelo uso da técnica de grupos focais deve-se ao fato de esta técnica permitir que os sujeitos envolvidos na pesquisa exponham as suas opiniões, os seus anseios de uma forma espontânea. Através do recurso de grupos focais, conforme Barbour (2009), podemos compreender a perspectiva interna do grupo, como os valores próprios do grupo em estudo, e as discussões permitem entender como este grupo processa e significa os temas pautados no debate.

Para Gatti (2005), com o uso da técnica de grupos focais em pesquisas qualitativas é possível que se manifestem uma variedade de pontos de vista, por se tratar de uma técnica que favorece as interações entre o grupo e permite a captação de significados. As potencialidades desenvolvidas em pesquisas através de grupo focais são interessantes, de acordo com a autora, pois o material que emerge das discussões, como ideias, opiniões, modo de ver, atitudes, valores, que são produzidos num coletivo, pode ser processado e evidenciado mostrando mudanças que vão se alternando ao longo das dinâmicas de trabalho.

Os encontros foram organizados, estruturados e realizados pela própria pesquisadora e primeira autora deste artigo, que assumiu o papel de 'moderadora' do grupo, conduzindo as discussões, de modo a envolver todos os participantes, intervindo apenas para introduzir novas questões e/ou para facilitar o processo em curso. Para cada encontro foi proposta uma questão que pudesse nortear o debate entre os adolescentes. Os encontros foram gravados por meio de gravador digital e, posteriormente, transcritos na sua íntegra para análise dos dados.

O estudo buscou deixar com que os fenômenos do discurso se manifestassem, sem impor-lhes direcionamento. Desta forma, a partir das narrativas apresentadas, foram emergindo algumas categorias de análise que nos ajudam a compreender a percepção e os olhares dos estudantes envolvidos neste estudo. Para identificar as narrativas dos estudantes e manter o anonimato, os participantes foram denominados por "E1, E2, E3..." e assim respetivamente. Já as escolas foram identificadas como escola A e a escola B.

4. ANÁLISE DE DADOS

A partir das questões lançadas aos grupos, emergiram inúmeros debates entre os adolescentes. As narrativas apresentam a visão e as perspectivas que os estudantes possuem sobre seus professores e os seus métodos de ensino, assim como os diversos papéis que a escola desempenha, a função do professor, o pouco espaço que as escolas dedicam à voz dos alunos. Pudemos elencar também algumas narrativas que apontam as percepções em relação à forma com que o professor desenvolve o processo de ensino e como, na visão dos alunos, esse processo poderia ocorrer.

As percepções dos jovens envolvem temáticas como a necessidade de dinamizar as práticas do professor para além da sala de aula; a importância de estabelecer relações afetivas e interpessoais entre professores e alunos; a possibilidade de o conhecimento ser oriundo tanto de alunos quanto de professores. O estudo busca, com estas contribuições, pensar o estudante como ator e protagonista do processo de ensino e aprendizagem.

4.1 Ensino Enraizado no Método Tradicional: "eu acho que é tudo muito igual ainda"

A partir das narrativas apresentadas em ambas as escolas, percebe-se que o ensino ainda se encontra fortemente enraizado no método tradicional de ensino, onde há um professor à frente da turma, dando as ordens e seguindo uma sequência de uma aula pré-estabelecida culturalmente pela sociedade escolar. Esse fato é narrado pelo estudante 1, da escola B: "é eu acho que é tudo muito igual ainda, sentamos ali e o professor escreve no quadro. Ou pegamos o livro e tal página e fazemos os exercícios. Não tem coisas diferentes que estimulem a gente a fazer, de querer gostar de estudar. Não estudamos para uma prova, decoramos, sabe! Então não estamos aprendendo, só estamos decorando para tirar uma nota boa".

Percebe-se um descontentamento com o modelo tradicional de ensino que prevalece nas escolas, os quais na sua maioria ainda são processos cumulativos, teóricos, em forma de treino, como percebe-se na fala do adolescente anteriormente citado: "não estudamos para uma prova, decoramos". O ensino escolar promove quase que unicamente a memorização do aluno, como nos explica Canário (2006), o que acaba por penalizar o erro do aluno, sendo que ao aluno não é permitido a experimentação do erro para que o mesmo possa aprender.

Os alunos anseiam por uma aprendizagem que não seja cumulativa e sim, que possa ser uma aprendizagem significativa, que possa ser incorporada e que dê sentido aos jovens. A narrativa do estudante 1, aponta para o descontentamento dos jovens sobre as metodologias de ensino utilizadas pelos professores em pleno século XXI. Percebe-se que a sistemática das

aulas atualmente nas escolas é similar ao do século passado, com a predominância do quadro branco (antigo quadro negro), e com o uso do livro didático que prevalece como instrumento principal para o ensino. Fato que é corroborado na fala de Sibília (2012, p. 51):

“Todavia, surge aqui um choque digno de nota: justamente essas crianças e adolescentes, que nasceram ou cresceram no novo ambiente, têm de se submeter todos os dias ao contato mais ou menos violento com os envelhecidos rigores escolares. Tais rigores alimentam as engrenagens oxigenadas dessa instituição de confinamento fundada há vários séculos e que, mais ou menos fiel a suas tradições, continua a funcionar com o instrumental analógico do giz e do quadro-negro, dos regulamentos e boletins, dos horários fixos e das carteiras alinhadas, dos uniformes, da prova escrita e da lição oral”.

No que diz respeito à prática de ensino, os estudantes destacaram que esta deveria envolver aulas dinâmicas, que extrapole os limites da sala de aula, conforme um estudante destacou: *“A gente não precisa só estar estudando dentro da sala de aula. A gente pode estar ao ar livre estudando. É, ao ar livre fazendo pesquisa (...) a gente podia fazer dentro ou fora da escola”* (Estudante 9, Escola A). Percebemos com essas falas que muitas aulas ainda permanecem com características de um ensino enraizado no método tradicional: com um professor transmitindo o conhecimento por meio de uma técnica, como o uso do quadro.

Entende-se que os alunos anseiam por práticas que possam romper com o espaço da sala de aula, do quadro negro e práticas que possam possibilitar outros ambientes e ferramentas que favoreçam a aprendizagem. Não apenas como mudança de cenário, mas como modificação na forma de entender as relações com conhecimento, o processo de ensino e de aprendizagem.

4.2 Relação de Afeto Professor/Aluno: “quando o professor tem essa característica humana”

Outro aspecto importante destacado na fala dos alunos diz respeito a afetividade do professor para com o aluno. Segundo a visão dos alunos participantes da pesquisa, para que a aprendizagem de fato se efetive, é imprescindível a disponibilidade do professor de se aproximar afetivamente do aluno, estabelecendo vínculos como evidencia uma das falas: *“[...] é eu acho que se tu tem uma afinidade com o professor tu aprende muito mais, quando tu sabe que o professor se preocupa contigo, quando ele conversa contigo. Não é aquele professor que só cumpre aquilo que foi dado a ele. Ele te ajuda, tá ali contigo, acho que é muito melhor...”* (Estudante 1, escola B).

Pudemos perceber também o quanto o a figura do professor influencia no processo de aprendizagem dos jovens. Para estes é imprescindível que o professor esteja disponível para o ato de ensinar. Esta disponibilidade, sugerida por um dos estudantes, diz respeito às características humanas do professor. *“Quando um professor não está bem, ele não consegue tirar tudo e entrar numa porta de sala de aula e entrar bem para dar a sua aula. São poucos os que conseguem fazer isso. E a gente consegue perceber se ele está bem ou não. Da mesma forma que quando o professor gosta da gente ele sabe quando a gente não está bem. Quando ele tem essa característica humana, acaba que a gente se preocupa mais com nossos estudos, e o professor acaba criando esse carinho pelos alunos”* (Estudante 1, escola B).

Nesta perspectiva também discursa Freire (2011) ao dizer que o problema não está em uma aula expositiva, e sim, na forma que o professor faz ou deixa de fazer a explicação. Mas o tipo de relação que o professor estabelece com seu aluno, quando este se considera o exclusivo educador do educando. Em que o educador rompe ou não aceita a condição fundamental do ato de conhecer, pois que é a relação dialógica quem deve prevalecer no ensino.

As palavras dos jovens mostram que eles reconhecem e valorizam a presença do professor no seu percurso de formação, e o significado deste em suas vidas, dando especial destaque à qualidade das relações que se estabelecem, como apresenta a narrativa do estudante 1, da escola B *“[...] é porque o professor acaba se tornando nossa segunda mãe, nosso segundo pai, porque criamos laços, vínculos e é muito bom isso”*.

Essas experiências também são sentidas pelos alunos quando eles explanam em suas discussões que com o passar do tempo, na medida que os alunos vão crescendo as relações de aproximação entre professores e alunos é enfraquecida: *“... quando somos pequenos os professores mimam e agora, parece que não estão nem aí”* (Estudante 9, Escola A). Ainda relacionam o fato de que não gostar de um determinado professor interfere diretamente em não gostar de determinada disciplina: *“Quando tu não gosta do professor, tu acaba se desinteressando pela matéria”* (Estudante 9, Escola A).

4.3 Aquisição do Conhecimento: A gente é adolescente, a gente não quer a ideia pronta!

Para os adolescentes é perceptível que o conhecimento possa ser oriundo tanto por parte dos alunos, através de diálogos, de debates em aula, como através dos ensinamentos dos professores. Entretanto estes querem formar as suas próprias ideias, e cabe ao professor estimular essa aprendizagem em suas aulas.

Podemos perceber isso na sequência das narrativas entre os alunos da escola B, em um dos encontros:

- *Muitos professores acham que somos novos para falar sobre política. A gente tem uma única professora que teve capacidade de te dizer porquê? Já temos toda uma ideia pronta, mas ela te pergunta o porquê tu achas isso? Ai tu tem que explicar... e ela contesta dizendo, mas e se fosse assim?* (Estudante 2)
- *é o professor que te faz pensar!* (Estudante 1)
- *é onde tu mais aprende!* (Estudante 6)
- *É! e o professor acaba aprendendo junto!* (Estudante 1)

Os adolescentes anseiam por aulas que permitam a sua participação ativa, onde possam formar as suas ideias a partir do diálogo com o próximo, o que pode ser evidenciado na fala da Estudante 2, da escola B: *“A gente é adolescente, a gente não quer a ideia pronta, a gente quer formar o nosso ideal!”*

A fala dessa estudante nos faz pensar o quanto nós adultos esquecemos que estes alunos são apenas adolescentes, no tempo deles, que carregam expectativas, que naquele determinado momento de suas vidas querem ser apenas adolescentes, poder ter a liberdade de serem eles próprios. É quase como um grito de ‘permitam me ser apenas um adolescente!’, ‘permitam me errar para depois poder acertar!’

Percebe-se também que há uma transformação no campo das relações professor/aluno, assim como nos diferentes saberes que compõem o processo de ensino e aprendizagem. Essa transformação que está atrelada ao ‘saber’ vindo do campo do ‘outro’, no caso, o saber que estava até então, unicamente, na figura do professor, passa a ser legitimado por diferentes saberes, oriundos tanto dos alunos quanto dos professores. As infinitas possibilidades na qual sociedade tecnológica se configura atualmente faz com que o professor deixa de ser o detentor de todo o conhecimento e se torna aprendente junto de seu aluno.

Os alunos possuem a percepção de que o professor não é mais aquela figura detentora de todo o conhecimento: “O professor, não sabe tudo, mas o básico, para poder explicar. Ele não precisa saber tudo também, ninguém sabe” (Estudante 9, Escola B). “Ele aprende também quando a gente fala alguma coisa que ele não sabe” (Estudante 9, Escola B).

Além disso, os estudantes reconheceram que o papel do professor na escola contemporânea não é unicamente de transmitir o conhecimento e sim de desconstruir ideias e valorizar o conhecimento prévio com que o aluno chega a sua aula.

O diálogo é a melhor relação que podemos estabelecer com os adolescentes, um *diálogo* baseado no amor, na humildade como nos cita Freire (2011, p. 107):

Nutre-se do amor, da humildade, da esperança, da fé, da confiança. Por isso, só o diálogo comunica. E quando os dois pólos do diálogo se ligam assim, com amor, com esperança, com fé um no outro, se fazem críticos na busca de algo. Instala-se, então, uma relação de simpatia entre ambos.

Ainda segundo Freire (2011), o diálogo tem significado importante na educação, porque os sujeitos dialógicos não apenas conservam sua identidade, mas a defendem e assim crescem um com o outro. O diálogo implica, um respeito um com o outro, diferentemente do que se denomina de autoritarismo, algo que rompe ou que não permite que o diálogo se constitua.

Neste sentido, também expressa o estudante 1, da escola B: “Eu acho que a gente precisa um professor que nos deixa debater sobre um determinado assunto e quando a gente consegue fazer isso, a aula rende muito. Quando debatemos, ali cara a cara, dialogando sobre isso, aprendemos muito mais fácil do que ler no livro, ou copiar a matéria do quadro”.

5. CONSIDERAÇÕES FINAIS

O contato com os estudantes permitiu averiguar, através de suas narrativas, o quanto a figura do professor é um elemento importante da escola e o quanto a sua conduta influência nos processos de ensino e de aprendizagem. Importante considerar que estes processos de ensino necessitam do envolvimento nas relações interpessoais, criando vínculos de afeto entre professor/aluno. Um dos aspectos destacado pelos estudantes foi a importância dessa intensa relação interpessoal para o bom andamento do processo de ensino e aprendizagem. E para que ela se efetive, é imprescindível a disponibilidade do professor em se aproximar afetivamente do aluno, estabelecendo vínculos de confiança e de respeito.

Outro ponto igualmente considerável, diz respeito ao fato da estrutura da escola, especialmente a sala de aula permanecem fielmente ao esquema tradicional de ensino, desde o uso do quadro negro, a disposição das classes em sala de aula (geralmente enfileiradas). A questão que alguns professores, vêm incorporando novas ferramentas tecnológicas em suas aulas, como recompensa de mudança no método de ensino. Os adolescentes de hoje clamam por práticas que possam romper com o limitado/fechado espaço da sala de aula e o quadro negro, sugerindo outros ambientes e ferramentas que favoreçam a aprendizagem.

Neste sentido existe uma reconfiguração dos papéis em sala de aula, onde o professor deixa de ser o transmissor do conhecimento e a possibilidade de o conhecimento ser oriundo tanto de alunos quanto de professores passa a ser efetiva. Para concluir, as narrativas apresentam percepções dos alunos sobre a necessidade de manter-se um diálogo harmonioso, onde todos possam ter a liberdade de expressão e de formar os seus ideais, que as práticas de ensino do professor rompam o espaço físico da sala de aula; que a importância das relações afetivas e interpessoais entre professor/aluno; a possibilidade de o conhecimento ser oriundo tanto de alunos quanto de professores, o qual deixa de ser o transmissor. O estudo busca, com estas contribuições, pensar o estudante como ator e protagonista do processo de ensino e aprendizagem.

REFERÊNCIAS

- Berté, R. (2015). O Adolescente Contemporâneo: das representações às expressões da adolescência. *Fermentário*, v. 2, p. 1, 2013. Disponível em: <<http://www.fermentario.fhuce.edu.uy/index.php/fermentario/article/view/144>> . Acesso em: 12 nov. 2015.
- Bogdan, R. C.; Biklen, S. K. (1994) *A investigação qualitativa em educação*. Porto/Portugal: Porto Editora.
- Canário, R. (2006). *A escola tem futuro? Das promessas às incertezas*. Porto Alegre: Artmed.
- Erikson, E. H. (1976). *Identidade: juventude e crise*. 2. ed. Rio de Janeiro: Zahar.
- Freire, P. (2011). *Educação como prática de liberdade*. 12 ed. Rio de Janeiro: Ed. Paz e Terra.

- Gatti, B. A. (2005). *Grupo Focal na pesquisa em ciências sociais e humanas*. Brasília: Líber Livro Editora.
- Gutierra, B. C. C. (2003). *Adolescência, psicanálise e educação - o mestre "possível" de adolescentes*. São Paulo: Avercamp Ed.
- Moraes, R.; Galiazzi, M. (2011). *Análise Textual Discursiva*. 2. Ed. Ver. – Ijuí: Ed. Unijui.
- Sibilia, P. (2012) *Redes ou paredes: a escola em tempos de dispersão*. Rio de Janeiro: Contraponto.
- Ramos, Ó. J.; Costa, M. (2007). Desafios à Escola Contemporânea: um diálogo. *Revista Educação & Realidade*. Universidade Federal do Rio Grande do Sul. Porto Alegre, Brasil. vol. 32, n. 2, p. 109-116.

RELATIONSHIP BETWEEN EDUCATION IN PHARMACEUTICAL SCIENCES AND PROFESSION: AN INTERDISCIPLINARY PERSPECTIVE

Custódia S. C. Fonseca

Universidade do Algarve, Campus de Gambelas, FCT, DQF
(acfonseca@ualg.pt)

Peter Stallinga

Universidade do Algarve, Campus de Gambelas, FCT, DQF
(bpjotr@ualg.pt)

Igor Khmelinskii

Universidade do Algarve, Campus de Gambelas, FCT, DQF
(ikhmelin@ualg.pt)

ABSTRACT

The first modern-era pharmacy schools began to be established in the nineteenth century, with some universities offering degrees or similar-level courses. However, the traditional pharmaceutical education continued in parallel, in the form of apprenticeships and “on the job” experience.

The decline of manufacturing in pharmacies, caused by the development of pharmaceutical industry, and the ensuing advisory role of pharmacists led to additional educational reforms in the last 50 or so years. Subjects such as anatomy-physiology, physiopathology and pharmacotherapy were incorporated into the pharmacy courses, which became longer. This reflected the growing body of relevant knowledge and the perceived need to increase the capacity of pharmacists to act as pharmacy-therapeutic advisors to both health professionals and general public.

The degrees offered now include Doctorates in Pharmaceutical Sciences as well as Masters and Integrated Masters (IM). The typical duration of an undergraduate degree in Portugal (IM) is now five years. Pharmacists may now receive instruction in social disciplines, such as health psychology, economics and public health.

Students should be prepared for lifelong learning, since their formal training cannot provide them with all that they will need in future, thus each individual pharmacist is personally responsible for ‘the maintenance, development and broadening of knowledge, skills and attitudes, to ensure competence as a professional, throughout their career’.

The present communication describes the structure of the Pharmaceutical Sciences degree in Portugal, satisfying the needs of the labour market in such health professionals.

Keywords: Education, Medicines, Pharmacy, Pharmacist, Portugal.

1. INTRODUÇÃO

Este artigo pretende dar uma perspetiva histórica da educação em farmácia relacionando-a com diferentes áreas de trabalho do farmacêutico.

2. PERSPETIVA HISTÓRICA DOS ESTUDOS FARMACÊUTICOS

No Renascimento (Séc. XVI), mais propriamente em 1521, o Regimento do Físico-mor do Reino determinava a obrigatoriedade da realização de um exame para o exercício da profissão farmacêutica: “(...) nenhum boticário nem pessoa outra em todos nossos Reinos e Senhorios não possa assentar botica nem usar do ofício de boticário sem que primeiro seja examinado pelo físico-mor com os físicos da Corte...” Tratava-se de uma autorização para o exercício profissional.

Nesse mesmo século no Reinado de D. Sebastião (1554-1578) foram instituídos 20 partidos (bolsas) para aqueles que quisessem ser boticários de profissão. O curso era de 6 anos, sendo que nos dois primeiros os alunos aprendiam Latim e os restantes 4 anos os alunos eram colocados numa botica onde praticavam a arte farmacêutica. Após esse período voltavam à Universidade de Coimbra onde eram sujeitos a um exame, sendo o júri composto por médicos professores da Faculdade de Medicina e por boticários de reconhecida competência. O curso não conduzia qualquer grau académico, em oposição ao que acontecia com medicina. O boticário era um profissional mecânico, o que em termos sociais dentro dos profissionais sanitários os médicos estavam no topo, a nível intermedio encontravam-se os boticários e cirurgiões e abaixo os sangradores, os barbeiros, etc.

Estes dois regimes de formação de boticários, o concedido pelo Físico-mor e outro pela Universidade de Coimbra mantiveram-se em paralelo.

Em 1772, houve alteração do regime de estudos com a Reforma Pombalina da Universidade de Coimbra. O Rei D. José conferiu ao seu ministro Marquês de Pombal plenos poderes para fazer uma reforma Universitária. Pretendia-se desenvolver

as ciências exatas promovendo o espírito experimental na Universidade. Foi fundada na Universidade de Coimbra locais destinados à investigação e ensino, entre os quais, e com importância para o ensino farmacêutico, temos o Jardim Botânico, o Laboratório de Química e o Dispensatório Farmacêutico que era a Botica do Hospital. O dispensatório que estava na dependência da Faculdade de Medicina era onde funcionava um curso para boticários. O curso constava de 4 anos, nos dois primeiros os alunos frequentavam o laboratório de química aprendendo as operações químicas e os dois últimos anos praticavam no Dispensatório Farmacêutico aprendendo as operações farmacêuticas. Depois destes quatro anos os alunos sujeitavam-se a um exame e se aprovados poderiam exercer a profissão em qualquer ponto do país. Contudo a frequência deste curso era baixa uma vez permanecia uma segunda via de formação de boticários.

Em 1794 a Casa Pia de Lisboa fundou um curso para boticários tendo como base o modelo de Coimbra.

Só em 1836 foi extinto o acesso à profissão farmacêutica por exame realizado por o físico-mor. Embora nos Séc. XVII e XVIII a formação para boticário eram maioritariamente concedidas pelo físico-mor.

Foi também em 1836 que foram criadas as Escolas de Farmácia de Coimbra, de Lisboa e do Porto. A primeira anexa à Faculdade de Medicina e as de Lisboa e Porto em anexo às Escolas Médico-cirúrgicas também recém-criadas. O Decreto de 5 Dezembro de 1836 reorganizou o curso de medicina e farmácia, preconizando para este último para além dos 4 anos de prática no laboratório de química e no dispensatório os alunos deviam frequentar cursos de zoologia, botânica, física e mineralogia na Universidade de Filosofia. Em Lisboa e Porto o curso ficou organizado do seguinte modo: 4 disciplinas teóricas (botânica, história natural dos medicamentos, química e farmácia) e também um curso prático no Dispensatório Farmacêutico da Escola ou em qualquer outra oficina aprovada ou acreditada. Esta reforma de 1836 também estabeleceu uma outra via paralela para o acesso à profissão estabelecendo que todos os que não tivessem frequentado os cursos teóricos e cursos práticos das Escolas de Farmácia podiam ser admitidos a exame final para obtenção do título de farmacêuticos desde que tivessem oito anos de prática na farmácia. Temos os farmacêuticos de 1ª Classe e de 2ª Classe.

Só em 1902 por Carta de Lei de 19 Julho e de acordo com o Regulamento das Escolas promulgado em 27 de Novembro, o curso de farmácia foi considerado Superior até lá os cursos ministrados em Escolas não eram conducentes a um título académico.

Os cursos superiores de Farmácia passaram a ser estruturados em dois anos cada um com 4 cadeiras: no 1º Ano tinham como disciplinas História Natural das Drogas e Posologia, Farmácia Química, Análises Microscópicas e Químicas Aplicadas à Medicina e à Farmácia; e Farmacotecnia e Esterilizações; no 2º ano as disciplinas eram Análises Toxicológicas, Química Legal, Alterações e Falsificações de Medicamentos e Alimentos.

Em 1921 as três Escolas Superiores de Farmácia ascenderam a Faculdades de Farmácia, competindo-lhes atribuir os graus de licenciado e doutor em Farmácia. A conquista foi breve e como parte do programa de contenção das despesas orçamentais determinada pelo Estado Novo, a Faculdade de Farmácia de Coimbra foi extinta em 1928 a que se seguiu a de Lisboa em 1932, sendo criadas em sua substituição as Escolas de Farmácia de Coimbra e Lisboa, que passaram a conferir o grau de bacharel, que habilitava à profissão.

O grau de licenciado passou a ser conferido somente no Porto, onde a Faculdade de Farmácia manteve o seu estatuto. Esta situação manteve-se durante mais de três décadas, até que, em 1968, foram restabelecidas as Faculdades de Farmácia de Coimbra e Lisboa.

Em 1978, uma reforma no ensino farmacêutico instituiu três ramos [farmácia de oficina e hospitalar (opção A); farmácia industrial (opção B); análises químico-biológicas (opção C)] para uma mesma licenciatura, que passou a denominar-se de “Ciências Farmacêuticas” (Decreto n.º 111/78 de 19 de Outubro).

Face à necessidade de sintonizar os estudos farmacêuticos com as orientações Europeias, a Portaria 528/88 de 8 de Agosto, veio introduzir o grau único de licenciado em Ciências Farmacêuticas.

Assim, e dadas as várias reformas do ensino instituídas desde 1932, encontram-se presentemente a exercer a profissão farmacêutica Licenciados em Farmácia, Licenciados em Ciências Farmacêuticas – Opções A, B e C e Licenciados em Ciências Farmacêuticas.

No início da década de 90 a licenciatura em Ciências Farmacêuticas era conferida por três Faculdades de Farmácia públicas – as Faculdades de Farmácia das Universidades de Coimbra, Lisboa e Porto. Em 1993, foram criadas as primeiras duas licenciaturas em instituições privadas, designadamente no Instituto Superior de Ciências da Saúde Egas Moniz e Instituto Superior de Ciências da Saúde do Porto.

Em 1999 é aprovada mais uma licenciatura em Ciências Farmacêuticas, desta feita na Universidade Lusófona em Lisboa, sendo que em 2000 é a Universidade Fernando Pessoa, no Porto que vê aprovada a sua licenciatura em Ciências Farmacêuticas.

Em 2005 o ensino farmacêutico estendeu o à Universidade do Algarve e 2006 à Universidade da Beira Interior.

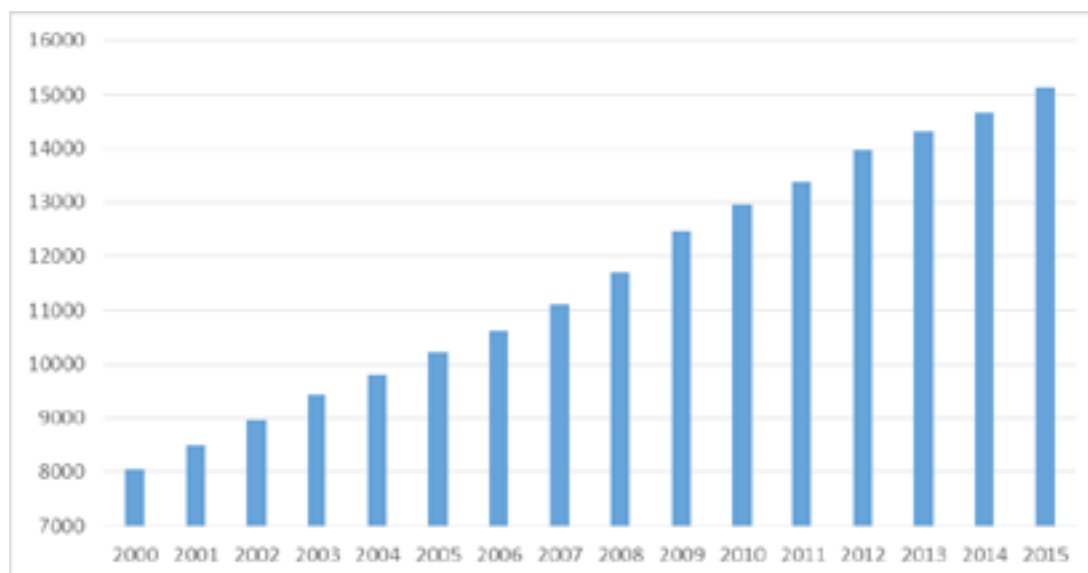
Na atualidade temos assim 5 Universidades Públicas e 4 Universidades privadas a ministrar o ensino farmacêutico em Portugal.

As licenciaturas em Ciências Farmacêuticas deram lugar a Mestrado Integrado em Ciências Farmacêuticas em 2007 por adequação ao Processo de Bolonha. O Mestrado é Integrado tem a duração de 5 anos, abrangendo o 1º e 2º ciclo e encontra-se organizado segundo o sistema de ECTS (European Credit Transfer System). O 1º ciclo tem a duração de 3 anos (180 ECTS) e confere ao aluno o grau de Licenciatura em Estudos Básicos de Ciências Farmacêuticas. Apenas é permitido o acesso à profissão de farmacêutico aos alunos que terminem o 2º Ciclo (120 ECTS) com duração de 2 anos e confere o grau de Mestre em Ciências Farmacêuticas.

3. FARMÁCIA EM NÚMEROS

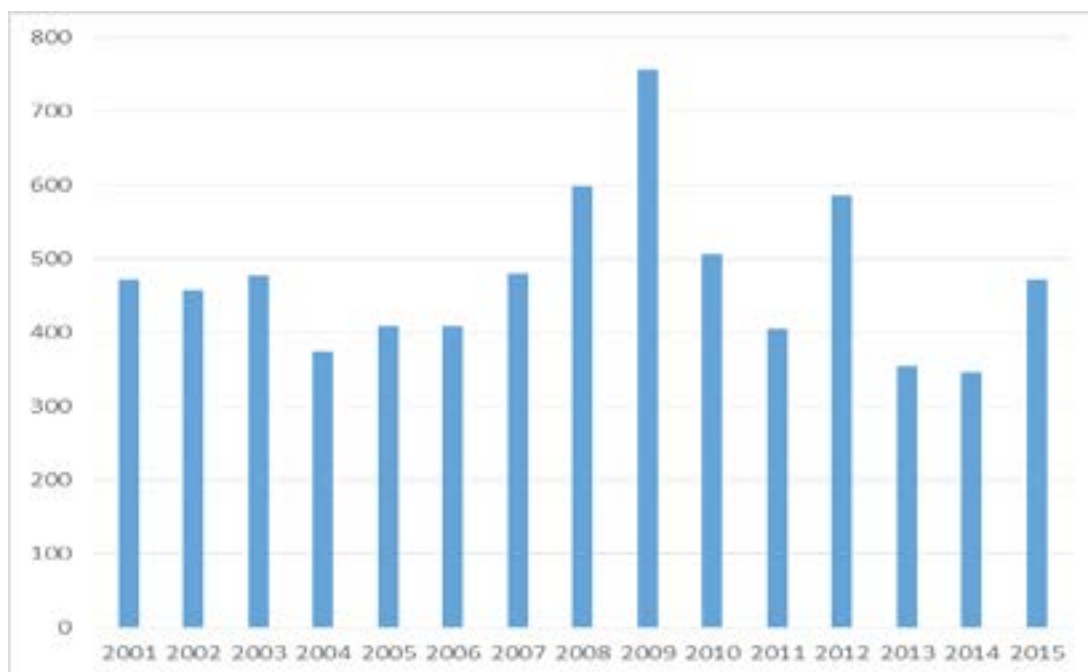
Nos últimos quinze anos o número de farmacêuticos tem vindo a aumentar passando de 8032 no ano de 2000 para 15140 no ano de 2015, correspondendo a um aumento de 473 farmacêuticos a mais por ano (Figura 1).

Figura 1. Número de farmacêuticos por ano (Dados obtidos no site da Ordem dos Farmacêuticos: http://www.ordemfarmaceuticos.pt/scid/ofWebInst_09/)



A Figura 2 mostra o acréscimo do número de farmacêuticos nos últimos quinze anos, sendo o ano de 2009 o registou maior número de entradas no mercado de trabalho.

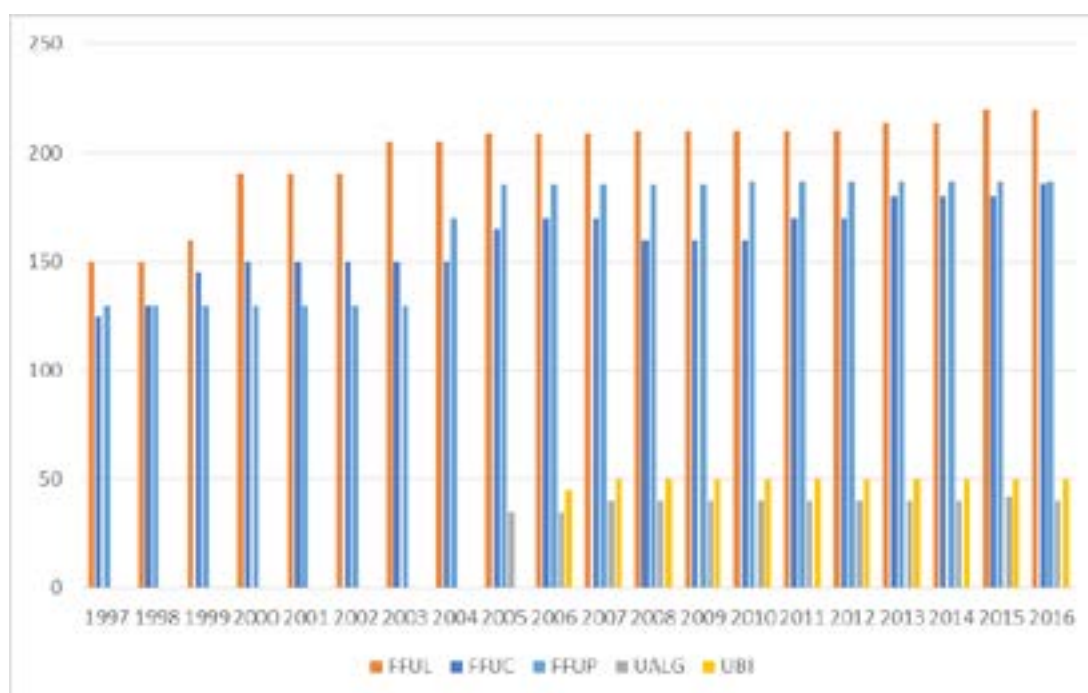
Figura 2. Acréscimo do número farmacêuticos desde o ano de 2001 a 2015 (Dados obtidos no site da Ordem dos Farmacêuticos: http://www.ordemfarmaceuticos.pt/scid/ofWebInst_09/)



Relativamente ao número de vagas para entrada no Curso de Ciências Farmacêuticas nas Universidades Públicas (Figura 3) verifica-se um aumento significativo nos últimos 20 anos, registando-se nos anos de 2000 e 2003 os maiores incrementos.

O ensino das Ciências farmacêuticas era realizado apenas nas 3 Universidades públicas, sendo elas a Universidade Lisboa, Coimbra e Porto, em 2005 a Universidade do Algarve e 2006 a Universidade da Beira Interior passaram também a dispor do mesmo curso. Estas Universidades contudo apenas têm um número de vagas que não chega a metade do número de vagas de qualquer uma das mais antigas.

Figura 3. Número de vagas na 1ª fase na Faculdade de Farmácia da Universidade de Lisboa (FFUL), na Faculdade de Farmácia na Universidade de Coimbra (FFUC) na Faculdade de Farmácia de Universidade do Porto (FFUP) e na Universidade do Algarve (UALG) e na Universidade da Beira Interior (UBI), de 1997 a 2016 (Dados obtidos no site da Direção-Geral do Ensino Superior: <https://www.dges.gov.pt/pt>)

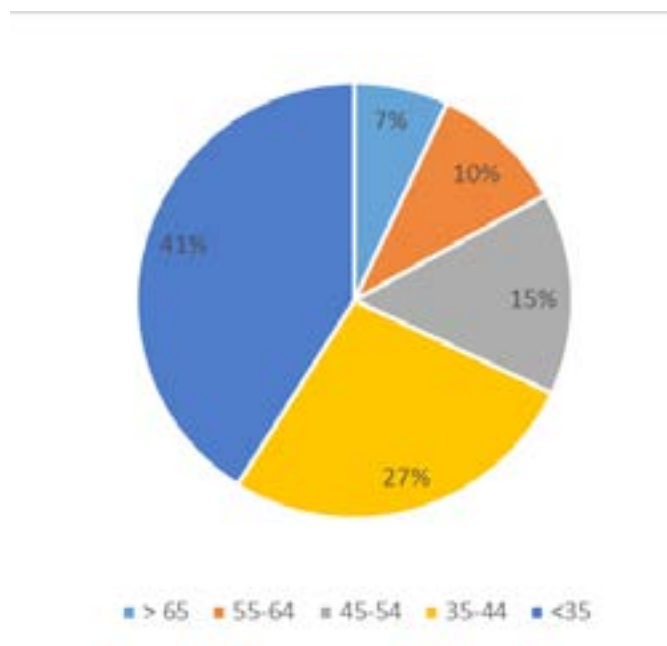


Neste trabalho não são consideradas as universidades privadas, nomeadamente a Universidade Lusófona de Humanidades e Tecnologia e Instituto Superior de Ciências da Saúde Egas Moniz situadas na região sul do país e no norte temos a Universidade Fernando Pessoa e Instituto Superior de Ciências da Saúde – Norte (CESPU).

Sendo assim o aumento do número de farmacêuticos no mercado de trabalho deve-se principalmente a dois factores: ao aumento significativo do número de vagas nas Universidades ditas clássicas e o aumento do número de cursos de Ciências Farmacêuticas (CF) ministrado em Universidades publicas e privadas.

A formação de um tão elevado numero de farmacêuticos nos últimos anos levou a que em 2016 os farmacêuticos constituam uma classe muito jovem: 41% dos farmacêuticos têm idade inferior a 35 anos, 27% estão entre os 35-44 anos, 10% entre 55-64 anos e sómente 7% tenham idade superior a 65 anos (Figura 4). Este último caso não se esperaria uma percentagem elevada uma vez que corresponde à idade da reforma. Ou seja a grande maioria dos farmacêuticos em atividade tem idade inferior a 44 anos.

Figura 4. Distribuição dos farmacêuticos em atividade por faixa etária (Dados obtidos no site da Ordem dos Farmacêuticos: http://www.ordemfarmaceuticos.pt/scid/ofWebInst_09/)



4. CURRÍCULO DOS CURSOS DE MESTRADO EM CIÊNCIAS FARMACÊUTICAS EM PORTUGAL

Para ser farmacêutico em Portugal é preciso ter o Curso de Mestrado Integrado em Ciências Farmacêuticas. Trata-se de um curso de banda larga que permite formar profissionais que possam exercer as possíveis atividades associadas à profissão farmacêutica, nomeadamente a nível da Farmácia de Oficina, Farmácia Hospitalar, Indústria Farmacêutica (desenvolvimento, fabrico, controlo de qualidade, marketing e assuntos regulamentares), Distribuição Grossista de medicamentos, Análises Clínicas e variadas outras atividades de índole Analítica (análises químicas, hidrológicas, bromatológicas, microbiológicas, toxicológicas, etc.), Ensino e Investigação. A estrutura do curso nas diferentes Universidades tem semelhanças entre si. Assim sendo têm todos a duração de 5 anos, em que se associam de forma equilibrada as matérias básicas (nos primeiros anos) com disciplinas de especialidade (a partir do 3º ano), a que acresce um Estágio profissionalizante (no 2º semestre do 5º ano), integrador dos conhecimentos e facilitador da inserção dos alunos na atividade profissional (Figura 5). As matérias básicas ao Curso de CF incluem-se em três áreas fundamentais sendo elas a química, a biologia e a medicina.

Figura 5. Educação em Ciências Farmacêuticas



O Mestrado Integrado em Ciências Farmacêuticas encontra-se organizado pelo sistema de ECTS (European Credit Transfer System), tendo a totalidade do primeiro e segundo ciclo 300 ECTS. Aos estudantes que tenham realizado os 180 créditos correspondentes aos primeiros seis semestres curriculares de trabalho é-lhe conferido o grau de licenciado em Estudos Básicos de Ciências Farmacêuticas. Esta licenciatura permite ao estudante aceder a vários mestrados (2º ciclo). Existem em todos os cursos Unidades Curriculares de opção que poderão realizar em alguns cursos a partir do 3º ano em outros casos a partir do 4º ano. Estas Unidades curriculares são de livre escolha do aluno e poderão pertencer aos primeiros ou segundos ciclos de outros cursos inclusivé noutras Universidades. Contudo na maioria dos casos terá que haver uma prévia aprovação pela Comissão de curso. O estágio curricular tem a duração de 6 meses e corresponde a 30 ECTS do curso e apresenta três vertentes, são elas o estágio em farmácia comunitária, o estágio em serviços farmacêuticos hospitalares e a elaboração de uma monografia ou trabalho de campo ou projeto. O estágio na farmácia comunitária e nos serviços farmacêuticos tem a duração de 4 e 2 meses respetivamente. Em alternativa o estágio poderá apenas ser feito em farmácia comunitária.

5. ESPECIALIZAÇÃO

Existem cinco especialidades que o farmacêutico poderá aceder através da prestação de provas feitas pelos respectivos colégios da especialidade da Ordem dos Farmacêuticos. São elas a Especialidade em Análises Clínicas, em Genética Humana, em Assuntos Regulamentares, em Farmácia Hospitalar e em Indústria Farmacêutica.

Os candidatos à especialidade em *Indústria Farmacêutica* têm que ter experiência mínima de 5 anos, devendo os últimos três ter sido consecutivos numa das três áreas da Indústria Farmacêutica, na produção, ou na qualidade ou na gestão de materiais. O laboratórios tem que ser licenciados pelo INFARMED.

A Especialidade de *Análises Clínicas* é concedida após um estágio de 4 anos em laboratório considerado idóneo para o efeito e aprovação de um exame realizado pelo colegio de especialidade. No Laboratório o candidato terá que passar 14 meses na seção de Química Clínica e igual período nas seções de Hematologia e Microbiologia e três meses na secção de Imunologia e igualmente três meses na seção de Genética.

A atribuição do Título de Especialista em *Genética Humana* fica condicionada a um período de estágio profissional de 4 anos em laboratório considerado idóneo para o efeito e a uma prova de avaliação final, na Ordem dos Farmacêuticos. No laboratório terá trabalhar 2 anos em Citogenética e Citogenética Molecular e 1 ano em Genética Molecular e Oncogenética igualmente um ano em Bioquímica Genética.

A atribuição do título de especialista em *Assuntos Regulamentares* fica condicionada à prestação de um exame após um período de exercício profissional em entidade pública ou privada no âmbito do registo e regulamentação farmacêutica. Este período de exercício profissional terá a duração mínima de 5 anos de atividade exclusiva nas áreas funcionais nucleares, subnucleares e complementares classificadas no Artigo 11º das Normas que regulamentam esta especialidade.

Os candidatos ao título de Especialista de *Farmácia Hospitalar* deverão ter uma experiência mínima de cinco anos em Farmácia Hospitalar, devendo nos últimos três anos ter sido consecutiva, sendo que o candidato deve estar em exercício de funções no momento da candidatura e ser membro efetivo da Ordem dos Farmacêuticos (OF).

6. DESAFIOS EDUCACIONAIS

No meio universitário tem-se assistido a uma profunda discussão relativa à reforma dos planos curriculares, que, muito provavelmente, será ajustada aos parâmetros definidos pela Agência de Avaliação e Acreditação do Ensino Superior (A3ES).

Contudo o estudante, quando concluir o curso deverá ter adquirido conhecimentos e competências que se traduzam num exercício profissional cujo objetivo compreenda, essencialmente, a pessoa do doente e a Saúde Pública. Assim sendo deve ter conhecimentos adequados dos medicamentos e substâncias utilizadas no respetivo fabrico; conhecimentos adequados da tecnologia farmacêutica e do ensaio físico, químico, biológico e microbiológico dos medicamentos; conhecimentos adequados do metabolismo e dos efeitos dos medicamentos e da ação dos tóxicos, bem como do uso dos medicamentos; conhecimentos adequados que permitam avaliar os dados científicos respeitantes aos medicamentos para poder, com base neles, prestar informações apropriadas; conhecimentos adequados dos requisitos legais e outros em matéria de exercício da atividade farmacêutica; a preparação, ensaio, armazenamento e distribuição de medicamentos em farmácias abertas ao público; preparação, ensaio, armazenamento e distribuição de medicamentos em hospitais; e a capacidade de difundir informações e conselhos sobre medicamentos.

Esperamos, pois, que a haver processo de reforma ele se faça de forma planeada e estruturada.

7. A PRÁTICA FARMACÊUTICA

No Séc. XX assiste-se à modificação da farmácia, na vertente técnica, científica e socioprofissional.

A indústria farmacêutica portuguesa iniciou o seu desenvolvimento nos finais do Séc. XIX, prolongando-se este processo de industrialização do medicamento no Séc. XX. Contudo as farmácias continuavam a produzir medicamentos magistrais mas a indústria galopava na intenção de ultrapassar esse exclusivo das farmácias de oficina. Nas receitas médicas, progressivamente o formulário magistral dá lugar ao nome comercial do medicamento. As farmácias passam de local de fabrico e dispensa de medicamentos em locais de cedência de medicamentos.

O uso do título de farmacêutico e o exercício da profissão farmacêutica ou a prática de atos próprios desta profissão, dependem da inscrição na Ordem dos Farmacêuticos.

Na definição do ato farmacêutico encontramos os medicamentos de uso humano ou veterinário como pilar essencial da atividade do farmacêutico mas também este poderá ter uma atividade de interesse sanitário como as análises clínicas, toxicológicas, bromatológicas, ou hidrológicas.

Esta componente do exercício farmacêutico revela-nos que o farmacêutico além de ser um especialista do medicamento pode ser um especialista em Saúde Pública, consolidando deste modo o seu estatuto profissional na hierarquia dos profissionais de saúde.

Segundo dados disponibilizados pela Ordem dos Farmacêuticos os farmacêuticos encontram-se distribuídos por diversas áreas profissionais: Farmácia de Oficina, Análises Clínicas, Farmácia Hospitalar, Indústria Farmacêutica, Distribuição Farmacêutica, Ensino, Investigação e Outras Áreas. A Figura 6 mostra a distribuição dos farmacêuticos em atividade no ano de 2016 pelas diferentes áreas profissionais.

Figura 6. Distribuição por área profissional



A farmácia de oficina representa a área profissional de eleição de mais de metade dos farmacêuticos portugueses, seguida da área hospitalar. Dado curioso, e digno de registo, é o número de farmacêuticos a exercer em áreas agrupadas no item outras áreas, estando aqui englobados cerca de 300 farmacêuticos que desempenham atividades nas áreas de toxicologia, bromatologia e hidrologia.

As principais funções do farmacêutico hospitalar em Portugal são a organização e gestão; distribuição e informação; farmacotecnia; controlo de qualidade; farmacovigilância; ensaios clínicos e meio hospitalar; farmacocinética; radiofarmácia e acompanhamento farmacêutico. Contudo a dimensão dos serviços farmacêuticos está de acordo com a dimensão dos hospitais onde se encontram instalados e de acordo com a natureza dos hospitais, que podem ser do estado ou de instituições privadas.

Atualmente existem em Portugal diversos armazéns grossistas de medicamentos com diferentes regimes de propriedade. Cerca de 40% estão em regime de cooperativas, 29% sob poder de empresas multinacionais, 9,5% são detidos por empresas nacionais, havendo outras possibilidades que rondam os 21,5%. Trata-se de um sector que passou por uma modernização profunda, no plano institucional e no plano técnico e científico. A direção técnica de um farmacêutico e a utilização de Boas Práticas de distribuição grossista modernizaram e atualizaram o sector. As indústrias farmacêuticas estabelecidas em Portugal são na sua esmagadora maioria de capital estrangeiro sendo muito reduzido o capital nacional envolvido. De um modo geral as indústrias farmacêuticas estabelecidas em Portugal dedicam-se à produção e entrada de medicamentos no mercado e são em reduzido número as que investem na investigação ou em atividades de I&D, que são decisivas na conquista de novos mercados e na expansão do produto e das instituições. Depois da entrada de Portugal na Comunidade Europeia, questões relacionadas com as boas práticas de fabrico; a qualidade, segurança e eficácia do medicamento; a informação e a publicidade do medicamento; a sua autorização e introdução no mercado, passaram a ser questões de primeira importância com legislação e regulamentação apropriadas.

8. FUTURO DA FARMÁCIA PRÁTICA

Algumas alterações estão a ocorrer na farmácia prática especialmente em farmácias, que poderão ter algum impacto no programa de educação em Portugal nomeadamente a) dado haver hoje em dia as redes hospital-comunidade, muitos fármacos poderão vir a ser disponibilizados aos doentes na farmácia comunitária, é o caso do tratamento para o vírus da imunodeficiência e síndrome da imunodeficiência adquirida ou quimioterapia; b) aumento da ênfase na educação dos doentes procurando-se estabelecer redes com os doentes crónicos com diabetes ou asma por exemplo; c) devido ao desporto, viagens e trabalhos ocasionais, os ortopédicos estão a tornar-se importantes na farmácia comunitária e os farmacêuticos têm que se adaptar; d) os cuidados de saúde em casa estão aumentar devido ao aumento da população idosa pelo que os farmacêuticos poderão ter que desempenhar aí um papel importante.

A nível da indústria farmacêutica muitos têm sido os desenvolvimentos devido à descodificação do genoma humano que constituiu um dos pilares fundamentais para a identificação de alvos terapêuticos e para o desenvolvimento de estratégias de prevenção e tratamento de doenças. O aparecimento de novos ramos da ciência como a bioinformática, a quimioinformática e a genómica funcional contribuiu igualmente para uma nova realidade. O desenvolvimento da química combinatória permitiu a síntese de numerosos compostos análogos, permitindo à indústria farmacêutica testa-los no que respeita à ação sobre um determinado potencial alvo terapêutico.

A síntese de medicamentos biológicos está a aumentar pois respondem a necessidades terapêuticas até aqui sem resposta.

A possibilidade da realização de testes fenotípicos ou genéticos dividindo a população de doentes em subgrupos de acordo com a resposta a determinado fármaco, permitira uma terapia individualizada.

A nanotecnologia constitui uma área de investigação em tecnologia farmacêutica que será certamente um tópico a introduzir nos programas desta área, assim como a terapia genica, e a terapia com células somáticas ou a engenharia de tecidos são tópicos a desenvolver na área da biologia.

9. CONCLUSÕES

O número de farmacêuticos depende do número de vagas existente nas 9 Universidades. A formação de um farmacêutico dura no mínimo 5 anos estando no final apto a desempenhar qualquer uma das atividades que estão incluídas no ato farmacêutico. O título de especialista só é possível após 4 a 5 anos de prática na área da especialidade e a aprovação do exame à Ordem dos Farmacêuticos. A maioria dos farmacêuticos desempenha a sua atividade na farmácia comunitária. Portugal tem uma excelente rede de farmácias pois cobre todo o território nacional.

Vários têm sido os desafios dos farmacêuticos ao longo da história mas a sua formação multidisciplinar faz dele um profissional com características próprias mas adequadas ao desempenho de cada uma das suas possíveis atividades profissionais.

REFERÊNCIAS

- Alsharif, N. (2012). Globalization of Pharmacy Education: What is Needed? *Am. J. Pharm. Educ.* 76 (6): Article 77.
- Bourdon, O. Ekland, C. and Brion, F. (2008). Pharmacy Education in France, *Am. J. Pharm. Educ.* 72 (6): Article 132.
- Pita, J. (2000), *História da Farmácia*. 2ª Edição, Livraria Minerva Editora. Coimbra. ISBN: 972-8318-39-39-1

- Pita, J. (2010). *A farmácia e o medicamento em Portugal nos últimos 25 anos*. Consultado em 4 Abril 2017 em <http://www.europe-direct-aveiro.aeva.eu/debatereuropa/>
- Sosabowski, M. and Gard, P. (2008). Pharmacy Education in the United Kingdom. *Am. J. Pharm. Educ.* 72 (6): Article 130.
- Sosabowski, M. and Ingram, M. (2003). 21st Century Issues in Pharmacy Education in the United Kingdom. *Am. J. Pharm. Educ.* 67 (4): Article 122.
- Waterfield J. (2010). Is Pharmacy a Knowledge-Based Profession? *Am. J. Pharm. Educ.* 74 (3): Article 50.
- Web site da Faculdade da Farmácia da Universidade de Coimbra: <http://www.uc.pt/ffuc> consultado em 4 Abril 2017
- Web site da Faculdade da Farmácia da Universidade de Lisboa: <http://www.ff.ul.pt/> consultado em 2 Abril 2017
- Web site da Faculdade da Farmácia da Universidade de Porto: https://sigarra.up.pt/ffup/pt/web_page.inicial, consultado em 4 Abril 2017.
- Web site da Ordem dos Farmacêuticos: http://www.ordemfarmaceuticos.pt/scid/ofWebInst_09/; consultado em 27 Abril de 2017.
- Web site da Direção-Geral do Ensino Superior: <https://www.dges.gov.pt/pt>

TEACHING IN TWO CYCLES OF PROFESSIONAL LIFE: A COMPARATIVE BRAZILIAN CASE STUDY

Jordana Wruck Timm

Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, RS
(jordana.timm@acad.pucrs.br)

Claus Dieter Stobäus

Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, RS
(stobaus@pucrs.br)

Juan José Mouriño Mosquera

Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, RS
(juan.mosquera@pucrs.br)

ABSTRACT

The teaching profession has been increasingly discussed, both for its relevance and for the growing social and economic devaluation it has been undergoing. The objective of this study is a qualitative analysis of a speech of a teacher interviewed after being in this profession for 24 years, comparing quantitatively with spontaneous responses of people interested in taking the Pedagogy course and entering the educational area. It is, therefore, a comparative study between a professional that is oscillating in the cycle of diversification/activism/questioning and young people who are entering the career, in order to verify the meaning and meaning of the teaching work in the life of these people. The analysis of these data was performed according to the Discursive Textual Analysis. The text runs through the bias of Health Psychology. It was concluded that the interviewees, entering the course of Pedagogy, are afraid of the choice of profession due to the mishaps found in it. Most of these subjects think about the option to enter the area through some family member or to recognize the importance of the profession. The interviewee with a longer career recognizes the difficulties encountered, however, the positive points she reports prevail, giving the immensity that this work has in her life.

Keywords: Teaching, Professional Life Cycles, Adult Life.

JEL Classification: I20, I23, I31, I29

1. INTRODUCTION

In his Doctoral Thesis, Timm (in progress) proposed to interview teachers, who teach in *Stricto Sensu* Post-Graduation, at different stages of the occupational life cycle. With the discussions with Mosquera and Stobäus, the theoretical framework was expanded. According to Huberman (2013), this cycle is subdivided into five phases, they are: entry into the career; The stabilization phase; The stage of diversification, the questioning; Serenity, affective detachment, and conservatism; And, finally, the divestment, distributed according to Frame 1:

Frame 1: Phases/Career themes



Source: Huberman (2013, p. 47)¹

¹ Translated by the authors.

Before conducting the official interviews, Timm proposed to conduct two Pilot interviews to verify the way of conducting and analyzing them, who generated material to analyze and, consequently, the possibility of making the choice of the methodological process and of analysis to be adopted for the Thesis. For what is being presented here, we are based on the discussion about the results of these pilots. That, besides working with histories of occupational life interviews, at the end of the interview the following questioning was realized: “what is the meaning and meaning of the teaching work in your life?” It is from this questioning that the discussion developed for the writing of this text.

In addition, at the end of 2015, was held, an internal event of our institution, called Open Campus, to welcome for the new students, and to clarify for those interested in taking a university entrance exam. It was given three workshops (in partnership) for those interested in the Pedagogy course, one of them entitled: “why does the pedagogue make a difference in education?” This workshop began by questioning the participants about the meaning and meaning of the teaching work for them.

The Pilot study gave the qualitative margin for this text, based on the speech of a professional who has been working in the area for some time. Already the result obtained in the workshop given, gave the quantitative character, seeking to verify what they are looking for in this profession the people who are now interested in the area.

2. LITERATURE REVIEW

The teaching profession, according to Guarany (2012), was not seen as a work activity, but rather associated with a personal vocation. For a long time, teaching was recognized as a vocation, apostolate, a lay priesthood, and its exercise was mainly based on moral qualities, a virtue which good masters had to possess and exhibit, according Lessard and Tardif (2008). With the university reform of 1968, the chair was abolished and the figure of the professor like final position of career was instituted. Teachers, instead of being allocated at their courses, began to move through departments. In public institutions, teachers begin to have a career that is based on academic degrees and degrees; The Dedicated Work Scheme (ED) is established; And teachers begin to be admitted by employment contract, and the regency becomes effective through the labor regime, says Morosini (2009).

Mosquera (1987) proposed that adult or adult life (adulthood) is a constant personality development stage, involving many aspects of personality construction, such as: identity, self-image, self-esteem, self-realization, always related to the context In which the person grows and develops and acts.

In this sense, during the last decades (marked by the context of the generalization and massification of education and bureaucratization of educational systems), teachers’ unionism and professional associations insisted that education be recognized as a trade, and therefore, teachers as qualified workers should Be treated by the employer respecting the material, social and symbolic plans, said by Lessard and Tardif (2008).

The historical process of teacher professionalization, and at that moment, states that the key period in the history of education and the teaching profession is in the second half of the eighteenth century, when the profile of the ideal teacher is outlined, placed Nóvoa (1999). In dealing with this, it is important to consider issues related to the identity of this professional.

For Pimenta and Anastasiou (2014), in relation to the profession, they affirm that it is by nature a process mediating between teacher and students (essentially different subjects), in the confrontation and the conquest of knowledge. Morosini and Comarú (2009), specifically on the teaching figure, affirm that their identity and professional formation are influenced by governmental and institutional public policies.

Moreover, the teacher is never a teacher in isolation, he is in the encounter with the subjectivity of each student, constructing the heterogeneity of a group (Grillo, 2008). For Morosini and Comarú (2009), this identity constitutes a process of construction, reconstruction and transformation of referential, responsible for dynamizing the teaching profession, from the social meanings and the reaffirmation of culturally consecrated practices, significant and that resist the Innovations, since it contains valid knowledge to the needs considered current in the confrontation between theory and practice.

We can add that the construction of the identity process and used concepts of a teacher, according to Rodrigues, Stobäus and Mosquera (2016, p. 1119):

Are not static and are due to the interactions of the subject with the environment in which it develops leads us to consider that this is a plausible way to add healthy identity to the objects of study of Positive Psychology.

This process, which is considered formative, says Pereira (2013, p. 35):

[...] I am understanding that teacherality is not an identity that a subject constructs or assumes or embodies, but otherwise it is a difference that the subject produces in itself. To become a teacher is to become something that was not being, is to differ from itself. And, in the case of being a difference, it is not the recurrence to the same, to a model or pattern. For this reason, teacherality is not, in my view, an identity: it is a difference produced in the subject. And, as a difference, it can not be a stable state to which the subject would arrive. Teacherality is a state at risk of permanent imbalance. If it is a stable, stagnant state, it would result in an identity and the flow would be impaired.

It is also important to take into account the vision not only of being a teacher, as a professional, but of looking at the teacher as a person (Mosquera and Stobäus, 2008, 2006a). Grillo (2008) states that for the analysis of the dimensions of teaching, the starting point is the figure of the teacher as a person and professional, which, for the author, are inseparable references

to this profession that is built on ethical-philosophical foundations and is impregnated with Values and intentionality. These fundamentals stimulate an existential project (more than pedagogical) explaining the human dimension of teaching.

Morosini and Comarú (2009) also defend the inseparability between the personal development and the life history of the teacher, considering that from the process of continuous formation, the collective and participative dimensions of work are taken as reference, with the intention that by this process Awareness, consolidation and teacher autonomy. For the authors, the work with teaching is characterized by an investment, for which the teacher needs to invest in himself as a person.

For Maciel (2009a), the investment in the career depends on motivational aspects, that is, it is necessary to administer social and personal requirements. Through work, there is a process that alters the nature and autotransforms the being that works, for Antunes (2009).

When the question of teaching comes into discussion, with the current context it is impossible not to remit the multiplicities of roles and responsibilities to which the teachers are affected, many of them extrapolating the educational character, besides the numerous legislations and collections made for these professionals. Morosini (2008) argues that there is an image created that teachers are incompetent, referring to the teaching function that has come to have a complexity that generates the feeling of incapacity in teachers to exercise it.

This is because there is a diversity of actions developed by teachers beyond the space of the classroom that are encompassed in teaching (Morosini and Comarú, 2009).

Pimenta and Anastasiou (2014) also defend that teaching surpasses the processes of the classroom in Higher Education, putting in discussion the purposes of teaching in this level. Morosini (2009) states that the teaching functions are under discussion. We can no longer see a teacher as a model, as an ideal type, as in the past was seen/idealized. As well, it is verified that multiple teachers are dependent on their work regime, the qualification and the institution where they teach.

Morosini and Comarú (2009) describe about the formality and recognition by the numerous legislations of the Brazilian Higher Education system. The charges to teachers differ according to the level of education and the institution in which they work. If the teacher teaches at a university, for example, in addition to teaching activities, he should conduct research; If it is in a university center and/or in isolated colleges, it is not charged with compliance in research activities; If it is at the *Stricto Sensu* Postgraduate level, you will necessarily be charged for the master's and/or doctorate course.

It was already believed that he could know how to teach one who was a good professional (Masetto, 2003). Pimenta and Anastasiou (2014) point out as some of the problems of teaching, the fact of putting professionals/researchers from a certain area to act as a teacher. As if the knowledge specific to their area of expertise was sufficient. For them, nobody is born professional/researcher and wakes up teacher.

In this sense, according Pereira (2013, back cover),:

Being a teacher is like a brand that is produced in the subject. It is not vocation, it is not identity, it is not destiny. It's a product of you. The search for the formation walks in the direction to look for ways of appropriation and activation of this mark in consonance with the singularities of the subject. If I become a teacher, I need to open myself to the forms of constitution of myself and propose situations of experiences that give support so that students also experience themselves as teachers in formation.

All this discussion is necessary, because later, when we discuss the speeches of the interviewees, we perceive the question of the vocation quite marked in the speech of those who want to enter into the profession, however the same falls to the ground, when analyzing the speech of those who have been teaching in the area for the longest time.

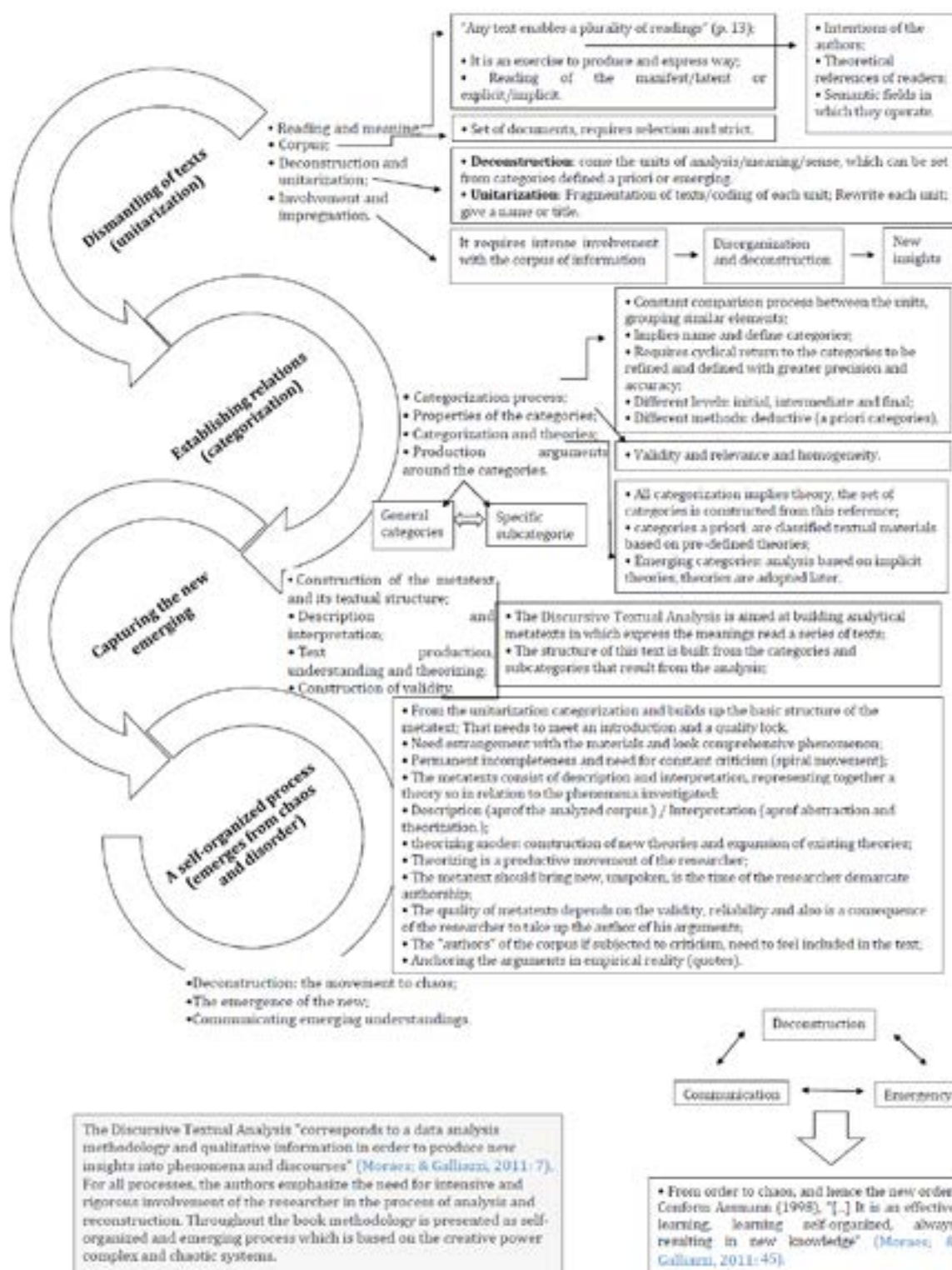
3. METHODOLOGY

The data collection consists of a cut of a pilot interview, focusing on occupational life history, performed for the author's doctoral thesis. Concomitant to this, were used statements of students interested in providing a college entrance examination for the Pedagogy course. Both cuts were aimed at the meaning and meaning of teaching.

In the pilot interview, the discourse of a female teacher was interviewed because she had a lot of experience, after being in school for 24 years, 10 years in Higher Education (the time was calculated at the time of the interview, Held in 2015). It acts in the area of Physical Education. The interview lasted 46 minutes and 13 seconds, with the main objective being life history and occupational life history. It was performed at a previously scheduled time and place, being recorded and then transcribed before analyzing it.

Already, the methodology adopted for data analysis, as mentioned previously, respects the principles of Discursive Textual Analysis proposed by Moraes and Galiazzi (2011). The way this methodology is used to perform the analysis can be better understood, from Figure 1.

Figure 1 - Schematic on the steps of Discursive Textual Analysis



Source: Timm *et al.* (2016, p. 1769), based in Moraes e Galiazzi (2011)

4. RESULTS AND DISCUSSION

In the Open Campus workshop, when they were asked about the meaning and meaning of teaching, the answers of possible future teachers, the following categories emerged:

- Taste/passion for teaching;
- Vocation;
- Affectivity for working with children;
- Follow the professional career of the mother and/or other relative.

Already, in the execution of the pilot interview, before this question and according to the Discursive Textual Analysis of Moraes and Galiazzi (2013), twenty-nine subcategories appeared and from these emerged six categories, arranged in Frame 2.

Frame 2 – Subcategories and Emergent categories indicating the meaning and meaning of teaching, according to the interviewed teacher

SUBCATEGORIES	FINAL CATEGORIES
Peculiar area; Classes differentiated as course; Only those who experience the course of Physical Education, recognizes; peculiar area in which people express themselves; Peculiarity and possibility of knowing the student; Different classes that require an active student behavior, particular area of expertise	Peculiar acting area
Music as a form of expression; Expression and unfold ; Corporal conscience; The student's need to express themselves, The transpires body language very essence of teaching in this area; Body language	(Self) expression.
Know the other through body language; Knowing the other is one of the characteristics of physical education; It works with the body of the other; Need to (self) meet bodily to meet and work with the other's body. Know the other/the other's body	Know the other/other's body
Taste for teaching; Taste and interest of teachers with their work; I taste for teaching	Taste for teaching
Daily renewal; The renew and teaching. The encounter with the unexpected; Unpredictability; (Re) learning; Constant renewal	Constant renewal
Multiplicity of meanings; The meaning and significance vary with the perception of each; The meaning and significance vary with the perception of each; different perceptions; Feeling of importance for the activity carried out, so that people can know; Source: prepared by the authors	Multiplicity of meanings that vary according to the perception of each

Source: Timm *et al.* (2016, p. 1770), based in Moraes e Galiazzi (2011)

In view of the six categories that emerged from the pilot interview, it is pertinent to point out that they were constituted from the open question “what is the meaning and meaning of the teaching work in your life?” In the first emergent category, entitled peculiar area of activity, we perceive that the interviewee brings this very strong in her report, because she is teaching in the area of Physical Education, which differs from teaching, learning, socializing and relating, when compared to other areas.

We believe that this category is closely linked to the following two, since the question of (self) expression and knowing the other and the body of the other, is also something more visible and recurrent in professionals who teach in that area. In the following section, it is possible to observe the interviewee putting herself in relation to this, interpreting that the meaning and meaning of the teaching work, especially in the area in which it works, offers:

[...] to get to know people a little more. And my course, my area is an area that greatly favors this. It is different from other areas, it is a very peculiar course, [...]. And there we see a little more of the students, we know the students a little more, and that's a very interesting thing. It has a very big interaction, because we deal with body issues a lot. (Pilot Interview 1).

Linked to this, the taste for teaching is another emerging category of this research and that also emerged during the realization of the workshop, as we wrote at the beginning of this subtitle. In the meantime, the interview of the exhibition exposes the experience with a student who had always been quiet in his classes, until the day that was given as an activity the creation of a choreography for a certain music, through which the students could express themselves, being this student highlighted with the interpretation made.

That scene created a new meaning and meaning in the teacher interviewed, making her realize the taste she has for the activity she carries out. Even at this point in the interview, she commented: “[...] I love to teach because, in fact, this is the big balcony [...]” (Interview pilot1), observing this as a constant renewal and as a Unpredictability that for her is one of the great senses of her profession.

In the fifth category, called Constant renewal, it is noticed that the daily renewal, the encounter with the unexpected, the unpredictability and (re-)learning in the performance of the said profession, are constant in the speech of the interview, as shown in the following section:

We arrive and do not know what to expect from the students. It's this thing like that, you renew yourself every day. [...]. And that there renews you in a certain way, and that renews you every semester or every class you give. Because you do not know what's going to happen, it's not a predictable class. So the idea of the meaning and meaning of teaching is not? It is this renewal thing, that of you also learning, of your learning a little every day. (Pilot Interview 1).

In fact, as the interviewee brings in her report, teaching brings very strong this question of the new, the unexpected. The classes in Graduation and Post-Graduation, have their characters changed every semester, so each beginning of semester is a new story to write and live. Of course in the intention of teaching, we always learn from each other. There is a mutual exchange in this teaching-learning process. When the interviewee talks about this issue of renewal and learning constantly, we refer to what Pimenta and Anastasiou (2014) defend by teaching, while the unfinished being constantly relearn, learn as he teaches. Freire (2000) also defended this idea of being unfinished beings and that we came in a state of conditioned and not determined.

Finally, in the last emergent category, entitled multiplicity of meanings that varies according to the perception of each one, it appears quite marked that the meaning and meaning of this profession varies according to the perception of each one, therefore, characterized by the individual perceptions obtained individually and the Which characterizes the multiplicity of meanings. For the interviewee, in addition and above all, what constitutes their sense of importance for their activity is that people can get to know each other, but believes that this can change according to each individual and according to the area of activity.

Therefore, in confronting the emerging categories, it is perceived that in both phases, the taste for teaching appears as one of the meanings and meanings of the said profession. The affection with the field of work is also characteristic present in both, however, one focused more on the issue of the child as a whole and another on the question of the body, which is understood if we take into account the specific area of performance. The other categories differ and we believe that this happens, precisely, by the time of performance.

In this sense, we emphasize the aspects related to affectivity, in which Mosquera and Stobäus (2006b) report that,;

[...] for personal aspects [...], also for Social Aspects [...], and Institutional Aspects [...], which leads, in general to the understanding that, for teachers interviewed, Affection is very important in the educational context and depends on individual (self) training so it can be used positively in this environment as a tool for learning and for healthy interpersonal relationships (contextualization).

The other categories, both in the workshop and the interview, are different, and we believe that this precisely happens through the teacher's time in the field.

5. CONCLUSIONS

In view of the above and the lines analyzed, it is possible to perceive some similarities between those who seek teaching and those who practice it, however, others are modified along the professional path. The question of meaning and feeling in this profession is quite strong and appears demarcated in both situations. Another strong factor is the issue of constant learning, since those who opt for this professional branch need to be in constant (re-)learning, aiming to meet the needs that emerge and constantly change in this segment.

The foregoing reveals a great deal about lifelong learning and the feelings derived from this profession; however, as future work, we suggest conducting interviews in each one of the phases, and then analyzing when changes occur in discourses about the way you feel about your work

REFERENCES

- Antunes, R. (2009). *Os sentidos do trabalho: ensaios sobre a afirmação e a negação do trabalho*. 2ª edição, 10ª reimpressão revisada e ampliada, Boitempo. São Paulo. ISBN: 978 858 593 4439
- Fernández Cruz, M. (2014). Modelo (auto)biográfico-narrativo de formación y el desarrollo profesional docente. In: M.H.M.B. Abrahão e A. Bolívar (orgs.), *La investigación (auto)biográfica en educación: miradas cruzadas entre Brasil y España*. EUG/EdiPUCRS. Granada/Porto Alegre.
- Freire, P. (2000). *Pedagogia da autonomia: saberes necessários à prática educativa*. 15ª edição, Paz e Terra. São Paulo. ISBN: 852 190 2433
- Grillo, M.C. (2008). O professor e a docência: o encontro com o aluno. In: D. Enricone (org.), *Ser professor*. 6ª edição, EdiPUCRS. Porto Alegre.
- Guarany, A.M.B. (2012). Trabalho docente, carreira doente: a privatização, a lógica produtivista e a mercantilização na e da educação e seus efeitos sobre os docentes. *Revista Educação por Escrito*. **3 (1)**: 26-40.
- Huberman, M. (2013). O ciclo de vida profissional dos professores. In: A. Nóvoa (org.), *Vidas de professores*. Coleção Ciências da Educação (4). 2ª edição, Editora Porto. Porto.

- Lessard, C. e Tardif, M. (2008). As transformações atuais do ensino: três cenários possíveis na evolução da profissão professor? In: M. Tardif e C. Lessard (org.), *O ofício de professor: história, perspectivas e desafios internacionais*. 2ª edição, Vozes. Petrópolis.
- Masetto, M. T. (2003). *Competência pedagógica do professor universitário*. Summus. São Paulo. ISBN: 853 230 8317
- Melo, G.F., Nunes, D.P.N.A., Nascimento, J.S. e Santos, P.P. (2013). A construção da docência na educação superior: em foco a identidade profissional. In: C.M.D'ávila e I.P.A. Veiga (org.), *Profissão docente na Educação Superior*. CRV. Curitiba.
- Moraes, R. e Galiuzzi, M.C. (2013). *Análise Textual Discursiva. Coleção Educação em Ciências*. 2ª edição, UNIJUÍ. Ijuí. ISBN: 978 857 429 6098
- Morosini, M.C. (2009). Docência e internacionalização da educação superior. In: S.M.A. Isaia, D.P.V. Bolzan e A.M.R. Maciel (org.), *Pedagogia universitária: tecendo redes sobre a Educação Superior*. Editora da UFSM. Santa Maria.
- Morosini, M.C. (2008). O professor do Ensino Superior na sociedade contemporânea. In: D. Enricone, (org.), *A docência na educação superior: setes olhares*. 2ª edição, EdUPUCRS. Porto Alegre.
- Morosini, M.C. e Comarú, P.A. (2009). A dimensão profissional docente: questões do nosso tempo. In: D. Enricone (org.), *Professor como aprendiz: saberes docentes*. EdUPUCRS. Porto Alegre.
- Mosquera, J.J.M. (1987). *Vida adulta: Personalidade e desenvolvimento*. 3ª edição, Sulina. Porto Alegre.
- Mosquera, J.J.M. e Stobäus, C.D. (2006a). Auto-imagem, auto-estima e auto-realização: qualidade de vida na universidade. *Psicologia, Saúde & Doenças*. 7(1): 83-88.
- Mosquera, J.J.M. e Stobäus, C.D. (2006b). Afetividade: a manifestação dos sentimentos na Educação. *Revista Educação*. 29(1): 123-133.
- Mosquera, J.J.M. e Stobäus, C.D. (2008). O professor, personalidade saudável e relações interpessoais: por uma educação da afetividade. In: D. Enricone (org.), *Ser professor*. 6ª edição, EdUPUCRS. Porto Alegre.
- Nóvoa, A. (1999). O passado e o presente dos professores. In: A. Nóvoa (org.), *Profissão professor. Coleção Ciências da educação* (3). 2ª edição, Editora Porto. Porto.
- Pereira, M.V. (2013). *Estética da professoralidade: um estudo crítico sobre a formação do professor*. UFSM. Santa Maria. ISBN: 978 857 391 1954
- Pimenta, S.G. e Anastasiou, L.G.C. (2014). *Docência no Ensino Superior. Coleção docência em formação/Ensino Superior*. 5ª edição, Cortez. São Paulo. ISBN: 978 852 492 2145
- Rodrigues, A.B.G.C., Stobäus, C.D. e Mosquera, J.J.M. (2016). Identity as study object of Positive Psychology. *Creative Education*. 7(8): 1119-1125.
- Timm, J.W., Mosquera, J.J.M. e Stobäus, C.D. (2016). Profession teacher is related to lifelong (re)learning. *Creative Education*. 7(12): 1765-1772.

ACHIEVEMENT GOALS PROFILES IN SCHOOL PHYSICAL EDUCATION: DIFFERENCES AT THE NATURE OF ATHLETIC ABILITY BELIEFS

Luís Manuel Oliveira Durão
Universidad Huelva; Escola Secundária/c3EB Pinhal Novo
(luis.m.durao@gmail.com)

Tomás García Calvo
Universidad Extremadura
(tgarciaalvo@gmail.com)

Ana Caballero Carrasco
Universidad Extremadura
(anacaballero carrasco@gmail.com)

Luis Manuel Casas García
Universidad Extremadura
(luisma@unex.es)

ABSTRACT

The purpose of this study was to study and identify the number and structure of the different dispositional goal orientations's profiles that can be formed and to investigate the differences between clusters on beliefs about athletic ability constructs related in a sample of students at the Physical Education classes of basic and secondary school of education public in Portugal.

To carry out present study we used an aleatory sample, comprising 505 students, aged between 12 and 18 years of both gender.

Different instruments were used in order to assess the achievement goals motivational's orientations for success in sport and athletic ability's beliefs. To confirm the existence of clusters profiles we perform hierarchical's clustering method and the non-hierarchic method K-means. In order to examine the characteristics of each goals profile's cluster obtained was done a multivariate analysis of variance.

The Cluster analysis showed a solution with four profiles describing goal orientations Z score's "high", "moderated" and "low". Results of multivariate analysis have shown that students highly motivational's profile have high significant levels of motivation task-oriented and present greater score of incremental beliefs about athletic ability than those with motivational profile low.

The outcomes pointed in accordance positive nature of task orientation have been associated with a belief that athletic ability is incremental, changeable with learning.

Keywords: Goal Profiles, Motivational's Orientations, Athletic Ability's Beliefs.

JEL Classification: I29

1. INTRODUCTION

The yearning to learn is the most important foundation of the learning and the human development (Lemos, 2005). In the educative environment, as in the sport or other contexts of work, the motivation not only produces a better learning and performance, but also produces more confidence and a greater satisfaction. When young students are motivated they tend to build thoughts and to develop behaviours that lead to the most satisfying learning's performance results. They take initiative in facing challenges or and use strategies to resolve problems. These young students also have a greater willingness, more enthusiasm, curiosity and interest to learning (Lemos, 2005). On the other hand, when they are not motivated, they internalize thoughts and develop negative behaviours (Lemos, 2005). They are passive, not strengthen, avoid the challenges, dropout easily and use the same inefficacious strategies repeatedly: showing annoyance, depression or anxiousness. They place themselves to the edge of the chance of same learning or they are against their educative agents. In other words, the motivation takes the individual to make things that facilitates its learning and improves its performance.

Motivation at the PE context is basically derived from the level of autonomy that someone has to choose tasks, as well as the perception of competence (Ntoumanis and Biddle, 1999; Prusak, Treasure, Darst, and Pangrazi, 2004). Particularly in PE, Roberts (2001) considers that understand the dynamic and complex psychological process of motivation is crucial to understand the human behaviour. A research produced by Biddle, Sallis and Cavill, (1998) confirmed that regular participation in physical activity for young people can contribute to the enhancement of physical, psychological, and social well-being.

In this sense, taking into account the importance of the study of the motivation models, the PE shows a particularly ideal achievement's context to evaluate the motivation process.

At the dissemination abundant of educational's psychology at the classroom, the achievement goals theory has been vastly used for sport's psychologists for a detailed understanding of the motivation in youth in sports environments and contexts of PE (Biddle, 2001; Duda and Hall, 2001). The current thought of motivational psychology research is based on a social-cognitive perspective, and this has been adopted in many domains of psychology, as the educational, social, health, developmental and sport's psychology. There are a lot of theoretical perspectives in sport and PE. In fact, in the PE domain, a social-cognitive approach has become dominant to understand young's motivation in PE (Wang and Biddle, 2001) the achievement goals theory through of perspectives of the Nicholls's theory (1989) and about ability beliefs of Dweck's theories (1999).

This work is supported at perspective of the achievement goals theory (Ames, 1992; Nicholls, 1989). In the scope of the PE, it has been likely one of the theoretical models that more contributions have carried out to understand the cognitions, behaviours and affective responses related with the achievement of students in PE's classes (Papaioannou, 1998).

This theory is based on the idea that the person's achievement goals is determined at time of initiating, maintaining or leaving a conduct, and defends that intent of the individual on doing something at the achievement's contexts, like at PE's classes is show the ability (Nicholls, 1989).

Two main concepts of ability have been identified in achievement contexts and they are manifested through two different of goal's involvement states namely task and ego. (Nicholls, 1989).

The way which an individual adopts the task and ego's involvement is known as their goal orientation. The "goal orientations" express the individual differences in a specific life domain, and they are usually expressed as 'task' and 'ego' goal orientations.

The findings have demonstrated typically that the person ego-orientated is concentrated in normative ability and will be motivationally more fragile when is in doubt with his own ability, but will evidence more adaptive outcomes when it is confident in his competence. Because it tends to be motivated, the individual to task-orientated is only interested in self-improvement regardless of ability or perceived competence.

Concerning how process activities, the achievement goals theory assumes that dispositional factors task and ego orientations of same construct are not mutually exclusive, but orthogonal (distinct and independent's states). It means that a person can be highly associates to a goal but not to the other, while others can be associated in both (Nicholls, 1989). A person is more likely to experiences two directions when it is able to vary in intensity or degree of motivational's involvement pattern (ego and task simultaneously) (Duda, 2001; Nicholls, 1989).

The individual that is in a state of task's involvement believes that his competence will be showed through the development of new skills, raising high levels of ability and exerting maximum possible effort. Since a state of task's involvement is self-referenced, this individual will perceives success when demonstrates mastery (Dweck and Elliott, 1983; Nicholls, 1989).

In contrast, an individual that is in a state of ego's involvement believes that his competence will be demonstrated with favourable s normative it compares with others. The ego's involved individual is focused on the social comparison, his competence will be demonstrated when perceives that his performance exceeded of the other person, particularly when achieves it to exert little effort (Nicholls, 1989).

In addition, Dweck (1999) noted that children process different ways the information ability-related in a classroom. This author presented the conceptions of ability in terms of beliefs on nature of intelligence. She noted while for someone the intelligence is relatively fixed for other people is being changeable. Other research proves that children who believe in a more fixed notion of intelligence (an "Entity Theory" of intelligence) are more likely to adopt an ego-orientated goal and show less adaptable answers to failure (Mueller and Dweck, 1998). On the other hand, those children who believe that intelligence is changeable (an "Incremental Theory" of intelligence) are more likely to adopt a task-orientated goal and show a positive motivation (Hong, Chiu, Dweck, Lin, and Wan, 1999). The study of how PE students interpret or build the changeable nature of athletic ability, in combination with goal orientations has at this moment a promising line of research for furthering understanding of the motivational construct.

When we assess person's task and ego goal's orientations and classify them as 'high' or 'low' in combination, it has been known as "goal profiles" (Fox, Goudas, Biddle, Duda, and Armstrong, 1994). These authors suggested that the best representation of achievement goals, and their subsequent consequences should derive of the analysis motivational goal profiles.

Standage and Treasure (2002), consider that the number of possible combinations between goal orientations correspond to the identification of four profiles, called high task and high ego (Hi-T/Hi-E), high task and low ego (Hi-T/Lo-E), low task and high ego (Lo-T/Hi-E) and low task and low ego (Lo-T/Lo-E).

A research by Wang, Chatzisarantis, Spray and Biddle (2002) that tested the process of cluster analysis to established possible relationships among goal orientation, self-determination and perceived competence, found three motivational profiles: "lowly motivated", which has low score in ego orientation and perceived competence, "highly motivated" which has high scores in the three variables and "moderately motivated" which has moderated task orientation, low ego orientation and moderately perceived competence. Biddle (2001) outlined that when we analyses a whole goal profile the outcomes may be different than when we analyses each goal separately.

In this line, knowing that ego orientation is frequently considered as less motivationally adaptable than a task orientation, some researches have used a goal profile approaching to the study of achievement goals and they have shown that individuals with high profiles in task orientation, either single or in combination with ego orientation, are associated with a high motivation and they display higher levels of adaptive responses than those people with low levels in task orientation (Dorobantu, and Biddle, 1997; Duda, 2001; Duda and Hall, 2001; Fox *et al.*, 1994; Roberts, Treasure, and Kavussanu, 1996;

Vlachopoulos and Biddle, 1996; Wang, and Biddle, 2001).

We consider that the identification of PE student's clusters profile represents different patterns of motivation and self-perception through which they could be instructive and that identification of the homogeneous groups is useful to develop strategies, increasing effectiveness of interventions and promoting physical activity in the youth.

Therefore, the present study is an evaluation work of the achievement goals theory which is composed of 505 students between 12 – 18 years olds involved in PE's context. In view of the results obtained and the importance of research of the PE education the aim of this study is to identify motivational profiles in PE, taking into account the influence of dispositional orientations as well as checking the differences of ability beliefs at each one of the profiles.

Based at the developed work previously (Wang and Biddle, 2001; Wang *et al.*, 2002) we hypothesized that there are relations's significant differences in the PE goal orientations profiles with scores "high", "moderate" and "low" among each profile with beliefs about of nature of athletic abilities. In relation to a highly motivated cluster (Hi-T/Hi-E) and moderately motivated profiles have a significant relation with incremental ability beliefs. On the other hand the entity ability beliefs become related with weakly motivated profile (Lo-T/Lo-E) and moderated's high ego cluster.

2. METHOD

2.1 Sample size and Procedure

To carry out present study we used an aleatory sample, comprising 505 students, aged between 12 and 18 years (Mean = 14:46, Standart Deviation: SD = 1.48) of both gender (235 boys and 270 girls) of the basic and secondary school's public education from the educational community of the municipality of Sesimbra, Setúbal's district. To accomplish the goals of our research, we contacted the Presidents of the Executive Councils and the teachers of departments EF of the participating schools, explaining them the objectives of research and requesting permission for their students participate in the completing the questionnaires. Thereafter, and similarly, were presented the study's objectives and was requested the authorization of the parents and tutors for its students participate at the fill the assessment tools. Students were also asked to give its assent to participate and informed about the mechanic fill of questionnaires, presenting them with the overall objectives of the study, in order to ensure greater interest and commitment to participation. It were clarified some terms that could raise doubts, asking them to answer as truthfully as possible, ensuring them that the answers were confidential and that only the head of research would have access to the collected information.

The evaluation instruments CNAAQ-2vp (Portuguese version) and POSQvp (Portuguese version) were applied to 25 classes of 7th to 12th grade within the study "Motivation and its Behavioural Consequences at Young PE students in Portugal".

Thus, before the EF class, each student has 15 to 20 minutes to carry out the complete filling of questionnaires, individually, in a climate that would allow them to focus without distractions. There were not detected difficulties in the interpretation of items's meaning or at fill mode.

2.2 Measures

2.2.1 *Questionnaire about Perception of Success at the PE classes:*

To assess the dispositional orientations to achievement goals of students in PE classes, we used the translated and validated to Portuguese's language (Fonseca & Brito, 2001), with adaptation at the educational context, of the English version Perception of Success Questionnaire (POSQ) Balagué and Roberts (1991) and Roberts, Treasure and Balagué (1998).

This questionnaire is made up by the description of 12 situations that could occur in educational / sporting contexts, of which include 6 that evaluate the task orientation's dimension (eg "demonstrate ... clear improvement in my performance "or" ... reach a goal ") and six others that refer to the ego orientation's dimension (eg "... am better "or" ... I defeat my colleagues "). For each of them the respondent indicates the degree to which considers that feel successful and if it occurred effectively, by using a Likert scale 5 points from 1 (completely disagree) to 5 (totally agree).

The reliability of the questionnaire has shown, in different developed studies satisfactory internal consistency coefficients both in sports (Fonseca & Brito, 2001: Ego = .84 and Task = .78) and in Physical Education (Roberts, Treasure, & Hall, 1994: Ego = .82, Task = .85). In this study were obtained Cronbach alpha's values of .87 and .82, respectively ego orientation and task orientation.

2.2.2 *Questionnaire about the perception of athletic ability beliefs - 2:*

To evaluate the conceptions about the nature of athletic ability of students at the PE classes, we used the translation and validated to Portuguese language (Durão, 2010), with adjustment to the educational context, of the Questionnaire's English version of the Conceptions of the Nature of Athletic Ability - 2 (CNAAQ-2) Biddle *et al.* (2003).

This assessment tool includes two dimensional scales called Incremental and entity ability's conceptions. The first construct, incremental conceptions, covers two subscales corresponding to two factorial dimensions of first order: "Learning" (3 items, eg, "... to succeed in the sport i need to learn techniques and skills, and then train them regularly ") and "Improvement" (3 items, eg, "... to be good at sport, will always improve if to work and endeavor to it "). The second dimension, entity conceptions, includes two first-order sub-scales: "Stable" (3 items, eg, "... I feel it is difficult to change my conviction how i am good at sports ") and" Innate "(3 items, eg, "... to be good in sport, i need to be naturally talented "). Analogously to previous questionnaire, the questions are formulated in a scale type Likert wherein each item has a range of 1 response

(totally disagree) to 5 (totally agree) according to the degree of personal convictions of each student. Two previous studies on the psychometric properties of the CNAAQ-2 (Biddle *et al.* 2003; Wang, & Biddle, 2001) revealed satisfactory reliability coefficients: $\alpha_{\text{Cronbach}} = .75$ and $.73$ for Incremental conceptions and $\alpha_{\text{Cronbach}} = .70$ and $.71$ for the entity conceptions of the athletic ability. In our study were obtained Cronbach alpha's values of $.75$ and $.74$, respectively incremental and entity ability beliefs.

2.3 Results

2.3.1 Descriptive statistics and correlational data of all factors

Table 1 shows the descriptive and correlations analyses of the different variables in the study.

Generally, the students has shown high task orientation and moderately high levels of incremental beliefs. This mean that goal orientation's constructs fluctuate between $M = 3.3$ for ego and $M = 4.14$ for task. The athletic ability conceptions were respectively 2.67 and 3.67 for entity and incremental beliefs.

Table 1. Means, Standart Deviation and intercorrelations of the variables (* $p < .01$; ** $p < .001$)

	M	SD	1	2	3	4
1. Ego orientation	3.3	.93	-	.25**	.32**	.22**
2. Task orientation	4.14	.64	-	-	-.10*	.44**
3. Entity belief	2.67	.74	-	-	-	.07
4. Incremental belief	3.67	.68	-	-	-	-

Own elaboration

The bivaried correlation (moment of Pearson) show that ego orientation was positively and significantly related with all of them. Task orientation is positively and significantly related with incremental beliefs and negatively with entity beliefs. We did not find evidence statistical ($r = .07$) what proves its orthogonality.

2.3.2 Analysis of goal profile clustering

To study the motivational profiles we follow the methodology drawn by Maroco (2003), using the statistical analysis procedure of clusters. In the first phase we perform hierarchical's clustering method (MH) according to their proximity (agglomerative methods) by the Ward's method using the square of Euclidean distance as dissimilarity measure between individuals. To evaluate the solution to retain of clusters number, we used as heuristic method the discretion of the R-squared through the ANOVA on-way analysis. To choose the minimum number of clusters to retain we have used as criterion the significant percentage of the total variability than $.8$ ($> 80\%$) were found four clusters as the most suitable solution.

In a second stage of clusters analysis, in order to confirm the existence of the four clusters, the non-hierarchic method K-means (NHM) clustering procedure was used and profiles were obtained, which corresponded to those obtained by HM.

Before cluster analyses the variables were standardised using Z scores which values are between ± 0.5 . The final centroid centres obtained are shown in table 2.

Table 2. Means, Standart Deviation and Z scores of Final Cluster Centres (Motivational Profiles)

	Cluster 1 (Hi-T/Hi-E) (N = 162)			Cluster 2 (Lo-T/Lo-E) (N = 60)			Cluster 3 (MLo-T/MHi-E) (N = 156)			Cluster 4 (MHi-T/Lo-E) (N = 122)		
	M	SD	Z _{Score}	M	SD	Z _{Score}	M	SD	Z _{Score}	M	SD	Z _{Score}
Ego Orientation	4.12	.51	.92	2.35	.61	-.98	3.51	.41	.27	2.25	.57	-1.09
Task Orientation	4.65	.28	.79	3.04	.51	-1.71	3.78	.32	-.56	4.47	.35	.51

Own elaboration

Four profiles were identified:

Cluster 1: High task and high ego (Hi-T/Hi-E). It is composed of 162 students (32.4%). Positive Z score's higher at ego orientation (.92) and task orientation (.79) were found.

Cluster 2: Low task and low ego (Lo-T/Lo-E). It is comprised 60 students (12 %). Negative Z score's higher at task orientation (-1.71) and ego orientation (-.98) were found.

Cluster 3: Moderated low task and moderated high ego (MLo-T/MHi-E). It is composed of 156 students (31.2%). This cluster has Z score's positively moderated to ego orientation (.27) and negative moderated's score for task orientation (-.56).

Cluster 4: Moderated high task and low ego (MHi-T/Lo-E). It is comprised 122 students (24.4%). This group had high negative Z score in ego orientation (- 1.09) and positive moderated's score for task orientation (.51).

2.3.3 Goals profiles comparisons

In order to examine the characteristics of each goals profile's cluster obtained, a multivariate analysis of variance (MANOVA) was carried out in which the athletic ability beliefs were considered as dependent variables and the profiles as independent variables (Table 3). The results have showed that there are differences's significantly in every dependent variable (Test Wilks' = .113, $F(30; 1430,12) = 52.46$, $p < .001$, $\eta^2 = .516$; Power = 1.00). Tests of inter-subjects effects have showed for entity belief ($F(3; 6.47) = 12.57$, $p < .001$, $\eta^2 = .071$, Power = 1.00) and for incremental belief ($F(3; 10.76) = 26.84$, $p < .001$, $\eta^2 = .140$, Power = 1.00). To identify and compare whether there are differences among groups between which or which pairs of groups there are statistical differences we used tests of mean comparisons post-hoc (Test of Tukey Honestly Significance Difference). Concerning entity beliefs the results showed significantly's effects between moderated Hi-T/Lo-E's cluster with highly motivated profile (Hi-T/Hi-E) and MLo-T/MHi-E's cluster ($p < .05$), but statistical differences between highly motivated, weakly motivated (Lo-T/Lo-E) and MHi-T/Lo-E motivation's profiles were not found ($p > .05$). For incremental beliefs there was not significance's effect between highly motivated profile and MHi-T/Lo-E's cluster, as well as MLo-T/MHi-E's profile and MHi-T/Lo-E's cluster ($p > .05$).

Table 3. Means, Standart Deviation by cluster and differences according to athletic ability beliefs. Multiple comparisons of clusters (Test Tukey HSD)

	Cluster 1 (Hi-T/Hi-E)			Cluster 2 (Lo-T/Lo-E)			Cluster 3 (MLo-T/MHi-E)			Cluster 4 (MHi-T/Lo-E)		
	M	SD	Z	M	SD	Z	M	SD	Z	M	SD	Z
Entity Beliefs	2,77	,80	.45	2,62	,61	1.12	2,83	,69	-.09	2,31	,67	-.95
Incremental Beliefs	3,99	,64	1.04	3,12	,66	-.07	3,58	,60	-.74	3,74	,63	.18

Own elaboration

Cluster 1 showed highest mean's value to incremental beliefs ($M = 3.99$). In cluster 2 the value of entity beliefs was 2.62 and incremental beliefs has obtained lowest values of the four clusters ($M = 3.12$). In cluster 3 entity beliefs ($M = 2.83$) has showed highest values than in other clusters. In cluster 4 entity beliefs ($M = 2.31$) has showed the lowest value of the four clusters.

3. DISCUSSION

As hypothesised the four profiles's resulted from the cluster analysis were found. At first cluster, the students scored positive high scores at ego and task orientation (Hi-T/ Hi-E), in the second one, students scored negatively high at task and ego orientations (Lo-T/Lo-E), the third one, moderated's negatively task and moderated's positively ego (MLo-T/MHi-E) and finally they scored high negative Z score's ego orientation and moderated positive in task orientation (MHi-T/Lo-E).

The outcomes show that students with highly motivational's profile (Hi-T/Hi-E cluster) had high significant levels of motivation task-oriented and present greater score of incremental beliefs than those with a Lo-T/Lo-E's profile.

On the other hand, students with MLo-T/MHi-E's profile had high levels of entity beliefs than participants who display MHi-T/Lo-E's group (moderately motivated's young students). As hypothesised the individual 's situation motivational is different in accordance with the goal profiles.

Furthermore, results demonstrated that those students highly motivated and moderately motivated showed high score of the incremental beliefs than the lower task-oriented classmates (Lo-T/Lo-E and MLo-T/MHi-E's clusters). In this line, we found out that in general groups that show high levels in both orientations (highly motivated) present same adaptive responses than the MHi-T/Lo-E's cluster (moderately motivated). The task orientation in the current study seems to be a decisive construct to increase the motivation, what confirms the consistency of the research carried out by Duda (1997). Contemplating the motivational patterns we found out that a lack of motivation had emerged in groups low task orientation's involvement that showed higher levels in entity beliefs of that groups high and moderated task orientation's involvement, which means that PE students are fundamentally focused on demonstrate more competence than the others. These results are similar to the study by Standage and Treasure (2002). Moreover, this perception of success appears to moderate effect's weak provoked by ego orientation's involvement (Roberts *et al.*, 1996).

The outcomes concerning of clusters pointed in accordance with the positive nature which task orientation have been associated in turn with a belief that athletic ability is changeable with learning. These findings suggest that if there are an

appropriate environmental structures youth students can be motivated for the physical activity.(e.g., positive incentive of the teachers).

From a theoretical point of view, this study identifies different motivational profiles in PE, whose data can supply to PE teachers an idea of complexity of student's motivation, because it can appears with motivational's different types in the same achievement environment. Moreover, from an applied perspective of Achievement goals Theory, these findings suggest that PE teachers should look to emphasise task-oriented involvement in their students if they want to facilitate forms of situational motivation and consequent better interest and participation rates. Finally, these results also provides some psychological tools of how teachers may increase the interests and participation in PE students creating favourable conditions that lead to improve their personal goals.

REFERENCES

- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84, 261-271.
- Biddle, S. J. H. (2001). Enhancing motivation in physical education. In G. C. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 101-127). Champaign, IL: Human Kinetics.
- Biddle, S. J. H., Sallis, J. F., & Cavill, N. (Eds.). (1998). *Young and active?: Young people and health-enhancing physical activity: Evidence and implications*. London: Health Education Authority.
- Dorobantu, M. & Biddle, S. J. H. (1997). The influence of situational and individual goals on the intrinsic motivation of Romanian adolescents towards physical education. *European Yearbook of Sport Psychology*, 1, 148-165.
- Duda, J. L., & Hall, H. (2001). Achievement goal theory in sport: Recent extensions and future directions. In: R. N. Singer, H. A. Hausenblas and C. M. Janelle, (Eds.), *Handbook of sport psychology*, (pp. 417-443). New York: Wiley.
- Duda, J. L. (2001). Achievement goal research in sport: Pushing the boundaries and clarifying some misunderstandings. In G. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 129-182). Champaign, IL: Humans Kinetics.
- Duda, J. L. (1997). Perpetuating myths: A response to Hardy's 1996 Coleman Griffith Address. *Journal of Applied Sport Psychology*, 9, 307-313.
- Durão, L. M. O., Moreira, J. M., Calvo, T. G., Cervelló, E. and Rubio, K. (2010). Propriedades psicométricas da versão portuguesa do Conceptions of the Nature of Athletic Ability Questionnaire-2 (cnaaq-2): estudo da estrutura fatorial e validade de construto. *Revista Brasileira de Psicologia do Esporte, São Paulo, v.3, nº 2*, 102-116
- Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development*. Philadelphia, PA: Taylor & Francis.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychology Review*, 95, 256-273.
- Dweck, C. S., & Elliott, E. L. (1983). Achievement motivation. In M. Hetherington (Ed.), *Handbook of child psychology. Vol. 4: Socialization, personality and social development* (pp. 643-691). New York: Wiley.
- Fonseca, A. M. & Brito, A. P. (2001). Estudo exploratório e confirmatório à estrutura factorial da versão portuguesa do *Perception of Success Questionnaire* (POSQ). *Revista Portuguesa de Ciências do Desporto*, vol. 1, nº3, 61-69.
- Fox, K. R., Goudas, M., Biddle, S. J. H., Duda, J. L., & Armstrong, N. (1994). Task and ego goal profiles in sport. *British Journal of Educational Psychology*, 64, 253-261.
- Hong, Y. Y., Chiu, C.-Y., Dweck, C. S., Lin, D. M.-S., & Wan, W. (1999). Implicit theories, attributions, and coping: A meaning system approach. *Journal of Personality and Social Psychology*, 77, 588-599.
- Lemos, M. S. (2005). Motivação e Aprendizagem. In G. L. Miranda, & S. Bahia (Org.), *Psicologia da Educação: Temas de desenvolvimento, aprendizagem e ensino* (pp. 193-231). Lisboa: Relógio D'Água Editores.
- Maroco, J. (2003). *Análise Estatística com utilização do SPSS*. Lisboa, Edições Sílabo.
- Nicholls, J. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.
- Nicholls, J. G., & Miller, A. T. (1984). *Development and its discontents. The differentiation of the concept of ability*. In J.G. Nicholls (Ed.), *The development of achievement motivation* (pp. 185-218), Greenwich, CT: JAI Press.
- Ntoumanis, N. & Biddle, S. J. H. (1999). A review of motivational climate in physical activity. *Journal of Sport Sciences*, 17, 643-665.
- Papaioannou, A. (1998). Students' perceptions of the physical education class environment for boys and girls and the perceived motivational climate. *Research Quarterly for Exercise and Sport*, 69, 267-275.
- Prusak, K. A., Treasure, D. C., Darst, P. W. & Pangrazi, R. P. (2004). The effects of choice on the motivation of adolescent girls in physical education. *Journal of Teaching in Physical Education*, 23, 19-29.
- Robert, G. C., Treasure, D. C. & Balagué, G. (1998). Achievement goal in sport: the development and validation of the Perception of Success Questionnaire. *Journal of Sport Sciences*, 16, 337-347.

- Roberts, G. C. (2001). Understanding the Dynamics of Motivation in Physical Activity: The influence of Achievement Goals on Motivational Processes. in G.C. Roberts (Ed.), *Advances in Motivation in Sport and Exercise* (pp. 1-50). Champaign, IL: Human Kinetics.
- Roberts, G. C., Treasure, D. C., & Kavussanu, M. (1996). Orthogonality of achievement goals and its relationship to beliefs about success and satisfaction in sport. *The Sport Psychologist*, 10, 398–408.
- Spray, C. M., Wang, C .K. J., Biddle, S. J. H., & Chatzisarantis, N. L. D. (2006). Understanding motivation in sport: An experimental test of achievement goal and self determination theories. *European Journal of Sport Science*, 6(1), 43-51.
- Standage, M. & Treasure, D. C. (2002). Relationship among achievement goal orientations and multidimensional situational motivation in physical education. *British Journal of Educational Psychology*, 72, 87-103.
- Vlachopoulos, S., & Biddle, S. (1996). Achievement goal orientations and intrinsic motivation in a track and field event in school physical education. *European Physical Education Review*, 2, 158–164.
- Wang, C. K. J., Chatzisarantis, N. L. D., Spray, C. M., & Biddle, S. J. H. (2002). Achievement goal profiles in school physical education: Differences in self-determination, sport ability beliefs, and physical activity. *British Journal of Educational Psychology*, 72, 433-445.
- Wang, J., & Biddle, S. J. H. (2001). Young people's motivational profiles in physical activity: A cluster analysis. *Journal of Sport and Exercise Psychology*, 23, 1-22.

PARALLEL SESSION V

PEOPLE, AGEING COMMUNITIES AND DIVERSITY

Maria Cristina Faria
Polytechnic Institute of Beja-Portugal
(mcfaria@ipbeja.pt)

ABSTRACT

Adopting healthy lifestyles in old age and engaging in productive tasks provides a potential benefit to preserving health and autonomy, enabling successful aging. Aging with well-being and quality of life implies the involvement of one's own, one's family, one's community and one's society. We are facing a set of dynamics to develop in the area of individual, family, social, community and political responsibility. Ageing populations are becoming more diverse in terms of behavior, culture, identity, disability and socio-economic standing. Giving more life each year from the age of 65 implies creating support and empowerment structures for older people in society and preparing young people and technicians to know how to deal assertively and competently with aging in their community. By observing the diversity of people, we understand how determinant the specificity and articulation of the action in this domain is. Providing older people with a quality life means that professionals working with this population should talk to each other and articulate their actions. The cooperative action articulates people, times and spaces, techniques and knowledge located in family, community, social, educational, health or political contexts. Several structures and services to support aging have been created and a number of programs have been carried out to ensure social support, health promotion, disease prevention and control, in the pursuit of healthy ageing. This symposium seeks to show the diversity of aging in the community, the protective factors of productive aging and the relevance of community mental health to the promotion of healthy lifestyles in older people.

Keywords: Ageing, Diversity, Community, Healthy Ageing, Mental Health.

1. INTRODUCTION

The forecasts speak for themselves and give us little time to prepare for the future. It is estimated that by 2025 there are about 1.2 billion individuals aged 65 or over. According to the forecast by the “*European Agency for Safety and Health at Work in the European Union*” (European Commission, 2014) the percentage of older workers will increase in the coming decades. Trends in the EU-27's active population suggest an increase of about 16.2% (9.9 million) in the age group 55-64 between 2010-2030 and a decrease in the rest. In many countries older workers will account for 30% or more of the active population. After 2030, population aging will continue at a lower intensity, so in 2060, the elderly are expected to account for 29.5% of the total population in the EU-27. In 2060, the elderly population will be 152.6 million, where the proportion of the elderly (aged 80 or over) is estimated at 12%. (European Commission, 2014).

The “*European Agency for Safety and Health at Work in the European Union*” further notes that the EU-28 employment rate for citizens aged 55-64 increased from 39.9% in 2003 to 50, 1% in 2013. However, these figures are still lower than the employment rate for the 22-64 age group. The average age of exit from the labor market increased from 59.9 years in 2001 to 61.5 years in 2010.

According to CENSOS 2011- Portugal (INE, 2012), we observed that the percentage of young people declined from 16% in 2001 to 15% in 2011, however, the percentage of older people increased from 16% to 19%. The direct consequence of the country's demographic structure was the fact that the aging rate rose from 102 in 2001 to 128 in 2011. On the other hand, the number of classic families increased to 4 043 726, but the average number of people decreased per family for 2.58. Ageing becomes a real concern (INE, 2002, 2012).

In Portugal, the fact that the retirement age has passed to the age of 66 or more shows us that citizens will have to work longer and older, also belonging to the working population for a longer period of time. According to projections by the *National Institute of Statistics* (INE), in 2060 the proportion of people over 65 will increase from 17.4% to 32.3% of the total population. Until when are humans available to work actively? Certainly, not all will have the same resistance and some strategies need to be implemented to ensure the work in a healthy way.

European citizens will have a more proactive working life. Hence “*gains*” (wisdom, strategic thinking, holistic perception, decision-making, professional experience and specialized knowledge) and “*losses*” (reduction of functional aptitudes, particularly physical and sensory ones) that arise with advancing age. However, everything seems to be dependent on lifestyle, nutrition, physical condition, genetic predisposition to the disease, educational level and environments where it lives, in particular at work.

The conscious adoption of healthy lifestyles in old age provides a potential benefit to the preservation of the health and autonomy of the elderly, enabling a healthy and rewarding aging. The World Health Organization (WHO) (2002) presented the concept of “*active ageing*”, referring to the capacity for ageing with health and autonomy, participating in society by exercising active citizenship and enjoying quality of life.

The organization of society, patterns of family interaction and filial responsibility in providing care for their parents has undergone changes in recent times (Pereira & Roncon, 2010), having in a way contributed to the isolation and loneliness of the elderly and of their institutionalization. In a study carried out by the authors, intra-family stress correlates negatively with quality of life and positively with depression. Therefore, when the family cannot support or does not exist, it is necessary to create support structures for older citizens. But when families want to care for and support their loved ones, it is necessary to create structures that support the family in the ageing process so that it does not wear away. It is therefore necessary to create social and health policies for ageing and a specialized intervention in the community to support the family.

Contemporary studies emphasize that quality of life, well-being, and maintenance of mental, physical and social qualities are directly related to the performance of meaningful and rewarding occupations. According to *“European Union and Committee of the Regions”* it is necessary to know how to make senior citizens more participatory in society as actors of their own development (Andor, Bresso, & Sedmak, 2011). It is therefore necessary to invest in the autonomy of older adults in society, thus enabling them to develop their capacity to remain autonomous as long as possible and to bring about changes that will improve their lives, in particular for people with disabilities or problems of health.

Faced with concepts and prejudices, perceptions and conceptions, stereotypes and discrimination, society is not always ready to invest in policies and actions to promote healthy ageing. This evidence only shows that there is a lot of work to be done and many synergies to be developed at local, regional, national and global levels, involving all aging-related actors and decision-makers, and, in particular, older people.

Increasingly, we can see the growth in the mobility of people within the *European Union* and the trend of world migration, where we observe 3% of the population is migrant. The facts put on the table the discussion on mental health and the psychological well-being of these populations and call attention to their diversity. According to Moleiro and Gonçalves (2010, p. 507) the effectiveness of psychotherapeutic and health services with ethnic minority groups results from a group of factors to be considered: 1) the understanding that the historical roots of psychotherapy are not neutral from the cultural point of view; 2) the recognition of some processes (reactions, behaviors or attitudes) of clients may be related to contextual and cultural aspects; 3) the existence of a vast literature on *“evidence-based practice”*, which emphasizes the use of clinical trials for demonstrating the efficacy of interventions that have neglected their applicability to minority client adjustment; and 4) the finding that health professionals themselves are not immune to biases and preconceptions that influence diagnosis, evaluation and intervention. This situation worsens when we combine multiculturalism with diversity in aging. For that reason, it is necessary to consider the training in multicultural competencies and ageing in health professionals, psychotherapists and trainers in higher education.

2. UNDERSTANDING AGE AND AGEING

What humans most fear in ageing or the onset of old age is the fact that it may arise associated with certain physical, mental, and social frailties. People are afraid to be sick, to stop being able to think, to be alone and helpless, to lose autonomy and power, to suffer and to die. Anxious feelings arise throughout human life and knowing how to deal with them makes the difference between a more peaceful life or not. Many people, when they become aware of the ageing process they are subjected to, deny, forget, or seek to slow down the evolution of events through strategies that minimize or hide signs of ageing (hair painting, hair implantation, plastic surgery and esthetics, anti-ageing creams, special makeup, procurement of material goods and services, involvement in too much tasks, ingestion of anti-ageing foods and taking anti-ageing medication). The mass media and the cosmetic and pharmaceutical industries have accentuated this phenomenon, which ends up reaching the older generations as well as the younger ones. Considering that no one can escape to the ageing process, some individuals adopt potentially destructive responses that endanger their personality and well-being. Concern about age is common among humans, but their overkill can take on proportions that lead to persistent, abnormal, obsessive and unjustified fear. High anxiety and persistent anguish arise that set in and trigger a specific psychological problem, which is reflected in a person's own distressing symptoms (insomnia, difficulty in relaxation, constant anguish, significant irritability, difficulty concentrating, headache, muscle aches, stomach aches, tachycardia, dizziness, tingling and cold sweats) affecting it psychologically and physically. We are talking about an anxiety disorder called gerascophobia, that is, *“a kind of phobia, which refers to abnormal persistent fear and unjustified to grow old, leading to unhappiness, regardless of the good health and financial position of the phobic subject”* (Delboni, Joaquim, Ploner & Cyrino, 2013, p. 204). Only people with gerascophobia become horrified and obsessed with the idea of growing old and facing one's own mortality. The excessive fear of becoming an adult or of aging, presents the usual manifestations of a phobia, such as, anxiety, fear and constant negative thoughts, that takeover of the individual life, causing him real fear when he thinks or refers to the theme of getting older and old age. According to Almeida and Azevedo (2004), the profile of the individual suffering from gerascophobia (irrational and persistent fear of growing old) presents as main characteristics traits of anxious, hysterical or narcissistic personality, and usually overestimates material possessions, has difficulty dealing with the loss of the seductive power or wealth.

The fear of aging comes within the scope of the problems related to a changing body, but also the fear of marginalization or rejection that old age can cause. After Butler's (1969) article on *“Ageism: Another form of bigotry”*, Butler and Lewis (cit. Garcia, 1988, p. 132) drew attention to popular myths about old age, highlighting three myths: 1) *Predominance of chronological age* (misconception that age expressed in numbers is more significant than the age at which the person feels and with which the person expresses himself in terms of efficacy and maturity); 2) *senility* (conviction that all old people are *“senile”*); and 3) *tranquility* (old age is understood to be a sea of roses and without fear). According to Lima and Viedas (1988), old age is a category of thought and in this perspective constitutes a central element of the social representation of the life cycle of individuals. The historical and cultural variability of conceptions about old age reflects the social construction of the

reinterpretation of the biological process (individual and universal) of the ageing of a society contextualized in a given epoch. Thus, we find different understandings about old age throughout the ages and from society to society at a given time.

Evidence has shown that vulnerability to aging in old age is associated demographically with being a woman living alone and in poor health (Kimmel, 1988). Discriminatory attitudes, mental health services and employment policies are examples of the interface between age and psychology, enabling new approaches to promote the well-being of older people. In this follow-up, ageing can be reduced by emphasizing diversity among older people, paying attention to compensating for reduced skills, and developing public policies based on need rather than age (Kimmel, 1988).

In our day, we can observe that associated with the uncontrollable fear of becoming adult and of ageing, also denominated of gerontophobia (*irrational and persistent fear of growing old, hatred or anger toward the elderly, or fear of the elderly*) we have the ageism (*describe stereotypes and prejudices held about older people on the grounds of their age*) (Clark, 2009). Ray, Sharp and Abrams (2006) identify three different types of discrimination: (1) under representative – passive/indirect discrimination by omission; (2) positive/protective – special treatment to benefit group; and (3) negative/overtly harmful – direct discrimination.

We can say that stereotyping based on age means that whoever does it attributes certain thoughts, attitudes or characteristics that are common to people of a certain age group. But, age-based prejudice arises when certain discriminatory behaviors are taken against people, in this case, the elderly, based on these stereotypes. According to the authors, “*Ageism is reflected in negative or positive stereotypes, as well as in prejudice or discrimination against (or to the benefit of) older people because of their age*”. (Iversen *et al.*, 2009; cit. José & Amado, 2016, p. 1). In its “*World Report on Aging and Health*” WHO (2015) considers it a priority to combat ageism. Consequently, political and local actors must be held accountable so that countries become more aware of and think more seriously about their public policies to implement for older people.

The document refers to the outcome of a worldwide investigation into the experience of ageing. More than 83,000 people from 57 countries participated in the study and the results were alarming, with 60% of respondents believing that older people are disrespected, particularly in poorer countries. In light of the evidence, WHO (2015) considers ageism as a public health issue. The main reasons are that the negative perception that the elderly population has an impact on public policies, for example, may inhibit politicians from taking actions aimed at this population, since public opinion believes it to be a “*burden*” or a “*less important*” question. On the other hand, most health problems faced by older people are associated with chronic conditions, especially non-communicable diseases. If there was an investment in health promotion and risk prevention for the elderly, these diseases could be prevented or delayed, but for that to happen society has to make a coordinated effort to promote healthy aging - and this depends on a vision more positive about it.

Another aspect highlighted by the report (WHO, 2015) concerns the observation of the stereotype about the understanding of what is a “*typically old person*”, stating that it does not exist. It turns out that one observes a diversity in the way each one ages, and everything will depend on how they lived their life and the resources they had available in their environment. For example, in some adults over the age of 80, levels of physical and mental capacity comparable to the levels of many 20-year-olds can be observed, but some 60-year-olds may need help. Despite this diversity, society persists in older people in a stereotyped way. As in discrimination by gender or race, in the case of age this ends up presenting itself as a definition of disability, regardless of the intrinsic capabilities of each.

Another stereotype of age discrimination that is generally observable over older people is that they are either dependent or burdened with the assumption that spending on aging is a loss in the economy and that the costs must be contained. Nowadays, we see another myth, since it is not clear that the elderly population generates high costs, ignoring the many contributions of older people to the economy. Another assumption is that older people will lead to unsustainable increases in health care costs by forgetting data suggesting that ageing has much less influence on health spending than a number of other factors, such as technology. Another myth that needs clarification.

Another myth is evidenced by the expression that “*70 is the new 60*”. It should be borne in mind that the fact that people live longer does not mean that they do so with a better quality of life and that they are healthier, and therefore it can be concluded that there is no longer any need for public policies to support them. For the 70s to be the new 60, it requires much more public health action focused on ageing.

Growing old in the future will be different from today. According to the report, change is occurring and has its implications at various levels: (1) urbanization and globalization have been accompanied by increased migration and deregulation of labor markets, which may be an opportunity for older people; (2) gender norms and the role of women have changed, they are no longer caregivers, performing higher safety functions at an advanced age; (3) the old models of family care are not sustainable, they require new approaches; and (4) technological change at the level of communication and information provides opportunities for family access and self-care orientation; and (5) the emergence of new support resources that are more functional and accessible, enabling opportunities for monitoring and personalized health care. Therefore, policies should update their performance at the level of aging through innovative and more productive approaches to enable ageing with well-being in health settings.

According to WHO (2015), there are a number of sectors and actors that can influence “*Healthy Ageing*” through a coordinated approach to policy and practice, which puts the needs and aspirations of older people at the center of attention. The report identifies three approaches as priorities for implementation and covering most sectors: (1) combating age discrimination; (2) allowing autonomy; and (3) supporting “*Healthy Ageing*” in all policies and at all levels of government. On the other hand, proposals are presented in the report for improving the effectiveness of interventions to improve the “*Healthy Ageing*”, which require a better understanding of common trajectories of intrinsic capacity and functional capacity, their determinants and the effectiveness of interventions to modify them. It is considered that the main actions to be taken to achieve this goal are three actions: (1) to identify the range and types of trajectories of intrinsic capacity and functional capacity and their determinants in different populations; (2) to quantify the impact of health care, long-term care and environmental interventions on the path of “*Healthy Ageing*” and identify the ways in which they operate; and (3) to better

quantify the economic contribution of older adults and the costs of providing the services they need for “*Healthy Ageing*” and to develop rigorous, valid and comparable ways of analyzing return on investment.

3. PROMOTION OF PSYCHOLOGICAL DEVELOPMENT IN AGEING

The contemporary perspectives of the study of human development call attention to several aspects to be considered in its approach that refer us to: (1) the relation between nature and nurture variables, between continuity and discontinuity, in the course of human development; (2) the integration of all levels of organization defined by the ecology of human development (from the biological and physiological to the cultural and historical); (3) developmental regulation through a mutual influence between the previous levels, from the genetic part to mental functioning, behavior, culture and society, and history; (4) plasticity in human development (a consequence of integrating levels of human development analysis, where the developmental system is characterized by a potential for change over time); and (5) relative plasticity (the regulation of development imposed, for example, by biological or contextual issues, can simultaneously facilitate or constrain opportunities for change, so that the magnitude of plasticity can vary throughout the life cycle). In any case, the potential for plasticity constitutes a fundamental orientation of human development (Sifuentes, Dessen & Oliveira, 2007; Fonseca, 2010).

Last century, from the 1970s, Urie Bronfenbrenner developed a scientific and epistemological model that came to be known as the “*Bioecological Model of Development*” (Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 1998; cit. Sifuentes, Dessen & Oliveira, 2007). In this model, the interactions and interfaces between the subsystems of the ecological environment and the system that Bronfenbrenner (1994) called the chronosystem, the time system, are evidenced. The model proposes that human development be studied through the interaction of four interrelated elements: *the process, the person, the context and the time* (Ceconell & Koller, 1998; cit. Ceconell & Koller, 2013). Thus evidencing a holistic and systemic conception of human development. Considering the connection between the individual and the environment, Bronfenbrenner (1977) emphasizes the active role of the individual as an agent of his own development process. The author understands the development through a systemic vision, contemplating the continuity and reciprocity of biological, psychological and social aspects, and the changes and continuity of the individual are prospected in the prism of the evolutionary processes and variations that occur in the person and its environment to the over time.

The ecological environment is understood as a system composed of socially organized subsystems that support and guide human development and are confined to the ecological environment: *the microsystem* (patterns of activities, social roles and interpersonal relationships experienced by the individual, in a given environment, the From face-to-face interactions); *the mesosystem* (relation between microsystems); *the exosystem*, (environments in which the individual does not participate directly, but indirectly influence it); and the macrosystem (observed in the individual’s intimacy, in his behaviors and in his ways of intervening and relating in the microsystem) (Sifuentes, Dessen & Oliveira, 2007). The chronosystem added by Bronfenbrenner (1994) is understood as another level of the development context and refers simultaneously to the chronological age of the individual and to the social and historical time in which he lives.

How can we explain that aging can be “*successful*” in the face of an oscillation between developmental gains and losses in the sense of a progressive predominance of losses on gains that people are even fully aware of? The “*Selective Optimization with Compensation*” Model (SOC), allows answering the question posed. The use of “selection-optimization-compensation” mechanisms as a way of explaining the successful orchestration of human life is, starting from the pioneering work of Paul Baltes, a model of adaptation that can be applied to several domains Of human functioning (physical performance, social relations, cognitive activity, etc.), especially from middle age and during old age. (Fonseca, 2012).

Many authors note the idea that “*Not only is the world aging, but it is also aging differently*”. We must transpose the current image of older people in society associated with frailty, dependency, unproductive or a burden for society and for future generations. Studies show that the quality of life, welfare, maintenance of mental qualities are directly related to social activity, socializing, integrated feel and useful in family and community. However, ageing can also occur associated with certain physical, mental and social weaknesses. We know that good mental health and good memory enables seniors to realize their full potential and cope with life transitions and major life events. While poor mental health and poor memory has the opposite effect. So, we need to explore the changing social dynamics of aging and their multiple contexts and promote wellbeing in all aging people.

Studies have shown how the quality of life, welfare, maintenance of mental, physical and social qualities are directly related to the performance of meaningful and rewarding occupations (Carvalho & Dias, 2011). Thus, according to “*European Union and Committee of the Regions*”, (Andor, Bresso and Sedmak, 2011), one must know how to make the most participatory senior citizens in society, the actors in their own development.

The studies show that “*the fact that individuals are transformed not only in appearance over the adult years, but in social and life patterns, in interests and priorities, and in relationships and inner qualities. No longer is the mature adult to emerge fully formed after a succession of developmental stages in childhood. Adulthood itself is now recognized as a period of active and seemingly systematic change*” (Wortley & Amatea, 1982, p. 476). According to Fernandez-Ballesteros (2000), the understanding of the indicators of functional age (functional capacity, reaction time, Satisfaction with life, the breadth of social networks) makes it possible to create the conditions for a satisfactory aging. Maintaining functional capacity throughout life, in particular starting at age 65, is now a priority for healthy aging. Purpose of the World Health Organization, draws attention to the relevance of educating people from middle age, “*in healthy lifestyles, management of stress, the need for adequate exercise and nutrition and the prevention of autonomy as well as Prevention of disease. This process must begin in midlife in order to be fully effective*” (Schroots, Fernández-Balesteros & Rudinger, 1999, p. 144).

The possibility that older people, despite their chronological age, may continue to show positive traits of psychological development is increasingly accepted by scholars. Positive traits of development are particularly visible in individuals whose

aging process corresponds to “successful aging” (Baltes & Carstensen, 1996).

Martin Seligman (2011) in his book “*Flourish*” comes up with a “*visionary new understanding of happiness and well-being*” and presents us as goal of positive psychology to increase the amount of flowering in the life of humans and the planet. In his theory of well-being (The PERMA Model) he presents us five elements (positive emotion, engagement, meaning, positive relationships and accomplishment) and each one has three properties: (1) contribute to well-being; (2) be desired by many people for their intrinsic value; and (3) be defined and measured independently of the other elements (exclusivity). To flourish the individual has to possess all the nuclear characteristics (positive emotions, engagement, interest, meaning, purpose) and three of the six additional characteristics (self-esteem, optimism, resilience, vitality, self-determination, positive relationships). However, not all humans are fit or have the skills to achieve happiness. There are strategies and plans to achieve happiness, such as forming the mind for happiness, paying attention to others, such as spending money on others to promote happiness and follow the code for well-being and happiness. In this sense, a positive lifelong education can be an action to be favored and implemented by decision-makers and politicians, which will be welcomed and worked by psychologists. Therefore, the importance of aging as a psychological issue must be recognized and included in the public debate and training of gerontology professionals

4. PROMOTING HEALTH IN AGEING

Studies have shown how quality of life, well-being, and maintenance of mental, physical and social qualities are directly related to the performance of meaningful and rewarding occupations (Carvalho & Dias, 2011). Thus, according to European Union and Committee of the Regions (Andor, Bresso, & Sedmak, 2011), it is necessary to know how to make senior citizens more participatory in society as actors of their own development. The developmental perspective of the aging process is based on three aspects (Fonseca, 2005): (1) *the development potential*; (2) *adaptive capacity*; and (3) *the limits of this adaptive capacity*. Thus, we can expect older people to be competent and responsive to ageing, to enable them to deal with the situations and problems of the transition and the implications of aging. The ability of the elders to self-actualize with their new stage of their lives allows them to be open to new challenges, willing to experience different experiences, and to outline a new life project.

Providing senior citizens with a quality life means that professionals working with this population (in social, educational, health or political contexts) dialogue and implement continued strategies of productive aging, so that these citizens are participative in society and perceive well and satisfaction with life. It is also important that they know and can consciously protect their health by outlining their limits and taking precautions to protect their health and not put them at risk.

Adopting healthy lifestyles in old age provides a potential benefit to the preservation of senior health and autonomy, enabling healthy aging. Various aging support structures have therefore been created and a number of programs have been developed to ensure social support, personal training and development, health promotion or disease prevention and control.

The concept of quality of life has been presented in several perspectives, but the definition of quality of life of the World Health Organization is the one with the greatest international consensus (Canavarró & Vaz Serra, 2010). Quality of life is defined as “*the individual's perception of their position in life within the context of the culture systems and values in which they are inserted and in relation to their goals, expectations, standards and concerns*” (WHOQOL Group, 1994, p. 28). The WHOQOL-100 (WHOQOL Group, 1993, 1994, 2006) was developed to assess the quality of life, with the following domains: Physical; Psychological; Level of Independence; Social relationships; Environment; and Spirituality. Later, a shortened version of the WHOQOL was made up of 26 items and organized into 4 domains: Physical, Psychological, Social Relations and Environment, including a facet about general QoL (quality of life in general and general perception of health).

Baltes and Baltes (1990) presented the concept of “*Successful ageing*” (SA), highlighting the heterogeneity of the aging process and the existence of a reserve in order to compensate for the decline of certain skills. Although they defend the principle of developmental continuity of gains and losses throughout the life cycle, they consider that there are limits exposed by age for adaptation and behavioral plasticity, triggering an increase of losses and a decrease of gains. Thus, in this perspective, aging can be understood through the selection, optimization and compensation model, interactive adaptation mechanisms that always seek the maximization of gains and the minimization of losses (Baltes, Staundinger, & Lindenberger, 1999, Martins, Guedes, Cabral Pinto & Fonseca, 2006).

The World Health Organization (WHO, 2002) went even further when it emerged with the concept of active aging, such as the “*process of optimizing opportunities for health, participation and safety, in order to increase the quality of life during ageing*”. On the other hand, studies show that quality of life, well-being, and maintenance of mental qualities are directly related to social activity, socializing, feeling integrated and useful in the family and community (Carvalho & Dias, 2011). In evidence of the diversity of the world in which we live, the approach of older people to promote their healthy aging should be carried out in a specialized manner taking into account their needs and specificities.

5. DISCUSSION

It is a reality that we are all in a process of development throughout the life cycle. That progression has to consider the ageing process of a personality contextualized in its environment. The understanding of ageing is related to the thinking and feeling of a person in a particular space and time of life, in particular, understanding the meaning of change and continuity in time. But also, with the conception produced differently in each society, the social representation of the life cycle, the relations that are established between the members of the community and society and the quality of the integration of the person in the social and ecological context.

Ageing with well-being and quality of life implies the involvement of one's own family, community, and society. It is therefore necessary to create and organize conditions for community participation that respects senior involvement and the promotion of synergies in support of ageing with happiness. We are facing a set of dynamics to develop in the area of individual, family, social and political responsibility. Giving more life each year from the age of 65 implies creating support and empowerment structures for older people in society and preparing young people and coaches to be able to deal assertively with the ageing of their community. Seligman (2012) mentions that public policies derive only from what we measure. In recent times, there has been an overvaluation of money, of gross domestic product and of the economy, which has little to do with the development of human welfare. We are in the line of Seligman (2011), the goal of generating wealth only makes sense if it generates human flourishing, and consequently happiness for all. It is necessary to embrace the challenge of positive psychology, to measure and develop human flourishing, and now, throughout the life cycle. We do not want the increase of ageism or gerontophobia, nor of cases gerascophobia, therefore, we must work to prevent this from happening. The importance of ageing as a positive psychological issue must be recognized and included in the public debate. Psychology training for professionals working with older people at an individual and community level also needs to be considered and implemented with greater awareness, only in this way can it promote the flowering of people of all ages and end demystification of ageing.

REFERENCES

- Andor, L., Bresso, M. & Sedmak, M. (2011). How to promote active ageing in Europe EU support to local and regional actors. *Brochure-AGE Platform Europe in partnership with the Committee of the Regions and the European Commission*. Bruxelles, Belgique: European Union, Committee of the Regions.
- Almeida, G. & Azevedo, M. (2010). Medo de envelhecer. *Revista Eclética*, Rio de Janeiro, v. 1, n. 30, 12-16.
- Baltes, P. B. & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. Baltes & M. Baltes. *Successful aging: perspectives from the behavioural sciences*. (1-34). Canada: Cambridge University Press
- Baltes, M. & Carstensen, L. (1996). The process of successful ageing. *Ageing and Society*, 16 (4), 397-422.
- Barreto, J. (1988). Aspectos Psicológicos do Envelhecimento. *Psicologia*, 6, 2, (159-170).
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32(7), 513-531. <http://dx.doi.org/10.1037/0003-066X.32.7.513>
- Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husten & T. N. Postlethwaite (Orgs.), *International Encyclopedia of Education* (1643-1647). New York: Elsevier Science.
- Butler, R.N. (1969). Ageism: Another form of bigotry. *The Gerontologist*, 9, 243-246.
- Canavarro, M.C. & Vaz Serra, A. (Coord.) (2010). Qualidade de Vida e saúde: Uma abordagem na perspectiva da Organização Mundial de Saúde. Lisboa: Fundação Calouste Gulbenkian, ISBN:978-972-31-1334-1
- Carvalho, P. & Dias, O. (2011). Adaptação dos Idosos Institucionalizados. *Millenium*, 40, 161-184.
- Cecconello, A. & Koller, S. (2003). Inserção Ecológica na Comunidade: Uma Proposta Metodológica para o Estudo de Famílias em Situação de Risco. *Psicologia: Reflexão e Crítica*, 16(3), 515-524
- Clark, A. (2009). *Ageism and age discrimination in social care in the United Kingdom*. Department of Health. Centre for Policy on Ageing. <http://www.cpa.org.uk/reviews>
- Delboni, B., Joaquim, S., Ploner, K. & Cyrino, L. (2013). Gerascofobia – o medo de envelhecer na contemporaneidade. *RBCEH, Passo Fundo*, 10, 2, 203-214, <http://dx.doi.org/10.5335/rbceh.2013.3320>
- European Commission (2014). *DG Research and Innovation, Population ageing in Europe: facts, implications and policies*. Luxembourg: Publications Office of the European Union, ISBN 978-92-79-35063-4, doi:10.2777/60452
- Fernández-Ballesteros, R. (2000). Gerontología social. Una introducción. in R. Fernández-Ballesteros (Dir.), *Gerontología social*. Madrid: Pirâmide
- Fonseca, A. (2005). *Desenvolvimento Humano e Envelhecimento*. Lisboa, Portugal: Climepsi Editores.
- Fonseca, A. (2012). Desenvolvimento Psicológico e Processos de Transição-Adaptação no Decurso do Envelhecimento. C. Paúl & O. Ribeiro (eds.), *Manual de Gerontologia, Aspectos biocomportamentais, psicológicos e sociais do envelhecimento*. (95-106), Lisboa, Portugal: LIDEL.
- Garcia, C. (1988). Panorâmica sobre a velhice. Uma introdução. *Psicologia*, 6, 2, (131-133).
- Gonçalves, D. Martins, I, Guedes, J., Cabral-Pinto, F. & Fonseca, A. (2006), Promoção da qualidade de vida dos idosos portugueses através da continuidade de tarefas produtivas, *Psicologia, Saúde & Doenças*, 2006, 7 (1), 137-143.

- Instituto Nacional de Estatística (INE) (2002) O envelhecimento em Portugal: situação demográfica e socio-económica recente das pessoas idosas. Departamento de Estatísticas Censitárias e de População do INE. *Revista de Estudos Demográficos*. 2.º Semestre, 185 - 208.
- Instituto Nacional de Estatística (INE)(2012). *Censos 2011 Resultados definitivos- Portugal*. Lisboa: Instituto Nacional de Estatística, IP, ISBN 978-989-25-0181-9
- José, J. & Amado, C. (2016). On studying ageism in long-term care: a systematic review of the literature. *International Psychogeriatrics*, (1-15), International Psychogeriatric Association. doi:10.1017/S1041610216001915
- Kimmel, D. (1988). Ageism, psychology, and public policy. *American Psychologist*, 43(3), 175-178.
- Lima, A. & Viegas, S. (1988). A diversidade cultural do envelhecimento: construção social da categoria da velhice. *Psicologia*, 6, 2, (149-179).
- Moleiro, C. & Gonçalves, M. (2010). Saúde na diversidade: Desenvolvimento de serviços de saúde mental sensíveis à cultura. *Análise Psicológica*. 3 (XXVIII),505-515
- Pereira, M. G., & Roncon, J. (2010). Relacionamento familiar em pessoas idosas: adaptação do índice de relações familiares (IFR). *Psicologia, Saúde e Doenças*,11(1), 41-53.
- Ray, S., Sharp, E. & Abrams, D. (2006). *Ageism : a benchmark of public attitudes in Britain*. Age Concern England. Policy Unit and University of Kent. Centre for the Study of Group Processes, http://www.eurolinkage.org/AgeConcern/Documents/Ageism_Report.pdf
- Schroots, J. & Yates, F. (1999). On the dynamics of development and aging. In V. Bengtson & K.W. Schaie (Eds.), *Handbook of theories of aging*. New York: Springer.
- Seligman, M. (2012). *A vida que floresce*. Alfragide: Estrela Polar. ISBN: 978-989-2068-1-7
- Sifuentes, T., Dessen, M. & Oliveira, M. (2007). Desenvolvimento humano: desafios para a compreensão das trajetórias probabilísticas. *Psicologia: Teoria e Pesquisa*, 23(4), 379-385. <https://dx.doi.org/10.1590/S0102-37722007000400003>
- World Health Organization (WHO) (2002). *Active Ageing: A policy framework. Noncommunicable disease prevention and health promotion, aging and life course*. Geneva, Switzerland: World Health Organization (WHO).
- World Health Organization (WHO), (2015). *World Report on Ageing and Health*. Geneva: WHO. http://apps.who.int/iris/bitstream/10665/186468/1/WHO_FWC_ALC_15.01_eng.pdf
- Wortley, D., Amatea, E. (1982). Mapping adult life change: A conceptual framework for organizing adult development theory. *Personnel and Guidance Journal*, 60 (8), 476-482.
- WHOQOL Group (1993). Study protocol for the World Health Organization project to develop a Quality of Life assessment instrument (WHOQOL). *Quality of Life Research*, 2, 153-159.
- WHOQOL Group (1994). Development of the WHOQOL: Rationale and current status. *International Journal of Mental Health*, 23(3), 24-56.
- WHOQOL-OLD Group (2006). *The WHOQOL-OLD Manual*. Copenhagen: WHO/European Office
- Wortley, D., Amatea, E. (1982). Mapping adult life change: A conceptual framework for organizing adult development theory. *Personnel and Guidance Journal*, 60 (8), 476-482.

COMMUNITY INTERVENTIONS TO PROMOTE HEALTHY AGING

Ana Sobral Canhestro
Polytechnic Institute of Beja - Portugal
(ana.canhestro@ipbeja.pt)

ABSTRACT

Healthy aging interventions emerge as a priority due to the demographic and epidemiological transitions in the second half of the twentieth century, mainly in the developed countries. This promotion should be developed throughout life, because a childhood and healthy adult ages are an important factor for a healthy aging. This article presents a secondary analyses of data from a qualitative study that investigates healthy lifestyle interventions in Baixo Alentejo, Portugal.

From the analysis of the interviews, it is highlighted that healthy lifestyles promotion is part of the practices developed in community interventions. Health professionals and municipalities are committed to implementing community interventions to promote health, based in policies addressed to physical and cultural environment and to the educational process of communities, promoting active participation, empowerment and equity. Partnerships, active citizen participation and evaluation of effectiveness are considered essential in the development of community interventions, despite the difficulties encountered. The majority of the interventions have as participants the children and the elderly, evidencing difficulties in the participation of people in active age.

Keywords: Healthy Aging, Healthy Lifestyles, Community, Intervention.

JEL Classification: I18

1. INTRODUCTION

Health promotion interventions are a priority considering the demographic and epidemiological transitions. Life expectancy has progressively increased over recent decades and is expected to continue. In association to the demographic aging, non communicable diseases such heart disease, high blood pressure, cancer and diabetes are the major causes of morbidity and mortality, increasing health expenditures and reducing the life's quality of older people. Many studies now suggest that non-communicable diseases may not be a necessary consequence of aging if a healthier lifestyle is adopted throughout life. Since a healthy lifestyle seems to be more influential than genetic factors in maintaining health throughout the aging process and although the risk of disease and disability increases with age, poor health should not be a necessary result of aging (Nuñez, Armbruster, Phillips, and Gale, 2003; Oxley, 2009).

Although the promotion of healthy lifestyles should be developed throughout life, the adulthood and particularly the middle-age has become the focus of specific interventions for healthy aging promotion and to reduce risk factors of non-communicable diseases. However, because they are busy with multiple professional and family tasks, middle-aged adults do not participate much in health promotion interventions and despite the great benefits from the adoption of health promotion behaviors they are not always able to incorporate and maintain healthy behaviors in the daily lifestyle.

2. BACKGROUND

Portugal integrates in the present the list of the most aged countries of the world and Alentejo constitutes, for several years, the most aged region of the whole national territory, and also presents the most elevated percentage of persons with decline of the level of health, as a result of acute and chronic conditions (Santana, 2000; Santana, Alves, Couceiro, and Santos, 2008; INE, 2012).

Pogressive aging of our societies should be viewed as positive phenomena and an opportunity to focus on a positive health promotion throughout the life-course (Ruciman *et al.*, 2006), however this new reality is also a challenge for many sectors of society and recent projections predict an overall increase in public spending related to population aging, there is however a general consensus that the impact of these costs can be minimized by keeping healthy, autonomous and independent people for the longest period possible (Oxley, 2009; Davim *et al.*, 2010; Drennan *et al.*, 2005; Ming, Gao and Pusari, 2006).

The World Health Organization (WHO) policy framework on ageing comprise a life-course approach to healthy ageing, recognizing that actions to ensure quality of life in old age should begin well before older age is reached. Central to the maintenance or improvement of health of the individual, families, groups and communities are health promotion and disease prevention activities. Health promotion is the process of enabling people to increase control over the determinants of health and thereby improve their health (WHO, 1986; Nutbeam, 1998). Increasing evidence shows that in order to have interventions effective and sustainable communities need more than information, they need to be involved in decisions about the implementation of interventions to promote health or to prevent disease (Rifkin, 2016). Participation is essential to sustain health promotion actions (Nutbeam, 1998). Health promotion embraces not only actions directed at strengthening the skills and capabilities of individuals, but also actions directed towards changing social, environmental and economic

conditions so as to influence public and individual health. It includes political and social interventions designed to change policies and services as well as to promote social responsibility for health (Nutbeam, 1998).

The principles of Primary Health Care are articulated, in 1978, in the Alma-Ata declaration signed by member states of the World Health Organization (OMS, 1978). Portugal is one of the countries that has been determined to put primary health care principles into practice with excellent results in most health indicators. Primary health care is nowadays the central pillar of the Portuguese health system, based on a community health center network covering the entire country. In 2005, Portugal began a reform of Primary Health Care and five different types of small multi-professional teams were created, called functional units of the health center groups, one of these teams is a Community Care Unit that is coordinated by nurses and has as one of its specific tasks: providing community interventions in response to community needs (Biscaia *et al.*, 2008).

The Helsinki statement on Health in All Policies (WHO, 2013) reinforces the idea of the inter-sectorial action and healthy public policy as central elements for the promotion of health, the achievement of health equity, and the realization of health as a human right. Health in All Policies is an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts in order to improve population health and health equity. It improves accountability of policymakers for health impacts at all levels of policy-making. It includes an emphasis on the consequences of public policies on health systems, determinants of health and well-being (WHO, 2013).

For the development of community health promotion interventions, it is crucial to build partnerships between primary health care and local government as well as with community institutions (e.g. schools). The key role of local government in tackling the social determinants of health and in health promotion interventions has been increasingly recognized because the municipalities offer support environments for healthy living and also because they are par excellence the partners of other community organizations and health care to the achievement of health-promoting interventions (Loureiro and Miranda, 2010). In Portugal, the involvement of municipalities in issues related traditionally to the health sector is not very expressive, and only about two decades a relatively small number of municipalities has been committed explicitly in this aspect of the citizen's life (Loureiro, Miranda, and Miguel, 2013).

Health promotion in general, and the promotion of healthy aging in particular, is a process in which the community nursing plays an important role, always ensuring the active participation of citizens and the involvement of all relevant stakeholders. The work of community nurses is increasingly putting the emphasis on promoting healthy lifestyles throughout life in order to healthy aging. Working in partnership with groups to achieve a deep understanding of local contexts may assist nurses when building up pictures of people's health-related needs and views (Manthorpe, Maim, and Stubbs, 2004; Ruciman *et al.*, 2006; Ming *et al.*, 2006).

3. METHODS

This article presents a secondary analyses of data from a qualitative study intended to understand, in the perspective of health professionals and representatives of local authorities, how the promotion of healthy lifestyles is prosecuted in Baixo Alentejo, Portugal. It was developed with resource to a qualitative methodology: qualitative content analysis of the fourteen semi-structured interviews conducted. The key informant interviewees were purposively selected, based on the snowball method, from professionals identified as having an important role in community health promotion interventions.

The interviews were conducted by the researcher using guided questions. All interviews were recorded, after the participants' consent, and fully transcribed afterwards. The thematic content analysis method proposed by Bardin was used, resulting in the categorization process (Bardin, 2009). This method is based on the analysis of the contents described based on the interviews, in order to identify the divergences and convergences the subjects defined and group them in categories. This methodological trajectory is organized in three phases: Pre-analysis; Exploration of the material; and, finally, Treatment of the results: inference and interpretation (Bardin, 2009).

The researcher conducting the analyses familiarized herself with the transcribed data by reading through the transcripts numerous times with the aim of identifying main themes and sub-themes. The guide questions also informed the identification of themes in the analysis process, as these questions referred to the main issues that needed to be covered in the interviews.

3.1 Ethical considerations

Approval was obtained from the Baixo Alentejo Health Local Unit Ethics Committee. The author provided information about the study to all participants. Informed consent was obtained from all participants, who were assured of confidentiality and of their right to refuse to answer any question or withdraw from the study at any time.

4. FINDINGS AND DISCUSSION

From the analysis of the interviews, it is highlighted that the promotion of healthy lifestyles is part of the practices developed both in the context of consultation in primary health care and in community interventions. Schools are the main community context where those interventions are developed, often integrated in the school health program and especially for the promotion of healthy eating and the prevention of childhood obesity as is widely recommended (George, 2014). These results highlight the traditional partnership between Schools and Health Centers already mentioned by Loureiro, Gomes and Santos (2011), who emphasize that the role of municipalities in health has been residual, however with the extension of their competencies at the level of Education, makes possible a greater investment of the municipalities in the promotion of the

health of the communities, aspect that is reinforced by the findings of our study. Community health professionals are the main promoters of community interventions to promote healthy lifestyles however municipalities also play an important role in promoting activities mostly for promoting of physical activity, activities that require greater investments in skilled human resources, adequate spaces, and equipment, being recognized by the professionals interviewed that the existence of conditions that favor the practice of physical activity is, today, a reality in all municipalities of the Baixo Alentejo.

Most interventions developed by municipalities are for children and elderly. Similar results was found in other Portuguese studies (Loureiro *et al.*, 2011; Bárrios and Fernandes, 2014) and it is emphasized that the aging of the population, the complexity and the multidisciplinary nature of health are increasingly leading municipalities to intervene in the area of health promotion and disease prevention.

Health promotion interventions for middle-aged people and other adults at active age are less frequent and the professionals recognized that this group of population participate less because they are busy and therefore less available and often the timing of interventions are not compatible to their availability. Interventions to promote health of middle-aged people are considered crucial, since it is an important period in adulthood, known as a dynamic transactional stage of development with important changes of roles and health status and where important decisions are made that will have an impact on later life (Grossbaum and Bates, 2002; Fagulha, 2005; Papalia, Olds, and Feldman, 2006). So that professional support and information to assist the decision-making may be useful (Manthorpe *et al.*, 2004). Non communicable diseases such heart conditions, high blood pressure, cancer and diabetes are the major causes of morbidity and mortality often begin in middle age (Lachman, 2004), making it a key stage in the prevention and control of these diseases (Darnton-Hill, Nishida, and James, 2004). Preventive interventions may target populations that are in good health, just as health promotion interventions may address people with a chronic illness and although health promotion and disease prevention originate from different theoretical backgrounds, in practice, the interventions tend to overlap (Wosinski, Cordier, Bachmann, Gagnon, and Kiszio, 2016).

With regard to gender, men participate less than women in community interventions, an aspect which is corroborated by international studies (OMS, 2007; Papalia *et al.*, 2006; Zhang *et al.*, 2011).

Respondents also refer the cultural, economic and educational issues as important determinants of participation in community interventions. Economic issues (often related to educational level) dramatically influence people's health and health behaviors (Bicudo, 2009; Loureiro and Miranda, 2010; Pender, Murdaugh, and Parsons, 2011) and also the demand for health care (Loureiro and Miranda, 2010). It is not possible to affirm that there is a direct relationship between health and educational level in all situations, since not always knowledge is synonymous with the adoption of healthy lifestyles (Loureiro and Miranda, 2010), however, it is recognized that the educational level influences the choice of behaviors to adopt because *"an individual's ability to obtain, process, and understand information is essential to being an informed consumer who can make appropriate decisions for self-care, health, and well-being."* (Pender *et al.*, 2011, p. 267) but also because limited literacy skills have been associated with negative health behaviors (e. g., people with the lowest level of education consume more tobacco, alcohol, and illicit substances, engage in less physical activity, use less the seat belt) and with less availability and access to preventive health services and screenings (e. g., flu vaccines, mammograms, colonoscopies) as well as lower adherence to therapy for the control of chronic diseases and consequently worse health and higher mortality (Loureiro and Miranda, 2010; Pender *et al.*, 2011; Crisp *et al.*, 2014).

An interesting range of inter-professional and inter-sectoral collaborative partnerships in health promotion intervention, mostly initiated by primary care teams, were described. Municipalities and other community organizations also seek the health sector as a preferred partner in health promotion interventions. These findings suggest that professionals are aware that interventions developed in partnership achieve health outcomes or intermediate health outcomes in a way which is more effective, efficient or sustainable than might be achieved by the health sector acting alone (Nutbeam, 1998; WHO, 2013). Similar results were found by Runciman, Watson, McIntosh, and Tolson (2006) that reinforce the important role that community nurses have in these partnerships, which emerged as a strategic response to policy, and as a pragmatic response on the part of community nurses to sharing the load and getting the work done. However, we need to emphasize that this partnerships should consider the patient a partner and an active member in the planning, implementation and evaluation of health promoting care (Manthorpe *et al.*, 2004; Runciman *et al.*, 2006; Guedes *et al.*, 2012). It should also be noted that these partnerships, particularly with regard to municipalities, are usually integrated into networking, an area where municipalities have great experience (Loureiro *et al.*, 2013). Despite the mentioned advantages, some difficulties are also mentioned in the work in partnership, being mentioned difficulties of articulation with the Schools and in the articulation between the health sector and the local authorities.

In regard to active citizen participation in the planning, implementation and evaluation of health promoting care, the respondents are aware of this importance and seek to promote it, which is consistent with the WHO recommendations: *"health promotion activities may be participatory, involving all those with a vested interest in the initiative; interdisciplinary, by involving a variety of disciplinary perspectives; integrated into all stages of the development and implementation of a health promotion initiative; and help build the capacity of individuals, communities, organizations and governments to address important health problems"* (Nutbeam, 1998, p. 22). This perspective of the interviewed professionals is corroborated by Rifkin (2016) who reports that there is growing evidence that, in order to have more effective interventions, communities and citizens need to have more than information, they need to be involved in decisions about the implementation of interventions. The identification and involvement of community leaders in the process of intervention planning is one of the strategies, mentioned by the interviewees, to promote active citizen participation. This strategy had already been mentioned by Davim and colleagues (2006) as fundamental for increasing active participation of citizens. The prominent role given by the interviewees to the establishment of a partnership between the professionals and the participants during the planning and execution of the interventions, is in line with what is considered essential by several authors (Nuñez *et al.*, 2003; Davim *et al.*, 2006; Ming *et al.*, 2006; Runciman *et al.*, 2006) however are

reported difficulties: some interviewees report an absence of participation culture, considering that people continue to leave important health decisions in the hands of health professionals. This aspect is in line with some passivity of the Portuguese population in its relations with health professionals and the health system, referred to in the report 'A future for health - we all have a role to play' (Crisp *et al.*, 2014) and does not seem to be unique to the Portuguese population since, in a study carried out in Spain, difficulties in the active participation of citizens were recognized as a threat to community intervention (Adella, Ruab, Solerc, Alvareza and Farga, 2016).

Should also be noted that health services alone can never create a large, self-sustaining community participation, since people and communities have other priorities in their daily lives and it will not be realistic to set and follow standard models of community participation as they may collide with cultural and historical aspects strongly entrenched in the communities, it is very important that active citizen participation is seen as a process and extends to other aspects of community life in an inclusive perspective of community development (Rifkin, 2009). *"Programs that mobilize communities around health issues alone have proved to have short lives"* (Rifkin, 2009, p. 33). Although there is not much scientific evidence to directly connect community participation to better health outcomes (Rifkin, 2009), it is increasingly recognized as fundamental to improve and maintain the interventions that bring significant contributions to health improvements (Rifkin, 2014), particularly in the vulnerable groups (Rifkin, 2009). Specific practical initiatives are recommended to empower citizens and begin to change the cultural aspects that act as barriers to their participation in decisions concerning their health (Crisp *et al.*, 2014).

This study also reported difficulties inherent to the professionals, which often take the lead role in the planning and implementation of interventions without being able to involve citizens. Health is an area where the main decisions are based on expert knowledge, is therefore a traditionally more hermetic area of citizen participation, which justifies in some way the difficulties experienced by health professionals and citizens, it is important that citizens want to be involved or express their opinion on health care planning and organization, in other words, participation should depend on the will of the citizens and not on a previously stipulated obligation (Serapioni and Matos, 2013). It also seems clear that many of the health professionals' difficulties arise from the fact that health professionals continue to have a training and practice centered on the biomedical model, which, being essential for disease prevention and control, has limitations when directed to promote health (OMS, 2008). In this biomedical model the participation of citizens is seen as their mobilization to respond to information provided to them by health professionals and not as their active involvement in decision making (Bathia and Rifkin, 2013), being the professional experts who take the leading role and the citizens have a passive role.

The findings of this study show the importance of interventions to promote healthy lifestyles are effective generating gains in health. To evaluate the effectiveness of interventions professionals seek to use objective indicators, but since it is not always easy to find reliable and valid measures (Nutbeam, 1999) are reported some difficulties and sometimes adopted a subjective assessment based on the perception that professionals have on improving the health and lifestyles after the interventions. The resolution of this aspect seems to be crucial, since the evaluation of the interventions is very important, allowing to modify or adapt the planning or the strategies, and can even influence the policies of health promotion and reduction of inequalities (Lopes, Mendes, Nunes, Ruivo, and Amaral, 2014).

In order to increase the effectiveness of the interventions, some strategies are mentioned, emphasizing adequate health planning that starts with the assessment of health needs, the characteristics of the community or group, and the opportunities and resources. This planning should be carried out with the active participation of the community, aspects corroborated by several authors (Nuñez *et al.*, 2003; Manthorpe *et al.*, 2004; Ming *et al.*, 2006; Runciman *et al.*, 2006; Pender *et al.*, 2011; Bárrios and Fernandes, 2014). Another strategy that is considered essential by the interviewees is the empowerment and accountability of people for their health, in line with what was recommended by the WHO, reinforced in several International Conferences for Health Promotion and this strategy is strongly linked to the previous one because the active participation requires empowered citizens, who express their opinions and their knowledge experiential in order to more appropriate interventions (Serapioni and Matos, 2013). The early start of healthy lifestyle promotion interventions is also considered strategic and meets international recommendations (WHO, 2003; WHO, 2005a; WHO, 2005b; WHO, 2009; CDSS, 2010; Marmot, 2014), being widely recognized that a healthy childhood and adulthood are important determinants of healthy aging (Oxley, 2009; Sanders, 2006; Hartman-Stein and Potkanowicz, 2003; Nuñez *et al.*, 2003; Marmot, 2014).

5. CONCLUSIONS

The results of this study cannot be generalized, as they refer to particularities related by the fourteen participants about their perspective from the promotion of healthy aging interventions in Baixo Alentejo – Portugal, however findings can be compared with those of other studies in the literature.

Community interventions to promote healthy lifestyles are mostly developed by health professionals working in community and municipalities. Partnerships, active citizen participation and evaluation of effectiveness are considered essential in the development of community interventions, by the respondents, despite some difficulties related.

Children, young people, and elderly are the main participants of the programs of healthy lifestyles promotion. Health promotion interventions for middle-aged people and other adults of working age are less frequent. Age and gender are considered as the main factors related to participants that influence the development of interventions to promote healthy lifestyles.

Most community interventions to promote healthy lifestyles interventions are not evaluated reflecting a lack of standardized measurement tools and methods.

One of the most mentioned strategies to increase the effectiveness of health promotion interventions is the involvement of the community and partners in the planning, implementation and evaluation of interventions, however there are difficulties

in community empowerment and a lack of culture of participation in people and communities.

Our findings suggest that there may be merit in:

- Consulting and actively involving people and communities in health promotion interventions.
- Finding strategies to enable increased participation of adults at active age and particularly middle-aged people.
- Strengthening a life-course approach to healthy ageing.
- Strengthening inter-sectoral and multi-professional partnerships.
- Promoting mechanisms for evaluating the effectiveness of interventions promoting healthy lifestyles.
- Considering effective ways of developing and evaluating practice change.
- Valuing the health promotion work in the community by primary care and municipalities.
- Continuing to design interventions based on the assessment of the health needs of populations.
- Being alert to trends and changes in all sectors of society and understand how these may affect the health of the population.

ACKNOWLEDGEMENTS

The researcher gratefully acknowledges the help received from the participants in this study and the advisory panel.

REFERENCES

- Adella, C., Ruab, M., Solerc, J., Alvarez, C., and Farga, A. (2016). La salud comunitaria en los equipos de atención primaria: objetivo de dirección. *Atención Primaria*. 48(10): 642-648.
- Bardin, L. (2009). *Análise de Conteúdo*. (5th Ed. Revista e atualizada). Lisboa: Edições 70.
- Bárrios, M., and Fernandes, A. (2014). A promoção do envelhecimento ativo ao nível local: análise de programas de intervenção autárquica. *Revista Portuguesa de Saúde Pública*. 32(2), 188-196.
- Bhatia, M., and Rifkin, S. (2013). Primary health care, now and forever? A case study of a paradigm change. *International Journal of Health Services*. 43(3), 459-71.
- Bicudo, M. (2009). *Do envelhecimento saudável à longevidade com qualidade - contributos de enfermagem*. Lisboa: Universidade de Lisboa. Doctoral Thesis. Retrieved from: <http://repositorio.ul.pt/handle/10451/1844>.
- Biscaia, A., Martins, J., Carreira, M., Gonçalves, I., Antunes, A., and Ferrinho, P. (2008). *Cuidados de Saúde Primários em Portugal – Reformar para novos sucessos*. (2th Ed. Revista e atualizada). Lisboa: Padrões Culturais Editora.
- Comissão para os Determinantes Sociais da Saúde [CDSS]. (2010). *Redução das desigualdades no período de uma geração. Igualdade na saúde através da ação sobre os seus determinantes sociais*. Relatório Final da Comissão para os Determinantes Sociais da Saúde. Portugal, Organização Mundial da Saúde.
- Crisp, L. (coord.), Berwick, D., Kickbush, I., Bos, W., Antunes, J., Barros, P., and Soares, S. (2014). *Um futuro para a saúde - todos temos um papel a desempenhar*. Lisboa: Fundação Calouste Gulbenkian.
- Davim, R., Araújo, M., Nunes, V., Alchieri, J., Silva, R., and Carvalho, C. (2010). Aspects related to healthy aging human. *Journal of Nursing UFPE / Revista de Enfermagem UFPE*. 4(4): 2018-2024.
- Darnton-Hill, I., Nishida, C., and James, W.P.T. (2004). A life course approach to diet, nutrition and the prevention of chronic diseases. *Public Health Nutrition*. 7(1A): 101-121.
- Drennan, V., Iliffe, S., Haworth, D., Tai, S., Lenihan, P., and Deave, T. (2005). The feasibility and acceptability of a specialist health and social care team for the promotion of health and independence in 'at risk' older adults. *Health and Social Care In The Community*. 13(2): 136-144.
- Fagulha, T. (2005). A meia idade da mulher. *Psicologia*. 19(1-2): 13-17.
- George, F. (2014). *Sobre Determinantes da Saúde*. Lisboa: DGS. Retrieved from: <https://www.dgs.pt/ficheiros-de-upload-2013/publicacoes-de-francisco-george-sobre-determinantes-da-saude-pdf.aspx>.
- Grossbaum, M., and Bates, G. (2002). Correlates of psychological well-being at midlife: The role of generativity, agency and communion, and narrative themes. *International Journal of Behavioral Development*. 26 (2): 120-127.
- Hartman-Stein, P., and Potkanowicz, E. (2003). Behavioral determinants of healthy aging: good news for the baby boomer generation. *Online Journal of Issues in Nursing*. 8(2): 17 p.
- Instituto Nacional de Estatística [INE] (2012). *Censos 2011 Resultados definitivos – Portugal*. Lisboa: Instituto Nacional de Estatística.
- Guedes, N., Moreira, R., Cavalcante, T., Araújo, T., Lopes, M., Ximenes, L., Vieira, N. (2012). Nursing interventions related to health promotion in hypertensive patients. *Acta Paulista de Enfermagem*. 25(1): 151-156.
- Lachman, M. (2004). Development in Midlife. *Annual Review of Psychology*. (55): 305-331.

- Lopes, M., Mendes, F., Nunes, L., Ruivo, A., and Amaral, A. (2015). *Respostas de Enfermagem para a saúde no futuro - Saúde-doença: a proximidade de cuidados num mundo sem fronteiras e com rápida mobilidade*. Encontro Nacional de Enfermagem. Organizado pela Direção-Geral da Saúde e a Fundação Calouste Gulbenkian. (8 de abril 2015). Lisboa: Fundação Calouste Gulbenkian. Retrieved from: https://comum.rcaap.pt/bitstream/10400.26/15264/1/Sa%C3%BAde-doen%C3%A7a_a%20proximidade%20de%20cuidados%20num%20mundo_abril%202015.pdf
- Loureiro, I., and Miranda, N. (2010). *Promover a Saúde – dos fundamentos à ação*. Coimbra: Almedina.
- Loureiro, I., Gomes, J., and Santos, M. (2011). *A Investigação participada de base comunitária na construção da saúde: Projeto de Capacitação em promoção da Saúde (PROCAPS). Resultados de um estudo exploratório*. Lisboa: Instituto Nacional de Saúde Dr. Ricardo Jorge [INSA].
- Loureiro, I., Miranda, N., and Miguel, J. (2013). Promoção da saúde e desenvolvimento local em Portugal: refletir para agir. *Revista Portuguesa de Saúde Pública*. 31 (1): 23-31.
- Manthorpe, J., Maim, N., and Stubbs, H. (2004). Older people's views on rural life: a study of three villages. *Journal of Clinical Nursing*. 13 (6B): 97-104.
- Marmot, M. (2014). *Review of social determinants and the health divide in the WHO European Region: final report*. Copenhagen: WHO Regional Office for Europe.
- Ming, L., Gao, R., and Pusari, N. (2006). Using Participatory Action Research to Provide Health Promotion for Disadvantaged Elders in Shaanxi Province, China. *Public Health Nursing*. 23 (4): 332-338.
- Núñez, D., Armbruster, C., Phillips, W., and Gale, B. (2003). Community-based senior health promotion program using a collaborative practice model: the Escalante Health Partnerships. *Public Health Nursing*. 20 (1): 25-32.
- Nutbeam, D. (1998). *Health Promotion Glossary*. Geneva: WHO.
- Nutbeam, D. (1999). Eficácia de la promoción de la salud – las preguntas que debemos responder. In: Unión Internacional de Promoción de la Salud y Educación para la Salud. *La evidencia de la eficacia de la promoción de la salud. Parte 2*. (pp. 1-11). Madrid: Ministerio de la Salud y Consumo.
- Organização Mundial da Saúde [OMS]. (1978). *Declaração de Alma-Ata. Conferência Internacional sobre Cuidados de Saúde Primários*. Alma-Ata: OMS.
- Organização Mundial da Saúde [OMS]. (2007). *Envelhecer com saúde: um desafio para a Europa – versão reduzida*. The Swedish National Institute of Public Health.
- Organização Mundial da Saúde [OMS]. (2008). *Relatório Mundial da Saúde 2008: Cuidados de Saúde Primários: Agora Mais do que Nunca (versão portuguesa)*. Geneva: OMS.
- Oxley, H. (2009). Policies for Healthy Ageing: An Overview. *OECD Health Working Papers*. 42, OECD Publishing.
- Papalia, D., Olds, S., and Feldman, R. (2006). *Desenvolvimento humano*. (8ª Ed.). Porto Alegre: Artmed Editora, SA.
- Pender, N., Murdaugh, C., and Parsons, M. (2011). *Health Promotion in Nursing Practice*. (6th Edition). New Jersey: Pearsons Education, Inc.
- Rifkin, S. (2009). Lessons from the community participation in health programmes: a review of the post Alma-Ata experience. *International Health*. 1: 31-6.
- Rifkin, S. (2014). Examining the links between community participation and health outcomes: a review of the literature. *Health Policy and Planning*. 29: ii98-ii106.
- Rifkin, S. (2016). Pursuing Primary Health Care: Community Participation in Practice, Doing Participatory Research. *JSM Health Education & Primary Health Care*. 1(2): 1018.
- Runciman, P., Watson, H., McIntosh, J., and Tolson, D. (2006). Community nurses' health promotion work with older people. *Journal of Advanced Nursing*. 55 (1): 46-57.
- Sanders, K. (2006). Developing practice for healthy ageing. *Nursing Older People*. 18(3): 18-25.
- Santana, P. (2000). Ageing in Portugal: regional inequities in health and health care. *Social Science and Medicine*. 50: 1025-1036.
- Santana, P. [Coord.], Alves, I., Couceiro, L., and Santos, R. (2008). *Envelhecimento e saúde em Portugal. PNS em foco - Boletim informativo n.º 2*. Lisboa: Alto Comissariado da Saúde – Gabinete de Informação e Prospectiva.
- Serapioni, M., and Matos, A. (2013). Participação em saúde: entre limites e desafios, rumos e estratégias. *Revista Portuguesa de Saúde Pública*. 31(1): 11-22.
- World Health Organization [WHO]. (1986). *First International Conference on Health Promotion*, Ottawa: WHO.
- World Health Organization [WHO]. (2003). *Diet, nutrition and the prevention of chronic diseases*. Report of a join WHO/FAO Expert Consultation. WHO Technical Report Series N° 916. Geneva: WHO.
- World Health Organization [WHO]. (2005a). *European strategy for child and adolescent health and development*. Copenhagen: WHO Regional Office for Europe.

- World Health Organization [WHO]. (2005b). *The European Health Report 2005: Public health action for healthier children and populations*. Geneva: World Health Organization.
- World Health Organization [WHO]. (2009). *A Snapshot of the Health of Young People in Europe*. Copenhagen: WHO.
- World Health Organization [WHO]. (2013). *The Helsinki Statement on Health in All Policies. The 8 th Global Conference on Health Promotion*. Helsinki: WHO.
- Wosinski, J., Cordier, S., Bachmann, A., Gagnon, M., and Kiszio, B. (2016). Effectiveness of nurseled healthy aging strategies for older adults living in the community: a systematic review protocol. *The JBI database of Systematic Reviews and Implementation Reports*. 14 (2): 1-7.
- Zhang, S., Wei, C., Fukumoto, K., Harada, K., Ueda, K., Minamoto, K., & Ueda, A. (2011). A comparative study of health-promoting lifestyles in agricultural and non-agricultural workers in Japan. *Environmental Health and Preventive Medicine*. 16: 80-89.

RETIREMENT EXPERIENCES, MENTAL HEALTH AND QUALITY OF LIFE IN SENIORS OF THE REPUBLICAN NATIONAL GUARD TRANSIT DETACHMENT OF BEJA

José Rodrigues
Polytechnic Institute of Beja
(rodrigues.jdl1@gnr.pt)

Maria Cristina Faria
Polytechnic Institute of Beja
(mcfaria@ipbeja.pt)

ABSTRACT

Based on an action-research perspective, the main objective of the present research is to know the experiences of the retirement, mental health and quality of life of pensioners of a Transit Detachment of the GNR to delineate intervention strategies that promote the well-being of retirees Professional group. For its accomplishment a qualitative and quantitative research methodology was used, of exploratory and transversal character. Participants in this study were people who were selected intentionally and with criteria, namely: to reside in Beja, to be willing to participate in the project and to be retired from the GNR Transit Detachment of the same locality. This included the participation of three elderly men, all male, aged 58-68, their wives and the District Commander of the GNR. The evaluation tools used were: the Semi- structured Interview on Mental Health and Well-being in gerontologists, the Mental Health Inventory and the WHOQOL-OLD adapted for the Portuguese population. The results obtained after this work, showed that the aging of the elderly is not happening in an active and successful way. Through the application of the Mental Health Inventory, it was verified that two participants did not present symptoms and one (P1) presented total results of severe symptoms, values indicative of lack of positive affection and low scores in the level of positive well-being. This participant was found to have severe mental health symptoms and indicative values that indicate that he “needs to improve his quality of life” due to deficiencies in past, present and future Satisfaction with goals achieved in life and projects to be carried out) and Social Participation (which assesses participation in daily activities, namely, in the community) The other two senior point to results of: “*regular quality of life*.” The research carried out allowed a better understanding of the specificity of the dynamics of reform in the GNR and contributes to reflect on intervention strategies in this area.

Keywords: Aging, Reform, Mental Health, Quality of life, Retired.

1. INTRODUCTION

Aging arises naturally and working life comes to an end and entry into retirement begins. At present, the advancement of medicine has provided conditions for people to live longer. Aging is a vital process inherent in all human beings, but the longevity achieved has no meaning without the essential conditions for obtaining quality of life. The existing paradigm, faced with the issues of aging, appears to be more comprehensive, in the sense of recommending the quality of life and health, in its most diverse nomenclatures, of the older ones with maintenance of physical, psychological and social autonomy, in which the elderly people are integrated into a secure society and can enjoy a full citizenship, considering this fact, together with the consolidation of the reform, its experiences and its consequences, it is thought that the relevance and timeliness of the theme is relevant. In that the promotion of the quality of life, in a stage of life in which the physical decline is unavoidable, implies to consider multidimensional criteria, like the maintenance of the social network and of significant activities.

The perspective of active aging emphasizes simultaneously the contributions made by the elderly to society through the goods they produce and the welfare and quality of life derived from the process (Kaye, Butter, & Webster, 2003). This concept applies at both individual and population level. Active aging, according to (Lopes, 2008, quoted by Escoval, 2008: 282), “enables people to reach their potential for physical, social and mental well-being through the course of life and to participate in society in accordance with Their needs, desires and abilities (...)”. At bottom, a stage of life with the continuation of active participation in society and not only the physically active body. Health is, for the generality of the elderly, a fundamental aspect when it is equated the respective psychological well-being. Maintaining mental health and active memory is a constant challenge as not all intelligence skills decline and others are preserved or may slightly improve. Mental illnesses are mostly associated with structural and functional alterations of the brain, often repercussions on some cognitive processes, such as memory (Nunes, 2008). As Fonseca (2011) argues, there is a great effort to understand the transition and adaptation to retirement, but it is important to note that none of these approaches can fully explain this transition. Therefore, the general objective of this work is related to the starting question: “*How are the experiences of the retirement related to the quality of life and mental health of the Gerontes of the Transitional National Guard of the Republican Guard in Beja?*”.

2. AGING

Aging is a process in development, common to all living things, but containing differentiated characteristics. It is an irreversible process, in which its natural term is the death of the organism (Fontaine, 1999). The same author also mentions that aging assumes a differentiated processing that reveals objective data, such as the reduction of intellectual capacity, physical degradation, tendency decrease of the perceptual and mnesic functioning, among others, and at the same time, subjective data, which constitute the representation that The person himself makes of his own aging. These changes suggest a set of movements in the individual's adaptive capacity, which may result in gains, which translate into growth, or losses, which translate into decline (Fonseca, 2005). The loss of social roles and the transition to an inactive life through retirement bring changes in the daily life of the elderly that may have negative repercussions on the healthy aging process (Bortolanza, Krahl & Blasus, 2005). In today's society, not only are older people more and more, but they also live longer, that is, there is a high average life expectancy, something that did not happen before. With the increase in the average life expectancy and the number of the elderly, the study of aging becomes essential. This is an issue that has arisen in today's societies, as a result of the growing decline in fertility rates, where the renewal of future generations is not guaranteed. This process usually occurs in the transition between the working age and the retirement age, which is more evident from the point of departure from the labor market and a separation from a period delimited by schedules, routines and responsibilities, ending in one unexpectedly, suggesting a break in the interrelationships of individuals. There is then a decrease in daily coexistence and the obligation to perform certain tasks, which is a privileged space for declining (Esteves, 1995).

Being old is not, as it has been in the past, an exceptional situation and tends to become increasingly vulgar (Rosa, 1993). Aging is a universal and irreversible process, replete with changes and transformations caused by time. According to Lima (2010), these transformations are linked to the interaction of internal factors, namely genetic and external patrimony, such as lifestyle (food, activity, among others). The concept of aging in Portuguese society is often associated with a specific phase of the life cycle, the retirement age (65 years), which is perceived as the beginning of old age (Squire, 2002). In turn, Paúl and Fonseca (2005) define aging as a genetically determined and environmentally conditioned energy loss, leading to an increased likelihood of contracting diseases, accidents, and instabilities. Already Moniz (2003), affirms that the aging is a process influenced by the social and cultural context in which the person inserts itself. As a multidimensional process, it focuses on the interdependence between biological, psychological and social age: the first is linked to organic aging and integrates the changes in the body associated with the passage of time, in which each organ undergoes modifications that alter the functional and individual capacity; the age psychological relationship is related to the skills that the individual mobilizes in response to changes in the environment and includes, for example, intelligence, memory and motivation; The social age refers to the role, status and habits of the individual relative to other members of society, is strongly determined by the culture and history of the country and translates indicators of family and social health. *"It is noteworthy that human aging is not only a demographic problem, but it is above all a more complex phenomenon that involves sociocultural, political and economic aspects in dynamic and permanent interaction with the biological and subjective dimension of individuals"* (Carvalho & Dias, 2011: 4). This means that it is not just a broader age pyramid at the top, the current situation is much more pertinent than this reality. Socio-cultural factors, Political and economic factors are daily causing several obstacles in the life of the elderly, allowing a decrease in subjective well-being. According to Costa (2002), although there is no biological, psychological or social basis for marking or defining the onset of aging, it may be seen as a decrease in adaptive capacities to the environment and life aggressions. Studies show that it becomes crucial to associate old age with a life stage with joy and disposition, interspersing opportunities related to an active life. It is important to stimulate the brain as well as constantly challenge the body and mind. Following an earlier concept of healthy aging, "Active Aging" emerges, which was introduced in 2002 by the World Health Organization (WHO) and is intended to be more comprehensive, extending beyond health, To socioeconomic, psychological and environmental aspects, in order to improve the quality of life of people who, over time, are aging (Ribeiro & Paúl, 2012). WHO (2005: 13) proposed the concept of active aging as the *"process of optimizing opportunities for health, participation and safety in order to increase quality of life during aging"*.

Quality of life, well-being, and maintenance of mental qualities are directly related to social activity, socializing, feeling integrated and useful in the family and community (Carvalho & Dias, 2011: 164). This concept applies at both individual and population level. Active aging, according to (Lopes, 2008, quoted by Escoval, 2008: 282), *"enables people to reach their potential for physical, social and mental well-being through the course of life and to participate in society in accordance with Their needs, desires and abilities (...). At bottom, a stage of life with the continuation of active participation in society and not only the physically active body. Often, derived from the constant stereotypes, the elderly are considered as burdens, or someone who no longer 'produces'".* On the contrary, it is evoked without realizing that the older is the individual, the more active his role in society is, which represents a potential in it. In order to make society more aware of the contribution of older people, the European institutions in 2012, the European Year for Active Aging and Solidarity between Generations, launched a series of actions aimed at combating social exclusion Reinforcing their active participation in society, thus allowing healthy and independent aging. Active Aging is promoted in three areas: employment, participation in society and autonomy. With regard to the former, it is necessary to give better prospects of employment to older workers; As regards the latter, to ensure greater recognition of the contribution of older people to society and to create the conditions to provide them with more support; In relation to the third domain (autonomy), it is also necessary to develop the capacity of the elders in order to maintain their autonomy for the maximum possible time.

Verdi composed the opera "Falstaff", about eighty years old, Michelangelo made the frescoes of the Sistine Chapel almost at the end of his life, at the age of eighty-nine. These facts point to a heterogeneity, in which aging is not a fatality, but a time with new aspects of life and combinations gathered by experience and facts lived and shared previously. In short, the way of aging is related to the way we develop and the aging process is characterized by being continuous, irreversible

and universal, implying the occurrence of several changes in the organism that have repercussions in different dimensions of human development. The notion of active aging refers to the possibility of aging with health and autonomy, continuing to participate fully in society as an active citizen. Regardless of age, everyone can continue to play a role in society and enjoy a good quality of life. The challenge is to make the most of the enormous potential that each one retains to the end of life. Nevertheless, in their universality, there are several forms of aging, associated with both the variability of the characteristics of the individuals and the socio-cultural context. In this sense, aging is related not only to biological and psychological changes, but also to the dominant social patterns and the way societies view aging.

3. MENTAL HEALTH IN AGING

Although old age is not synonymous with diseases, aging can result in multiple illnesses, impairments and disabilities, with consequent deterioration in the health of the elderly, both in physical and / or mental aspects. The capacity we have to pay attention, to remember, to work the information received from our interior and the external environment, is due to cognition. This allows us to communicate with others, plan our interventions, execute them, evaluate the results. Throughout life, all the activity developed, however simple it may be, depends on the articulation of the various capacities that the person possesses. When these capacities are altered, this will sharply compromise the interaction with the environment that surrounds us. Mental illnesses are mostly associated with structural and functional alterations of the brain, often repercussions on some cognitive processes, such as memory (Nunes, 2008). Aging is the height of life in which the person is confronted with significant losses, not only of people who have had importance for himself, such as family members, friends, but also, with the loss of the autonomy in the accomplishment of their activities of daily life that appear of normal form (progressively) or of pathological form (abrupt or gradual). Aging is a common experience for all those who have the privilege of living long lives.

The process of aging differs from person to person, it is marked by different modes of experimentation of the experiences that cross it. Health is, for the generality of the elderly, a fundamental aspect when it is equated the respective psychological well-being. Maintaining mental health and active memory is a constant challenge as not all intelligence skills decline and others are preserved or may slightly improve.

Cognitive decline in the elderly is confined to normalcy on the one hand and dementia on the other. Both boundaries are difficult to delimit, which leads to relevant questions regarding differential diagnosis. These difficulties stem from the fact, for example, that memory complaints are frequent in elderly people and that there is some cognitive decline in normal aging. Old age is a period of many changes in a person's life, learning to cope with these changes is critical if this period is to flow naturally and not undermine the interpersonal relationships of the elderly.

4. RETIREMENT

At the present time, practically all the people assume the expectation that after working a specific period of time, they retire. Retirement is therefore a key aspect of modern life and widely held to be a guarantee. However, the pension system and the retirement process is a relatively recent life cycle event in the industrialized world. From the historical point of view, it was only from the second half of the twentieth century onwards that it became possible for older workers not only to retire, but also to do so at specific mandatory ages. Thus, retirement as a distinct period of human life derives from social security systems that provide adequate income for the elderly, allowing them to withdraw from the labor market. Old age and retirement came to represent two distinct realities (the age of being old now appears later than retirement age), which undermines the legitimacy of the reform in the face of old age and the assumptions of social solidarity and contracts Interrelationships, on which they were based (Fernandes, 2008).

This disturbance of social security systems, not only in terms of sustainability, but also in terms of the legitimacy of social contracts and the principles of social citizenship (Mendes, 2011) promises, in Portugal, given the projections in Demographic aging, and the sharp decrease in the number of active contributors, is a social challenge, the resolution of which will imply the emergence of new strategies and social policies, adequate to the sociocultural characteristics of our country. Among them is the increase in the age established for entry into retirement, which is estimated to reach within a few years at 70 years of age (Mendes, 2011).

5. RETIREMENT IN GNR

The regime of transition to pre-retirement (reserve) and reform of the military of the National Republican Guard, has some peculiarities, a little different from those of other citizens, which I will state, with the applicable legislation and the definitions of some concepts, indispensable For a good understanding, of the whole process.

It is important to define some pertinent concepts in order to understand the present chapter:

- *Military Service Time* - The length of service is counted as a period of military service, plus the percentages of legally established increases and the length of time the military stays in the reserve outside the service effectiveness, which may not exceed five years. (Article 108 of the EMGNR);
- *Length of Service Provided to the State* - The length of service, in the sense of service rendered to the State, is counted as the length of military service, plus that provided in the exercise of public functions; The period of service rendered to

the State shall be counted for the purpose of calculating the remuneration of the reserve and the retirement pension in accordance with the respective legal regimes applicable. (Article 107 of the EMGNR)

- *Effective Service Time* - The length of service rendered in the Guard or in military or police functions outside its scope, as well as in other situations expressly provided for in the EMGNR, is counted as an effective service time: Frequency of training courses that enable entry in the pictures of the Guard; From the time when the military was compulsively removed from service, provided that he was reinstated by review of the respective process; (Article 109 of the EMGNR)
- *Reservation* - The reservation situation is the one to which the Guardian military travels, verified that the conditions established in the GNR military statute, while remaining available for the service: - on the effectiveness of the service, or - out of service effectiveness (article 72 of the EMGNR);
- *Conditions of Passage to the Reserve* - Reach the age limit established for the respective station; Or has provided 20 or more years of service, the request is granted; Or declare, upon reaching the age of 55 years and 36 years of service; (Article 85 of the EMGNR);
- *Retirement* - Military personnel in the asset or in the reserve who, after the age of 60, require a change to the retirement situation (Article 93.1 (b) of the EMGNR).

According to the Resolution of the Council of Ministers No. 110/2005 of June 2, “*the Government determined that special retirement and retirement regimes, which establish retirement ages, minimum service hours or Different from the general regime applicable to public servants. In the case of the security forces, and in particular the Republican National Guard, it is understood that, on the one hand, the special pain and wear and tear on the performance of their duties and, on the other hand, the physical conditions necessary for the performance of the task, the same length of retirement age as for the generality is not justified Of the servants of the State (for 65 years), maintaining the age, already in force today, of 60 years (...)*”. However, it is noted that the age at which the actual service rendered in GNR ceases. Is much lower than the age of 60 years provided for by law since the Guardian military is entitled to change to 36 years of service regardless of age. As these 36 years of service are counted with a 25% increase, the age at which the actual service can cease can be less than 50 years. After 5 years in the reserve, the GNR military retired, regardless of age and without any pension reduction.

6. METHODOLOGY

This chapter aims to approach the methodology used to carry out the research process, so as to frame it from the methodological point of view. Thus, to answer the question of departure, the objectives and characteristics of the methodology were taken into account.

The methodology assumes an essential relevance in the course of any social project, taking into account that the final results are dependent on the procedure, due to the method and the way the results were obtained (Perez Serrano, 2008). In the accomplishment of the present work the methodology of qualitative and quantitative research was used, through a cross-sectional exploratory case study based on action research. According to Fortin (1999: 40) the research design is the “logical plan elaborated and used by the researcher to obtain answers to the research questions”. Agreeing to Bogdan & Biklen (1994), “*action research is the collection of systemic information with the aim of promoting social change*” (p.292). Action research is the type of applied research in which the researcher is actively involved in the cause of research. In order to develop greater familiarity with the problem and to explain it, the objective of the present investigation is exploratory. Exploratory research aims to “develop, clarify and modify concepts and ideas, in order to formulate more precise problems” (Gil, 2008: 46).

In order to understand the question of the experiences of the reform, mental health and quality of life of the military of the GNR, who served in the Transit Detachment of the city of Beja, a case study was carried out in that city. With this, the retired professionals of this security force, their relatives (wives) and the current District Commander of the Institution were approached to obtain data in order to respond to the starting point stated at the beginning of the investigation. The type of approach carried out in this study was the mixed approach, since qualitative and quantitative research techniques were used to collect the data, through interviews and questionnaires, respectively. According to Fortin (1999: 22) the quantitative method is the “collection of observable and quantifiable data” and aims to “*contribute to the development and validation of knowledge*”. The same author says that the qualitative method is the “*absolute and broad understanding of the phenomenon*” and its purpose is “*to describe and to interpret*”. In this way, through the interviews and questionnaires, a better perception of the studied phenomenon can be obtained.

As a purpose and delimitation of the problem, the research project under study has as main objective to know the experiences of the reform, mental health and quality of life of the gerontes of the Transit Detachment of the National Republican Guard in Beja. The intention is to identify the experiences of the reform, to know the mental health and to evaluate the quality of life of the participants. According to Espinoza, 1986 quoted in (Perez Serrano, 2008: 46), the general objectives are: “*those broader purposes that define the frame of reference of the project*”. However, the specific objectives are distinguished by particularizing more than the general objectives, which makes it clarify more what is desired with the project (Perez Serrano, 2008).

The starting point of the present investigation is to understand, “*In what way are the experiences of the reform related to the quality of life and mental health of the Gerontes of the Transit Detachment of the Republican National Guard in Beja?*”

It presents as general objective:

- To know the experiences of the reform, mental health and quality of life of the gerontes of the Transit Detachment of the National Republican Guard in Beja.

And as specific objectives:

- Identify the experiences of the retirement, to know the mental health in gerontes, to evaluate the quality of life and to increase the feeling of utility and belonging to the community.

6.1 Participants

According to Quivy & Campenhoudt (2005: 80) a population is “a set of constituent elements of a whole” and the “subset of a population or a group of subjects that form part of the same population” (Fortin, 1999: 202) is the sample. In this study, the target audience consists of elements that contain selection criteria, previously defined by the researcher. That being said, this is a sample for convenience. Thus, the present investigation had as participants (population) a total of 3 military personnel, all male, with 58 (P1), 63 (P2) and 68 (P3) years of age, all married and with children, their wives (Respectively P4, P5 and P6) and the Honorary District Commander of GNR de Beja (P7), as mentioned in the table below (Table 1). They were selected for having in common the criteria of: residing in Beja, of showing availability and being retired from the GNR Transit Detachment of the same locality.

Table 1 - Characterization of Participants

Code Participant/ Kinship / Function	Gender	Status	Age	Formation	Children	Grand children
P1 - Participant 1	Male	Pré-retirement	58	9th year	2	No
P2 - Participant 2	Male	Retirement	63	8th year	4	4
P3 - Participant 3	Male	Retirement	68	9th year	2	3
P4 - Wife of the P1	Female	Active	52	Bachelor's Degree	----	----
P5 - Wife of the P2	Female	Retirement	60	11th year	----	----
P6 – Wife of P3	Female	Retirement	65	6th year	----	----
P7 - - District Commander of GNR /Beja	Male	Active	51	Masters	----	----

6.2 Instruments

At this point, the instruments used to collect data and to whom they were addressed are explained and explained. For (Perez Serrano, 2008) the selection of instruments to be used in research must be very demanding and clear. It is up to the researcher to choose the best type of instrument to use, through his / her study objectives, as well as the results that he / she intends to reach. Questionnaires and interviews are “primary data,” since they are “researched by the researcher in order to satisfy a need for present and specific information” (Sarmento, 2013: 16). Thus, in this study, as instruments of data collection, the following were used: the semi-structured Neuropsychological Evaluation Interview; Mental Health Inventories Adapted from the Mental, Health Inventory (Ribeiro, 2001) and the WHOQOL - OLD quality of life assessment. The Interview with a Semistructured Neuropsychological Assessment model, of mental health and wellbeing in seniors, was used to collect data about the participants / gerontes, their relatives (wives) and the excellent district commander of the GNR of Beja. The Semistructured Interview applied to the district commander of the GNR of Beja, had as general objective to collect institutional information on the process of retirement of the geronte in GNR. In this sense, it was considered fundamental to carry out an in-depth anamnesis, in order to obtain information about their understanding of the reform, in a military context, and about how the GNR institution prepares the retirement of its gerontes.

The dimensions and sub-dimensions discussed in the interview were: the understanding of GNR reform, reform process in GNR (GNR reform process, successful GNR reform and preparation for Reform), to understand the interference of the reform process in the mental health of the GNR military (interference of the mental health reform) and to understand the interference of the reform process in the quality of life of the GNR military (interference of the reform in the quality of life).

The Semistructured Interview applied to the relatives of the gerontes had as general objective to collect familiar information about the experiences of the gerontes reform. In order to do this, it was considered fundamental to carry out an in-depth anamnesis in order to obtain information about their understanding of the reform in a military context, about the way in which their families experience their reforms and understand the interference of the health reform process Mental health and quality of life of gerontes.

The dimensions and sub-dimensions discussed in the interview were: understanding of GNR reform (understanding about retirement, family reform process, transition to successful family retirement and retirement preparation), understanding the Reform process in the mental health of the GNR military and to understand the interference of the reform process in the quality of life of the GNR military (interference of the reform in the quality of life).

The Semistructured Interview applied to the gerontologists had as general objective to collect information on the experiences of the reform, mental health and quality of life of gerontes. In order to comply with this objective, it was considered fundamental to carry out an in-depth anamnesis, in order to obtain information about their sociodemographic

data, state of consciousness, health and well-being, understanding about their health, wellbeing, understanding interference of the reform process in the mental health and quality of life of the geronte, as well as the experiences of successful reforms.

The dimensions and sub-dimensions addressed in the interview were: the sociodemographic data and the interviewee's state of consciousness (orientation, pre-morbid level and attitude of the interviewee in relation to their situation), interviewee's main complaints (subjective and spontaneous complaints), social support (Social integration networks, neighbors and family members, social isolation and friendship), aging (successful aging), mental health (mental health reform interference), quality of life (interference of the reform in the quality of life) and experiences of the Successful retirement (and successful retirement experiences).

The Mental Health Inventory, adapted from the Mental Health Inventory (MHI) by Ribeiro (2001), was also used. Regarding the questionnaire survey, this is "a research tool that allows data to be collected, which, after its introduction into a database (...), produces information, which results in results" (Sarmiento, 2013: 67).). The Mental Health Inventory, adapted from the Mental Health Inventory (MHI) by Ribeiro (2001) consists of a self-response questionnaire, with 38 items, which are distributed in five scales: Anxiety; With ten items; Depression, with five items; Loss of Emotional / Behavioral Control, with nine items; Positive affection, with eleven items; Emotional Ties, with three items. In turn, these five subscales are grouped into two other dimensions that measure respectively: Psychological Distress (resulting from the grouping of subscales of Anxiety, Depression, and Loss of Emotional / Behavioral Control); And Psychological Well-Being (obtained from the grouping of subscales, Positive Affect and Emotional Bonds). The answer to each item is organized in an ordinal scale of 1 to 6, with items 1 and 28 being punctuated from 1 to 5 and the other items are quoted inverted. The total score will result from the sum of the gross values of the items that make up each scale, and the total results below level 52 will point to the existence of severe symptomatology and the results below 60, for the existence of moderate symptomatology. The higher values will correspond to a higher level of Mental Health.

Finally, the WHOQOL - OLD quality of life assessment inventory was also used. This instrument of quality of life assessment, WHOQOL-OLD module consists of 24 questions and their answers follow a Likert scale (from 1 to 5), whose score is attributed to six domains, which are: "Sensorial Functioning", "Autonomy", "Past Activities, Gifts and Future", "Social Participation", "Death and Dying" and "Intimacy". Each of the domains has 4 questions; And responses range from 4 to 20. Basically, high values represent a high quality of life, low values represent a poor quality of life.

6.3 Procedure

In this chapter, the procedures and techniques used to carry out the investigation, which began in November 2016, are explained. The procedures employed are in accordance with the techniques explained by Fortin (1999), Sarmiento (2003) and Quivy & Campenhoudt (2005), who are the authors of reference in the scope of the research methodology and, when consulting different authors, it was possible to compare the different points of view and to use those that best fit the present investigation.

It was therefore necessary to provide clarification on the purpose of the investigation to the participants in it and to request their informed consent to allow the use of the data collection instruments. All participants in the project were previously contacted by phone in order to hear their availability for interviews, questionnaires and scheduling.

All data collection instruments (Semistructured Interview on Mental Health and Wellbeing in Geronetes, Mental Health inventories and Quality of Life assessment) were individual and performed in the participants' homes, except for the GNR of Beja that was made in the GNR barracks. They were performed on different days, had the average duration of approximately 1 hour per session, in a total of 3 sessions and with a spacing of one week between each test. Its application was conducted in a context that safeguards the privacy of participants.

They were asked to respond as honestly as possible, ensuring that the answers obtained were anonymous and confidential. Interview procedures required a number of considerations, namely: encouragement of verbal interaction, reinforcement that all responses would be valid and that there were no right or wrong answers, formulation of simple questions, repeating or clarifying, to ensure that the Interviewee understood what was being asked.

In applying the Mental Health and Quality of Life assessment inventories, although they were self-response questionnaires, the interviewer read the instructions and explained how they were completed to the participants, informing them that the reference period Answers is relative to the period of the last two weeks.

7. RESULTS

At this point, the data obtained in the questionnaire surveys carried out and the interviews are presented. According to (Amado, 2013: 299), *"the question of data analysis is central to research." The truth is that it is not enough to collect the data, it is necessary, later, to analyze and interpret them, because it is not possible to do one thing without the other. The analysis involves working with the data, its organization, division into units, synthesis, search for patterns, discovery of important aspects of what (eg, Must be seized and the decision of what is to be passed on to others.*" Thus, in the analysis of the interviews, the analysis of its contents was used, each interview being explored individually, and, subsequently, a global analysis of the interviews was carried out.

For the analysis of the Mental Health Inventory data, Excel software was used to obtain the total results of each questionnaire and for the evaluation of the quality of life evaluation data, the evaluation of the quotation of the items by the dimensions was carried out. Therefore, 7 interviews (3 interviews with the seniors, 3 with their wives and 1 with the GNR district commander) were carried out to the participants in the investigation and 6 questionnaires to gerontologists (3 on mental health and 3 on quality of life), Which have been thoroughly analyzed in order to arrive at the results and then to answer the objectives that will answer the question of departure.

7.1 Neuropsychological Assessment Interviews

Participant 7 (interviewed E7) is the current District Commander of the Republican National Guard, is 51 years old, has 32 years of service and has been running GNR de Beja since March 2013. Previously served in the district of Portalegre, where it is natural. He has a degree in Business Management and a Master's degree in Journalism and Garrison. The general objective of the interview was to collect institutional information on the process of reform of the geronte in the GNR. Through the Semistructured Interview on Mental Health and Wellbeing in Gerontes it was concluded that in the dimension “*what the understanding about the reform in the military context*” and sub-dimension, understanding about the reform in GNR:

Table 2 - General Analysis of Neuropsychological Evaluation Interviews

DIMENSION	SUB-DIMENSION	GLOBAL ANALYSIS
Collect sociodemographic and State of consciousness	Orientation	- Reveal spatial, temporal and diachronic orientation (E1, E2 and E3)
	Pre-morbid level	- Respond to questions (E1, E2 and E3)
	Geronte's attitude towards his situation	- Reveal good attitude (E1, E2 and E3); - It easily locks up (E1)
Main patient complaints	Subjective and spontaneous complaints	- You feel depressed (E1); - Loss of normal vision at age (E2); - Short-term memory loss (E3); - Feel anxiety (E1, E2 and E3)
	informal support networks - neighbors and family members	- You feel good where you live and maintain a good neighborly relationship (E1, E2 and E3) - Lives with spouse (E1, E2 and E3)
Social support	Social isolation	- Spends many hours alone (E1); - Spends a few hours alone (E2, E3); - Does not have social support (E1); - Have social support (E2, E3).
	Friendship relations	- Family and friends (E1, E2, and E3)
Aging	Aging Successful	- Have health (E1, E2 and E3); - Economic well-being (E1, E2); - Together with the family (E1, E2 and E3); - Do not be doing nothing (E2, E3). - Have social activities (E1); - Being with family and friends (E2, E3)
Mental health	Interference with mental health reform	- Positive form, acquired better mental health (E2 and E3); - Have more free time (E3); - More comfortable, less agitated (E3); - Exercise (E2); - Negative form, acquired worse mental health, causes depression (E1); - Being unoccupied, proves anxiety (E1)
Quality of life	Interference with the quality of life reform	- Acquired better quality of life (E2 and E3); - Acquired worse quality of life (E1); - Free time for social and / or play activities and be with friends and family (E2, E3); - Disappointment at being unemployed (E1). - Sit alone (E1); - Good to have free time (E1 and E2); - Desired and expected (E1, E2 and E3); - Good, family and leisure (E2); - Too busy in activities (E3)
Experiences / Reform successful	Successful retirement experience	-
Participation in community project	Participation in community project	- Yes (E1, E2 and E3)

The Commander thinks that the reform in the GNR obeys several legal requirements (age and length of service), is no more than a separation of the service with the allocation of a pension. The most important aspects to emphasize are those included in the Statute of the Military of the Guard, such as age, length of service, requisition, reaching the age limit.

The general analysis of the Neuropsychological Assessment Interviews (Table 2), in the state of consciousness dimension, made it possible to record the interviewees' information regarding the sub-dimensions, orientation, pre-morbid level and patient's attitude towards their situation. In the sub-dimension guidance, respondents were oriented and assertive in their responses; In relation to the pre-morbid level, answered all the questions, being able to identify their daily routines, as well as aspects of their personal and professional life, past and present, regarding the participants' attitude towards their situation, showed a good attitude and comfort with your life. In the interviewees' main dimension, the analysis allowed to scrutinize

subjective and spontaneous complaints, where E1, E2 and E3 feel anxiety and E3 feels depressed, while E2 has vision loss and E3 reveals short-term memory loss. In the social support dimension, the participants present very positive responses, since the sub-dimensions, informal-neighbor support networks and family / friendship relations are quite complete and social isolation is practically null. In the dimension of aging and sub-dimension of successful aging, the participants consider this theme as a period of well-being, where themes related to good health, economic well-being and being with the family stand out.

In the dimension of mental health and interference of the reform in this, it is emphasized the personality trait that the interviewees demonstrate: E1 presents symptoms of depression, spends a lot of time alone, points out as a factor of destabilization the fact that the wife continues in the active life, is A very introverted person. E2 and E3 are more “socially extroverted”, they do not present indicators of problems at this level. In the dimension of quality of life and sub-dimension interference of the reform in this, it should be noted that the respondents E2 and E3, have acquired better quality of life, and E1 states that worsened their quality of life and disappointed with the reform. Finally, in relation to the experience / retirement dimension and experience of successful reform, participants E2 and E3 view it as quiet, close to the family and with some economic power; He shares, but says that he has not improved his quality of life because he feels very lonely. In conclusion, we can say that the interviewees show very positive sociodemographic indexes, although. E1 is very dependent on the family, (the availability of the wife), a factor that depresses him. E2 and E3 reveal that their experiences of retirement, mental health and quality of life reveal clear indicators of balance, although E3 shows that they are involved in many activities which, for the moment, presents no problem to them, Will make it more fragile in the future.

7.2 Mental Health Inventory

Through the application of the Mental Health Inventory, the objective was to evaluate the Mental Health of the elderly participants. This assessment is based on five scales, characterized by: positive affect, emotional ties, loss of emotional / behavioral control, anxiety and depression. These scales are divided into two dimensions: positive well-being and distress. Positive well-being is the sum of the scale of positive affect and emotional ties, whereas distress is the sum of the range of emotional / behavioral control, anxiety and depression. In the graphs will be presented the individual results, transformed to zero to one hundred (0 to 100), of each one of the interviewees / participants.

The Participant P1, regarding the primary dimensions, in terms of the positive affect, presents 32.7 points; Emotional ties point to 53.3 points, loss of emotional / behavioral control to 56.8 points, anxiety to 50 points and depression to 58.3 points. In the positive well-being dimension it obtained 37.1 points, the distress reached 54.2 points. The total of the result is 47.8 points (below 52 points) points to the existence of severe symptoms, at the level of the evaluation of the mental health of the participant P1.

The Participant P2, regarding the primary dimensions, at the level of the positive affect presents 67.2 points, the emotional ties show 100 points, the loss of emotional / behavioral control 97.7 points , Anxiety points to 96 points and depression to 91.6 points. In relation to the positive well-being dimensions, it obtained 74.2 points, and the distress reached 95.7 points. The total result is 87.7 points. The total result of 87.7 points (above 60 points) points to the absence of any symptoms at the level of the assessment of the mental health of the participant P2.

By means of the graphical representation (graphic 3) it is possible to visualize that the Participant P3, with respect to the primary dimensions, at the level of the positive affect presents 49.09 points, the emotional ties show 53.3 points, the loss of emotional / behavioral control 88 , 6 points, anxiety point to 84 points and depression to 87.5 points. In relation to the positive well-being dimensions obtained 50 points, the distress reached 86.4 points. The total result is 72.8 points. The total result of 72.8 points (above 60 points) points to the absence of any symptoms in the evaluation of the mental health of the participant P3.

The application of the WHOQOL-OLD Quality of Life Inventory was aimed at evaluating the quality of life of the elderly participants. The Inventory consists of 24 questions. Their responses follow a Likert scale (from 1 to 5) attributed to six domains / facets, which are: “Sensory Skills”, “Autonomy”, “Past Activities, Gifts and Future”, “Social Participation”, “Death and Dying “and” Intimacy “. Each of the domains / facets has 4 questions, and the answers can range from 4 to 20 points, for a total of 6 domains. Therefore, a total 120 (5 points average) points corresponds to 100% quality of life. Table 2 shows the WHOQOL-OLD results, bearing in mind that: quality of life needs to improve (when the mean for 1 to 2.9 or total up to 11.6 points); Regular (average for 3 up to 3.9 or total up to 15.6); Good (average 4 up to 4.9 or total up to 19.6) and very good (average equal to 5 or total 20).

P1 - Through the representation of table 2 it is verified that the participant, in relation to the domains / facets, has the following values:

- Sensory functioning / abilities, which assess sensory functioning and the impact of loss of sensory abilities on participation in activities and interaction, presents 10 points; Needs improvement:
- Autonomy, which assesses the ability to live independently / independence and make decisions, presents 11 points; Needs improvement:
- Past, present and future activities, which assesses the satisfaction with goals achieved in life and projects to be carried out, presents 9 points, needs to improve;
- Social participation, which evaluates participation in daily activities, namely in the community, presents 9 points; Needs improvement:
- Death and dying, which evaluates concerns and fears about death and dying, presents 11 points; Needs improvement:
- Intimacy, which evaluates the ability to have personal and intimate relationships, 15 points; Regular quality of life.

The total result of 65 points, (2.66 of average) that corresponds to a percentage of 53.3%, points to the result of: needs to improve their quality of life.

P2 - With respect to the participant P2, also through the representation of table 2, it is possible to visualize that with respect to the domains / facets, it presents the following values:

- Sensory functioning / abilities, which evaluate sensory functioning and the impact of loss of sensory abilities on participation in activities and interaction, presents 15 points; regular:
- Autonomy, which evaluates the ability to live independently / independence and make decisions, presents 16 points; good:
- Past, present and future activities, which assesses the satisfaction with goals achieved in life and projects to be carried out, presents 17 points; good:
- Social participation, which evaluates participation in daily activities, namely in the community, presents 17 points, good:
- Death and dying, which assesses concerns and fears about death and dying, presents 12 points, regular:
- Intimacy, which evaluates the ability to have personal and intimate relationships, 17 points; Good quality of life.

The total score of 94 points, (3.91 average) that corresponds to a percentage of 78.3%, points to the result of: regular quality of life.

P3 - Through the representation of table 2, it is possible to visualize that the participant P3, with respect to domains / facets, has the following values:

- Sensory functioning / abilities, which assess sensory functioning and the impact of loss of sensory abilities on participation in activities and interaction, presents 12 points; regular:
- Autonomy, which evaluates the ability to live independently / independence and make decisions, presents 15 points; regular:
- Past, present and future activities, which assesses the satisfaction with goals achieved in life and projects to be carried out, presents 12 points; regular:
- Social participation, which assesses participation in daily activities, namely in the community, has 14 points; regular:
- Death and dying, which assesses concerns and fears about death and dying, presents 12 points; regular:
- Intimacy, which assesses the ability to have personal and intimate relationships, 13 points; regular.

The total score of 76 points, (3.16 of average) that corresponds to a percentage of 63.3%, points to the result of: regular quality of life.

8. CONCLUSIONS

It was possible to verify that the participating seniors are not actively aging. In addition, one of them points to the existence of serious symptoms in the evaluation of mental health and that needs to improve their quality of life. The evidence from this study has shown that the newly retired participant perceives the transition to retirement as a transition from life and that the change that involves this same process requires an adaptive effort, endowed with some complexity that has not yet dominated. Also, the way in which all participants experience this adaptive process is based on their personal characteristics, the coping experiences and strategies they already had, the support networks they have and the characteristics of the process of conjugality which have been building over time.

It turns out that the participants are very dependent on the availability of the people with whom they live (wives). If they are still in the active life, it makes them feel a few "lost", not knowing well what to do with their available time, preventing them from having a greater mental readiness, to face the reform of a more positive way. On the other hand, if they are already reformed, it seems to increase their quality of life and their mental health.

Regarding the contextualization of previous experiences, which was transversal and was very present in the discourses of the participants of this study, its emission noted that the present options result largely from past experiences (agriculture) and that would have been due to the Which made their options adaptive to reform.

In short, it can be concluded that the condition of being alone or accompanied in terms of marital relationship, influence the quality of life and the experiences of the reform.

REFERENCES

- Amado, J. (2013). *Manual de Investigação Qualitativa em Educação*. Coimbra: Imprensa da Universidade de Coimbra;
- Assembleia da Republica, *Resolução do Conselho de Ministros N° 110/2005, de 2 de junho*. Publicado no Diário da República — I Série-B n°. 124 — 30 de junho de 2005;
- Bogdan, R. & Biklen, S. (1994). *Investigação Qualitativa em Educação Uma Introdução à Teoria e aos Métodos*. Porto: Porto Editora;
- Bortolanza, M., Krah, S. & Biasus, F. (2005). *Um olhar psicopedagógico sobre a velhice*. Rev. Psicopedagogia, 22 (68): 162-70;
- Carvalho, P. & Dias, O. (2011). *Adaptação dos Idosos Institucionalizados*. Millenium, 40: 161-184;
- Costa, M. A. (2002), *Cuidar idosos: formação, práticas e competências dos enfermeiros*. Coimbra: Formasau;

- Escoval, A. (2008). *Financiamento – Inovação e Sustentabilidade*. Lisboa: Offsetmais Artes Gráficas, S.A;
- Estatuto dos Militares da Guarda Nacional Republicana (EMGNR), aprovado pelo Decreto-Lei n.º 297/2009, de 14 de Outubro, com as alterações introduzidas pela Declaração de Rectificação n. 92/2009, de 27 de Novembro;
- Esteves, J. A. (1995). *Jovens e Idosos. Família, Escola e Trabalho*. Porto: Edições Afrontamento;
- Fernandes, A. (2008). *Questões Demográficas: Demografia e Sociologia da População*. Lisboa: Edições Colibri-Faculdade de Ciências Sociais e Humanas da UNL;
- Fonseca, A. (2005). *Desenvolvimento humano e envelhecimento*. Lisboa: Climepsi;
- Fontaine, R. (1999). *O envelhecimento e as suas causas*. Em Fontaine, R. (Ed.), *Psicologia do Envelhecimento* (pp. 19-32). Lisboa: Climepsi;
- Fortin, M. (1999). *O Processo de Investigação: da conceção à realização (1.ª Edição)*. Loures: Lusociência;
- Gil, A. (2008). *Métodos e Técnicas de Pesquisa Social (6.ª Edição)*. São Paulo: Editora Atlas;
- Kaye, L.W., Butter, S.S., & Webster, N.M. (2003). *Toward a productive ageing paradigm for geriatric practice*. *Ageing International* Spring, 28(2), 200-213;
- Lima, M. P. (2010). *Envelhecimento (s)*. Estado de Arte, Imprensa da Universidade de Coimbra;
- Mendes, F. (2011). *Segurança Social: O futuro hipotecado*. Lisboa: Fundação Francisco Manuel dos Santos;
- Moniz, J. (2003). *A Enfermagem e a pessoa idosa – A prática como experiência formativa*. Loures: Lusociência;
- Nunes, B. (2008). *Memória: funcionamento, perturbações e treino*. Lisboa: Lidel;
- Perez Serreno, G. (2008). *Elaboração de Projectos Sociais – Casos Práticos*. Porto: Porto Editora;
- Quivy, R., Campenhoudt, L., (2005). *Manual de Investigação em Ciências Sociais (4ª Edição)*. Lisboa: Gradiva.
- Rosa, M. (1993). *O desafio social do envelhecimento demográfico*. *Análise Social*, vol. 122, 679-689;
- Sarmiento, M. (2013). *Metodologia Científica para a elaboração, escrita e apresentação de teses*. Lisboa: Universidade Lusíada Editora;
- Squire. A. (2002) *Saúde e Bem-Estar para Pessoas Idosas: Fundamentos Básicos para a Prática*. Loures: Lusociência.

SENSE OF COMMUNITY AND PRODUCTIVE AGING: PROTECTIVE FACTORS OF WEAR OF AN ELDERLY INFORMAL CAREGIVER

Cláudia Sofia Chora
Polytechnic Institute of Beja
(cslc11@hotmail.com)

Maria Cristina Faria
Polytechnic Institute of Beja
(mcfaria @ipbeja.pt)

Ana Isabel Fernandes
Polytechnic Institute of Beja
(afernandes@ipbeja.pt)

ABSTRACT

This is a case study of an elderly woman of 70 years of age, informal caregiving, professionally active and living in the Santa Margarida do Sado community.

After interviewing the caregiver and applying the evaluation scales (Sense of Community Index, Basic Need Satisfaction in General Scale and Carers Assessment of Difficulties Index - CADI) it is possible to conclude that the caregiver is well integrated in her community, establishing good relationships with her family, and customers/neighbors. Her skills as caregiver and professional activity are recognized and social support is evident. Although she faces her aging process positively she assumes to have less time for herself, family and friends, and consequently less quality of life. Concerning the others interviewers (caretakers, husband, son, and customers/neighbors) they recognize her skills as caregiver as they are her main family and community support.

Regarding these results it is present the intervention project "Caring for the carers - + 65 - Strategies and Support", which aims to respond to the identified needs by the Caregiver and making the task of caring less complex and demanding.

Keywords: Informal Caregiver, Productive/Successful Aging, Community Feeling, Life Quality and Well-being.

1. PRODUCTIVE/SUCCESSFUL AGING

The concept of productive aging emerged in the 70's among professionals from political, social and academic contexts, in order to combat the current image of the elderly, who presented them as fragile, dependent and non-productive people, that is, a burden for Society and for the younger generations (Caro, Bass and Chen, 1993).

Productivity in the aging process, where there is significant and satisfactory activity, where the elderly are involved in a structured and continuous way, has a positive impact on their lives.

Productive/successful aging is associated with the elderly's proactivity who regulate their life quality through the definition of objectives and efforts to achieve them. They use resources that are useful for adapting to age-related changes: health and well-being, emotional stability, autonomy, life histories, lifestyles, family relationships and friendship, among other things.

Healthy aging depends on the environment and social support, as it prevents isolation and loneliness, vulnerability to abuse, neglect, access to information and training, and economic determinants such as pay or social protection. Given that the health and functionality of individuals can be influenced by extrinsic factors to aging. It is possible to increase the percentage of elderly people whose aging can be productive and / or successful (Botelho, 2000).

There are two parallel dimensions to the concept of productive aging: an objective, which emphasizes the contributions made by the elderly to their relatives, social group or community and a subjective view, which privileges the affective component of the process, in the sense of its positive consequences: well-being and life quality of the elderly (Kaye, Butter and Webster, 2003).

The paradigm underlying productive aging conceptualizes aging from a positive perspective, refuting stereotypes and valuing the role played by the elderly, as well as the contributions they provide to society. To incapacity and dependence, productive aging opposes an image of health and well-being, where autonomy is not only possible but also desirable and where the elderly are no longer a vulnerable and passive individual but rather an active agent in their aging and can continue to make a significant decision (Rozario *et al.*, 2004). In fact, the elderly have an extremely important role within the groups in which they are inserted, as they provide models of aging, represent ancestry and are a living example of the ability to survive and adapt to the life adversities.

Fontaine (2000) defines aging as a set of processes that the organism undergoes after its development phase. However, it is not synonymous of old age, since the latter is considered a state that characterizes a group of a certain age (people over sixty).

From the point of view of psychosocial research, relevant steps were taken regarding the conception of aging, which has favored a change in the image of older individuals and allows this image to be projected into intervention actions to improve living conditions in Post-retirement phase.

Although the aging process can be interpreted from different points of view, it is a normal, universal, gradual and irreversible process at the level of changes and transformations that occur over time. It is a phenomenon linked to the processes of differentiation and growth, that interact internal factors such as genetic heritage and external factors such as the lifestyle, education or environment in which it lives (Figueiredo, 2007).

The concept of aging and attitudes towards the elderly have been changing, reflecting the level of knowledge about human physiology and anatomy and the established culture and social relationships (Paúl and Fonseca, 2005).

Living for many years means that the individual has gone through several experiences with a differently impact from the emotional point of view. It also means that different affective-emotional relationships have been established and that among these relations, the most important are those related to important investments in caregivers (parents, grandparents, siblings or friends) (Paúl and Fonseca, 2005).

Learning is constant throughout life. However, it requires training at the level of competencies, according to individual capacity. The access to information makes the elderly recognize that they are not all losses and that there are capacities that they can maintain or even improve, allowing them to feel useful in the groups where they are inserted.

2. LIFE QUALITY AND WELL-BEING

Assessing the Life Quality of the elderly is an increasingly important aspect, due to the increasing prevalence of chronic diseases and, in turn, to an increase in life expectancy.

In the words of Neri (1993), the life quality in old age depends on several interactive aspects. Multidimensional objective aspects, namely in terms of functionality, cognitive competence and interaction with the environment and subjective aspects that refer to feelings of satisfaction and perception about health status.

Promoting the life quality of the elderly implies at the same time, taking care of prevention and health promotion, caring for the feeling of living in safety and, above all, facilitating the maintenance of active social participation in its various settings, from significant interpersonal exchanges, to the exercise of rights and duties of citizenship, extending the participation of the senior population to community structures and associations.

The elder's life quality is closely related to his biological, but also intellectual, social, labor, psychological, affective, and economic resources that have been accumulated during his life and which greatly influence him (Fairman, 2006: 16).

3. LOSS OF AUTONOMY AND DEPENDENCE

People live longer and although most of the elderly are neither sick nor dependent, the truth is that the bio-psycho-social transformations that all of them undergo, alter their homeostatic balance and demand a new equilibrium to which each individual adapts more or less easily (Palma, 1999).

Figueiredo (2007) assumes that the task of caring for a dependent elderly person requires time and dedication and that when this does not happen, feelings of guilt arise. Restriction of time results from different factors, such as insufficiency or even lack of external support, increased needs of caregivers, and the requirement for professional activities.

4. ELDERLY AS CARE RECEIVER

The majority of elder people who have a health that allows them to an independently live, undertake tasks without recourse to help. However, those who suffer from chronic diseases become more vulnerable and in need of help.

Caregivers end up giving more help than is necessary, given their family's advanced age and the inability to perform certain tasks. The person receiving care is usually female, married or widowed and has children. Female longevity makes them more susceptible to chronic diseases (osteoporosis, hypertension, diabetes, arthritis, among others), while men are more likely to suffer from heart disease or stroke. Therefore, at the origin of care delivery lies a multiplicity of health problems that require assistance in domestic tasks, transportation and purchases (Figueiredo, 2007).

The relationship between the elderly caregiver and the caregiver is fostered by the common experience of both (childhood and married life) and individual stories. Caregiving requires large reconstructions in the relationship, taking into account the dependency relationship established (Figueiredo, 2007).

5. INFORMAL CAREGIVERS

Informal caregivers are becoming more and more important, since social and health policies and financial limitations lead the elderly to stay at home, a place where the intimacy that characterizes self-care is preserved.

According to Coelho (2011) caring is a difficult task because it implies dealing with the beliefs and values of the other. It

consists of the relationship with the other, responding to their needs, transmitting security and attention, through the sharing and articulation of difficulties during care delivery.

The care action aims to promote the physical well-being of the dependent elderly, taking care of their pain; mental well-being, helping him to face fears and insecurities; social welfare, ensuring their socio-economic and relational needs.

6. INFORMAL CAREGIVER: CAREGIVING

Informal caregivers are an essential support for the support of elderly dependents in a home context. It is important to know the relationship between their socio - demographic and contextual characteristics.

Informal caregivers must provide the dependent elderly with support in the instrumental activities of their daily lives (dealing with household and clothing, shopping, among others), dealing with functional difficulties associated with daily basic necessities of life (hygiene and food), responding to the need for emotional support (company) and managing psychological pressures.

According to Figueiredo (2007) most caregivers provide help because they feel that this is their obligation. There are other reasons, such as altruism, gaining social approval or avoidance of censorship, feelings of gratitude to one who cares.

Albert (1992) highlights some points about the caregiver's ideology:

- the question of "duty" and "solidarity", especially when caregivers are direct relatives;
- the tendency of studies to relate the caregiver's ideology to variables of a psychological nature, to the detriment of variables linked to the social structure.

The informal caregiver is the person on whom the responsibility for the provision of most of the care related to the maintenance and continuity of life of the dependent elderly person is borne and who is not remunerated for what he or she does and who does not have any specific training.

According to Figueiredo (2007), the Portuguese cultural tradition attributes to the family and particularly to the female members, the responsibility of caring for the elderly. Thus, caring for elderly relatives is assumed to be an extension of the normal family roles.

Many caregivers assume this role since they believe that their care for the dependent person is the best because of the intimate / personal knowledge they possess. Thus, in the same way that a source of satisfaction is promoted this conviction serves to oblige the caregiver to fulfill this role even if institutionalization is considered (Nolan, Grant and Keady, 1996).

7. INFORMAL CAREGIVER NEEDS

The ability of the informal caregiver to perform other activities outside the home can be beneficial, since it provides opportunities to rest from direct tasks with the elderly person, besides favoring social interaction, minimizing problems such as isolation, distress or depression.

Identifying the needs of informal caregivers is a complex process which depends on the individual variability, the care delivery phase and the context in which it occurs. The provision of care to a dependent family member and associated subjective reactions are likely to generate difficulties that will affect other aspects of the caregiver's life (Figueiredo, 2007).

Another of the most felt needs of caregivers is to have someone with whom to share their difficulties, concerns or satisfactions in caregiving, who hears them and acknowledges their dedication, so that they feel valued.

Although participation in support groups is poorly emphasized as a necessity among family caregivers, they can play an important role in serving as a source of information and advice on diseases affecting caregivers, the techniques and available aids. They also favor social interaction through the breakdown of isolation and solitude.

Another type of need is free time, in which the caregiver is dispensed, even temporarily, from the task and responsibility of caring. The need for free time can be translated into replacements over a period of time. Finally, the need for information and training on available services, allowances and rights which is felt when the dependency of the caregiver increases. Therefore, the effectiveness of the intervention requires the appreciation of the caregivers' points of view in the course of assessing their needs.

8. SOCIAL, FINANCIAL, PHYSICAL AND EMOTIONAL IMPLICATIONS

Family caregivers differ in the type of motivation or circumstance that led them to assume such responsibilities, in the resources they have, in their competencies / capacities for care and also in function of the degree and type of dependence of the person cared for, the history of the relationship with the caregiver and the way they accept the care provided (Figueiredo, 2007).

The fact that caregivers can count on the help of someone, such as the secondary caregiver, relieves them of the demands of care, improving their health perception (Brito, 2002; Lage, 2005), and quality of life, attenuating the consequences of changes in their lifestyle and contributing naturally to the perception of greater psychic vigor and greater energy (Lage, 2005).

Paul (1997) points out that although family members are the major source of physical and emotional support for the elderly, friends have a strong effect on subjective well-being, involving multiple aspects ranging from intimacy sharing, emotional support and opportunities of socialization.

Caring can be a full-time task for some caregivers or cumulative with a profession for others. The time spent in the exercise of their professional functions can be beneficial for the caregiver since it is an escape from the care tasks, it alleviates some economic difficulties and also the interaction and interaction with colleagues and friends. However, the reconciliation of responsibilities as caregiver to the elderly and the maintenance of the job can generate certain constraints, such as: increased tasks, pressures and concern for the well-being of dependents while carrying out their professional duties. These constraints will have a greater or lesser impact at the professional level depending on the work conditions of the caregiver: schedules, functions, wear, among other aspects (Figueiredo, 2007).

The author also points out that the cessation of the caregiver's professional activity, despite providing an increase in the time available for elderly care, can have negative consequences, since employment is an escape from the performance of these (routine) tasks, it provides a financial improvement of the family and the interaction between colleagues and / or friends.

9. CAREGIVER WEARNESS

The process of caring is usually a complex and demanding process, which involves a set of experiences of health care and well-being of the care provider and whose consequences are more accentuated.

The repercussions that manifest themselves on caregivers vary throughout the caring process, with overload / wear being more intense at the beginning of the relationship, with the probability of decreasing as the caregiver adapts to the new situation and acquiring more skills to care for (Andreasen, 2003).

Stephens (1993) reports that informal caregivers make little use of formal services as a form of support for caregiving activities and point out the reasons for this: unawareness and cost of care, criticism from third parties and discomfort due to the behavior of the family member who care.

10. SENSE OF COMMUNITY

The Sense of Community was used first in 1974 with Seymour Sarason who presented it as a central and dominant concept in the field of Community Psychology.

Mobilization and involvement around community problems in a specific locality contribute significantly to increased sense of community and place identity. Speaking of community feeling is "related to belonging to a group or community, in which people consider themselves to be similar, acting interdependently to meet their needs" (Prezza and Constantini, 1998: 181).

For McMillan and Chavis (1986), community feeling is based on four essential elements that define the specific qualities of the concept. These elements are: to be part of something; influence; integration and fulfillment of needs and sharing of emotional attachments, which are defined as membership feeling, membership feeling for another member and group and conviction that members' needs will be met through an union commitment.

Services should be developed to make individuals, especially the elderly, capable of controlling their own lives, to remain productive and to remain as active as possible in the community for as long as possible. This is the so-called empowering of citizens that is, giving the elderly control over their lives and making them part of the process of choice within their family and social network and building a healthier and more prepared community for future challenges. The greater it's degree of commitment and its resources the more possibility it has of making this population capable and autonomous. In this way, they can maintain an active role in society and in their community providing positive / productive aging.

11. NEEDS SATISFACTIONS: THE IMPORTANCE OF SOCIAL NETWORK AND SOCIAL SUPPORT

Antonucci (2001) defines social network taking into account the characteristics that describe the people with whom interpersonal relationships are maintained: age, gender, proximity and frequency of contacts among its members.

According to the same author social support functions as an interpersonal exchange that involves three elements: help, affection or affirmation. Thus, while the social network concept focuses its attention on the surrounding contexts and social systems, social support / support focuses on interpersonal exchanges between members of a network, especially at the level of health care, housework, administrative matters and financial aid.

12. COMMUNITY AS A PROTECTIVE AND SUPPORTIVE FACTOR

Sarason (1974: 1) described the psychological feeling of community as "the feeling that we are part of a mutually supportive relationship network, always available and on which we can depend."

Community participation is not just about support and / or help among members of a particular group but also about their contribution to decision making. This type of participation can take place in very diverse ways and focus on areas such as life quality, environmental issues, safety and prevention of interpersonal violence (Dalton, Elias, and Wandersman, 2001). The greater the level of integration and satisfaction of individuals in a community, the greater the individual and community benefits. At the individual level it manifests itself in higher levels of well-being, satisfaction and quality of life; sense of

justice; less solitude and isolation. At community level there is greater collaboration and community mobilization around change. (Elvas and Moniz, 2010).

13. EMPIRICAL STUDY

13.1 Methodological study

The research began with an interdisciplinary bibliographical research and analysis on the importance of community feeling and productive aging as protective factors for the wear and tear of an elderly informal caregiver in order to be approached and based on the theme.

13.2 Methods

The method used was the qualitative method since it presents characteristics that allow a greater depth of information collected.

This method allowed to obtain a comprehensive understanding the context of informal care provided by an elderly woman who remains professionally active and to understand whether or not there is the influence of community feeling and productive aging as protective factors.

Qualitative research is “descriptive”, that is, the description must be accurate and result directly from the data collected. The research included transcripts of the interviews through recordings of the interviews and application of Sense of Community Index, Basic Need Satisfaction in General Scale and Carers Assessment of Difficulties Index – CADI. It has the consent of the interviewees.

13.3 Techniques

The technique used for the data collection was a semi-directional or semi-structured interview.

13.4 Instruments

The information obtained through the application of interviews to the participants in the study (caregiver, caregivers, husband, son and two clients / neighbors) and evaluation scales (Sense of Community Index, Basic Need Satisfaction in General Scale and Carers Assessment of Difficulties Index – CADI) to the Caregiver, allowed the verification of community’s integration level as well as their community participation, the existence of social support, the way they view the aging process and the recognition of her skills as a caregiver and active professional.

13.5 Interviews

The interviews were carried out from the 4th to 8th April of 2016 through the elaboration of an Guide Interview applied to each participant in the study and treated using the thematic-categorical content analysis method.

14. RESULTS

14.1 Sense of Community Index

According to the quotation of the Sense of Community Index it is verified that for the informal caregiver it is important to be part of the local community, given that the total value of the scale is of 53 points. The answer to the first question is then reinforced by the values obtained in the subscales of Belonging (14 points) as well as in the emotional Link subscale (15 points). It is also noted that the caregiver feels the influence that the community has in their life, given the value of the subscale Influence (12 points). According to the caregiver her community has the capacity to respond to their needs given the value obtained in the subscale Reinforcement of needs (12 points). There is a connection to this community, as the same is felt as a network support, to which it is important to belong.

14.2 Basic Need Satisfaction in General Scale

According to the Basic Need Satisfaction in General Scale it is observed that the caregiver, in general, feels that her needs are satisfied (score in the total scale of 120 points). It is also possible to verify that it is well integrated in its community maintaining good relations, feeling that it can trust and that it is supported by the people that are close to him (subscale - relations of belonging = 47 points).

She is a caregiver who feels competent in the performance of her role (subscale - competence = 36 points), maintaining her autonomy and freedom in her choices (subscale - autonomy = 37).

14.3 Carers Assessment of Difficulties Index – CADI)

According to the results obtained, it is possible to observe that for the caregiver the main difficulties are related to the professional support (10 points) revealing the lack of support in the social and health services. Following are the reactions

in the care (15 points), where the caregiver revealed a constant concern with the elderly as well as feeling of impotence in relation to their condition. The dimension where are observed some difficulties is related to the dimensions of the caregiver (22 points) where he presented some physical fatigue and a decrease in her health. On the other hand, it turns out that the family assumes a preponderant role for itself (10 points). Regarding the relational problems (23 points) it is verified that the caregiver experiences moments of irritation and situations of despair in which the elderly will be one of the causes.

To conclude the analysis, in the social constraints dimension (18 points), the caregiver mentions that she spends less time on herself, family and friends with a decrease in her life quality.

15. DISCUSSION

The present investigation focuses on the case of an elderly informal caregiver, who presents unusual characteristics: 70 years old, single daughter, both parents living at 90 and 93 years of age, professionally and socially active and caregiver. In this sense, the need arose to study in depth her daily routine, what motivates her, her difficulties and strengths, her role with the community where she resides and the way she views her role as caregiver.

The Caregiver resides and carries out her professional activity in a rural community, where there is social support and affective ties between their members. This information is reinforced through the Carvalho study (2009), in which rural communities still have the duty of solidarity and mutual assistance, associated with a moral duty towards one another, involving the care of moral values and principles and respect for with the other.

Diogo *et al.* (2005) reinforce the sharing made by the Caregiver, noting that the positive aspects of caring are related to personal growth increased sense of accomplishment, pride and competence to face challenges, improvement in interpersonal relationship, both with the elderly and with other people, increased meaning of life, pleasure, satisfaction, retribution, satisfaction with oneself and well-being with the quality of well-being offered.

Sommerhalder (2001) also identifies positive or beneficial aspects experienced by caregivers: personal growth; increased sense of accomplishment, pride and ability to face challenges; Improving interpersonal relationships; Increased meaning of life; pleasure; satisfaction; retribution; self-satisfaction and well-being with the quality of care offered.

The Caretaker highlights the strong family connection, concern for the well-being of caregivers (parents) and the importance that social support has in overcoming the difficulties inherent in caring and being professionally active.

It was possible to perceive more broadly the process of productive and / or successful aging of the Caregiver influenced by psychosocial factors, the existence of a professional activity and the support of the family.

In the present investigation the caregiver highlights the positive way she has faced the aging process, the support of the social network, the socialization in the community and the way she is dedicated to her professional activity and provides care to the parents, assuming multiple roles. Despite this she says that her free time for leisure activities with her husband is reduced.

The implementation of programs to support informal caregivers will allow them to easily face more difficulties encountered in the caring process, to understand the different alterations present in the aging of the individuals to develop procedures that facilitate the relationship with the elderly on a daily basis - Day and implement informal help groups for informal caregivers, with a view to promoting processes of sharing and identifying problems and to the interaction of experiences.

16. INTERVENTION PROJECT

The intervention project emerges as a strategy to care for those who care through a formal educational process of a multidisciplinary nature which aims not only to increase the skills of informal caregivers related to knowledge but also to their integration into a group that having in common the experience of caring, promote mutual assistance while benefiting from a network of social support.

17. PROPOSED INTERVENTION PROJECT: "CARING FOR THOSE WHO CARE - +65 - STRATEGIES AND SUPPORT"

One of the needs identified by the Caregiver is the lack of free time, which may influence her psychological well-being. To meet this need, the creation of a group of volunteers who can ensure the company of care recipients in times of absence of caregivers is essential.

They are not intended to be cared for except that they keep company with small tasks of leisure.

In this sense, local authorities are an important partnership because of their proximity policy, which acts as a vehicle for transmitting information and identifying potential stakeholders.

Volunteers with an interest in the elderly are available and willing to support caregivers and provide them with free time to do some leisure activities (or not) and improve their well-being.

After the creation of the volunteer group, a little training is necessary to alert the most important and challenging aspects of the care recipients.

It should also be noted that the training action will be adapted to the characteristics of the care recipients.

Simultaneously with the creation of a group of volunteers to support caregivers, it is intended to energize a caregiver sharing group, as will be described in the following objective.

The present objective would be carried out by a PsychoGerontology technician.

Based on the needs of the caregiver previously identified in the research, some measures are suggested that intend to respond to these needs, as well as to increase the physical and emotional well-being of the caregiver. In addition to supporting caregivers, this proposal also aims to make the task of caring fewer complexes and demanding. It is suggested that to stimulate a training action aimed at caregivers and future caregivers, it should be developed by health professionals and PsychoGerontology technicians. Finally, it is also intended to create a space for counseling and referral to caregivers and future caregivers.

18. CONCLUSION

The present research focuses on how community feeling and productive aging are protective factors for the wear of an elderly informal caregiver.

After analyzing all the data collected it is concluded that this Caregiver has a strong connection to the community where she resides due to the fact that she maintains her professional activity that allows her daily contact with her members and also the existence of a network of Social support (family network, professional and friendship / neighborhood), promoting their well-being and / or quality of life.

The positive way in which she sees her aging process is fundamental to face the daily adversities, especially those that come from her role as Caregiver.

It was demonstrated by the study that the Caregiver defends the presence of their parents (caregivers) at home, since only then can they preserve their dignity and provide quality of life. Thus, the manifestation of happiness in caring for the loved one at home was manifested by the Caregiver by fulfilling the wishes of her parents and providing them with a decent end of life.

REFERENCES

- Albert, S. (1992). Psychometric investigation of a belief system: caregiving to the chronically ill parent. *Social Science Medicine*, 35 (5), pp. 699-709.
- Andreasen, N. C. (2003). *Admirável cérebro novo – dominar a doença mental na era do genoma* (1ª. Ed.). Lisboa: Climepsi Editora. ISBN 9789895550135
- Antonucci, T. (2001). Social relations: Na examination of social networks, social support, and sense of control, in J. Birren e K. SCHAE (eds.), *Handbook of the Psychology of Aging*. San Diego: Academic Press, pp. 427-453.
- Botelho, A. (2000). *Autonomia Funcional em Idosos. Caracterização Multidimensional em Idosos Utentes de um Centro de Saúde Urbano*. Porto: Edições Bial.
- Brito, L. (2002). *A Saúde Mental dos Prestadores de Cuidados e Familiares Idosos*. Coimbra: Quarteto.
- Caro, F.G., Bass, S.A., e Chen, Y.P. (1993). *Achieving a Productive Aging Society*. Em S.A. Bass; F.C. Caro, e Y.P. Chen (Eds.), *Achieving a Productive Aging Society* (Pp.4-25). London: Auburn House.
- Carvalho, M. I. (2009). Os cuidados familiares prestados às pessoas idosas em situação de dependência: características do apoio informal familiar em Portugal. *Revista Kairós, São Paulo*: 12 (1), 77-96.
- Coelho, A. M. R. (2011). Cuidar: Uma conduta ética. *Revista Nursing*, Janeiro; p.10.
- Dalton, J., Elias, M., e Wandersman (2001). Understanding sense of community. *Community psychology linking individual and communities* (pp. 186-217). Wadsworth: Thomson Learning.
- Diogo, M. J., Ceolim, M. F., e Cintra, F. A. (2005). Orientações para idosos que cuidam de idosos no domicílio: relato de experiência. *Revista Escola de Enfermagem USP*, 39 (1), 97-102.
- Elvas, S. e Moniz, M. J. V. (2010). Sentimento de Comunidade, Satisfação e Qualidade de Vida. *Análise Psicológica*. v.28 n.3, 451-464.
- Fairman, S. C. (2006). *El Amor a los 70*. Buenos Aires: Grupo Editorial Lumen.
- Figueiredo, D. (2007). *Cuidados familiares ao idoso dependente*, 1ª edição. Setembro de 2007. Lisboa: Climepsi editores.
- Fontaine, R. (2000). *Psicologia do Envelhecimento*, 1ª edição. Setembro de 2000. Lisboa: Climepsi editores.
- Kaye, L.W., Butter, S.S., e Webster, N.M. (2003). *Toward a productive ageing paradigm for geriatric practice*. *Ageing International Spring*, 28(2), 200-213.
- Lage, I. (2005). *Questões de género e cuidados familiares a idosos*. Nursing. Ano 17, nº 217. Lisboa: pp. 40-43.
- McMillan, D., e Chavis, D. (1986). *Sense of community: A definition and theory*. *American Journal of Community Psychology*, 14(1), 6-23
- Neri, A. L. (1993). Qualidade de vida no adulto maduro: interpretações teóricas e evidências de pesquisa. In A. L. Neri (Org.), *Qualidade de vida e idade madura* (pp.9-55). Campinas: Papirus.
- Nolan, M., Grant, G., Keady, J. (1996). *Understanding family care*. Buckingham: Open University Press.

- Paúl, C. (1997). *Lá para o fim da vida. Idosos, Família e Meio Ambiente*. Coimbra: Almedina.
- Paúl, C. Fonseca, A.M, (2005). *Envelhecer em Portugal*. Lisboa: Climepsi.
- Palma, E. M. C. (1999). *Enfermagem agora - a família com idosos dependentes - que expectativas?* Enfermagem nº 15, 2ª série. Lisboa: pp. 27-40.
- Prezza, M., e Constantini, S. (1998). *Sense of community and live satisfaction: Investigation in three different territorial contexts*. Journal of Community e Applied Social Psychology, 8, 181- 194.
- Rozario, P., Morrow-Howell, N., e Hinterlong, J. (2004). *Role Enhancement or Role Strain: Assessing the Impact of the Multiple Productive Roles on Older Caregiver Wellbeing*. Research on Aging, 26(4), 413-428.
- Sarason, S. (1974). *The perception and conception of a community. The psychological sense of community: Prospects for a community psychology* (pp. 130-160). San Francisco: Jossey-Bass.
- Sephens, M. A. (1993). Understanding barriers to caregivers' use of formal services: The caregivers' perspective, in S. H. Zarit, L. I. Pearlin e K. W. Schaie (eds.), *Caregiving systems. Formal and informal helpers*. New Jersey: Lawrence Erlbaum Associates, pp. 261-272.
- Sommerhalder, C. (2001). *Significados associados à tarefa de cuidar de idosos de alta dependência no contexto familiar*. Dissertação de Mestrado. Universidade de Campinas: Faculdade de Educação.

INTERACTIVE INTRODUCTION TO FIRST-ORDER ORDINARY DIFFERENTIAL EQUATIONS AND ITS APPLICATIONS

Celestino Coelho

Departamento de Matemática, Faculdade de Ciências e Tecnologia, Universidade do Algarve
(ccoelho@ualg.pt)

Rui Marreiros

Departamento de Matemática, Faculdade de Ciências e Tecnologia, Universidade do Algarve
(rmarrei@ualg.pt)

Ana C. Conceição

Departamento de Matemática, Faculdade de Ciências e Tecnologia, Universidade do Algarve
(aconcei@ualg.pt)

ABSTRACT

Differential equations constitute a large and very important branch of modern mathematics. From the early days of the calculus this subject has been an area of great theoretical research and practical applications in several branches of science. Despite this importance, the largest part of the students reveals strong difficulties to understand the theory of differential equations and its applications.

As a consequence of what was mentioned above we decided to create a new educational tool that accomplishes some of those goals, describing how this dynamic device can be used in the classroom when teaching the first approach of the first-order Ordinary Differential Equations (ODEs).

Keywords: Ordinary Differential Equations, Modelling, Growth and Decay, Computable Document Format.

1. INTRODUCTION

Over the last decades, we witnessed a huge development in the power of computation, simultaneously the electronic devices that perform numerical and symbolic programming evolved in power as they inversely evolved in size, making them so light and cheap that is possible nowadays for every student to carry his own laptop to the classrooms. This reality opens the possibility to create new approaches that might help them to understand the concepts associated with the subjects intended to teach in a more effective and fashion way.

We decided that would be a good idea to show and explore the interaction using both the symbolic programming capacity of *Mathematica*[®] and the graphical capacity. To reach our goals we take advantage of a tool recently developed by Wolfram Research, the Computable Document Format (CDF)¹, which enables the interaction between the digital document and the reader.

The appearance of this tool provides a complementary way of how to teach the mathematical concepts and, in our opinion, increases the probability of our success. In this context, we pretend to use this tool to tackle some applications of the first-order differential equations – rate problems, following the ideas presented in (Coelho & Marreiros, 2013) and (Conceição, Pereira, Silva, & Simão, 2012).

In the section 2 we recall the most basic concepts of the theory of the first-order differential equations (see, for instance, Ross, 1998), as well as we present a description of the software created by us, showing the results obtained when applied to solve its most common applications in the section 3. Among the applications to these equations we choose the, so-called, rate problems (population growth, radioactive nuclei decay). Additional information about the construction and use of CDF file type can be found in (Ruskeepää, 2009) and (Wolfram, 1999).

2. MODEL

2.1 Basic theory

A first-order ODE solved for the derivative is an equation connecting an independent variable x , a sought-for function $y=y(x)$ and its first derivative, that can be written in the form

$$y' = f(x, y), \quad (1)$$

¹ This type of document runs with CDF-Player, which is a free software program that can be downloaded from <http://www.wolfram.com/cdf-player>.

where f is a real continuous function in some domain D of the x o y plane.

The general solution of the differential equation (1) is a function

$$y = \varphi(x, C) \quad (2)$$

depending on one arbitrary constant C and such that (2) satisfies the equation (1) with any allowed value of C .

A particular solution of the differential equation (1) is a solution obtained from the general solution (2) with some defined value of the constant C .

2.2 Growth and decay rate problems

Let $y=y(t)$ denote the quantity of a substance at a time t , and suppose the rate, i.e., the derivative, $y' \equiv dy/dt$, at which the quantity changes are proportional to the amount of the quantity present at time t ; i.e., we have

$$y' = ky, \quad (3)$$

where k is a constant of proportionality.

The differential equation (3) is an equation with variables separable; separating variables, integrating, and simplifying, we have that

$$y(t) = Ce^{kt} \quad (4)$$

is the general solution of the differential equation (3).

Usually, in this so-called “rate problems”, there are given two initial conditions, which allow us to obtain the value of C and the constant of proportionality k . Let the following conditions be given

$$y(0) = y_0, \quad y(t_1) = y_1, \quad (5)$$

i.e., y_0 is the amount initially present and y_1 is the amount present at time t_1 ; $y_0, y_1 > 0$. Computing the constants C and k :

$$\begin{cases} y(0) = y_0 \\ y(t_1) = y_1 \end{cases} \Leftrightarrow \begin{cases} y_0 = C \\ y_1 = y_0 e^{kt_1} \end{cases} \Leftrightarrow \begin{cases} C = y_0 \\ k = \frac{\ln(y_1/y_0)}{t_1} \end{cases} \quad (6)$$

and inserting their values in (3) we get

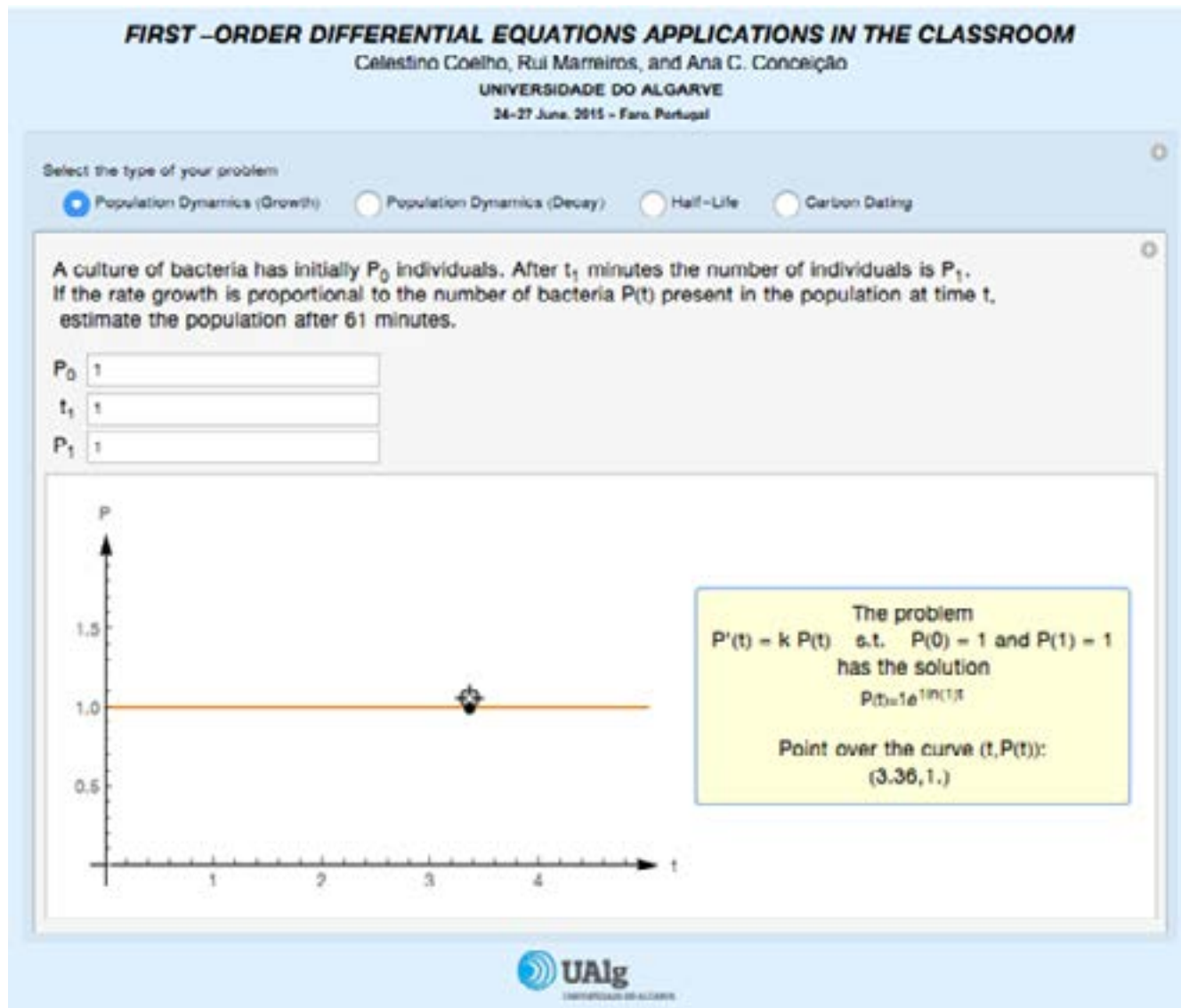
$$y(t) = y_0 e^{\frac{\ln(y_1/y_0)}{t_1} t}. \quad (7)$$

Note that if the quantity $y(t)$ grows, i.e., $y_1 > y_0$, then $k > 0$ (in this case, k is the, so-called, growth constant); if the quantity $y(t)$ decreases, i.e., $y_1 < y_0$, then $k < 0$ (in this case, k is the, so-called, decay constant).

2.2 Implemented software

The figure below shows the initial status of the layout of the implemented software.

Figure 1. Structure of the software developed



Analyzing the Figure 1 we see that the software is divided in two parts, the one at the top corresponds to the definition of the problem, where we found a list of radio buttons that enables the choice of the type of problem we intend to solve, followed by a region of input fields where the user defines the initial state of the population, that is, the number of individuals present at time t_0 , P_0 , a ulterior time, t_1 , where a new information about the population is collected, as well as the number of individuals present, P_1 . Notice that to get the answers to the questions asked it will be obligatory to grab the mouse and move the pointer over the plot to the left or to the right until we stabilize it over the point where we want to collect the information we seek. Sometimes it will be difficult, or even impossible, to get the exact coordinates of the point, what forces the teacher to be careful when choosing the question and the user when giving the answer, that is, if the answer has to be an overestimation or an underestimation.

One of the most important targets to reach constructing this software is the simplicity of its use. We want this software to be very easy to use, so, to change the fields in the input area, the user just needs to press TAB key (or use mouse) to jump automatically to the next input field. As the user changes the input field the output will be automatically updated, both graphical and analytical.

3. RESULTS

3.1 Population growth and decay

3.1.1 Example 1 (e-coli population growth)

A culture of bacteria (e-coli) has initially $P_0=3$ individuals. After 20 minutes the population is twice the original value. If the rate growth is proportional to the number of bacteria $P(t)$ present in the population at time t :

- find the number of bacteria $P(t)$ present in the population after 61 minutes;
- what will be the time necessary to guarantee a population 5 times bigger than the initial population?

Figure 2. Tool application to solve a problem of population dynamics using a growth rate in e-coli growth population problem

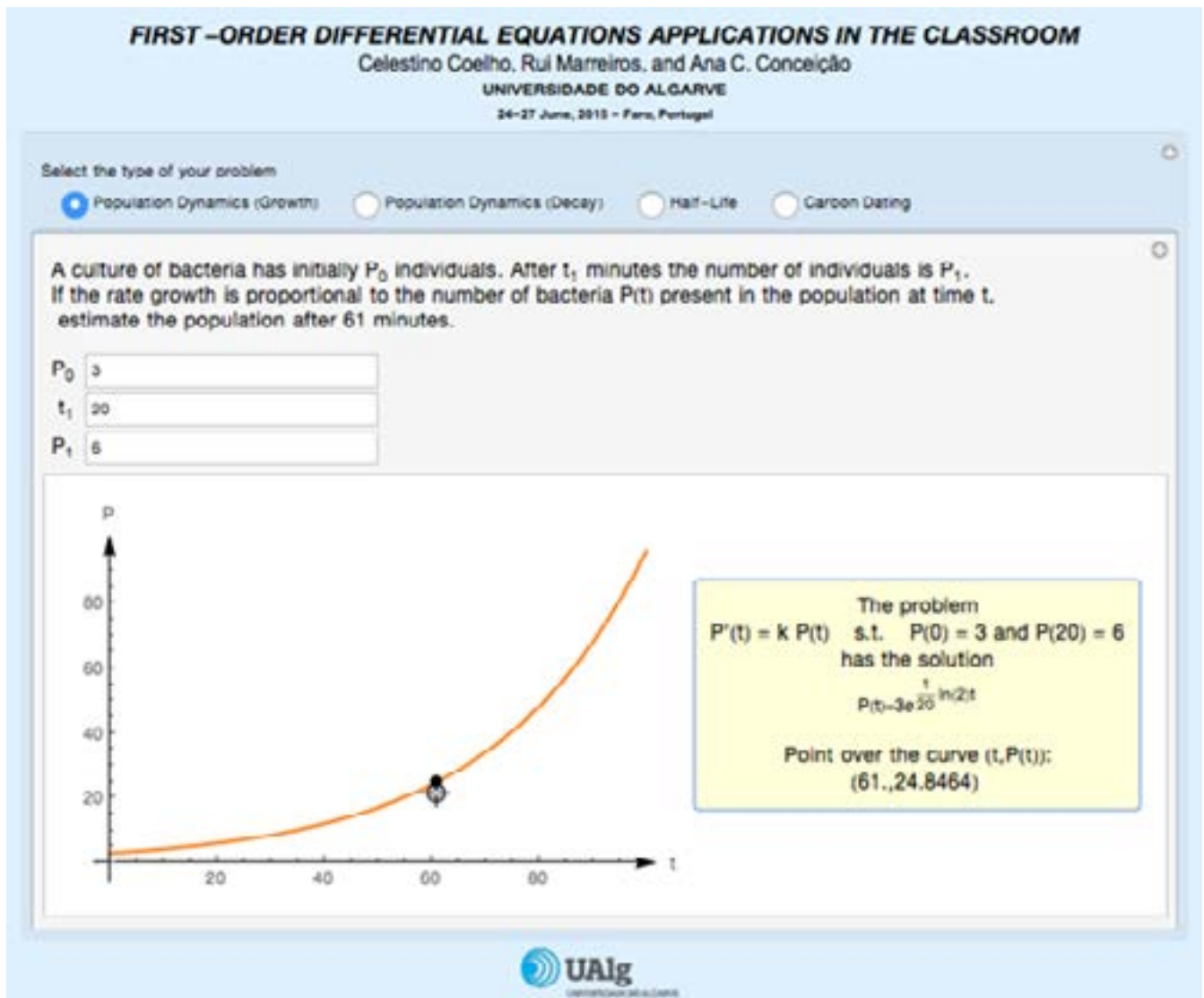


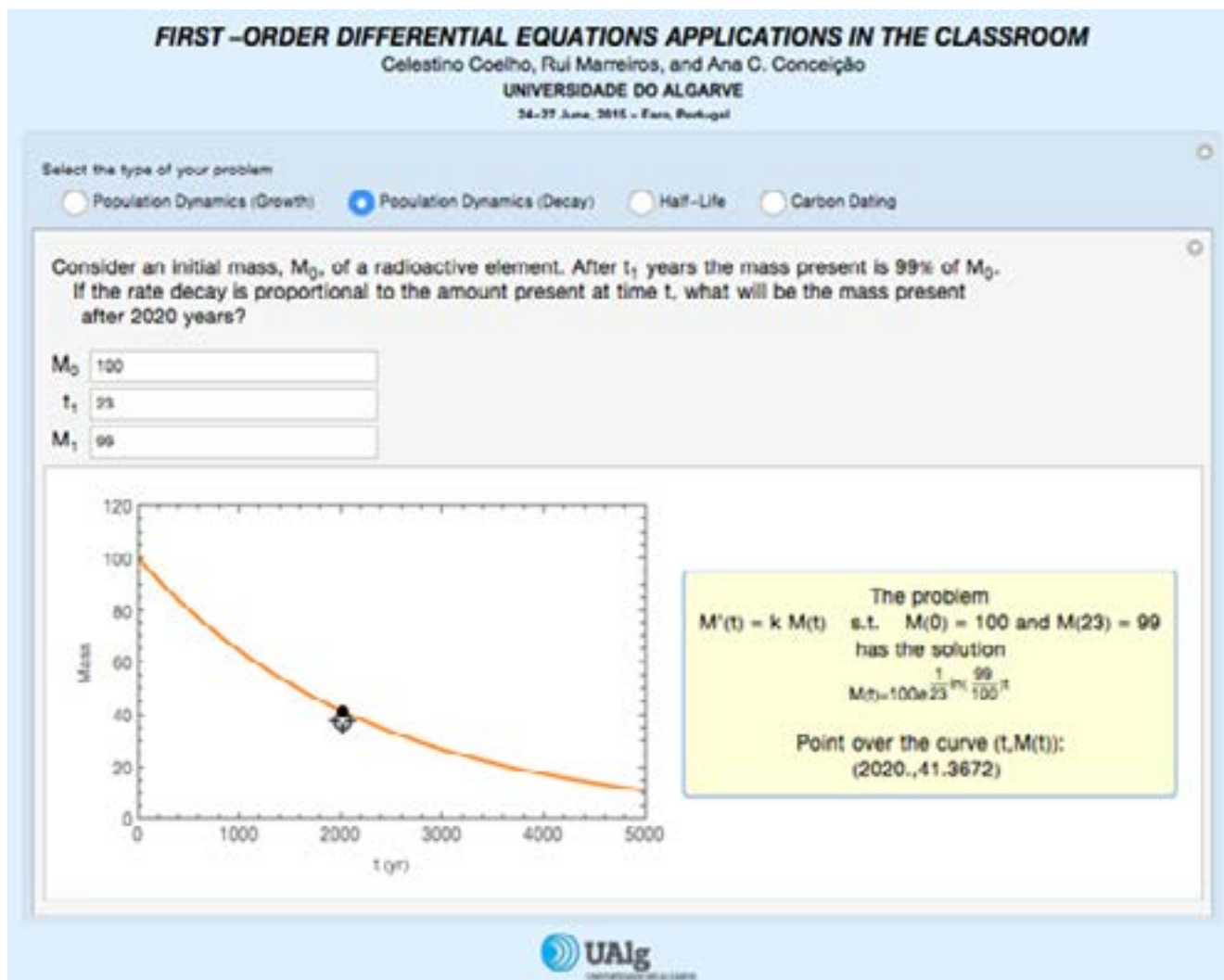
Figure 1 shows how to apply our tool to solve the questions exhibited in example presented before. If we attend to the input fields present in the software we see that, to get the solution to our problem, we have to input the number of individuals that are initially in the population, P_0 , and the number that constitute the population after a certain elapsed time, t_p , denoted by P_p .

3.1.2 Example 2 (radioactive nuclei decay)

Consider an initial mass of the radium element, $M_0 = 100$ g, that is reduced in 1% after 23 year. If the rate decay is proportional to the amount present at time t :

- find the mass present after 2020 years;
- what will be the time necessary to guarantee one half of the initial mass?

Figure 3. Tool application to solve the problem of radioactive nuclei decay presented in example 2



The problem presented in example 2 is similar to the one shown in example 1, but in this case, it is associated to a decay rate. In which concerns to the application of the tool it will be necessary to notice that to say that after years the mass decreases is equivalent to say that of the mass is present after years, as well as the fact that time here is counted in years. There are some subtle aspects, like the ones stated before, that require an additional attention of the user.

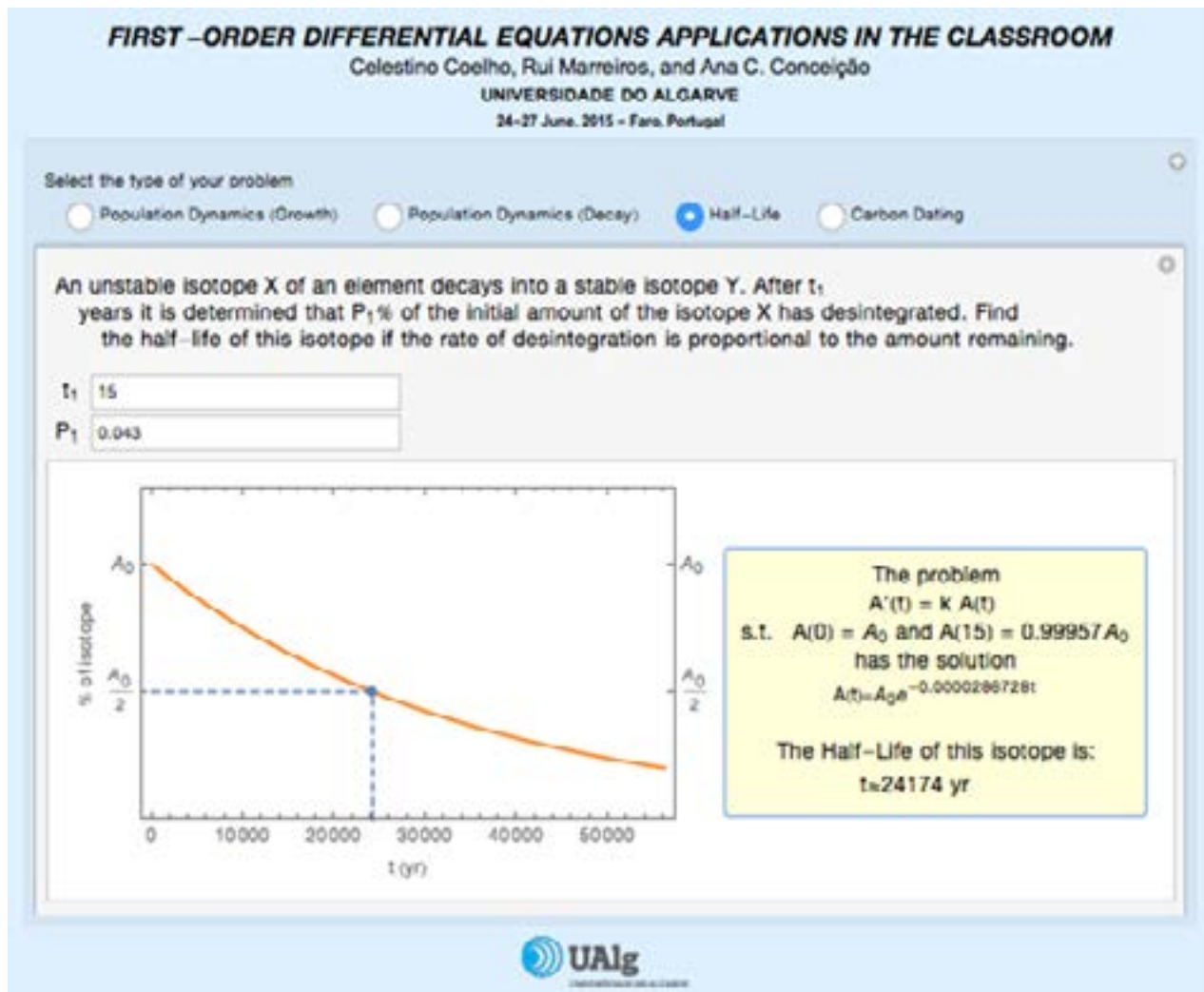
3.2 Half-life

This concept is often applied in Physics and provides a measure of the stability of a radioactive substance, corresponding to the time it takes for one-half of the atoms initially present in an amount of A_0 to disintegrate, or transmute, into the atoms of another element. The stability of a substance is directly related to the value of its half-life, that is, the larger the value of the half-life is, the more stable the substance is.

3.2.1 Example 3 (Half-life of plutonium)

A breeder reactor converts relatively stable uranium-228 into the isotope plutonium-239. After years, it is determined that of the initial amount of plutonium, A_0 , has disintegrated. Find the half-life of this isotope if the rate of disintegration is proportional to the amount remaining.

Figure 4. Tool application to solve the problem of radioactive nuclei decay presented in example 3



Looking at Figure 4 we notice some slight differences between the layouts of the software in this case and the other two presented before. In fact, here we don't need to introduce the initial state because we are assuming that the percentage in that stage is 100%. Due to this assumption, the user only need to give the time elapsed, t_1 , and the percentage of the isotope that has been disintegrated after that period of time, P_1 . In what concerns to the output we verify that there are also some differences worth mentioning. In the graphical solution, the half-life of the isotope, which represents the answer to our problem, is automatically marked with a blue dot. The usage of additional dashed lines is made to give a more precise idea of the location of this point. Since the objective of this type of problems is to give the value of the half-life of the isotope it makes no sense to give freedom to move the cursor over the plot. This originates another subtle difference in the analytical output. Instead of showing the point over the curve, we present the value of the half-life of the isotope.

3.3 Carbon dating

The American physical chemist Willard F. Libby was the first to develop a theory of carbon dating. During the 50's Libby led a team of scientists at the University of Chicago, and, as recognition of the importance of this work, was awarded the Nobel Prize for Chemistry in 1960. Carbon dating is a particular type of radioactive dating, applicable in cases for which the matter to be dated was once living. The radioactive isotope carbon-14 (C^{14}) is produced at a relatively constant rate in the atmosphere, and like stable carbon-12 (C^{12}), combines with oxygen to form carbon dioxide, which is incorporated into all living things. When a living organism dies, its level of C^{12} remains relatively constant, but its level of C^{14} begins to decay with the rate

$$\frac{d[C^{14}]}{dt} = -k[C^{14}], \quad (8)$$

where the decay rate is given by $k = 1.2097 \times 10^{-4} \text{ yr}^{-1}$. This rate corresponds with the commonly quoted fact that C^{14} has a half-life of 5730 years. Since the fraction of C^{12} to C^{14} remains relatively constant in living organisms, at the same level as it occurs in the atmosphere, roughly

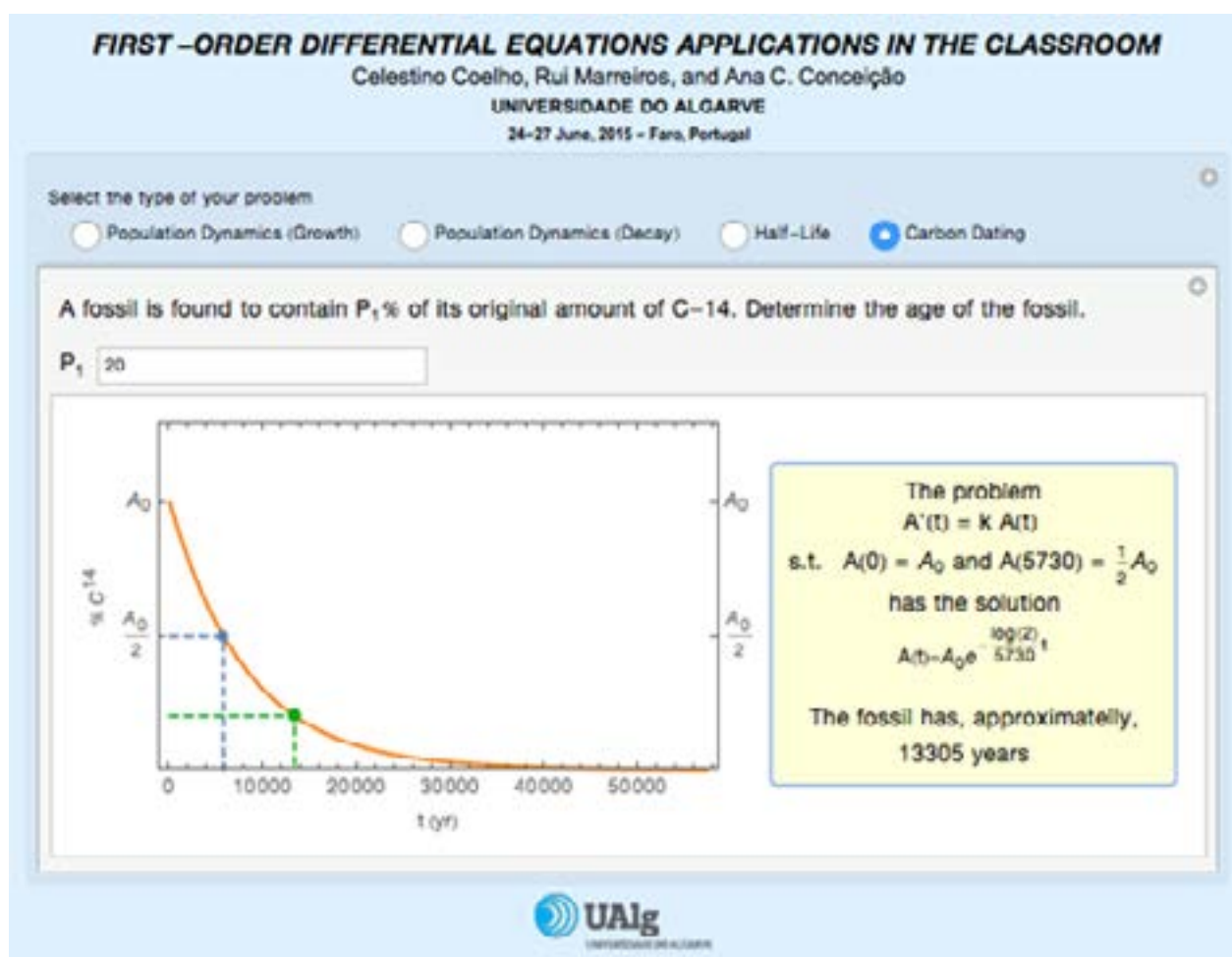
$$\frac{[C^{14}]}{[C^{12}]} \cong 1.3 \times 10^{-12}, \quad (8)$$

we can determine how long an organism has been dead by measuring this ratio and determining how much C^{14} has radiated away. In practice, scientists measure this ratio of C^{14} to C^{12} in units called modern carbons, in which the living ratio that corresponds to the ratio of C^{14} to C^{12} in a living organism is defined to be 1 modern carbon. As it was mentioned this method is based on the knowledge of the half-life of C^{14} , which, in Libby's experiments was fixed in approximately 5600 years, while nowadays it is commonly accepted that this value is approximately 5730 years. This method has been used to date numerous things, being one of the latest the dating of fragments of woolen trousers excavated at Yanghai cemetery in western China, published just a few months ago, (Beck, Wagner, Li, Durkin-Meisterernst, & Tarasov, 2014).

3.3.1 Example 4 (Age of a fossil)

A fossilized bone is found to contain 20% of its original amount of C^{14} . Determine the age of the fossil.

Figure 5. Tool application to solve the problem of carbon dating presented in example 4



Concerning to Figure 5 there are three observations to be made. Since we are interested in the percentage of C^{14} that is present in the object that is to be dated, the problem to be solved is always the one stated in the analytical output panel. This means that this type of problem has always the same solution. Due to this characteristic, the only input that should be given is the percentage of C^{14} that is measured in the object. And, finally, since we pretend to know the age of the object, we just need to solve the equation to find the value of t that corresponds to the percentage given. The answer to the problem is stated in the last line of the analytical output panel and marked with a green dot over the curve in the plot on the graphical output panel.

4. CONCLUSIONS

As we all know, most part of the students reveals strong difficulties to learn mathematical concepts, being one of the pertinent questions: "Where can we apply this?" For us, teachers, the introduction of new digital technologies represent a huge step on how we can help in answering this question. This kind of technologies can also be explored to explain, in a more appealing way, the mathematical concepts. The possibility of interaction with the software enables the test and enumerable number data sets, which, in most part of applications, is important to understand the behaviour of the solution

of the problem that is being solved. This intrinsic characteristic of the software represents a great advantage because different teachers with different sets of data can use it.

In the future, we intend to use this software in the classroom testing it with our students and collecting the feedback of their use, hoping that their feedback will be important to develop this kind of software to other application cases to ODEs as well as other subjects. Other future goal is to present this software in workshops, for other teachers, and in seminars, for a more general audience.

REFERENCES

Wolfram, S. (1999). *The Mathematica Book*. Cambridge Press.

Beck, U., Wagner, M., Li, X., Durkin-Meisterernst, D., & Tarasov, P. (2014). *The invention of trousers and its likely affiliation with horseback riding and mobility: A case study of late 2nd millennium BC finds from Turfan in eastern Central Asia*. Quaternary International.

Coelho, C., & Marreiros, R. (2013). Solving second-order linear ordinary differential equations interactively. In A. Loja, J. I. Barbosa, J. A. Rodrigues (Ed.), 1st International Conference on Algebraic and Symbolic Computation (pp. 243-258). ISBN: 978-989-96264-5-4.

Conceição, A., Pereira, J., Silva, C., & Simão, C. (2012, April). *Mathematica* in the classroom: new tools for exploring precalculus and differential calculus. Paper presented at the 1st National Conference on Symbolic Computation in Education and Research, Lisboa.

Ruskeepää, H. (2009). *Mathematica Navigator: Mathematics, Statistics, and Graphics*. Academic Press.

Ross, R. (1998). *Differential Equations*. John Wiley and Sons.

SOLVING SECOND-ORDER LINEAR ORDINARY DIFFERENTIAL EQUATIONS BY USING INTERACTIVE SOFTWARE

Celestino Coelho

Departamento de Matemática, Faculdade de Ciências e Tecnologia, Universidade do Algarve
(ccoelho@ualg.pt)

Rui Marreiros

(rmarrei@ualg.pt)

Departamento de Matemática, Faculdade de Ciências e Tecnologia, Universidade do Algarve

ABSTRACT

Differential equations constitute an area of great theoretical research and applications in several branches of science and technology. The scope of this work is to present new software that is able to show all the steps in the process of solving a linear second-order ordinary differential equation with constant coefficients.

Keywords: Linear Ordinary Differential Equations, Symbolic Computation, Wolfram Mathematica, Computable Document Format.

1. INTRODUCTION

In the present work, we present interactive software that can be used to aid in the process of teaching linear second-order ordinary differential equations (ODEs) with constant coefficients. This work can be seen as a natural complement to our previous work (Coelho & Marreiros, 2013). In (Coelho & Marreiros, 2013) we studied the second-order linear differential equations with constant coefficients. In what relates to the implementation of the computational tool, in (Coelho & Marreiros, 2013) we started with the homogeneous case and then extended it to the construction of a particular solution by using the variation of parameters method (the “general method”) in the nonhomogeneous case. In the present work, we also consider the undetermined coefficients method to construct a particular solution for the same type of equations. As we see below, this method can only be applied to a special form that the right-hand side (rhs) of the equation can assume.

This work is organized as follows. We begin shortly recalling the basic concepts of the theory of the second-order linear ODE; for references we address the reader to our cited work (Coelho & Marreiros, 2013), and, for instance, (Ross, 1984), (Krasnov, Kiselev, & Makarenko, 1981) and (Marreiros, 2012). Then follows the main section where we describe the implementation and the use of the software.

2. BASIC CONCEPTS

2.1 Basic theory

Below we recall the basic concepts of the theory of the second-order linear differential equation.

Definition 1. A second-order linear ordinary differential equation in the dependent variable y and the independent variable x is an equation that can be written in the form

$$y'' + ay' + by = f, \quad (1)$$

where a , b and f are continuous real functions on a real interval I , i.e., $x \in I \subset \mathbb{R}$.

If f is not identically zero on I , then the equation (1) is said to be nonhomogeneous.

If f is identically zero on I , then we obtain the so called corresponding homogeneous equation to (1), being its form naturally given by

$$y'' + ay' + by = 0. \quad (2)$$

The following result takes place.

Theorem 1. Let y_1 and y_2 be two linearly independent solutions of the homogeneous equation (2) on an interval I . Then the general solution of (2) is given by

$$y = C_1 y_1 + C_2 y_2$$

where $C_1, C_2 \in \mathbb{R}$.

The general solution of the nonhomogeneous equation (1) is given in the next theorem.

Theorem 2. Let y be the general solution of the nonhomogeneous equation (1), y_h be the general solution of the homogeneous equation (2) and y_p a particular solution of the nonhomogeneous equation (1). Then

$$y = y_h + y_p.$$

First, let us consider the homogeneous equation with constant coefficients, i.e.,

$$y'' + ay' + by = 0, \quad (3)$$

where $a, b \in \mathbb{R}$. Associated to the equation (3) we define the characteristic equation,

$$r^2 + ar + b = 0. \quad (4)$$

We know that the roots of (4) have to fall into one of the following three cases: two real distinct roots; one real root with multiplicity two; or two complex conjugate roots. Let r_1, r_2 be the roots of (4) and $C_1, C_2 \in \mathbb{R}$; according to each case, the general solution of the equation (3) is written in one of the following forms.

Case 1. Distinct real roots, $r_1 \neq r_2$; then

$$y(x) = C_1 e^{r_1 x} + C_2 e^{r_2 x}.$$

Case 2. Repeated real roots, $r_1 = r_2 = r$; then

$$y(x) = (C_1 + C_2 x) e^{rx}.$$

Case 3. Complex conjugate roots, $r_1 = \alpha + i\beta, r_2 = \alpha - i\beta, \alpha, \beta \in \mathbb{R}, \beta \neq 0$; then

$$y(x) = (C_1 \cos(\beta x) + C_2 \sin(\beta x)) e^{\alpha x}.$$

Next, we consider the nonhomogeneous equation with constant coefficients, i.e.,

$$y'' + ay' + by = f, \quad (5)$$

where $f(x) \neq 0$ and $a, b \in \mathbb{R}$. By theorem 2 we know that the general solution of this equation is given by $y = y_h + y_p$, where y_h is the general solution of the associated homogeneous equation and y_p is a particular solution of the given nonhomogeneous equation. The process to obtain y_p was explained for equation (3); therefore, we only need to know how to obtain one particular solution for (5). There are two methods to perform this task: the undetermined coefficients method and the variation of parameters method.

The undetermined coefficients method. This method can only be applied to a special form that the function on the rhs of the equation (5) can assume; the general form of f allowing the use of this method is

$$f(x) = (P_m(x) \cos(\beta x) + Q_n(x) \sin(\beta x)) e^{\alpha x},$$

where $P_m(x)$ and $Q_n(x)$ are polynomials of degree m and n , respectively.

In this case, a particular solution $y_p(x)$ of the equation (5) is sought in the form

$$y_p(x) = x^s (A_k(x) \cos(\beta x) + B_k(x) \sin(\beta x)) e^{\alpha x},$$

where $k = \max\{m, n\}$, A_k and B_k are polynomials of degree k of the general form with undetermined coefficients, and s is the multiplicity of the root $r = \alpha \pm i\beta$ of the characteristic equation of the corresponding homogeneous differential equation to (5) (if $\alpha \pm i\beta$ is not a root of the characteristic equation, then $s = 0$). Let us briefly explain the use of this method.

Depending on the function f we seek a particular solution $y_p(x)$ of the equation (5) in a similar form with undetermined coefficients. Then we substitute the expression for y_p in the given equation. Equating coefficients of the similar terms of the first and the second member of (5), we obtain a linear system of equations, to find the undetermined coefficients. Solving this system, we get the particular solution sought $y_p(x)$.

The variation of parameters method. For sake of self-contained present work, we briefly recall this “general method” (see our previous work (Coelho & Marreiros, 2013)) that we have to use in the general case. Consider the nonhomogeneous linear differential equation

$$y'' + ay' + by = f,$$

where a, b and f are continuous functions on some interval I . Let y_1 and y_2 be two linearly independent solutions of the corresponding homogeneous equation

$$y'' + ay' + by = 0,$$

on the interval I . Then a particular solution of the nonhomogeneous equation is given by

$$y_p = uy_1 + vy_2,$$

provided that u and v are functions that satisfy the following conditions

$$\begin{cases} u'y_1 + v'y_2 = 0, \\ u'y'_1 + v'y'_2 = f. \end{cases}$$

These conditions represent a linear algebraic system of equations for the unknowns u' and v' . Note that this system has a unique solution because,

$$W = y_1 y'_2 - y'_1 y_2 \neq 0,$$

since y_1 and y_2 are two linearly independent solutions of the corresponding homogeneous differential equation. Therefore, applying Cramer's rule, we can write,

$$u' = \frac{\begin{vmatrix} 0 & y_2 \\ f & y'_2 \end{vmatrix}}{W} = -\frac{f y_2}{W}, \quad v' = \frac{\begin{vmatrix} y_1 & 0 \\ y'_1 & f \end{vmatrix}}{W} = \frac{f y_1}{W}.$$

Performing the integration, we obtain

$$u = -\int \frac{f y_2}{W} dx, \quad v = \int \frac{f y_1}{W} dx.$$

The superposition principle. It is convenient to use the following result when the rhs $f(x)$ of the nonhomogeneous equation is given by a sum of several functions. If $y_{pk}(x)$ is a solution of the equation

$$y'' + ay' + by = f_k(x), \quad k = 1, \dots, n,$$

then the function

$$y_p(x) = \sum_{k=1}^n y_{pk}(x)$$

is a solution of the following equation

$$y'' + ay' + by = \sum_{k=1}^n f_k(x).$$

3. SOFTWARE IMPLEMENTATION AND USE

This section is used to show the outlook as well as to present a brief description of the software developed to solve second-order ODEs using the undetermined coefficient method and the variation of parameter method, according to the works (Coelho & Marreiros, 2013) and (Coelho & Marreiros, 2015) respectively. First, we decided to create the one using the variation of parameter, but, due to user input restrictions, we were forced to return to this problem and create one tool that can be used by students when learning the linear second-order ODEs with constant coefficients without having to pay any license. In both situations, it was used the Wolfram's software, more precisely we implement the code to create the Computable Document Format (CDF) file with the program Mathematica® following the references (Torrence & Torrence, 2009), (Ruskeepää, 2009), (Trott, 2006) and (Wolfram, 2003).

The CDF file type is a type of file that, as the name itself indicates, has the ability of doing calculus within the document. It is worth mentioning that this type of file requires a previous installation of the CDF Player program that can be downloaded from Wolfram's webpage¹. This intrinsic characteristic of the file gives the programmer the chance to create files for an incredible wide set of applications that can be used to teach or to present any subject that involves any type of calculus.

¹ Wolfram's webpage (at the bottom of the webpage look for Products/CDF Player).

Figure 1. Outlook of the software - regions of input and output

SOLVING SECOND-ORDER LINEAR ODEs BY USING INTERACTIVE SOFTWARE
UNDETERMINED COEFFICIENTS METHOD
 Celestino Coelho and Rui Mameires
 UNIVERSIDADE DO ALGARVE

REGION 1

Select the type of function on the rhs of your ODE ($y'' + ay' + by = f(x)$):

☒ $f(x) = (a_0 + a_1x + a_2x^2)e^{mx}$ ☐ $f(x) = (a_0 + a_1x + a_2x^2)e^{mx} \sin(\beta x) + (b_0 + b_1x + b_2x^2)e^{mx} \cos(\beta x)$

REGION 2

a 1
 b -2
 a_0 1
 a_1 0
 a_2 0
 a 0

REGION 3

General Solution Corresponding Homogeneous DE Particular Solution

REGION 4

The GENERAL SOLUTION of the Second Order Linear ODE

$$y'' + y' - 2y = 1$$

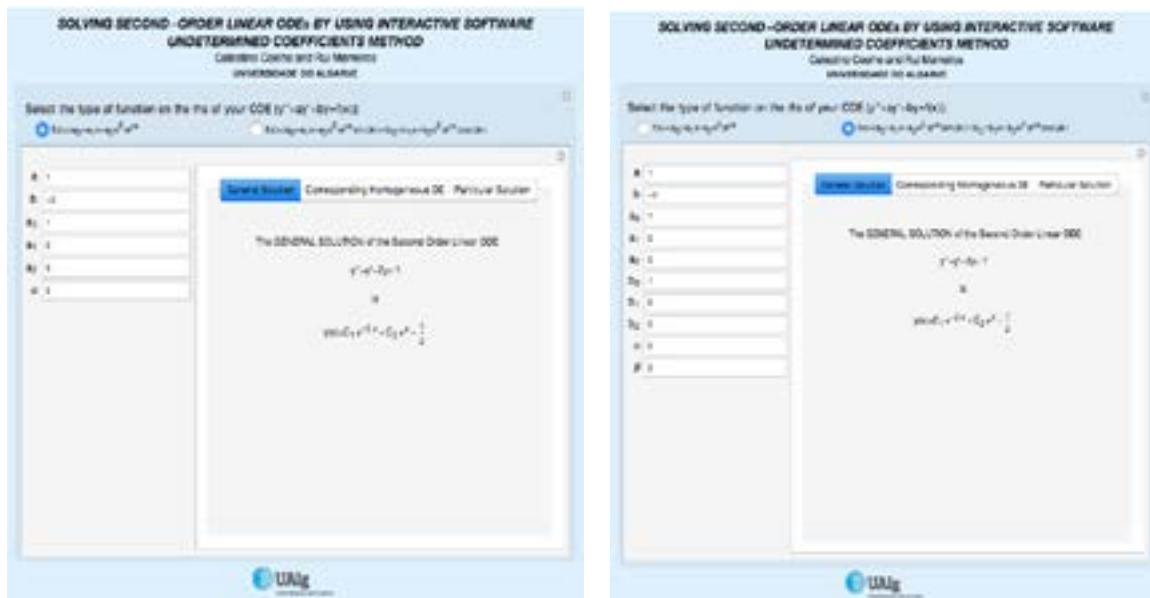
is

$$y(x) = C_1 e^{-2x} + C_2 e^x - \frac{1}{2}$$

UAlg

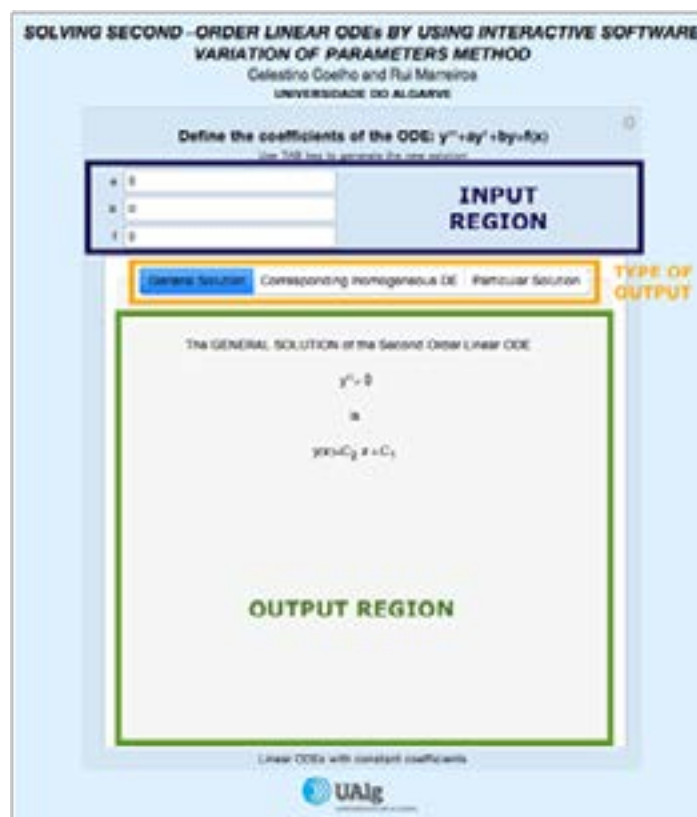
In what concerns to the outlook, we can see it as two main areas, one of input and another of output results. In figure 1 the regions that correspond to input conditions are signalized as regions 1 and 2. Region 1 is not exactly an input region but is directly related with the input region marked as region 2. Figure 2 shows the changes that occur when the user chooses one of the types presented to define the function on the rhs of the ODE. When the function on the rhs has the form of a product between a polynomial and an exponential, the user is compelled to choose the first option. This way it will be necessary to define the coefficients of the polynomial as well as the exponent constant coefficient. Since this was created to be a didactical tool we limited the degree of the polynomial to a maximum of two. So, in this case, the user has to give the program the coefficients of the ODE, the coefficients of the polynomial, and the exponent coefficient, that is, the user has to define six input values. The other option to define the function on the rhs includes trigonometric functions. This is actually the general case of the function that we can have on the rhs of the ODE when using the undetermined coefficients method to solve the type of ODEs covered in this work. Attending to figure 2 we notice a substantial increment in the number of input fields in this case. In fact, we have to define the coefficients of another polynomial, that will have, again, a maximum degree of two, and the constant coefficient in the argument of the trigonometric functions, which sums up to ten input values. To deal with the trigonometric functions the user must be a little bit more careful, because sometimes the function on the rhs of the ODE depends only on a cosine function, case that will be accomplished by setting the coefficient β equal to 0, but in other occasions the function defined on the rhs depends only on a sine function. In this situation, the manipulation is slightly different, because the choice of a coefficient β that eliminates the first part of the function is not the easiest way to solve the problem. Therefore, in this case, the user must set all the coefficients of the polynomial equal to zero. Other situation that is important to emphasize is the one that happens when the function on the rhs depends simultaneously on sine and cosine functions. In this case, additional caution must be taken, because if the constant coefficients in the arguments of the trigonometric functions are not the same the problem can't be solved by a solely application of the program. To clarify this situation, when the constant coefficients in the arguments of the trigonometric functions are exactly the same the user can define the function on the rhs in one application of the program, in any other situation it will be necessary to apply the principle of superposition described in the first section. In fact, this principle has to be applied in all situations that occur when the user is confronted with the impossibility of defining the rhs function in the way that the program exhibits. Turning to the output area we may divide it in two regions, one where the user sets the part of the solution he wants to see or analyse, if the idea is to see the process of obtaining the solution. In figure 1 this is marked as region 3. By clicking on one of the three options available, the user will see the general solution, the process to obtain the solution to the homogeneous associated ODE, or the process to obtain the particular solution to the ODE defined in the input area. The result of the choice in region 3 will be displayed in the region marked as region 4 in figure 1.

Figure 2. Outlook of the software - choices available for f in the ODE: $y''+ay'+by=f$.



In which concerns to the software developed to solve the problem with the method of variation of parameters, printed in figure 3, we easily see that its structure is exactly the same as the one described above, with one slight difference worth mentioning. Since this is the general method we do not have restrictions to the form of the function to be used in the rhs of the ODE, so, to define it, the user has an input field where he has to define the analytical expression of the function to use. Note that the input has to be done using the syntax of the programming language that is being used, more precisely the one used when programming with Mathematica®. The possibility of inputting analytical expressions is what implies the buying of a license to run the CDF player.

Figure 3. Outlook of the software: method of variation of parameters.



To end this section, we describe in a very briefly way the most important commands used to create the software presented here. As the list of commands used to implement the software is vast, it will be impossible point and explain all of them. The central command used to construct this type of files is the Manipulate command (see figure 4), used to enable interactive manipulation.

Figure 4. Command Manipulate

```
Manipulate[
  TabView[{
    {"op1", "General Solution" → Column[
```

Another important command used is the InputField command, presented in figure 5, which is used to represent an editable input field that, in our case, contains the values the user wants to attribute to the constant coefficients of the ODE, the polynomial and also to the trigonometric constant arguments.

Figure 5. Command InputField

```
{ {alfa, 0, alfaL}, -10, 10}, Alignment → Center, ControlPlacement → Left, ControlType → InputField
], {+end manipulate+}
```

Analysing figure 4 we notice the existence of another command, also with greater importance, used to manipulate the output. The command TabView provides the possibility to choose, by clicking, the type of output.

Figure 6. Command DSolve

```
"y(x) =" FullSimplify[y[x] /. DSolve[y''[x] + a y'[x] + b y[x] = 0, y[x], x,
  GeneratedParameters → (Subscript[C, #] &)]][[1]]],
```

Sometimes, due to the specificity of the problem, we also used commands that are intrinsic to Mathematica® and enable the user to perform symbolic calculus, such as DSolve (see figure 6).

EXAMPLES

The examples we decide to show here were chosen from the references (Braun, 1983), (Vrabie, 2004), and (Demidovich, 1978). Our choice was performed in a constructive way, which is building new cases upon the ones already solved by using the software. In what follows, we decided to state the problem we want to solve and give the main direction guidelines to obtain its solution. This way the user can see the correspondence between the process of obtaining the solution and the results provided by the software.

The homogeneous case

Since in all the situations we have to start the process by solving the associated homogeneous ODE we start this section by presenting the procedure when having a homogeneous ODE.

Example 1. Find the general solution of the ODE
 $y'' - 2y' + y = 0$.

Using the theory presented in the first section we solve this type of ODE by constructing and solving the characteristic equation
 $r^2 - 2r + 1 = 0 \Leftrightarrow (r - 1)^2 = 0$.

Since it has only one solution with multiplicity 2, $r = 1$, the general solution of the ODE presented in example 1 will be
 $y(x) = C_1 e^x + C_2 x e^x = (C_1 + C_2 x) e^x$,

with $C_1, C_2 \in \mathbb{R}$.

The results we get by applying our software are shown in figure 7. Note that in this case the particular solution has to be $y_p(x) = 0$, which means that the general solution of the ODE is equal to the solution of the homogeneous associated ODE.

Figure 7. Results obtained by using the software when solving example 1.



The nonhomogeneous case

To start the analysis of the application of our software to the nonhomogeneous case assume that the coefficients of the ODE are exactly the same as the ones used in example 1, meaning that the solution of the homogeneous associated equation is the general solution obtained to the ODE defined in example 1. First, we will turn our focus to examples that can be solved by using the undetermined coefficients method, presenting, at the end of the section, an example that can't be solved with the undetermined coefficients method, that is, that has to be solved by using the method of variation of parameters.

The method of undetermined coefficients. To start the exemplification of the application of the software developed for this method consider a function on the rhs that is the result of a product between a polynomial and an exponential.

Example 2. Find the general solution of the ODE

$$y'' - 2y' + y = 6xe^x.$$

From example 1 the solution of the homogeneous associated ODE is given by

$$y_h(x) = C_1 e^x + C_2 x e^x,$$

where $C_k, k=1,2$ are arbitrary real constants. The characteristic equation, $r^2 - 2r + 1 = 0$, has a unique solution with multiplicity two, $r = 1$. This implies that we need to look for a particular solution that has the following form,

$$y_p(x) = x^2 (A_0 + A_1 x) e^x = (A_0 x^2 + A_1 x^3) e^x.$$

In this situation, we need to multiply by x^2 because the associated homogeneous ODE has a solution that already is a linear combination of the functions in the set $\{e^x, x e^x\}$. This means that we need to look for a solution that is a linear combination of $x^2 e^x$ and $x^3 e^x$. The application of the undetermined coefficient method to this case yields,

$$y_p(x) = x^3 e^x.$$

Which leads us to conclude that

$$y(x) = y_h(x) + y_p(x) = C_1 e^x + C_2 x e^x + x^3 e^x,$$

with $C_1, C_2 \in \mathbb{R}$.

In figure 8 we present the results obtained by our software when it is applied to example 2.

Figure 8. Results obtained by using the software when solving example 2.



As a third example for the application of this software we will consider a function on the rhs of the ODE that is the result of a product between a polynomial and a trigonometric function. Note that when it is mentioned a trigonometric function we are considering only the sine and/or cosine functions.

Example 3. Find the general solution of the ODE
 $y'' - 2y' + y = 4 \sin x$.

In what concerns to the homogeneous associated ODE we already know its solution, since is the same of the ODE presented in example 1. According to the form of the function on the rhs of the ODE we need to search for a particular solution in the form,

$$y_p(x) = A_0 \sin x + B_0 \cos x.$$

Applying the method described in the first section we obtain
 $2B_0 \sin x - 2A_0 \cos x = 4 \sin x$,

which leads to the following system of linear equations,

$$\begin{cases} -2A_0 = 0 \\ 2B_0 = 4 \end{cases} \Leftrightarrow \begin{cases} A_0 = 0, \\ B_0 = 2, \end{cases}$$

and, consequently,

$$y_p(x) = 2 \cos x.$$

Therefore, the general solution of the ODE is given by
 $y(x) = y_h(x) + y_p(x) = C_1 e^x + C_2 x e^x + 2 \cos x$,

with $C_1, C_2 \in \mathbb{R}$.

Figure 9 shows the results obtained with our software.

Figure 9. Results obtained by using the software when solving example 3.



The method of variation of parameters. The real importance of considering this method it's because it can be applied in all situations in particular when the function on the rhs of the ODE doesn't meet the form that can be used to apply the method of undetermined constants.

Example 4. Find the general solution of the ODE
 $y'' - 2y' + y = e^x \ln x$,

with $x > 0$.

The major difference between the software that uses the undetermined coefficients method and the one that uses the method of variation of parameters resides in the way that user inputs the data, more precisely the form allowed to define the analytical expression of the function present in the rhs of the ODE. In this method, the choice for the analytical expression of the function to be used in the rhs is free. However, to input the analytical expression the user must follow the syntax used when programming with Mathematica®. For instance, in the example 4 the user must write `Exp[x]*Log[x]` in the field that corresponds to f . After inputting the data that defines the equation in the correspondent fields, the software will generate three tabs of results. The first one, appearing by default, is the one that corresponds to the general solution of the ODE defined, see figure 10 (left side). Clicking on the second tab the user can inspect the procedure used to obtain the general solution of the corresponding homogeneous differential equation, see figure 10 (middle). Finally, clicking on the third tab the user will find the procedure applied to obtain the particular solution using the method of variation of parameters, see figure 10 (right side). Relating the results obtained with this program with the ones given by the one that uses the method

of undetermined coefficients method we discover that the only difference is the tab that shows the process of obtaining the particular solution, the other two tabs show exactly the same results.

Figure 10. Results obtained by using the software when solving example 4.



The superposition theorem

To end the section dedicated to examples let us explain how to use the software implemented for the method of the undetermined coefficients when a single application of it does not solve the problem. This situation occurs when the rhs of the equation is defined as a sum of functions that can be used with this method. For example, suppose that the rhs of the ODE corresponds to the sum of the function

$$f(x)=6xe^x$$

with the function

$$g(x)=4\sin x$$

i.e., the ODE to solve is given by

$$y'' - 2y' + y = f(x) + g(x) \Leftrightarrow y'' - 2y' + y = 6xe^x + 4\sin x. \quad (6)$$

In this type of situations, the user must run the application twice, one to obtain the particular solution to the ODE

$$y'' - 2y' + y = f(x) + g(x) \Leftrightarrow y'' - 2y' + y = 6xe^x. \quad (7)$$

which corresponds to the one obtained in example 4.2, and another to obtain the particular solution to the ODE

$$y'' - 2y' + y = f(x) + g(x) \Leftrightarrow y'' - 2y' + y = 4\sin x. \quad (8)$$

which corresponds to the one obtained in example 3. Denoting the particular solutions to the ODE (7) and (8) by y_{pf} and y_{pg} , respectively, the application of the superposition principle presented at the end of the first section allow us to conclude that the particular solution to the ODE (6) is given by

$$y_p(x)=y_{pf}(x)+y_{pg}(x).$$

4. FINAL REMARKS

In (Coelho & Marreiros, 2013) we presented software that could be used to solve this type of ODEs, but, due to the way that we choose to create it, the user can only apply it freely when the function on the rhs of the equation is constant. In any other case the user is obliged to buy a license for Mathematica® or CDF Player. As a consequence of this fact, we can assure that one of most important conclusions of this work is that the software developed using the method of undetermined coefficients can be used without the necessity of buying any license. This feature allows us to share it with our students, so they can use it at home, or anywhere else, when studying linear second-order ODEs with constant coefficients. This may be the most important conclusion of this work, but we may draw other minor considerations about it, such as the importance it represents as a complement in studying this subject and the simplicity of its use, whether we use the program built with the undetermined coefficients method or the method of variation of parameters.

We should point out that in the last couple of years there has been a little revolution in the publication and distribution of this type of applications, as we can see in Wolfram's webpage, but in our humble opinion the one we present in this is more complete and give a more concise approach about the process of how we should obtain the particular solution.

REFERENCES

- Birkhoff, G., & Rota, G.-C. (1989). *Ordinary Differential Equations* (4th ed.). John Wiley & Sons.
- Braun, M. (1983). *Differential Equations and Their Applications* (3rd ed.). New York: Springer-Verlag.
- Coelho, C., & Marreiros, R. (2015). Learning to solve linear second-order ordinary differential equations with constant coefficients by using interactive software. In J. B. A. Loja (Ed.), *2nd ECCOMAS Conference on Algebraic and Symbolic Computation - SYMCOMP 2015, March 26-27* (pp. 331-349). Faro: ECCOMAS.
- Coelho, C., & Marreiros, R. (2013). Solving second-order linear ordinary differential equations interactively. In A. Loja, J. Barbosa, & J. Rodrigues (Ed.), *Proceedings of the 1st ECCOMAS Conference on Algebraic and Symbolic Computation - SYMCOMP 2013, September 9-10* (pp. 243-258). Lisboa: ECCOMAS.
- Demidovich, B. (1978). *Problems in Mathematical Analysis* (2nd ed.). Moscow: Mir Publishers.
- Edwards, H., & Penney, D. (2008). *Elementary Differential Equations* (6th ed.). Pearson Education, Inc.
- Gill, D. (2009). *A First Course in Differential Equations with Modeling Applications* (9th ed.). Brooks/Cole.
- Krasnov, M., Kiselev, A., & Makarenko, G. (1981). *A Book of Problems in Ordinary Differential Equations*. Mir.
- Marreiros, R. (2012). *Apointamentos de equações diferenciais ordinárias*. Faro: Universidade do Algarve.
- Ross, S. (1984). *Introduction to Ordinary Differential Equations* (4th ed.). John Wiley & Sons.
- Ruskeepää, H. (2009). *Mathematica® Navigator: Mathematics, Statistics, and Graphics* (3rd ed.). Academic Press.
- Torrence, B., & Torrence, E. (2009). *The Student's Introduction to Mathematica®, A Handbook for Precalculus, Calculus, and Linear Algebra* (2nd ed.). Cambridge University Press.
- Trott, M. (2006). *The Mathematica Guidebook for Symbolics*. New York: Springer Science+Business Media, Inc.
- Vrabie, I. (2004). *Differential Equations, An Introduction to Basic Concepts, Results and Applications*. Singapore: World Scientific Publishing Co. Pete. Ltd.
- Wolfram, S. (2003). *The Mathematica® Book* (5th ed.). Wolfram Media.

BILINGUAL TEACHING IN ALGARVE AND ITS ADVANTAGES

Rui Rego

University of Algarve; Vale Verde International School-Algarve
(profdeciencias@gmail.com)

Jorge Andrez Malveiro

University of Algarve
(jamalveiro@ualg.pt)

ABSTRACT

Surprising recent studies connecting cognitive advantages of being bilingual might influence the future of education. In Algarve, we could find two schools that offer bilingual teaching. These schools provide at early stages for 50% of teaching in English and the rest conducted in Portuguese. These schools strongly believe that this bilingual approach will enrich students' lives in Portugal, and enhance their capacity for learning additional languages. This unique approach provides progressive building blocks for non-native speakers in both languages if they start in this system at an early stage (Esposito, 2014). This ensures that by the end of the Primary Years Program, students should be well prepared for a Portuguese or English tuition. This type of program has proved very successful (academic success) and is evident in the high pass rate of students at these schools, being significantly higher than in England, Wales or Northern Ireland (according to the results released by the Department of Education of UK for 2016).

Speaking two languages has obvious practical benefits in an increasingly globalised world. According to Theresa Deussen (2014), research is pointing out several benefits (Cultural, Social, Cognitive, Economic, and Academic) related to bilingualism.

The most recent discoveries connect bilingualism to increased brain efficiency, faster responses to stimuli and it could delay the symptoms associated with Alzheimer and other frontotemporal dementia diseases. Evidence supports an array of benefits of growing up to become proficient in more than one language and the effectiveness of bilingual programs in schools. In a world that globalisation is a challenging reality; we need to be ready for present and future multicultural changes.

Keywords: Bilingual, International School, Academic, Cognitive.

In Algarve, you can access a high-quality public and private education systems. Surprising recent studies connecting cognitive advantages of being bilingual might influence the future of education. At the moment, parents don't need to wait until the system changes, because there are some schools in Algarve that follow a fully bilingual program for their children.

International schools attended by Portuguese and foreign students can be found all over the country. At these schools, students may study international programs such as the International Baccalaureate, or the British IGCSE, or even the Portuguese system. Through the combination of cultural excursions, curriculum inclusion and with the privilege of having a diverse body of multinational students and teachers, these schools provide an optimal environment to develop multicultural education. Even with a multicultural education, not all schools offer a true bilingual education.

In Algarve, we could find 5 international school groups that could offer an international education up to A-level: -The Nobel International School; International College of Vilamoura; Vale Verde International School (VVIS); Aljezur International School; and Colégio Santiago International (CSI).

From this list of schools, only two are offering a true bilingual education: - CSI, and VVIS.

The first school adopting a fully bilingual program was VVIS. At 2002 following the completion of a Masters Research Degree by the School Director investigating the effective implementation of bilingual education, a pilot scheme program was launched in 2008 to introduce Algarve's first fully bilingual primary school. This project provides at early stages for 50% of teaching in English and 50% of lessons being conducted in Portuguese. This ratio fades out as the students' progress on their studies favouring the English teaching. The pilot program was a great success and is running since then up to year 6. VVIS students are now able to communicate in both languages. Preschool following the bilingual International Preschool Curriculum commenced in September 2013 and ran for about 2 years. It followed the International Preschool Curriculum taught mainly in Portuguese, with some themes being taught in English.

The school divides the teaching so that some subjects are taught in English and others are taught in Portuguese. Bilingual teaching becomes a natural event in the school grounds. The school embraces several subjects taught in Portuguese that are introduced by the Ministry of Education in Portugal such as "Língua Portuguesa" (Portuguese Language), "Estudo do Meio" (Environmental Studies), "História e Geografia de Portugal" (History and Geography of Portugal), "Educação Física" (Physical Education), "Educação Visual e tecnológica" (Visual and Technological Education), "Formação Pessoal e Social ou Educação Religiosa" (Personal and Social Education or Religious Education).

CSI started its bilingual program at around 2012 and expanded to A-level in the same way as VVIS. These schools strongly believe that this bilingual approach will enrich students' lives in Portugal, and enhance their capacity for learning additional languages. This unique approach provides progressive building blocks for non-native speakers in both languages

if they start in this system at an early stage. This ensures that by the end of the Primary Years Program, the student should be well prepared for a Portuguese or English tuition.

Besides the bilingual approach, the advantage of VVIS compared to other international schools in the area is that their intake is limited to eighteen students per class in the secondary. This low pupil ratio per teacher provides ample opportunity for students to receive individual attention, which has proved very successful and is evident in the high pass rate of students at that school.

According to the Department of Education of UK, in England, the A*- C pass rate dropped from 68.8% in 2015 to 66.6% in 2016. In 2016 Wales shows a similar percentage and Northern Ireland with a higher result 79.1%. With the following percentage data, we could compare the results of the bilingual schools of the Algarve with England, Wales, and Northern Ireland. Results for 2016 were as follows on Percentage of A*- C results (2016):

- VVIS = 91%;
- CSI = 87.5%;
- Northern Ireland = 79.1%;
- Wales = 66.6%;
- England = 66.6%.

Both schools clearly scored above any of the compared countries. VVIS with the best results scored 11.9% above Northern Ireland and 24.4% above Wales and England.

Comparing the results of these two bilingual schools in Algarve, with the UK panorama, we could clearly see that these schools are outperforming England, Wales and Northern Ireland.

At years 7, 8 and 9, the curriculum in these bilingual schools is totally based on the British curriculum guidelines. Subjects from year 7 to year 9 are taught according to the program of study for key stage 3 and attainment targets.

They follow a common curriculum of English, Mathematics, General Science, French, Portuguese, Geography, History, Information Computer Technology, Music, Drama, Art, and Design. PSHE and Physical Education programs are adapted according to the year and the group being taught.

Subjects from year 10 to 13 follow programs from Cambridge International Examinations or the from Pearson.

The syllabuses are international in outlook but retain a local relevance. They have been created specifically for an international student body with content to suit a wide variety of schools and avoid cultural bias. This curriculum allows university entry in more than 145 countries. The Universities and Colleges Admissions Service (UCAS) is a UK-based organisation that recognises their qualifications.

At 2011 the British Council started working with the Portuguese Ministry of Education in order to assist a program (Bilingual Schools Project) that follows a bilingual form of teaching in 3 primary public schools (none in the Algarve). Some lessons such as “Estudo do Meio” (Environmental Studies) and “Expressões Artísticas” (Artistic Expressions) were taught partly in English.

At 2014 the Ministry of Education, through the General Directorate of Education – “Direção Geral de Educação” (DGE) made a formal assessment of this project that they considered successful and decided to invite other schools to adhere and to expand the model up to year 6. The assessment identified several advantages that are summarised in the following table.

Table 1- Summary of the advantages of the Bilingual Schools Project according to the DGE 2014 assessment

Advantages for the students	Advantages for the teachers and the school
Increases the chances of having fully bilingual students at the end of their schooling	An innovative curriculum might reduce student dropout
Improves the ability to communicate in different environmental contexts	Might increase staff motivation and the sense of belonging to a common community
Promotes a more flexible chain of thought	Teachers develop their skills through in-service training
Improves the chances of learning and understanding other languages	
Improves their future chance of finding a suitable job in this increasingly globalised world.	

Probably the biggest challenge of this program, and also identified on the assessment, is the lack of preparation and low language skills that some Portuguese primary teachers have at the beginning of this new educational model.

Speaking two languages has obvious practical benefits in an increasingly globalised world (Baker, 2011). Most children have the capacity to learn more than one language. Researchers say that there are advantages to being bilingual. However, some people might argue that learning one language might be hard enough but several studies show clear advantages of learning two or more languages and even more advantages if you fully become bilingual and biliterate.

Children who are learning to speak two languages tend to follow patterns of learning as any other person learning their first language. The sounds of the first language can influence how children learn and use a second language. As a rule, over time, the more difficult sounds and words will be eventually learned (Baker, 2011).

Initially, it was thought that learning two languages could increase or highlight speech or language problems. Today experts such as Corey Heller (founder of Multilingual Living and the Editor-In-Chief/Publisher of Multilingual Living Magazine) know that it is not true and any speech or language problem will show up in both languages. However, these problems are not caused by learning two languages and learning two languages could even reduce some of the problems previously identified, therefore acting as an advantage.

Research is pointing out several benefits related to bilingualism that could be ordered in two groups: *Cultural and Cognitive* in one hand, and *Economic and Academic* on the other hand.

There might be other advantages such as an increased level of well-being but it is not fully studied yet to be sure.

There are strong **Cultural** benefits of being bilingual (Gaia Vince, 2016). This tends to be more important in immigrant communities. Preserving important relationships, traditions, and identity of the community of origin and at the same time participate fully in the local society proves to be the best way to promote their successful integration during the acculturation process. Developing a high level of proficiency in another language opens doors to other ways of thinking about the world and possibility of relationships with people in other communities and other countries. This means that as an adult the job market is considerably expanded and it also helps to promote social interaction. The following table summarises some key points.

Table 2- Summary of the main cultural benefits of being bilingual

Cultural benefits
Preserves important relationships
Keeps traditions alive
Identity of the community is preserved
Promotes social integration with the host community
Increases the chances of acculturation by integration
Increases social interaction with the host and native communities

Recently some researchers are identifying **Cognitive** benefits; Ellen Bialystok and Michelle Martin-Rhee at York University in Toronto identified a superior ability to deal with conflicting visual and verbal information. In their study, young bilingual children show more awareness of how language works and have better social interaction skills. Also, Alena Esposito and Lynn Baker-Warda compared classroom responses of ethnically diverse children in bilingual and traditional classrooms. They observed more successful classroom responses from kids in a bilingual class.

Furthermore, some researchers hypothesise that the cognitive multitasking involved in bilingual speech may act as a protection against dementia. Some researchers indicate that learning two languages could interfere with each other: this idea is not completely unreasonable as there is evidence that in a bilingual's brain both language systems are stored in different areas and they could be active and processing at the same time (even when using only one language). This could create situations in which one system obstructs the other. But this interference could also be a good thing. Researchers found that this situation forces the brain to resolve internal conflicts, strengthening the cognitive muscles and possibly delaying dementia. Further studies are needed but they have an interesting hypothesis that seems acceptable.

A 2004 study developed by Ellen Bialystok and Michelle Martin-Rhee compared bilingual with monolingual preschoolers in a competition with a digital mental puzzle. The tasks consisted of identifying and sorting objects according to their colour and then reorganise them according to their shape. Bilinguals were significantly quicker at performing this task.

In this field, some studies don't suggest a heightened cognitive ability by bilinguals but instead a more efficient use of the brain. According to Albert Costa from the University of Pompeu Fabra-Spain, as bilinguals need to switch languages quite often, this is training the brain to focus on the essential on a given moment. This researcher compared German-Italian bilinguals with Italian monolinguals during a pre-set task. He found that the bilingual subjects not only performed faster, but they also did so with less activity in parts of the brain showing a higher efficiency.

In 2009 Agnes Kovacs conducted a study in Italy with 7-month old babies. Part of the sample was exposed to two languages and the other half to only one language since birth.

Kovacs conducted an experiment that consisted of repeating a sound before they were shown a puppet. Initially, the puppet was always shown on one side, so babies learned to anticipate this fact. On a later set of trials, the puppet was shown on the opposite side. The babies exposed to a bilingual environment learned quicker to switch their anticipatory gaze in the new direction.

Another interesting study was conducted by the University of California-San Diego. The neuropsychologist Tamar Gollan studied 44 elderly Spanish-English bilinguals. He measured the degree of proficiency in each language and concluded that the higher the degree of bilingualism, the later the appearance of the symptoms of dementia or Alzheimer's.

Since then, more studies have been conducted and with bigger samples. In the largest study to date, relating dementia and bilingualism, (almost 650 patients) in India, of whom 60 percent were bilingual, had been diagnosed with the condition. On average, bilinguals developed dementia 4.5 years later than those who did not. The delay ranged from three years for Alzheimer's disease to six years for frontotemporal dementia. Table 3 explores cognitive benefits that are still being studied.

Table 3- Summary of some cognitive benefits being studied

Cognitive benefits
Increases the brain efficiency
Promotes faster responses to stimuli
Might delay of symptoms associated with Alzheimer and other frontotemporal dementia diseases

Other promising results have also been achieved as happened in the studies developed at the University of Florida, where some of its researchers found some evidence that suggests possible Economic benefits of bilingualism. Other studies found more modest benefits to individuals' incomes, however, that study shows that fully bilingual immigrants in the USA (2003/2004) earn an average of nearly \$7,000 more per year than immigrants who speak only English. The following table summarises some possible benefits.

Table 4- Summary of some economic benefits of being bilingual

Economic benefits
More job opportunities
Access to more responsibilities and therefore more bonuses or higher salary
Higher average salary
Higher chances of promotion
Reduced time between jobs

There also seem to be some **Academic** benefits by studying in a bilingual environment. Studies in the US show that students that started in a bilingual school at kindergarten show initially weaker results but at roughly by the fifth grade, they are likely to read as well or better in English than those in regular programs and also read better in the second language. In this case, the advantages are clear and start being noticeable after the fifth grade. The following table will identify some academic benefits.

Table 5- Summary of academic advantages of being bilingual

Academic benefits
After the fifth year at a bilingual system, students show similar or better results at one language and clearly better results at the second language compared to systems following a monolingual teaching.
Reading and writing becomes easier
The interpretation of instructions is clearer

Evidence supports an array of benefits of growing up to become proficient in more than one language and the effectiveness of bilingual programs in schools. In a world that globalisation is a reality, we need to be ready for future changes. I believe that the combination of these benefits also contributes to an increase in well-being. At the moment there is only one study that connects bilinguals with well-being and they postulate that it might have a positive effect.

REFERENCES

- Baker, C. (2011) *Foundations of bilingual education and bilingualism*. 5th Edition Toronto Multilingual matters LTD. pp512
- Bialystok, E.; Craik, F.; Klein, R.; Viswanathan, M. (2004) *Bilingualism, aging and cognitive control: Evidence from the Simon Task*. Psychology & Aging, v.19, p.290- 303.
- Costa, A., Branzi F. M., & Ávila C. (In Press). *Bilingualism: Switching*. Neurobiology of Language.
- Gaia Vince From Mosai12 August 2016 <http://www.bbc.com/future/story/20160811-the-amazing-benefits-of-being-bilingual> written at 12/8/2016
- Kim, K., Relkin, N., Lee, K., & Hirsch, J. (1997). *Distinct cortical areas associated with native and second languages*. Nature, 388, 171-174
- Martin-Rhee, M., & Bialystok, E. (2008). *The development of two types of inhibitory control in monolingual and bilingual children*.
- Ryan, C. (2013) *Language use in the United States: 2011*. American Community Survey Reports

- Suvarna A. *et al.*, (2014) *Bilingualism delays age at onset of dementia, independent of education and immigration*. American Academy of Neurology.
- Thanh, V. (1995) *Bilingualism and Subjective Well-Being in a Sample of Elderly Hispanics*. Journal Of Social Service Research Vol. 20, Iss. 1-2, 1995
- Theresa Deussen, 18th December, <http://educationnorthwest.org/northwest-matters/treating-language-strength-benefits-bilingualism>
- <https://prezi.com/ac0t0slojznz/bilingual-education> accessed at 15/3/2017
- <http://www.asha.org/public/speech/development/The-Advantages-of-Being-Bilingual/> accessed at 15/3/2017
- <http://www.dge.mec.pt/estudo-de-avaliacao-do-projeto-ensino-bilingue-precoco-no-1o-ciclo-do-ensino-basicoO> accessed at 28/3/2017
- <https://www.gov.uk/government/organisations/department-for-education> accessed at 28/3/2017

EXTENDING THE SOCIAL TRADITION ON ORGANISATIONAL LEARNING - ETHICS, GENDER AND CITIZENSHIP

Ângela Lacerda Nobre

Economics and Management Department, Escola Superior de Ciências Empresariais,
Instituto Politécnico de Setúbal
(angela.nobre@esce.ips.pt)

Rogério Duarte

Department of Mechanical Engineering, Escola Superior de Tecnologia,
Instituto Politécnico de Setúbal
(rogerio.duarte@estsetubal.ips.pt)

Marc Jacquinet

Department of Social Sciences, Universidade Aberta
(marc.jacquinet@uab.pt)

ABSTRACT

Purpose – to highlight the controversial and potentially rich dilemmas of contemporaneity in organizational settings, including the context of the knowledge economy, the need to promote knowledge management, the structuring role of organizational learning, and the enabling and powerful framing, which emerges from the ethical, gender and citizenship dimensions.

Design – an exploratory theoretical inquiry, which acknowledges the importance of capturing the philosophical argumentation behind different epistemic options and schools of thought, including the possibility to understand the empowering potential of concepts such as social innovation.

Findings – the acknowledgement of the role of signification is highlighted in a crucial way: according to the social tradition perspective, there are two central items that illustrate the process through which meaning-making emerges spontaneously in human spheres of action, the first one is language use and the second one is the participation in social practices.

Practical Implications – ethics, gender and citizenship are direct entry spaces for the understanding of the complexity of how humans organise themselves and create and share knowledge in order to optimise their action.

Originality – the full power of human thought and action is achieved when there is enough individual and social motivational alignment in order to promote the best options available; such options do emerge and succeed as a matter-of-fact evidence of the creative and interpretative capacity, which finds in organisations one of the best instances for such human development.

Keywords: Organizational Learning, Ethics, Gender, Citizenship, Social Innovation.

JEL Classification: O35

1. INTRODUCTION

The rationale behind the emergence of Organisational Learning, in the last quarter of the twentieth century, was that a new transitional phase was under way, corresponding to a change from an industrial society, based on rigid settings dating from the nineteenth century, namely the command and control paradigm, to a post-industrial society, focused on collaboration and cooperation, which gains new relevance in the turbulent first decades of the twentieth first century. A transition implies that there have to be new solutions to new problems and also that the very idea of problem and solution is changed.

The post-industrial era has acquired many different designations, from knowledge economy, to digital economy or information economy. Broader still, the societal context, also acquires a new terminology, namely the network society (Castells, 2011), the programmed society (Touraine, 1971) or the digital age. If knowledge is important, then learning becomes crucial and organisations become a fundamental setting within which learning and knowledge creation and sharing may occur.

The links between a new technological enabled environment, related to the digital and information technology revolution, and the need to promote learning in organisational settings, is straightforward. However, the transition phase holds a myriad of different layers, like the skin of an onion. Therefore, there are philosophically based concerns that may take the form of epistemological, anthropologic and ethnographic inquiries. Not only one ascertains that learning at organisational level is crucial within the changing societal environment, but also that the methods, approaches and models being used in order to capture this changing reality have to evolve too.

The social tradition on Organisational Learning, in contrast to the dominant cognitivist perspective, brings in a widely diversified and heterodox set of contributions, ranging from history, the arts, psychoanalysis, to semiotics. The message that it holds is that complexity must be dealt with from novel perspectives, including transdisciplinary inputs. More importantly, new starting points of analysis should be put forward, namely those that may enable new and powerful perspectives and worldviews to emerge. Consequently, addressing issues such as ethics, genre and citizenship, perform this role of working as a new reality test in relation to current organisational and societal challenges.

In short, ethics refers to how each society defines and distinguishes good from bad, desirable from undesirable behaviour. Gender issues relate to the importance of recognising the inheritance from a male dominance society and the role of feminism in promoting a more balanced society. It is crucial to highlight that inclusion and equality issues, within the human's rights settings, are primarily related to the rights of the minorities. However, gender equality is a cause that represents half of humanity, meaning that it is hard to hide. Finally, citizenship refers to the possibility, capacity and ability of individuals to promote common good and contribute to the societies to which they belong. These three dimensions enable a critical and constructive angle of analysis of current reality.

Identifying core items in the present change and transitional phase and enabling the creation of an effective organisational agenda, which may address such items in a gratifying and effective way, that is an open goal to be attained. Such organisational agenda for change may represent strong opportunities for groups of individuals to work together towards a common objective. No matter the geographical setting or the historical age, these elements are constitutive of that which signifies being human, that is, to imagine, design and work towards a common goal, this has always been present in the history of humanity.

Although the social tradition perspective has always been present in organisational and management studies, its heterodox and marginal role, when confronted with the dominant position of the cognitivist perspective, makes it hard to be fair and objective regarding its ability to capture, to decode and to deconstruct the fine lines of meaning that are present in human settings.

Organisations are human laboratories for social innovation and organisational communities may host radical and revolutionary lessons for society as a whole, as microcosms of how a differentiated unity enables humans to work together for common good, creating something that is larger than the sum of its parts. Social innovation is part of the process of change and transition, and it is understood to be an integral and dynamic process, which overlaps individual and organizational scales in order to focus on the cultural, political and historical process of change, evolution and human development.

The present work uses the importance of interdisciplinary studies as a gateway for organisational complexity. The argument is that organisational learning and social innovation are framed by contemporary challenges that may be better grasped through three main theoretical constructs: ethics, gender and citizenship. Consequently, the structure of the current paper is to highlight the contributions of several authors to these different fields of study, so that each will form one of the sections below.

2. THE RELEVANCE OF INTERDISCIPLINARY STUDIES

Complexity and the autopoietic capacity of complex systems are considered to be core requisites for the relevance and emergence of interdisciplinary studies. Certain authors, namely Newell *et al.* (2001) argue that “an examination of complex systems yields new insights into the practice of interdisciplinary study and confirms widely accepted principles for the conduct of interdisciplinary inquiry”. As they explain: “Interdisciplinarity is necessitated by complexity, specifically by the structure and behavior of complex systems. The nature of complex systems provides a rationale for interdisciplinary study.” (Newell *et al.*, 2001). Even more strongly: “Most importantly, the distinguishing but elusive characteristic of interdisciplinary studies—synthesis or integration—is at last explained in terms of the unique self-organizing pattern of a complex system.” (Newell *et al.*, 2001).

The need to use an interdisciplinary perspective in research is often related to the need to come closer to real life problems and to practical and hands-on solutions to such problems. Robson and McCartan (2016) stress the importance of such approaches in “projects for which social research methods can be used”. Moreover, they consider the challenge that is posed to researchers, departments and university institutions and research centres: to make proof of the “ability to obtain funding for research and complete projects with measurable impact” (Robson and McCartan, 2016). These authors identify three characteristics in current research: “An increased emphasis on ethical considerations when carrying on research involving people; the mighty bandwagon of evidence-based everything; the all-pervading Internet, particularly the rise of social media” (Robson and McCartan, 2016). Again, these characteristics point towards the need and justification for the use of interdisciplinary perspectives.

In an educational setting, Jones (2010) discusses the benefits of interdisciplinary studies and how and why new curricula are needed. He contrasts the following concepts: “The interdisciplinary approach is uniquely different from a multidisciplinary approach, which is the teaching of topics from more than one discipline in parallel to the other, nor is it a cross-disciplinary approach, where one discipline is crossed with the subject matter of another. Interdisciplinary techniques go beyond these two techniques by allowing students to see different perspectives, work in groups, and make the synthesizing of disciplines the ultimate goal (Jones, 2010).

This author argues that interdisciplinary curricula, though being time consuming, has the advantage of promoting collaborative team work: “the interdisciplinary approach continues to synthesize the characteristics and methods of multiple disciplines while developing lifelong learning skills” (Jones, 2010). Further, this author highlights: “Students and their teachers will advance in critical thinking, communication, creativity, pedagogy, and essential academia with the use interdisciplinary techniques (Jones, 2010).

Klein (2005) highlights the links between interdisciplinary studies and integrative learning. Under his perspective ““Interdisciplinary” studies is a subset of integrative learning that fosters connections among disciplines and interdisciplinary fields”. This author argues that this is intrinsically a constructivist approach and he explains why. “Students are engaged in “making meaning.” Application of knowledge takes precedence over acquisition and mastery of facts alone, activating a dynamic process of question posing, problem posing and solving, decision making, higher-order critical thinking, and reflexivity.” (Klein, 2005). Furthermore, he stresses four main characteristics, as “a set of core capacities that emerge from the intersection of the two concepts”, interdisciplinary studies and integrative learning. These are: “the ability to ask meaningful questions about complex issues and problems; the ability to locate multiple sources of knowledge, information, and perspectives; the ability to compare and contrast them to reveal patterns and connections; the ability to create an integrative framework and a more holistic understanding”(Klein, 2005). Equally important, this author is able to connect complexity and paradox, arguing that there is a certain compromise in the acceptance of the frontiers of knowledge. “Contextuality, conflict, and change are the defining parameters of this kind of learning. Contextuality is a different metaphor of knowledge and education than unity, which assumed consistent, logical relations within a linear framework with the expectation of achieving certainty and universality. Contextuality accepts the contingent character of knowledge and action. Students need to tolerate ambiguity and paradox if they are to take grounded stands in the face of multiple and sometimes conflicting perspectives.” (Klein, 2005)

3. ETHICS

Ethics has traditionally been related to moral and to prescriptive modes of distinguishing right from wrong. The idea that some kind of behavior would not fit a certain social context could be assumed to be against the moral and ethics of such context.

Ethics is an important branch of philosophy. Practical and applied philosophy has increased its importance as the complexity of social settings rises. Such is the case of organizational contexts, where management problems often have ethical related implications.

The rationale that sustains the importance of ethics when discussing organizational phenomena is that it may capture the subtleties of human interaction. Ethics of care, ethics of alterity and ethics of the other, all refer to the same empathic involvement between people. Under this perspective, the other, the different, is an unavoidable and irrefutable experience, which all human beings may share.

Moreover, it is through this confrontation with a different other, the child and the mother, or the employer and the employee, that each individual may acknowledge hers or his own interior reality. Without a personal contact with a different other there could not be a healthy development of individual human beings.

Nilo R. Júnior (2009) develops a rich interpretation of the relationship between ethics and alterity, the different other. According to this author: the millenary long history of human development and of the face to face encounters, as the face of the different other “inaugurates a wisdom that is older and more original than the wisdom obtained by means of reason, i.e., by knowing or thinking” (Júnior, 2009). From this encounter, this author develops the links to the role of education and of peace building: “peace asserts itself as care and responsibility towards the other, and also as justice and equity towards the third one” (Júnior, 2009). And also: “peace is built up as solidarity against the exacerbation of individualism”.

Nel Noddings (2002) addresses the concept of ethics of care within a broad philosophical framework: “The ethics of care can be seen as fundamentally relational, not individual-agent-based in the way of virtue ethics, and the ethics of care is more indirect than character education.” (Noddings, 2002). This author argues: “An alternative to character education is care ethics”. In other words, the fundamental issue is not the definition of a specific set of virtues, which ought to be promoted as a process of educating one’s character, but rather the experiential involvement in a one-to-one relationship where caring for someone and being cared by someone are structuring and signifying experiences.

Virginia Held (2006) addresses the perspective of the ethics of care as a novel approach to ethics. Traditionally, for the last two-hundred years, ethics has been majorly restrained to moral theory. The development in the last few decades of ethics of care offers promising potential for applied research, namely in the civil rights and social movements areas. This author addresses the relations of ethics and power, and the reach of law, stressing the understanding of “care as a practice and as a value”. The argument is that the abundance of normative perspectives forces the need for alternative options. The advantaged of the ethics of care perspective is that it does not need to “rely on dubious claims of universal norms of reason”, which form moral normative standards. According to this author, the development of this perspective is itself an open on-going and cooperative process.

Maurice Hamington (2004) addresses the ethics of care, or care ethics, as he refers, from the perspective of the body, of corporality, highlighting the practical and concrete nature of care. This embodied care is also linked to the area of feminist ethics and to the work on the body developed by the philosopher Merleau-Ponty.

The author Michael Slote (2007) stresses the role of empathy in defining the ethics of care. This author argues that care ethics “present an important challenge to other ethical traditions”. Namely the conventional understanding of ethics as a rigid set of norms and not as a dynamic and open process of reflective critique.

Within an organisational setting, Alexander Styhre (2001) argues: “Thinking of work as ethically embedded rather than determined by the degree of distribution of the empowering resources in organizations paves the way for opportunities to conduct more sensitive analyses of how managerial techniques operate in practice.” (Styhre, 2001). This author highlights the importance of empowerment, offering a critique of its often too idealised view: “Empowerment is depicted by its proponents as the common denominator for recent managerial techniques and activities that acknowledge the individual

employee as an intelligent, accountable, creative being, and therefore a productive resource for the company.” In an innovative way, this author argues: the importance of the “notion of ethics, and more specifically what Foucault calls *technologies of the self*, provides possibilities for analysing how employees constitute themselves as ethical, productive, and legitimate members of society through the use of management techniques” (Styhre, 2001).

Different authors discuss the paradoxes around ethics in organizational contexts. Sheldene Simola (2003) argues: “Despite the importance of ethics in corporate crisis management, they have received limited attention in the academic literature.” This author addresses ethics of justice and ethics of care as complementary perspectives.

Regina Scheyvens and Helen Leslie (2000) address the ethical concerns involved in conducting applied research and fieldwork. In particular, these authors stress the “ethical issues regarding the validity and effectiveness of cross-cultural and cross-gendered fieldwork”, in particular in developing countries. They offer a “critical discussion concerning whether there is potential for the fieldwork process to be empowering for research participants” (Scheyvens and Leslie, 2000).

4. GENDER

In their work on transdisciplinarity in women’s and gender studies, Irene Dölling and Sabine Hark (2000) argue that this area is undertaking a movement towards a needed “higher level of self-reflexivity”. As they explain, “the increasing institutionalization carries with it the threat of a loss of critical potential, especially the capacity to reflect upon its own modes of knowledge production”. This normalization occurs in all disciplines and transdisciplinarity is the answer. “Transdisciplinarity, understood as a critical evaluation of terms, concepts, and methods that transgresses disciplinary boundaries, can be a means to this higher level of reflexivity”. They situate this account in the following manner: “caught between a visible trend toward normalization and a renewed struggle over the legitimacy of women’s and gender studies, feminism is undergoing a critical reexamination as women’s studies own disciplinary location brings renewed attention to the necessary role of transdisciplinarity in women’s and gender studies.”

Working in the field of gender studies, Mary Bucholtz (2003) calls attention to the critical role of the relationship between language and gender, in particular to the centrality of discourse, that is, “the interdisciplinary investigations of discourse-level phenomena”. As she explains: “The study of language and gender has increasingly become the study of discourse and gender”. This author stresses that: “Discourse is language in context”. And, as happens in discourse-oriented research, the language use in social practices is the centre of attention. “Language as it is put to use in social situations and not the more idealised and abstract linguistic forms that are the central concern of linguistic theory.” (Bucholtz, 2003). This social tradition interpretation of language is critical to the understanding of complex phenomena such as gender unbalances and sexual discrimination.

Interestingly, Bucholtz stresses the rich and positively slippery nature of both discourse and gender studies, as they necessarily respond to the complexity and to the diversity of social contexts: “Hence there is no well-defined approach to discourse that can be labelled “feminist discourse analysis”. Indeed, not all approaches to gender and discourse are feminist in their orientation, nor is there a single form of feminism to which all feminist scholars subscribe.” (Bucholtz, 2003).

In organizational contexts, gender biases are critical and they help to explain the inequality of gender balance in top management positions. Gary Powell, Anthony Butterfield and Jane Parent (2002) stress that, besides some positive evolution, nevertheless “a good manager is still perceived as predominantly masculine”. Though “there has been a considerable increase in the proportion of women managers in recent years, and a call for “feminine leadership” to capitalize on this increase”. Their study focuses on the following question: “whether there has been a corresponding change in men’s and women’s stereotypes of managers such that less emphasis is placed on managers’ possessing masculine characteristics”. As has been said, they conclude that this is not the case, as management performativity is still strongly connected to male stereotyped characteristics.

Deborah Prentice and Erica Carranza (2002) address the issue of “reactions to gender stereotype deviants and sex discrimination” in organizational contexts. They create a framework to “characterize the contents of prescriptive gender stereotypes”. They call attention to the double effect of past and future determinations; whereas prescriptive biases are fixed in the past, proscriptive ones project such biases into the future, in a self-strengthening manner. “The framework distinguishes between prescriptions and proscriptions that are intensified by virtue of one’s gender, and those that are relaxed by virtue of one’s gender” (Prentice and Carranza, 2002). They addressed both American society in general and highly masculine contexts in particular, with interesting results. “The results demonstrated the persistence of traditional gender prescriptions in both contexts, but also revealed distinct areas of societal vigilance and leeway for each gender. In addition, they showed that women are seen more positively, relative to societal standards, than are men.” (Prentice and Carranza, 2002).

In organizational contexts, the work of Madeline Heilman (2001) addresses the gender inequality in top management jobs. This author argues that gender unbalance is key: “Because of gender bias and the way in which it influences evaluations in work settings, it is argued that being competent does not ensure that a woman will advance to the same organizational level as an equivalently performing man.” (Heilman, 2001). As this author explains, “the scarcity of women at the upper levels of organizations is a consequence of gender bias in evaluations”. In this work the author addresses the “processes giving rise to these outcomes” and identifies the “procedures that are likely to encourage them”.

Using blunt terms and plain language, this author highlights the profound injustice that occurs in organizational settings related to gender unbalances, including being penalized for being effective: “It is proposed that gender stereotypes and the expectations they produce about both what women are like (descriptive) and how they should behave (prescriptive) can result in devaluation of their performance, denial of credit to them for their successes, or their penalization for being competent” (Heilman, 2001).

Agency is critical in women's studies as it relates to the capacity of individual female members of a society or organisation to go beyond and to transgress previously defined prescriptive gender biases. Agency is empowerment and the denial and refusal to remain enslaved in previous societal prejudices.

Laurie Rudman and Peter Glick (2001) develop an interesting study where women's perceived niceness is key. They carried on from previous research, taken in late 1990s, in order to design the following setting: "In an experiment, job description and applicants' attributes were examined as moderators of the backlash effect, the negative evaluation of agentic women for violating prescriptions of feminine niceness. (...) students made hiring decisions for a masculine or "feminized" managerial job. Applicants were presented as either agentic or androgynous." (Rudman and Glick, 2001). The results are close to an anecdote: "a feminized job description promoted hiring discrimination against an agentic female because she was perceived as insufficiently nice. Unique to the present research, this perception was related to participants' possession of an implicit (but not explicit) agency-communality stereotype. By contrast, androgynous female applicants were not discriminated against." (Rudman and Glick, 2001). As they conclude: "The findings suggest that the prescription for female niceness is an implicit belief that penalizes women unless they temper their agency with niceness." (Rudman and Glick, 2001).

5. CITIZENSHIP

The identification of the frontiers of research of citizenship studies is a complex task as it is a dynamic construct, following the changes that occur within society itself. Jopke (2007) analysis such changes under three dimensions: status, rights, and identity. "With respect to status, it is argued that access to citizenship has been liberalized. On the rights dimension, there has been a weakening of social rights and rise of minority rights. Citizenship identities today are universalistic, which limits states' attempts to counter the centrifugal dynamics of ethnically diversifying societies with unity and integration campaigns." (Jopke, 2007).

Isin and Turner (2007) argue in favor of an agenda for citizenship studies in the following terms: "not so much a dogmatic sequence of principles as an ethos toward conceiving democratic citizenship as a cosmopolitan virtue", understood as a concrete and practical expression of what it means to belong to a certain society.

Indeed, the idea of global citizenship is universalistic and it connects to the notion of cosmopolitanism, which other authors highlight as a key component of current notions of citizenship.

The context of the new economy brings forward novel perspectives on citizenship. Bennett *et al.* (2009) address the need to consider the "changing political identifications and practices of new generations of citizens". Their focus is "in different post-industrial democracies with the aim of deriving a set of core learning categories that offer a starting point for thinking about how to address changing citizen identity styles and learning opportunities in various online and offline environments." These authors challenge traditional paradigms of what they call "dutiful citizenship". They expand such notion by "identifying additional civic learning opportunities that reflect more self-actualizing styles of civic participation common among recent generations of youth who have been termed digital natives." According to these authors, self-actualization is key and it works through specific learning styles, which favor "interactive, networked activities often communicated through participatory media such as videos shared across online networks" (Bennett *et al.*, 2009). Under this perspective the emerging online environments represent new communities of learning, which create new digital ecosystems, again that fuel novel forms of citizen engagement.

Citizenry is a powerful concept because it may be reframed within a smaller scale, such as the dimension of an organization instead of a society. Indeed, organizational citizenship illustrates the importance of promoting forms of behavior that favor the benefit of all the stakeholders involved in a specific organizational setting, in other words, to work towards the benefit of the organization as a whole. Different dimensions of such organizational citizenship behavior have been analyzed through factor analysis and under meta-analysis (e.g., Walumbwa *et al.*, 2010). These authors highlight the following predictors of organizational citizenship behavior: job satisfaction, organizational commitment, fairness, trait conscientiousness, and leader support.

Previous research started in the 1980s and it influenced this field of study. Namely, Organ and Ryan (1995) were pioneers and they address attitudinal and dispositional dimensions of organizational citizenship behavior. Attitudinal measures include job satisfaction, perceived fairness, organizational commitment and leader supportiveness. The degree of conscientiousness is relevant as a dispositional dimension.

Other authors address the role of leadership in promoting citizenship in an organizational setting, in particular transformational and transactional leadership. Nguni *et al.* (2006) focus on "the effects of transformational and transactional leadership on job satisfaction, organizational commitment, and organizational citizenship behavior" and they comment on the potential for accumulated effects, the so-called add-on effects, emerging from the interaction between the different dimensions.

6. CONCLUSIONS

Empowerment, appropriation and capacitation stand for enabling mechanisms through which it is possible to foster, nurture and promote the best potential for human thought and action. No matter the scale, from groups to organisations and to social movements, there is a common factor that is a precondition for success, which is the capacity to work together towards a common goal. In other words, the capacity to engage, attract and mobilise individual efforts is a multidimensional phenomenon, which directly depends from the narrative, discursive and argumentative logical reasoning that may justify such engagement, attraction and mobilisation. The power of narratives to unleash the imagination and the desire to achieve

previously unthoughtful alternatives and future ideals has been present throughout the history of humankind. The pipeline for human ingenuity and creativity has been the capacity to aim at achieving that which may have seemed impossible in the past. No matter the context or the historical era, the structuring conditions of human development remain focused in a few essential elements, namely the possibility to remain open to the unknown, the capacity to trust in oneself and in others, and the opportunity to experiment deep forms of transformative learning. In other words, the possibility to profit from trusting and empowering environments and to experiment open and diversified cultures, enables the widening of horizons and the unleashing of creativity through an authentic, rich and dense living experience. It is not possible to underestimate the potential of humans to overcome adversity, vulnerability and frailty. Why? How? Precisely by uniting efforts in strong community building and sense-making efforts of collective engagement towards the achievement of common goals, because that is what makes humans human. Unless these anthropological and ethnographic assumptions are stated upfront and assumed as a precondition for success, it is not possible to understand the potential for action of organised groups of individuals, such as institutions or social movements. Ethics, gender and citizenship dimensions are present implicitly in every organisation. The quality, fairness and democratic intensity of the relationships regarding the organisation stakeholders, will be reflected upon the organisational effectiveness and potential for excellency. Motivation, work satisfaction, performativity and an inclusive and challenging organisational culture, are indeed consequences of the invisible, informal and implicit power of the organisational community and of its meaning-making potential.

REFERENCES

- Bennett, W. L., Wells, C., & Rank, A. (2009). Young citizens and civic learning: Two paradigms of citizenship in the digital age. *Citizenship studies*, 13(2), 105-120.
- Bucholtz, M. (2003). Theories of discourse as theories of gender: Discourse analysis in language and gender studies. *The handbook of language and gender*, 43-68.
- Castells, M. (2011). *The rise of the network society: The information age: Economy, society, and culture* (Vol. 1). John Wiley & Sons.
- Dölling, I., & Hark, S. (2000). She who speaks shadow speaks truth: Transdisciplinarity in women's and gender studies. *Signs: Journal of Women in Culture and Society*, 25(4), 1195-1198.
- Hamington, M. (2004). *Embodied Care: Jane Addams, Maurice Merleau-Ponty, and Feminist Ethics*. University of Illinois Press.
- Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of social issues*, 57(4), 657-674.
- Held, V. (2006). *The ethics of care: Personal, political, and global*. Oxford University Press on Demand.
- Isin, E. F., & Turner, B. S. (2007). Investigating citizenship: An agenda for citizenship studies. *Citizenship studies*, 11(1), 5-17.
- Jones, C. (2010). Interdisciplinary Approach-Advantages, disadvantages, and the future benefits of interdisciplinary studies. *ESSAI*, 7(1), 26.
- Joppke, C. (2007). Transformation of citizenship: status, rights, identity. *Citizenship studies*, 11(1), 37-48.
- Júnior, N. R. (2009). Ética e alteridade: a educação como sabedoria da paz. *CONJECTURA: filosofia e educação*, 14(3).
- Klein, J. T. (2005). Integrative learning and interdisciplinary studies. *Peer Review*, 7(4), 8-10.
- Newell, W. H., Wentworth, J., & Sebberson, D. (2001). A theory of interdisciplinary studies. *Issues in Interdisciplinary Studies*.
- Nguni, S., Slegers, P., & Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School effectiveness and school improvement*, 17(2), 145-177.
- Noddings, N. (2002). *Educating moral people: A caring alternative to character education*. Teachers College Press, PO Box 20, Williston, VT 05495-0020
- Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel psychology*, 48(4), 775-802.
- Powell, G. N., Butterfield, D. A., & Parent, J. D. (2002). Gender and managerial stereotypes: have the times changed?. *Journal of management*, 28(2), 177-193.
- Prentice, D. A., & Carranza, E. (2002). What women and men should be, shouldn't be, are allowed to be, and don't have to be: The contents of prescriptive gender stereotypes. *Psychology of Women Quarterly*, 26(4), 269-281.
- Robson, C., & McCartan, K. (2016). *Real world research*. John Wiley & Sons.
- Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of social issues*, 57(4), 743-762.
- Scheyvens, R., & Leslie, H. (2000, February). Gender, ethics and empowerment: Dilemmas of development fieldwork. In *Women's Studies International Forum* (Vol. 23, No. 1, pp. 119-130). Pergamon.

- Simola, S. (2003). Ethics of justice and care in corporate crisis management. *Journal of Business Ethics*, 46(4), 351-361.
- Slote, M. (2007). *The ethics of care and empathy*. Routledge.
- Styhre, A. (2001). Kaizen, ethics, and care of the operations: Management after empowerment. *Journal of Management Studies*, 38(6), 795-810.
- Touraine, A. (1971). *The post-industrial society: tomorrow's social history: classes, conflicts and culture in the programmed society* (Vol. 6813). Random House.
- Walumbwa, F. O., Hartnell, C. A., & Oke, A. (2010). Servant leadership, procedural justice climate, service climate, employee attitudes, and organizational citizenship behavior: a cross-level investigation. *Journal of Applied Psychology*, 95(3), 517.

SUSTENTABILIDADE: PRÁTICAS NA HOTELARIA

Cláudia Martins Pantuffi

Universidade Presbiteriana Mackenzie; Centro Universitário Senac, São Paulo/SP

Janette Brunstein

Universidade de São Paulo – USP; Universidade Presbiteriana Mackenzie, São Paulo/SP

RESUMO

A sustentabilidade no turismo, com foco na hotelaria, destaca-se como um paradigma recente, porém sua definição se apresenta de forma normativa, imprecisa e de difícil operacionalização. Hotelaria sustentável pode ser entendida como capacidade de reconhecer e gerenciar os impactos por ela causados. A hotelaria gerenciada de forma sustentável se torna uma força nas dimensões econômica e ambiental, contudo, se for gerenciada de forma inadequada, produz conflitos decorrentes do pagamento de baixos salários, empregos sazonais, deterioração de recursos naturais e culturais. Este artigo tem como objetivos mapear e promover reflexão sobre a sustentabilidade no segmento hoteleiro e suas práticas. Para realização da pesquisa, foram considerados artigos teóricos e empíricos que abordam ações, políticas e estratégias sobre o tema. Definir sustentabilidade na hotelaria é um desafio, envolve considerar impactos locais e globais. É relevante observar que há muitos conceitos que se entrelaçam, como pode ser constatado com relação à sustentabilidade e responsabilidade social corporativa, sendo que, em alguns casos, a primeira está inserida na segunda e, em outros, a sustentabilidade se insere no contexto da gestão ambiental. Como consequência deste entrelaçamento, corre-se o risco de não haver investimento adequado na formação de profissionais para sustentabilidade bem como não fica claro, no escopo da organização, quem são os responsáveis pelas práticas sustentáveis, tornando-as pouco efetivas. Considerando a sustentabilidade como uma ideia força que contempla temas como qualidade de vida, diversidade, redução da pobreza, atração e retenção de profissionais, etc., é fundamental que os hoteleiros e/ou profissionais que atuam no setor cada vez mais agreguem conhecimentos relevantes quanto ao tema, para efetivamente promover seu desenvolvimento.

Palavras-chave: Sustentabilidade, Hotelaria, Práticas, Turismo.

1. INTRODUÇÃO

Os discursos de gestores e empresários quanto à sustentabilidade dirigem-se aos funcionários, fornecedores, consumidores, enfim, a todos os *stakeholders* envolvidos com a organização. O objetivo desses discursos é relacionar as práticas ambientais, econômicas e sociais à imagem da empresa, com a finalidade de fortalecê-la. Na prática, de forma geral, as organizações têm dificuldades em efetivar plenamente seus discursos, pois as ações acabam se direcionando para um ou dois pilares do tripé (Claro, Claro, Amancio, 2008; Junqueira, Maior, Pinheiro, 2011), o que, de acordo com Elkington (2012), gera um desequilíbrio que terá como consequência resultados pouco significativos.

A hotelaria, cenário deste artigo, está inserida no segmento de Turismo, sendo que este, por sua vez, faz parte do campo de estudos das Ciências Sociais Aplicadas.

Para Saarinen (2006), o turismo pode ser entendido como um sistema amplo em que há circulação de pessoas, produtos e serviços nos destinos que se relacionam aos roteiros e regiões. Envolve aspectos sociais e culturais, movimentando a economia global. Questões quanto à sustentabilidade no turismo têm gerado preocupações, uma vez que seus impactos tanto podem ser benéficos como prejudiciais. O desenvolvimento turístico tende a promover melhorias quanto a aspectos sociais, culturais e econômicos no local e seu entorno, porém, quando seu desenvolvimento não é planejado, há impactos negativos (Saarinen, 2006; Claver-Cortés *et al.*, 2007; Hsieh, 2010).

A ideia de sustentabilidade no turismo se destaca como um paradigma recente, porém a definição de sustentabilidade para tal tem se apresentado de forma normativa, imprecisa e de difícil operacionalização. Turismo sustentável pode ser entendido como capacidade de reconhecer e gerenciar os impactos por ele causado (Saarinen, 2006). Pérez e Bosque (2015) complementam que, se o turismo for gerenciado de forma adequada e sustentável, pode se tornar uma força na geração de empregos e desenvolvimento econômico, por outro lado, se for gerenciado de forma inadequada, pode produzir conflitos decorrentes de pagamento de baixos salários, empregos sazonais, deterioração de recursos naturais e culturais, entre outros.

O ponto em comum das análises e reflexões sobre responsabilidade social corporativa (RSC) e sustentabilidade é que, para terem eficiência e eficácia, é importante que componham a estratégia da organização. A preocupação do segmento do turismo e hotelaria com este assunto data da década de 1990, decorrentes das demandas da agenda 21, que destaca código de ética para o turismo sustentável (Saarinen, 2006; Holcomb, Upchurch, Okumus, 2007). Pérez e Bosque (2015) acrescentam que as pesquisas e ações sobre o tema focam em questões ambientais, sociais e econômicas.

Melissen (2013), destaca que os desafios para o segmento do Turismo se tornam os mesmos para hospitalidade, dessa forma, para a hotelaria, que está inserida neste contexto.

Relacionando o turismo e a hotelaria, pode-se afirmar que cuidar do entorno no qual o hotel está inserido gera vantagem competitiva, porém o nível de investimento para a atividade ambiental se relaciona à expectativa quanto ao retorno econômico

frente às ações adotadas (Claver-Cortés *et al.*, 2007) e a capacidade financeira do empreendimento, o que, muitas vezes, gera investimentos tímidos e pouco expressivos nas ações ambientais.

Apesar da hotelaria não ter recebido atenção imediata quanto às questões relacionadas à sustentabilidade, há uma crescente preocupação com os impactos negativos gerados, pois, como parte do segmento do Turismo, a hotelaria proporciona benefícios sociais e econômicos em função do apoio ao lazer, geração de empregos, desenvolvimento do entorno, etc. No entanto, a hotelaria também gera impactos sobre o ambiente, pois, mesmo variando de porte, os hotéis consomem água e energia, produzem resíduos, geram poluição sonora, poluição do ar, e impacto na biodiversidade (Bohdanowicz, 2006; Hsieh, 2012; Grosbois, 2012). Hsieh (2012) complementa, informando que os hotéis engajados com as questões ambientais adotam em suas práticas a reciclagem e gestão de resíduos, melhor aproveitamento da energia e da água, construções mais ecológicas, compras verdes, entre outras.

Frente ao exposto, com este artigo objetiva-se mapear e promover uma reflexão quanto as práticas orientadas para sustentabilidade adotadas pela hotelaria e seus impactos para a gestão. Para tal, propõem-se as seguintes questões: Quais são as práticas orientadas para sustentabilidade que a hotelaria vem adotando? Qual papel e contribuição dessas práticas para o empreendimento?

Para realização da pesquisa, foram considerados artigos teóricos e empíricos disponíveis nas bases de dados brasileiras e internacionais, que discutem a sustentabilidade no turismo, com foco na hotelaria e hospitalidade. Para tanto, serão considerados conceitos e reflexões sobre sustentabilidade no turismo e hotelaria (Ruschmann, 2003; Saarinen, 2006; Hsieh, 2010; Grosbois, 2012; Perez, Bosque, 2015; entre outros); quanto às práticas adotadas na hotelaria (Kirk, 1995; Tzschentke, Kirk, Lynch, 2008; Coelho, Gosling, Gonçalves, 2013; Melissen, 2013; Barber, 2014; entre outros).

Este artigo está estruturado em três seções que se propõem a: refletir sobre sustentabilidade no turismo e hotelaria, apresentar as práticas adotadas pelo setor hoteleiro e as considerações finais, que retomam as questões norteadoras e buscam direcionar futuras reflexões.

2. SUSTENTABILIDADE NO TURISMO

Para contextualizar o campo do artigo de forma abrangente, torna-se relevante considerar as questões voltadas à sustentabilidade e responsabilidade social corporativa (RSC) no Turismo. Cabe ainda destacar que sustentabilidade, na maioria dos artigos internacionais e nacionais apresentados, está inserida no escopo de ações, relatórios e reflexões relacionadas à RSC, e que suas discussões possuem maior ênfase na dimensão ambiental.

Para Pérez e Bosque (2015), o conceito do *Tripple Botom Line* de Elkington (2012) é o que melhor atende às demandas da RSC para o turismo, e estabelece a seguinte relação:

- Dimensão econômica: garantia atividades econômicas de longo prazo, de forma que as partes envolvidas se beneficiem;
- Dimensão social: “respeito pela autenticidade dos valores tradicionais dos destinos turísticos, bem como a contribuição das empresas quanto a compreensão e tolerância intercultural” (Perez, Bosque, 2015, p. 318);
- Dimensão ambiental: utilização adequada, proteção e conservação do meio ambiente e da biodiversidade dos destinos turísticos.

Em consonância com Sachs (2002), Perez e Bosque (2015) propõem, ainda, considerar mais uma dimensão, que se vincula a aspectos culturais, uma vez que muitos hotéis se localizam em centros urbanos, atraindo turistas e impactando no ambiente cultural (Grosbois, 2012), bem como relações sociais e culturais são desenvolvidas entre os turistas e moradores dos locais visitados.

Outro conceito relevante para o turismo sustentável é de capacidade de carga: que se relaciona ao quanto um destino turístico suporta de turistas e movimentação sem gerar impactos nocivos ao ambiente, bem como sem prejudicar a experiência turística, ou seja, capacidade de absorção de turistas. O conceito considera as questões físicas, sociais e culturais (Saarinen, 2006; Hsieh, 2010).

Saarinen (2006) explica que essa capacidade de absorção é discutida e tratada por correntes teóricas, as quais ele denomina tradição. São elas:

- Tradição baseada em recursos: considera que o turismo gera impactos, dessa forma seu desenvolvimento necessita de gerenciamento quanto aos recursos envolvidos; os limites para crescimento e impactos são avaliados a partir dos recursos utilizados; baseia-se na noção de um espaço estático, pode tornar-se restritiva para o crescimento do setor.
- Tradição de atividades: turismo caracterizado como atividade dinâmica, que produz impacto devido à amplitude de interesses e/ou atividades; relaciona-se à mudança do ambiente para garantir o desenvolvimento e crescimento do turismo; é gerenciado como atividade econômica; adota o conceito de produto e ciclo de vida.
- Tradição de base comunitária: envolve participação, negociação e fixação de limites dos envolvidos na relação de sustentabilidade e turismo; tem foco na contribuição para o desenvolvimento local, envolve percepção e significados atribuídos.

Pode-se observar que definir sustentabilidade no turismo é um desafio. As três tradições descritas representam diferentes aspectos e possuem elementos distintos para seu entendimento, bem como pontos positivos e negativos. A sustentabilidade não se trata de uma via de mão única na relação entre impactos locais e globais, trata-se tanto de responsabilidade global como local. Há ênfase nas relações humanas e éticas, sem as quais o turismo sustentável pode se tornar algo sem sentido, somente um termo usado para causar efeito (Saarinen, 2006).

Ruschmann (2003) aborda os impactos do turismo em relação à sustentabilidade, os quais também podem ser compreendidos para a Hotelaria, uma vez que esta faz parte do campo de estudos do Turismo. O quadro a seguir sintetiza os impactos descritos pela autora.

Quadro 1: Impactos do Turismo relacionados à sustentabilidade

Impacto	Natureza do impacto
Econômico	Positiva: - Geração de renda - Aumento na oferta de emprego - Elevação do consumo no entorno - Atração de mão de obra de outras localidades
	Negativa: - Inflação - Especulação imobiliária - Sazonalidade da demanda
Cultural	Positiva: - Elevação do nível cultural da sociedade - Valorização do artesanato local - Valorização e preservação do patrimônio histórico - Valorização da herança cultural
	Negativa: - Descaracterização do artesanato por ser produzido somente para consumo - Vulgarização e adaptações mercadológicas das manifestações culturais - Destruição do patrimônio histórico
Social	Positiva: - Elevação do nível profissional da população
	Negativa: - Crescimento da prostituição no entorno - Estímulo ao consumo de drogas e bebidas alcoólicas
Ambiental	Positiva: - Implantação de programas ou políticas voltadas ao cuidado com os recursos naturais - Utilização mais racional dos espaços - Adoção de medidas voltadas a preservação do meio ambiente
	Negativa: - Ocupação de áreas naturais - Poluição do ar e água - Poluição sonora - Degradação da paisagem

Fonte: Autora (2017) adaptado de Ruschmann (2003)

Os impactos econômicos são mais fáceis de mensurar do que os ambientais e socioculturais, uma vez que possuem menos aspectos intangíveis e subjetivos. Para mensurar os impactos econômicos, considera-se local, regional e nacional. Informa ainda que há uma relação estreita entre impactos sociais e culturais, dificultando, dessa forma, a distinção entre eles (Ruschmann, 2003).

Em 2002, o Instituto Brasileiro de Turismo- Embratur - e a Associação Brasileira da Indústria de Hotéis (ABIH) assinaram um acordo criando um sistema de classificação para os hotéis, o qual incorporou os conceitos de gestão ambiental e responsabilidade social como critérios. Gonçalves (2004) explica que a ABIH desenvolveu um projeto denominado Hóspedes da Natureza, voltado à introdução e fomento da gestão ambiental nos empreendimentos hoteleiros. As ações ambientais propostas são norteadas por princípios relacionados a adaptação, identificação e aplicação dos conceitos e práticas de gestão ambiental condizentes à realidade brasileira. O objetivo da ABIH é tornar o projeto um instrumento de disseminação dos conceitos e práticas referentes ao tema, e promover a integração da gestão ambiental aos negócios relacionados à hotelaria (Gonçalves, 2004).

Com vistas à regulamentação das práticas e normalização da sustentabilidade no turismo, a Associação Brasileira de Normas Técnicas (ABNT), em parceria com o Ministério do Turismo, implantou a ABNT NBR 15401:2006. Esta norma estabelece definições e princípios, os requisitos ambientais, socioculturais, e econômicos para o turismo sustentável, com o objetivo de fornecer diretrizes para certificação ambiental.

Deve-se levar em conta que a indústria da hospitalidade, na qual se incluem os hotéis, não é causadora de impactos ambientais considerados de grande porte, bem como não consome quantidades elevadas de produtos não renováveis; dessa forma, a preocupação com sustentabilidade com foco ambiental pode ficar à margem das estratégias organizacionais (Kirk, 1995). Essa afirmação se torna significativa quando considerado o impacto de forma individual, ou seja, de um hotel. Porém, se a indústria hoteleira for considerada de forma global, este cenário muda, pois, o impacto será considerado como a somatória de todos os empreendimentos instalados em uma localidade (Kirk, 1995; Tzschentke, Kirk, Lynch, 2008).

Refletindo sobre a capacidade de impacto da hotelaria quanto a sustentabilidade, que pode ser tanto nocivo como positivo, torna-se relevante identificar as práticas que têm sido adotadas pelo segmento.

3. PRÁTICAS ORIENTADAS PARA SUSTENTÁVEIS NA HOTELARIA

Estudar sustentabilidade e responsabilidade social corporativa (RSC) na hotelaria se deve ao impacto e transformações que os hotéis geram no meio em que operam e pela sua relação com a competitividade organizacional. Pode-se considerar que o que motiva um hotel a assumir ações sustentáveis se relaciona à legislação, pressão do grupo de consumidores e possível gestão de custos (Kirk, 1995).

Mesmo consciente da amplitude da sustentabilidade na hotelaria, principalmente se considerando os aspectos referentes ao turismo, os estudos e as preocupações quanto ao tema dizem respeito à “gestão ambiental e está intimamente conectada à responsabilidade social corporativa” (Coelho, Gosling, Gonçalves, 2013, p. 653), o que corrobora com a questão das pesquisas e relatórios sobre sustentabilidade na hotelaria estarem inseridos nos relatórios que tratam de RSC.

As pesquisas se direcionam para identificar as práticas relacionadas à sustentabilidade, buscando compreender como as informações sobre o tema são transmitidas, a relação entre sustentabilidade e retorno para o empreendimento, entre outras. Como metodologia, observa-se maior ênfase em pesquisas qualitativas.

As ações ambientais aplicadas à hotelaria se direcionam a: utilização de dispositivos economizadores de energia nas unidades habitacionais (UH); sensores de lâmpadas; lâmpadas econômicas; redutores de vazão de água nas torneiras; utilização de torneiras automáticas; coleta seletiva de lixo; redução da lavagem de roupa por meio da redução de troca de enxovais nas UHS (quartos); diminuição do descarte de resíduos; melhor planejamento arquitetônico; entre outras (Kirk, 1995; Hsieh, 2010; Coelho, Gosling, Gonçalves, 2013). Observa-se ênfase nas ações com foco ambiental que ao longo do tempo oferecem retorno financeiro na medida em que geram redução de despesas. O desafio na relação sustentabilidade e hotelaria se encontra na medida em que as ações citadas não podem impactar nos serviços e conforto oferecidos aos hóspedes (Hsieh, 2010). Observa-se, pelas ações descritas, uma carência de efetividade quanto a transformação e desenvolvimento do entorno, formação dos funcionários, pois tratam-se de ações de caráter pontual, especialmente envolvendo redução de custos.

Para Kirk (1995), refletir sobre sustentabilidade e políticas ambientais torna-se relevante, pois, no contexto da hotelaria, há situações de conflito, sendo que muitos hotéis estão em áreas naturais, de equilíbrio ecológico e locais históricos. Outro ponto refere-se ao hóspede, que busca, ao se hospedar no hotel, um tratamento diferenciado e serviços como, por exemplo, lençóis e toalhas trocados diariamente, sauna, piscina, transporte para passeios, etc.

A relação entre sustentabilidade e prestação de serviços diferenciadas é paradoxal, pois de um lado, o hotel necessita de uma gestão focada nas questões sustentáveis para realizar suas operações, por outro lado, estas ações, ao serem implantadas, não podem impactar no nível e qualidade dos serviços prestados (Kirk, 1995), bem como devem ser compartilhadas pelos hóspedes, na medida em que estes incorporam essa cultura em suas hospedagens.

Kirk (1995) resume alguns aspectos relevantes em relação à sustentabilidade na hotelaria, dentre eles: o indivíduo, ao se hospedar em um hotel de luxo, possui expectativas que são coerentes com a proposta do meio de hospedagem, como conforto e “mimos” relacionados às toalhas, instalações, produtos de higiene oferecidos, entre outros. As adoções de algumas ações voltadas à sustentabilidade podem frustrar essas expectativas, como, por exemplo, troca de toalhas ou tipo de iluminação. O negócio deve se alinhar ao local em que está implantado e possuir relação com a comunidade, compondo, dessa forma, os atrativos turísticos do destino. Não se trata de um segmento que gera fortes danos ao meio ambiente e entorno, no entanto, gera impactos, uma vez que consome e/ou desperdiça energia, água, alimentos, emite CO₂, gera barulhos, produz fumaça, etc.

Em pesquisa realizada, Houdré (2008) informa que parte dos empreendimentos hoteleiros de porte global não haviam aderido e/ou definido estratégias relacionadas à sustentabilidade, porém, mesmo não integrando o *core business*, os empreendimentos mencionavam preocupação com questões sobre RSC em sua missão. Para melhor apresentar o status das ações de algumas redes hoteleiras, apresenta-se o quadro a seguir:

Quadro 2: Ações com foco em sustentabilidade – principais redes hoteleiras

Rede Accor	- Em 1994, início das estratégias voltadas ao meio ambiente; - Em 2002, o desenvolvimento sustentável torna-se parte da estratégia da rede; - Os critérios para desenvolvimento sustentável envolvem: biodiversidade, integração arquitetônica e filantropia empresarial (como exemplo: auxílio às comunidades locais) - Ideia central: Funcionário pode fazer a diferença, com a publicação de um guia para gestores dos hotéis treinarem seus funcionários; - Plantação de árvores (investimento de 50% dos valores referentes à redução de custos com lavanderia) – mensagem junto aos hóspedes, “aqui suas toalhas plantam árvores”.
Hilton Hotels Corporation	Metas para concretização até 2014: - Redução de 20% de consumo de energia; - Redução de 20% a emissão de CO₂; - Redução de 20% a produção de resíduos; - Redução de 10% do consumo de água.

Marriott	- Envolvimento com a comunidade a partir do espírito de servir, oferecendo oportunidade de carreira para jovens e pessoas com deficiência; - Em 2008, inserção de 10.000 jovens e adultos com deficiência em postos de trabalho nos Estados Unidos; - Preservação do meio ambiente; programas voltados à redução-reutilização-reciclagem em hospitais infantis; - Acordo com o estado do Amazonas visando proteger milhões de acres da floresta tropical brasileira.
InterContinental Hotels Group IHG	- Há bases na mudança estratégica para desenvolvimento sustentável que podem tornar o grupo referência; - Possui todos os componentes de Desenvolvimento Sustentável e é possível observar a aplicação destes na governança corporativa e expressos na missão da organização; - Focos e objetivos do programa: incorporação na cultura e estratégia da organização; engajamento dos funcionários; Desenvolvimento Sustentável como integrante dos programas de RH; busca de prêmios voltados ao tema; ser ativo nas atividades do segmento que envolvam sustentabilidade, entre outras.

Fonte: Elaborado pela autora com base em Houdré (2008)

Pode-se observar, a partir da análise do quadro, que as práticas ou estratégias relacionadas à sustentabilidade apresentam preocupações ambientais, gestão de água e energia, cuidado com o entorno e meio ambiente com plantio de árvores, engajamento de funcionários, entre outros, abordando, dessa forma, as dimensões ambiental e econômica, porém essas ações são apresentadas nos relatórios sobre RSC, o que demonstra falta de clareza, pelo menos quanto a comunicação das ações e resultados relacionados ao tema.

O quadro apresentado enfatiza a importância da sustentabilidade e desenvolvimento sustentável na hotelaria, tal associação é reforçada pela estreita relação entre o hotel e a comunidade do entorno no qual está localizado (Melissen, 2013). Barber (2014) complementa que o processo de transformação do hotel em verde, ou seja, incorporação de ações que atendam a sustentabilidade por meio da gestão ambiental e RSC, pode gerar vantagem competitiva, porém, além de serem ativos quanto às práticas sustentáveis, necessitam comunicar suas ações. Ao tornar-se verde, o hotel pode influenciar seus fornecedores e hóspedes, bem como gerar uma oportunidade de desenvolvimento e formação de seus funcionários, ou seja, promover o desenvolvimento de competências (Rahman, Reynolds, Svaren, 2012).

De acordo com Grosbois (2012), a organização pode adotar quatro maneiras para comunicar suas práticas orientadas para sustentabilidade: (1) relatórios sobre RSC com seção dedicada à sustentabilidade; (2) *sites* dedicados à sustentabilidade; (3) não há relatório ou seção explícita sobre o tema, mas fornecem algumas informações no *site* e (4) nenhuma informação sobre o assunto. Ressalta que as organizações que se enquadram no item (2) tendem a considerar o tema relevante. No que diz respeito à hotelaria em relação às pesquisas realizadas pela autora, destaca-se que a mesma se enquadra mais no item (1), ou seja, sustentabilidade é considerada um item da RSC. A autora enfatiza que a comunicação das ações junto aos *stakeholders* pode oferecer diversos benefícios, como a melhoria da imagem, elevação da credibilidade do empreendimento, vantagem competitiva; destaca-se que esses pontos são apresentados ao longo da seção.

Holcomb, Upchurch e Okumus (2007), Grosbois (2012), Hsieh (2012) e Jones, Hillier e Comfort (2014) realizaram pesquisas sobre o material divulgado com relação ao referido tema, tanto pelas redes hoteleiras, como por hotéis independentes, relacionando e discutindo as informações, qualidade e abrangência dos conteúdos divulgados em meios de comunicação públicos. Como fonte de informações, utilizaram os relatórios relacionados à RSC, sendo que a sustentabilidade se encontra nestes relatórios. Grosbois (2012) destaca a relevância deste tipo de pesquisa e análise, uma vez que há crescente interesse na avaliação dos relatórios relacionados à RSC; aponta, também, que o número de informações é crescente, todavia, a qualidade das mesmas varia de segmento para segmento. No caso da hotelaria, as informações variam em detalhes e qualidade, e que há o reconhecimento da importância do tema por parte das redes hoteleiras (Jones, Hillier, Comfort, 2014).

Holcomb, Upchurch e Okumus (2007), analisaram as informações divulgadas por meios de comunicação de domínio público, como revistas, *websites* e relatórios anuais de hotéis, destacados como Top 10 da revista *Hotels* (Marriott International; Extended Stay Hotels; Accor; InterContinental Hotels Group; Tharaldson Enterprises; Global Hyatt Corp, entre outros) e identificaram cinco categorias presentes nos conteúdos: comunidade, ambiente, visão e valores, mercado e força de trabalho.

Concluíram que todos os hotéis mantêm *websites* com informações sobre questões referentes a RSC. Dos hotéis estudados, a Hilton Corporation fornece o maior número de informações, que abordam igualdade de oportunidades, diversidade, direitos humanos, saúde e segurança, ambiente e sustentabilidade. Contudo, apontam que os relatórios podem ser melhorados. Os autores destacam ainda que fornecimento de informações detalhadas na internet pode contribuir para a melhoria da imagem do hotel, bem como oferecer informações para hóspedes em potencial.

Em especial, destaca-se o conteúdo do InterContinental Hotels Group (IHG), tal grupo apresentava, na época da pesquisa, em seu *site*, as ações de RSC que se relacionavam a educação, crianças, participação do empregado e apoio aos esforços humanitários, ações que estão além das práticas ambientais descritas como mais frequentes no segmento, sendo caracterizadas, ainda, pelos autores, como documentos de fácil leitura. Ressalta-se que as análises foram realizadas em 2005.

Em sua pesquisa, Grosbois (2012), avalia e relata os métodos de comunicação e as informações que são repassadas sobre as práticas de RSC, com foco em sustentabilidade. As bases para análise foram os relatórios *on-line* e *websites* dos hotéis e redes hoteleiras consideradas Top 150, no ano de 2010, identificadas na lista *Corporate 300*, da revista *Hotel*. Dos 150 hotéis pesquisados, 46 não possuíam informações sobre o tema. Como resultados, constata-se que nos relatórios aparecem muitas informações e metas, porém há menor número de informações detalhando ações específicas. Como desafio, aponta a dificuldade de análise devido à falta de clareza nos relatórios e as diferentes métricas adotadas para acompanhar o desempenho das ações.

Quanto aos principais temas relacionados à sustentabilidade, Grosbois (2012) identificou que são considerados ambiente, qualidade de emprego, diversidade e acessibilidade, bem-estar da comunidade e prosperidade econômica. Destaca, ainda, que se torna difícil identificar se a ação descrita no documento analisado ocorre no âmbito da rede ou da unidade, sugere, dessa

forma, padronização e validação na forma de apresentar as informações e resultados, o que permitirá análise e comparação entre os hotéis e redes pesquisadas.

Também em 2012, Hsieh desenvolveu uma pesquisa por meio da análise do conteúdo dos *sites* dos hotéis identificados como Top 50 da revista *Hotels* de 2009. A pesquisa focou nas práticas ambientais das redes, não considerando as outras dimensões já discutidas. Como resultados, o autor aponta que 23 (46%) redes possuem em seus *sites* informações referentes às políticas e práticas ambientais. Destaca que as redes com maior número de unidades hoteleiras possuem *sites* com mais informações, o que demonstra, na análise do autor, engajamento das grandes redes nas questões ambientais, bem como possibilidade de o tema ser relacionado à vantagem competitiva. Quanto às informações, 9 redes das 23 tinham em seus sites títulos específicos relacionados às questões ambientais.

Hsieh (2012) compara os resultados obtidos na hotelaria com outros segmentos, e destaca que o número encontrado é pouco significativo, porém deve-se ao fato de o setor não causar impactos drásticos ou imediatos ao meio ambiente, o que pode gerar desinteresse ou mesmo falta de motivação para divulgar as ações. Cabe lembrar que, se considerados para análise todos os hotéis localizados em uma mesma região, essa afirmação se enfraquece, pois, a somatória de impactos pode tornar-se drástica.

Com a mesma metodologia de Holcomb, Upchurch e Okumus (2007), Grosbois (2012) e Hsieh (2012), Jones, Hillier e Comfort (2014) realizaram pesquisa com o objetivo de apresentar uma visão de como a hotelaria global comunica para o mercado sua postura em relação à sustentabilidade. A fonte das informações foram os *sites* corporativos das redes hoteleiras.

Jones, Hillier e Comfort (2014) pesquisaram as redes consideradas Top 10 no mundo: Marriott, Best Western, Iberostar, Hilton, Relais Chateaux, Ramada, IHG (representada pela marca Holiday Inn), Ritz Carlton e Jumeirah. Os autores destacam que essas redes podem ser consideradas representantes de uma abordagem atual quanto à sustentabilidade, bem como buscam divulgar suas ações de forma ampla e que atinjam vasto número de pessoas.

O processo de busca adotado pelos autores corrobora com Grosbois (2012) quanto a pouca visibilidade dada à sustentabilidade nos relatórios, pois, para localizar informações sobre o tema, utilizaram inicialmente a expressão “relatório anual de sustentabilidade”, no entanto não resultou em informações. Na sequência, foi utilizada a palavra sustentabilidade, no *site* de cada uma das redes, o que resultou em informações para pesquisa.

A partir da análise dos relatórios, considerando as dimensões econômica, social e ambiental, Jones, Hillier e Comfort (2014) concluíram que os compromissos apresentados pelas redes englobam as três dimensões, demonstrando preocupação com a sustentabilidade e uma forma de apresentar diferencial competitivo. Concordando com Grosbois (2012), apontam a necessidade de validação das informações, podendo, dessa forma, torná-las mais consistentes.

Perez e Bosque (2015), da mesma forma que os autores supracitados, desenvolveram pesquisa analisando informações divulgadas pela internet do setor hoteleiro da Espanha, com objetivo de identificar se há falhas. Analisaram 170 organizações do setor, amostra composta desde redes hoteleiras até pequenos hotéis de gestão independente. Ressaltam que as informações são analisadas pela ótica do desenvolvimento sustentável e grupos de interesses ou *stakeholders*. Para análise, foram consideradas as quatro dimensões já descritas: ambiental, social, econômica e cultural (Elkington, 1994, 2012; Sachs, 2002), relacionando-as a seis grupos de interesse: clientes (hóspede e turista), fornecedores, funcionários, acionistas/investidores, sociedade e meio ambiente.

As principais conclusões de Perez e Bosque (2015) se relacionam a: utilização das páginas da internet com maior foco comercial; o grupo de interesse que possui maior direcionamento de informação são os clientes; vasta informação relacionada aos recursos naturais e patrimônio cultural que são atrativos para turistas; poucas informações econômicas. Destacam que os fornecedores não recebem muita atenção relacionada às informações referentes à operação do hotel, o que, segundo os autores, pode, ao longo do tempo, prejudicar as relações comerciais.

A partir das análises realizadas, depreende-se que as contribuições que os autores oferecem se relacionam à melhoria quanto à apresentação das informações, clareza e dispersão das informações concordando com Grosbois (2012) e Jones, Hillier e Comfort (2014). Recomendam que as informações culturais devem ser mais valorizadas, pois trata-se de uma componente chave no segmento hoteleiro. Para concluir, Perez e Bosque (2015) informam que encontraram dificuldade na comparação das informações, pois não há dados suficientes que expliquem as métricas consideradas para a obtenção das informações apresentadas nos relatórios, sugerem a padronização, concordando novamente com as considerações de Grosbois (2012).

Font *et al.* (2012) complementam as pesquisas de Holcomb, Upchurch, Okumus (2007), Grosbois (2012), Hsieh (2012), Jones, Hillier e Comfort (2014) e Perez e Bosque (2015), estudando a lacuna entre o discurso e a prática com relação às ações ligadas a Sustentabilidade e RSC descritas pelos hotéis. Para a pesquisa, consideraram dez redes hoteleiras, responsáveis por 64 marcas, dentre elas: Accor, Barcelo Hoteis e Resorts, Hilton, Iberostar, Intercontinental Hotels Group (IHG), Marriott International, Sol Meliá, entre outros. Os autores analisaram as informações publicadas em *sites*, realizaram visitas técnicas em mais de um hotel das redes e aplicaram questionários.

Os temas considerados pelos autores foram: políticas corporativas, assuntos trabalhistas, questões socioeconômicas, ações ambientais, engajamento dos clientes e transparência. Observou-se que a maioria das redes possui um profissional responsável em cada hotel, como, por exemplo, engenheiro-chefe ou o próprio gerente geral, entretanto, não citam a existência de uma área ou equipe responsável pelo tema. Como prática mais consolidada, destacam-se as ações de caridade ou assistenciais.

Quanto à relação entre discurso e prática, a maior divergência foi observada nas questões ambientais e envolvimento com os clientes. Nas visitas, observou-se que algumas políticas descritas não eram cumpridas, porém, outras excediam o explícito. Foram observadas práticas individuais que extrapolavam as práticas implantadas nos hotéis (Font *et al.*, 2012).

Como conclusão, os autores destacam que há diferenças entre o discurso e a prática. Há ações ou práticas com níveis de adesão distintos. A maior ênfase se relaciona à questão ambiental como gestão da energia e água, pois o retorno em termos

de redução de custos se torna mais imediato. Outro achado foi relacionado a uma preocupação maior com aspectos internos, contradizendo a relevância de cuidar do entorno, destacada por Kirk (1995) e Saarinen (2006).

Uma justificativa para o descompasso entre discurso e prática encontrado pelos autores se deve à maturidade das redes no que tange à incorporação e gestão das políticas de RSC. Apontam, ainda, que as redes que se destacam, como Accor, IHG e Marriott podem se encontrar num processo de desenvolvimento de uma competência difícil de ser imitada, que integra saberes e agrega valor, denominada competência essencial por Prahalad e Hamel (2000).

Font *et al.* (2012) estabelecem uma crítica considerando a efetividade das ações que podem se tratar de *greenwashing*, visando, dessa forma, criar uma imagem positiva do hotel para com seus fornecedores, clientes e comunidade.

Quanto ao crescimento de pesquisas, Kang, Lee e Huh (2010) corroboram as conclusões de Holcomb, Upchurch, Okumus (2007), destacando que, no *site Hospitality Net3*, houve um crescimento nas publicações referentes ao tema: de 69 publicações em 1999, para 139 em 2007. Reforçam, ainda, que organizações do segmento de hospitalidade como Hilton, Starwood, Starbucks e McDonalds passaram a disponibilizar relatórios sobre as ações relacionadas a sustentabilidade e RSC (responsabilidade social corporativa), com intuito de agir de forma transparente frente ao tema e criar uma boa imagem no mercado.

Pesquisas foram realizadas considerando sustentabilidade ao retorno financeiro do empreendimento. Bader (2005) aponta que ações relacionadas à sustentabilidade podem contribuir financeiramente com o hotel, contrapondo questões apresentadas por Orsato (2006) e Porter e Kramer (2011). A autora destaca que há vantagens para o negócio, entre elas: promove a redução de custos e geração de receita adicional, melhora a estabilidade financeira a longo prazo, melhora a imagem e a gestão financeira promovendo credibilidade junto às entidades financiadoras e investimentos.

Contrapondo Bader (2005), Kang, Lee e Huh (2010) destacam que há poucos estudos sobre a realidade da hotelaria e RSC relacionada ao desempenho financeiro, especificamente a análise dos impactos positivos e negativos. Os autores analisaram, o desempenho de organizações do segmento de hospitalidade de capital aberto, estabelecidas no mercado norte americano, dentre elas hotel, cassino, restaurante e companhia aérea.

Os resultados demonstram que, na hotelaria, a relação com RSC apresenta impacto positivo sobre o valor da organização (olhar de longo prazo), no entanto, não revelou impacto sobre a rentabilidade. Dessa forma, observa-se que o investimento em RSC deve ser considerado para o longo prazo, o que, para alguns empreendimentos, pode se tornar um obstáculo.

Também com foco na relação entre gestão ambiental e desempenho financeiro, Claver-Cortés *et al.* (2007) desenvolveram uma pesquisa com objetivos de identificar as práticas ambientais dos hotéis e apontar uma possível relação entre essas práticas e retorno econômico, bem como o nível de comprometimento ambiental do empreendimento. Como objeto, a pesquisa contou com hotéis de 3 a 5 estrelas, independentes ou de redes, localizados em Alicante no sudeste da Espanha.

Quanto aos itens pesquisados por Claver-Cortés *et al.* (2007), destacam-se: quantificação de custos ambientais e economia; treinamento e desenvolvimento de funcionários no tema; compras sustentáveis; argumentos sustentáveis abordados nas campanhas de marketing e adoção de medidas para consumo adequado de energia e água. De forma geral, nas respostas, os itens relacionados à energia e água são os mais valorizados, o que reflete preocupação com redução de custos e despesas e pouca diversificação e abrangência das práticas. A partir da análise dos resultados, foram identificados três grupos:

- Grupo 1: caracterizados como hotéis proativos ambientalmente, com as melhores pontuações em todas as categorias pesquisadas. Quanto ao porte dos empreendimentos, são os maiores, mais luxuosos e de rede, e os que possuem maior número de certificações, ou seja, aqueles que têm maiores recursos financeiros, corroborando com as considerações de Hsieh (2012) e Rahman, Reynolds e Svaren (2012).
- Grupo 2: caracterizam-se por possuírem ações e pontuações intermediárias.
- Grupo 3: caracterizados como ambientalmente reativos, o que leva à hipótese de que esses empreendimentos não apresentam interesse nas questões relacionadas à sustentabilidade. Na avaliação, os principais itens pontuados foram gestão da energia e água. Os hotéis desse grupo são os de categoria mais baixa e de menor tamanho, bem como possuidores de menor número de certificações, levando à hipótese de que possuem menos recursos financeiros.

Claver-Cortés *et al.* (2007) concluem que há uma relação entre comprometimento com a gestão ambiental e número de certificações, tamanho do hotel e pertencimento ou não a redes. Sugerem, por fim, que os hotéis devem investir em ações com foco na formação dos gestores, enfatizando, principalmente, a relevância da gestão ambiental.

Quanto a implementação da Gestão Ambiental, os autores destacam que esta pode gerar impactos diretos, relacionados à gestão do hotel, como a redução de custos e aumento de receitas. Já os impactos indiretos tendem a melhorar a competitividade do empreendimento por meio da conservação dos destinos no seu desenvolvimento a longo prazo.

Relacionando a importância e a existência de sistemas de gestão ambiental (ISO's), Rodriguez-Antón *et al.* (2012) analisaram a hotelaria da Espanha. Para tanto, foram pesquisados 294 hotéis de 3 a 5 estrelas que adotam necessariamente o sistema. A pesquisa evidenciou que, em função da existência de poucas normas na Espanha, a preferência é pela adoção das normas internacionais. O perfil do cliente aparece como relevante na pesquisa, sendo que o turista de lazer demonstra mais preocupação com o meio ambiente, elevando a preocupação e investimento na Gestão Ambiental, neste segmento.

Ainda considerando práticas ambientais, mas no contexto Americano, Rahman, Reynolds e Svaren (2012) realizaram pesquisa analisando o que eles denominam “práticas verdes ou ambientalmente amigáveis” (p. 720), as quais não envolvem custos ou são de baixo custo. A pesquisa foi realizada em 166 hotéis identificados por meio da *American Hotel & Lodging Association*. A análise envolve as práticas ambientais e estuda as diferenças relacionadas ao porte do empreendimento (se pertence a alguma rede e sua localização geográfica). Apresentam hipóteses que conectam adoção de práticas sustentáveis e a relação entre pertencer ou não às redes hoteleiras; se os hotéis maiores são mais propensos a adotar práticas sustentáveis e se hotéis localizados no Nordeste dos Estados Unidos tendem a adotar, de forma mais intensa, práticas ambientais. As práticas pesquisadas foram gestão de energia, redução de resíduos, reciclagem, educação dos funcionários e negócios verdes.

Após a análise, Rahman, Reynolds e Svaren (2012) concluem que pertencer a redes proporciona adoção de práticas sustentáveis mais consistentes, confirmando novamente as considerações de Hsieh (2012). Com relação ao porte do hotel, os autores apontam que não há consistência, talvez decorrente da forma arbitrária na concepção da distribuição do questionário; a hipótese relacionada à localização geográfica também não foi confirmada.

Na busca de comparações entre práticas sustentáveis, Bohdanowicz (2006) realizou pesquisa no contexto europeu, visando comparar as práticas relacionadas à sustentabilidade em dois países, Polônia e Suécia. Como hipótese, a autora aponta que questões geopolíticas relacionadas ao desenvolvimento do país podem interferir na preocupação, desenvolvimento, desempenho e adoção das práticas relacionadas à sustentabilidade.

A pesquisa demonstrou que há maior preocupação com sustentabilidade na Suécia (94,7%) do que na Polônia (82,3%), sendo que as principais ações retratadas foram direcionadas na seguinte ordem: gestão da água (reutilização de toalhas e tratamento de águas residuais), gestão de resíduos e gestão de energia. Já na Suécia, a prioridade identificada foi: gestão de resíduos, compras verdes (por exemplo, detergentes biodegradáveis), gestão da água e da energia. Bohdanowicz (2006) destaca que as diferenças na hierarquização talvez sejam decorrentes de legislação e da realidade de cada país.

O resultado da pesquisa denota que, neste cenário, a sustentabilidade está ligada à melhoria do negócio, ao retorno financeiro ou à redução de custos, demonstrando que o tema muitas vezes não consta nas principais pautas de planejamento, ou, como já mencionado, no *core business*. A diferença de resultados entre os dois países pesquisados possibilita a conclusão de que os fatores geopolíticos, econômicos e culturais interferem nas práticas que se tratam de sustentabilidade (Bohdanowicz, 2006).

Relacionando pequenos empreendimentos e práticas ambientais, Tzschenke, Kirk e Lynch (2008) realizaram pesquisa na Escócia, com o objetivo de identificar fatores que promovem a adoção de práticas ambientais em pequenos hotéis.

Os autores utilizam o termo verde para designar empreendimentos que adotam ações com vistas a minimizar o impacto negativo no meio ambiente e recursos naturais, bem como poluição. Como principais exemplos, são citados: reciclagem, treinamento sobre questões ambientais, gestão de energia e água, gestão da troca de toalhas e roupas de cama, envolvimento dos hóspedes nas ações, entre outros.

As análises das entrevistas permitiram algumas considerações: os gestores que focaram na gestão de custo observaram na gestão ambiental uma oportunidade de melhoria; outros gestores identificaram a sustentabilidade como uma evolução do negócio. Observou-se, também, que a vivência decorrente do envelhecimento do gestor e valores pessoais contribuem para que as questões ambientais sejam valorizadas (Tzschenke, Kirk, Lynch, 2008).

Interligando sustentabilidade e atratividade em relação aos hóspedes, Berezan *et al.* (2013) desenvolveram um estudo com hóspedes de diferentes nacionalidades, no cenário de San Miguel de Allende, México. O objetivo foi identificar de que forma as práticas sustentáveis podem elevar a satisfação do hóspede e fazer que com ele retorne. As hipóteses trabalhadas se relacionam a satisfação do cliente, retorno do hóspede e diferenças na satisfação do hóspede em relação à nacionalidade.

Quanto aos resultados, os autores supracitados apontam que as práticas sustentáveis promovem impacto positivo junto aos hóspedes e acarretam no retorno dos mesmos, todavia, constataram que as políticas de reciclagem causam impacto negativo sobre estes, gerando constrangimento e insatisfação, também influenciando na intenção de retorno. Destacam, também, que a nacionalidade influencia na percepção das práticas sustentáveis, o que, a longo prazo, segundo os autores, pode também impactar nas intenções de retorno.

Considerando a relação hóspede e sustentabilidade, Barber (2014) realizou uma pesquisa com objetivo de identificar a preferência dos hóspedes por hotéis “verdes” (que se preocupam e atuam a favor da sustentabilidade) e se esses hotéis se diferenciam dos demais. Para verificação dos objetivos, foram elaboradas hipóteses relacionadas aos produtos oferecidos pelo hotel e as preferências dos hóspedes.

Como conclusão, o autor destaca que há diferentes níveis de comprometimento e interesse quanto à sustentabilidade em relação aos hóspedes, o que indica diferentes padrões de comportamento quanto à escolha da hospedagem. Aponta, ainda, que a pesquisa indica que a adoção da sustentabilidade pode se tornar uma ferramenta de atração de hóspedes.

Quanto à relação entre gestão ambiental e posicionamento gerencial, Kirk (1995) realizou pesquisa nos hotéis de Edimburgo, visando identificar a postura gerencial em relação ao tema, bem como o equilíbrio entre política global e ação local, retomando o paradoxo do impacto gerado por um hotel ou uma rede, ou mesmo um grupo de hotéis em um destino turístico.

O autor informa que dezenove hotéis apresentavam declarações escritas sobre gestão ambiental, destacando-se que não houve diferença nas respostas quanto ao hotel ser ou não pertencente à rede. Dos hotéis que expressaram políticas relacionadas à sustentabilidade, as mais frequentes foram: reciclagem de garrafas e latas, utilização de detergentes biodegradáveis, política de troca de toalhas e adoção de lâmpadas de baixo consumo. Destaca-se que os achados da pesquisa de Kirk (1995) demonstram concordância com as colocações de Hsieh (2010) e Coelho, Gosling e Gonçalves (2013), bem como pouca evolução nas práticas e/ou considerações quanto à sustentabilidade (considerando o intervalo entre as pesquisas), denotando, ainda, uma limitação e uma relação direta entre sustentabilidade e práticas ambientais.

Quanto aos efeitos das políticas ambientais, as respostas mais frequentes foram sobre aumento da rentabilidade, elevação da satisfação do cliente, melhoria nas relações com a comunidade e sob a ótica do marketing, vantagem frente aos concorrentes (Kirk, 1995). No entanto, o autor alerta que esses efeitos devem ser considerados como indicativos, pois, devido à amostra, não é possível generalizar os resultados.

No Brasil, as pesquisas caminham para identificar as práticas relacionadas à sustentabilidade, buscando entender relação com *stakeholders*, gestão ambiental e RSC. Como metodologia, observa-se, a partir das leituras realizadas, a predominância de pesquisas qualitativas, concordando com os resultados apresentados por Junqueira, Maior e Pinheiro (2011). Como cenário, encontram-se pesquisas focadas em cidades, estados ou regiões. Também há a distinção entre hotéis pertencentes a redes ou independentes. O foco principal da pesquisa é a gestão ambiental.

Viera e Hoffmann (2010) apresentam pesquisa cuja proposta é descrever a relação entre os *stakeholders* e sua influência no desenvolvimento de práticas ambientalmente sustentáveis, em três hotéis localizados no Balneário de Camboriú (SC).

Quanto à relação com os *stakeholders*, o hotel A possuía os clientes como os mais focados nas questões ambientais, já o hotel B apresentou os acionistas/dono e funcionários como os que tinham maior preocupação com o meio ambiente e, no hotel C, os mais interessados no meio ambiente foram os funcionários e a comunidade (Viera, Hoffmann, 2010).

Quanto às práticas de sustentabilidade, os hotéis A e C apresentaram similaridades, enquanto o B apresentava ações mais efetivas. Como ações presentes nos três empreendimentos, direcionavam-se às questões ambientais como: separação do lixo, redução do consumo de água e energia, práticas de reciclagem e reaproveitamento de material, por exemplo, papel. O hotel B apresentava outras práticas, porém ainda com foco ambiental como: educação de funcionários e gestores sobre as questões ambientais; participação dos clientes nas campanhas de proteção ambiental e compra de produtos ecológicos (Viera, Hoffmann, 2010).

Como obstáculo para implantação de ações voltadas à dimensão ambiental da sustentabilidade, foi apontada pelos três hotéis a falta de cultura organizacional que valorize e incentive essas ações (Viera, Hoffmann, 2010), reforçando que sustentabilidade requer transformação e ressignificação dos valores da organização e, conseqüentemente, mudança de cultura.

Coelho, Gosling e Gonçalves (2013), buscaram identificar “Quais fatores poderiam contribuir para o desempenho da hotelaria, considerando a sustentabilidade e a responsabilidade social corporativa?” (p. 649).

Após a análise, os autores observaram que as dimensões social e ambiental tinham maior ênfase nas ações hoteleiras. No âmbito ambiental, o foco estava na economia de água e luz, reutilização de papel e reciclagem. No econômico, observou-se pouca ênfase, com citação da absorção da mão de obra local e qualificação de profissionais. No âmbito social, houve destaque para proteção à criança, doações para instituições de caridade, ligado a caráter assistencialista e filantrópico. Por fim, no âmbito cultural, foram citadas a conservação do prédio e objetos de época e o apoio a entidades culturais (Coelho, Gosling, Gonçalves, 2013).

O resultado da pesquisa demonstra que a gestão hoteleira em estudo (hotéis em Belo Horizonte) não adotou de forma consistente ações voltadas à sustentabilidade. Da mesma forma, as ações relacionadas à RSC não estavam evidentes para os clientes, o que pode dificultar a escolha do hóspede por um hotel utilizando o critério das práticas sustentáveis (Coelho, Gosling, Gonçalves, 2013).

Quanto às redes, os autores apontam que a RSC possui um caráter mais estruturado e profissional, o qual pode resultar em benefícios para o empreendimento. Para os autores, os hotéis que possuem mais ações ou investimentos efetivos em sustentabilidade e RSC são aqueles que diversificam suas ações e abrangem maior número de dimensões (econômica, social, cultural e ambiental).

Malta, Mariani e Arruda (2013) desenvolveram uma pesquisa na cidade de Campo Grande (MS), tanto em hotéis de redes como independentes. O objetivo da pesquisa foi identificar como as práticas sustentáveis são apresentadas na cidade. A análise dos hotéis contemplou as dimensões econômica, social e ambiental (Elkington, 2012). Foram analisados seis hotéis, três de rede e três independentes, de categorias similares, padrão mais elevado e com número de Uhs (unidades habitacionais designa os quartos no hotel) variando de 80 a 140.

Os autores concluem que as práticas relacionadas à sustentabilidade são mais evidentes nos hotéis pertencentes às redes, corroborando com Claver-Cortés *et al.* (2007), Hsieh (2012), Rahman, Reynolds e Svaren (2012), porém, ações relacionadas à sustentabilidade no setor hoteleiro da cidade de Campo Grande são pouco expressivas. Destacam que os gestores entrevistados não apresentaram respostas completas sobre o tema, além de que as ações se limitam às exigências legais ou que gerem economia, como caso de consumo de água e energia.

De forma geral, pode-se destacar como práticas no segmento: transparência das ações do hotel; economia de energia; racionalização do consumo de água; reciclagem e aquisição de produtos ecologicamente corretos; remuneração condizente com o mercado e capacitação profissional (Malta, Mariani, Arruda, 2013).

Sperb e Teixeira (2008), analisaram o perfil do empreendedor e das pousadas instaladas na Ilha do Mel e as ações adotadas com relação à Gestão Ambiental. Os pontos pesquisados se relacionam a água, energia e resíduos.

Relacionando as práticas sustentáveis nos itens pesquisados, Sperb e Teixeira (2008) concluem que a prática mais efetiva é a economia de energia elétrica, talvez devido ao impacto financeiro dessa ação. Já as práticas relacionadas a água e resíduos são incipientes e pouco eficazes, como, por exemplo, fossas inadequadas e separação e utilização de resíduos de forma pouco organizada. Por fim, os autores concluem que a Gestão Ambiental na Ilha ocorre de forma a atender os interesses e direcionamento dos proprietários das pousadas, sem a devida preocupação com o meio ambiente.

Sob a ótica da sustentabilidade como vantagem competitiva, Töpke, Vidal e Soares (2011) desenvolveram uma pesquisa relacionando o marketing ambiental e as ações de sustentabilidade. A pesquisa foi realizada no Rio de Janeiro – Região Turística da Serra Verde Imperial, em dois hotéis que constam no Guia Quatro Rodas e são indicados como sustentáveis. O hotel A faz parte do roteiro do charme e adota o Código Voluntário de Ética e de Conduta Ambiental (Agenda 21) e possui ações que visam reduzir o impacto no meio ambiente (uso de energia solar, separação e utilização corretas do lixo orgânico e inorgânico, filtragem de água por processo natural, aproveitamento da lenha, entre outros), bem como desenvolve programas para conscientização de funcionários e hóspedes, enquadrando-se, dessa forma, no Sistema de Gestão Ambiental descrito pela ABIH. O hotel B caracteriza-se como pousada, e não atinge as premissas propostas para Gestão Ambiental, uma vez que somente possui horta, reaproveitamento da lenha e reciclagem. Por fim, Töpke, Vidal e Soares (2011) recomendam uma melhor adoção de ações ambientais, principalmente as voltadas para educação e conscientização ambiental.

Cabe ressaltar que os autores apontam que sustentabilidade pode se tornar uma vantagem competitiva, o que pode ser questionável pelas reflexões de Orsato (2006) e Porter e Kramer (2011). Dessa forma, podemos considerar que a sustentabilidade é um diferencial, na medida em que hóspedes escolham o hotel por suas ações, porém não é possível relacionar de forma direta a vantagem competitiva e retorno financeiro.

Com o objetivo de entender a maneira pela qual as redes têm desenvolvido ações sustentáveis de forma cooperativa com seus associados, Silva, Agostin e Langoski (2015), realizaram estudo de caso em uma rede sediada em Porto Alegre. Tal rede abrange 22 empreendimentos situados no Rio Grande do Sul, Paraná e Amazonas.

Apesar dos hotéis adotarem algumas ações com vistas à gestão dos custos, como utilização de lâmpadas fluorescentes, conscientização dos clientes quanto à troca de toalhas, chuveiros e vaso sanitário com baixo fluxo de água, reciclagem de lixo, entre outros, Silva, Agostin e Langoski (2015) concluem que as ações voltadas à sustentabilidade na rede ainda são pouco estruturadas, porém, há demanda dos associados e a ocorrência de ações de forma isolada. Identificaram, também, que as ações relacionadas à redução de custos são aceitas de forma mais favorável.

Pelas pesquisas apresentadas pode-se considerar que o tema sustentabilidade é ponto de interesse do segmento hoteleiro, porém mantém-se associado à RSC e carece de mais desenvolvimento.

4. CONSIDERAÇÕES FINAIS

Temas como a sustentabilidade e a responsabilidade social corporativa, tornam-se cada vez mais um desafio para a sociedade, organizações e indivíduos. Na prática, ser verde relaciona-se muito mais às ações corretivas do que preventivas.

Pode-se observar, pelo exposto, que as ações dos hotéis frente à sustentabilidade estão em fase embrionária e com medidas mais enfáticas no que diz respeito à gestão ambiental, principalmente àquelas que promovam algum tipo de retorno financeiro, contudo, deve-se considerar que alterações mais abrangentes são necessárias à longo prazo (Bader, 2005), porém para que a hotelaria desponte em suas ações, faz-se necessário que os hotéis incorporem em sua cultura organizacional e *core business* a sustentabilidade como um valor organizacional.

Cabe concordar que a gestão ambiental no Turismo, mais especificamente na hotelaria, é uma meta complexa de ser atingida, pois, como já exposto, os impactos que esta pode gerar no ambiente, na cultura, na sociedade e na economia, se analisados de forma isolada, podem não ser considerados significativos, conforme apontam Rahman, Reynolds e Svaren (2012).

É também relevante observar que há muitos conceitos que se entrelaçam nas pesquisas, ou muitas vezes se misturam, como pode ser observado com relação à sustentabilidade e responsabilidade social corporativa (RSC), sendo que, em alguns casos, a primeira está inserida na segunda e, em outros, a sustentabilidade se insere no contexto da gestão ambiental. Como consequência deste entrelaçamento, corre-se o risco de não haver investimento adequado na formação de profissionais para sustentabilidade e consequente desenvolvimento de práticas orientadas para o referido tema, bem como não fica claro, no escopo da organização, quem são os responsáveis pelas práticas sustentáveis, fazendo, dessa forma, com que as pesquisas se direcionem mais aos Gerentes Gerais e proprietários dos empreendimentos, deixando uma lacuna com relação aos outros níveis de organização.

As pesquisas relacionadas ao material de divulgação indicam pontos relevantes quanto ao olhar do empreendimento, por meio de seus gestores para as práticas orientadas para sustentabilidade: (a) as informações sobre o tema direcionam-se aos clientes, caracterizando um foco comercial (Perez, Bosque, 2015); (b) as informações variam em detalhes e qualidade, bem como há reconhecimento da importância do tema quanto sua incorporação ao *core business* (Jones, Hillier, Comfort, 2014); (c) há falta de padronização e clareza nas informações, bem como validação das informações (Grosbois, 2012).

Considerando o exposto referente às práticas orientadas para sustentabilidade realizadas, observa-se que as mesmas se direcionam com mais ênfase às questões ambientais, caracterizando um “olhar” unidimensional, com práticas na sua maioria voltadas à consumo de energia e água, coleta seletiva, redução de resíduos, reciclagem, lavagem de toalhas, troca de roupa de cama, utilização de produtos biodegradáveis, adoção de lâmpadas de baixo consumo e plantio de árvores (Bohdanowicz, 2006; Rahman, Reynolds, Svaren, 2012; entre outros). Na dimensão econômica há ênfase para práticas que proporcionam redução de custos, tais como: gestão de energia e água (Claver-Cortéz *et al.*, 2007) e utilização de lâmpadas de baixo consumo (Kirk, 1995). Quanto à dimensão social, as práticas citadas se relacionam à formação e treinamento de funcionários, envolvimento dos hóspedes (Tzschentke, Kirk, Lynch, 2008), remuneração condizente com mercado (Malta, Mariani, Arruda, 2013) e ações de caridade ou assistenciais (Font *et al.*, 2012). A dimensão cultural não foi citada, o que conota a necessidade de mais investimentos e adoção de práticas.

As pesquisas apresentadas apontam, como consequência da adoção de práticas orientadas para sustentabilidade, redução de custos, gestão financeira mais adequada, melhoria da imagem do empreendimento (Kirk, 1995; Bader, 2005; Claver-Cortéz *et al.*, 2007; Bohdanowicz, 2006), bem como um descompasso entre o discurso e a prática, no qual o discurso tem se apresentado mais abrangente do que a efetiva prática (Font *et al.*, 2012).

Considerando a sustentabilidade como um conceito amplo que cada vez mais abraça temas como qualidade de vida, diversidade, redução da pobreza, atração e retenção de profissionais, entre outros, é fundamental que os hoteleiros e/ou profissionais que atuam no setor cada vez mais agreguem conhecimentos relevantes quanto ao tema (Hsieh, 2012). Os treinamentos e as práticas na hotelaria devem incorporar, em seu contexto, os temas relacionados às dimensões da sustentabilidade, para que, dessa forma, seja promovido a adoção de práticas efetivas que contemple além de aspectos corretivos, considerem também o planejamento e a prevenção.

REFERÊNCIAS

Associação Brasileira de Normas Técnicas. (2006). NBR 15401:2006. Meios de Hospedagem – Sistema de Gestão da Sustentabilidade – Requisitos. Rio de Janeiro: ABNT.

- Bader, E.E. (2005). Hotels Sustainable Hotel Business Practices, *Journal of Retail & Leisure Property*, 5 (1):70-77.
- Barber, N.A. (2014). Profiling the Potential “Green” Hotel Guest: Who are they and what do they want? *Journal of Hospitality of Tourism Research*. 38 (3): 361-387.
- Berezan, O.; Raab, C.; Yoo, M.; Love, C. (2013). Sustainable Hotel Practices and Nationality: The impact on guest satisfaction and guest intention to return. *International Journal of Hospitality Management*.34:227-233.
- Bohdanowicz, P. (2006). Environmental awareness and initiatives in the Swedish and Polish hotel industries – survey results. *Hospitality Management*. 25:662-682.
- Claro, P.B.O.; Claro, D.P.; Amâncio, R. (2008). Entendendo o Conceito de Sustentabilidade nas Organizações. *R.Adm.* São Paulo. 43(4): 289-300.
- Claver-Cortés, E.; Molina-Azorín, J.F.; Pereira-Moliner, J.; López-Gamero, M.D. (2007) Environmental Strategies and their Impact on Hotel Performance. *Journal of Sustainable Tourism*. 15 (6).
- Coelho, M.F.; Gosling, M.; Gonçalves, C.A. (2013). Sustentabilidade e Responsabilidade social corporativa como Estratégia para competitividade na Hotelaria. *Turismo & Sociedade*. Curitiba, 6 (3): 645-670.
- Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California management review*. 36 (2): 90.
- Elkington, J. (2012). *Sustentabilidade, canibais com garfo e faca*. São Paulo, M. Books do Brasil Editora Ltda.
- Font, X.; Walmsley, A.; Cogotti, S.; McCombes, L.; Häusler, N. (2012). Corporate Social Responsibility: The disclosure-performance gap. *Tourism Management*. 33:1544-1553.
- Gonçalves, L.C. (2004). *Gestão Ambiental em Meios de Hospedagem*. São Paulo: Aleph (Série Turismo).
- Grosbois, D. (2012). Corporate social responsibility reporting by the global hotel industry: Commitment, initiatives and performance. *International Journal of Hospitality Management*. 31 (3): 896-905.
- Holcomb, J. L.; Upchurch, R. S.; Okumus, F. (2007). Corporate social responsibility: what are top hotel companies reporting? *International Journal of Contemporary Hospitality Management*.19 (6): 461 – 475.
- Houdré, H. (2008). Sustainable development in the hotel industry. *Cornell Hospitality Industry Perspectives* 1(2): 6-20.
- Hsieh, E. (2010). Hospitalidade & Sustentabilidade; in Phillip Jr., A.; Ruschmann, D.V.M; *Gestão Ambiental e Sustentabilidade no Turismo*. Barueri, SP: Manole (Coleção Ambiental, v.9).
- Hsieh, Y. (2012). Hotel Companies’ environmental policies and practices: a content analysis of their web pages. *International Journal of Contemporary Hospitality Management*. 24(1):97-121.
- Jones, P.; Hillier, D.; Comfort, D. (2014). Sustainability in the Global Hotel Industry. *International Journal of Contemporary Hospitality Management*. 26(1):5-17.
- Junqueira, L.A.; Maior, J.S.; Pinheiro, F.P. (2011). Sustentabilidade: A produção científica Brasileira entre anos de 2000 a 2009. *RGS-A-Revista de Gestão Social e Ambiental*.5(3) :36-52.
- Kang, K.H.; Lee, S.; Huh, C. (2010). Impacts of positive and negative corporate social responsibility activities on company performance in the hospitality industry. *International Journal of Hospitality Management*. 29(1): 72-82.
- Kirk, D. (1995). Environmental Management in Hotels. *International Journal of Contemporary Hospitality Management*.7(6): 3-8.
- Malta, M.C.M.; Mariani, M.A.P.; Arruda, D.O. (2013). Reflexões acerca da sustentabilidade no âmbito da gestão de empreendimentos hoteleiros. São Paulo. 6(2): 534-553.
- Melissen, F. (2013). Sustainable hospitality: a meaningful notion? *Journal of Sustainable Tourism*. 21(6): 810-824.
- Orsato, R. (2006). Competitive Environmental Strategies: When Does It Pay to Be Green? *California Management Review*. 48(2):127-141.
- Perez, A.; Bosque, I.R.D. (2015). Estado de La Comunicación de Responsabilidad Social Corporativa en El Sector Hotelero Español. *Cuadernos de Turismo*.36: pp.315-338.
- Porter, M.E.; Kramer, M.R. (2011). Creating Shared Value. *Harvard Business Review*.89 (2): 62-77.
- Prahalad, C.K.; Hamel, G. (2000). A Competência essencial da corporação. In: Ulrich, D. (Org.) *Recursos humanos estratégicos*. São Paulo: Futura.
- Rahman, I.; Reynolds, D.; Svaren, S. (2012). How “green” are North American Hotels? An exploration of low-cost adoption practices. *International Journal of Hospitality Management*. 31: 720-727.
- Ruschmann, D. (2003). *Turismo e Planejamento Sustentável: A proteção do meio ambiente*. 10ª. Edição, São Paulo: Papirus.
- Rodriguez-Antón; Alonso-Almeida, M.D.M.; Celemin, M.S.; Rubio, L. (2012). Use of different sustainability management systems in the hospitality industry. The case of Spanish Hotels. *Journal of Cleaner Production*. 22:76-84.

- Saarinen, J. (2006). Traditions of Sustainability in Tourism Studies. *Annals of Tourism Research*, Vol. 33, No. 4, 1121–1140, 2006.
- Sachs, I. (2002). *Caminhos para o Desenvolvimento Sustentável*. Rio de Janeiro. Garamond.
- Silva, P.M.; Agostin, M.R.; Langoski, L.M. (2015). Redes de Cooperação e Sustentabilidade: Estudo de Caso de uma Rede Hoteleira. *Rev. Adm. UFSM*, Santa Maria. 8(Edição Especial): 9-23.
- Sperb, M.P.; Teixeira, R.M. (2008). Turismo Sustentável e Gestão Ambiental em meios de hospedagem: o caso da Ilha do Mel, Paraná. *Observatório de Inovação do Turismo – Revista Acadêmica*.3(4).
- Töpke, D.R.; Vidal, M.P.; SOARES, R. (2011). Hotelaria Sustentável: preocupação com a comunidade local ou diferencial competitivo. *Observatório de Inovação do Turismo – Revista Acadêmica*. 6 (3).
- Tzschentke, N.A.; Kirk, D.; Lynch, P.A. (2008). Going Green: Decisional factors in small hospitality operations. *International Journal of Hospitality Management*.27:126-133.
- Viera, E.V.; Hoffmann, V.E. (2010). Atores e Práticas de Sustentabilidade Ambiental em Empreendimentos Hoteleiros; in Phillip JR., A.; Ruschmann, D.V.M. *Gestão Ambiental e Sustentabilidade no Turismo*. Barueri, SP: Manole (Coleção Ambiental, v.9).

DIABETES LITERACY AMONG HIGHER EDUCATION STUDENTS

Alexandra Neto

Escola Superior de Saúde, Instituto Politécnico de
Bragança
(alexandraneto@ipb.pt)

Marco Pinheiro

Escola Superior de Tecnologia e Gestão, Instituto
Politécnico de Bragança
(mpinheiro@ipb.pt)

Ana Galvão

Escola Superior de Saúde, Instituto Politécnico de
Bragança
(anagalvao@ipb.pt)

Maria José Gomes

Escola Superior de Saúde, Instituto Politécnico de
Bragança
(mgomes@ipb.pt)

ABSTRACT

Literacy in diabetes appears to be one of the key tools to combat the increasing prevalence of this chronic disease that has grown exponentially over the years and globally at national level. This study aimed to evaluate the level of literacy in diabetes among students and provide guidelines for proposing an intervention project among this community. The specific objectives were: validate the Diabetes Knowledge Questionnaire (DKQ); and relate the levels of knowledge about diabetes with the socio-demographic and clinical variables. The sample comprises 432 higher education students who replied to the questionnaire in the period between February 15 and March 18, 2016. It was found that the DKQ (Sousa, 2003) that evaluates the knowledge of people about diabetes and its treatment seems to be acceptable for the general population and the two-dimensional model obtained from the confirmatory factor analysis revealed good levels of adjustment (CMIN/DF=1.645, CFI=0.983, NFI=0.959, TLI=0.979, PCFI=0.803, RMSEA=0.039). The results showed a low level of literacy about diabetes and that there is a need for investment in community education projects to increase literacy about diabetes.

Keywords: Diabetes, Health Literacy, Knowledge, Intervention.

JEL Classification: C93, Y90

1. INTRODUCTION

The aging of the world population has brought with it an increase in the incidence of chronic diseases, associated to an increase in demands and costs in health. Among these diseases diabetes mellitus (DM) has been highlighted for its exponential increase over the years.

In 2008, according to the World Health Organization (WHO), 58 million deaths worldwide were due to non-communicable diseases, with DM being responsible for 3.5% of these deaths, with the associated behavioural risks of four metabolic and psychological changes: increased blood pressure, obesity, hyperglycaemia and hyperlipaemia (WHO, 2012).

According to Nurse, Dorey, Yao, Sigfrid and Yfantopolous (2014), one of the most cost-effective human-based interventions is the preventive diabetes lifestyle program, which promotes Literacy in DM as an engine for adopting healthier lifestyles and concomitantly, preventing their onset.

Thus, given the current challenge of a society in a continuous process of demographic aging, with the increase of chronic non-communicable diseases closely related to the lifestyle adopted, the theme related to the level of health literacy and DM, as a relevant factor for the control and prevention of diabetes highlights the pertinence of the present study.

Diabetes is a metabolic disease that affects a large number of people both globally and nationally, conferring it pandemic characteristics (Correia, 2010). This notion is reinforced by Whiting, Guariguat, Weil and Shaw (2011), who consider diabetes as one of the chronic diseases whose incidence and prevalence has increased exponentially over the years.

According to Beaglehole and Lefèbvre (2004,) “the world is facing an increasing epidemic of diabetes with potentially devastating proportions. Its impact will be felt more severely in developing countries.”

Unwin and Marlin (2004) point out that “awareness among policymakers at international and national level about the importance of diabetes at the clinical and public health levels remains low.”

The International Diabetes Federation (2013) points out that diabetes is currently a major cause of chronic morbidity and loss of quality of life and is responsible for a high frequency of consultations and urgent care, having in 2013 been responsible for 5, 1 million deaths. According to Feudtner (2011) type 2 diabetes can be considered a “disease of civilisation”, a “product of modern technology”.

2. LITERACY IN HEALTH AND PREVENTION

Health literacy is defined by DeWalt, Berkman, Sheridan, Lohr, and Pignone (2004) as the “degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions,

which includes adequate interpretation of documents, reading and writing quantitative information, and the ability to listen effectively in a health care setting". For Nutbeam (2008) the relationship between illiteracy and health status is currently well recognized and understood. According to this author, the interest in this relationship contributed to the emergence of the concept of health literacy, with two different roots - public care and public health. This concept is simultaneously a challenge, leading to the development of new intervention strategies in clinical practice and consequently to a change in health organizations as well as an based on educational research for literacy, concepts of adult education and health promotion, with a view to develop skills and abilities aimed at the acquisition by the patient / client of the health service of greater control over their Health and the factors that influence it, being this notion corroborated by Freedman *et al.* (2009).

According to Heide, Heijmans, Shuit and Rademakers (2015) initiatives should be developed to strengthen and improve the role of patients in health care, focusing attention on patients ("specifically functional and interactive health literacy"). These authors developed a study to examine the extent to which functional, interactive and critical health literacy is associated with the control of patients' perceptions of health care and the frequency of visits to primary health care institutions. The study of control of care was associated with the perceived ability to organise care, interact with suppliers, and to perform self-care through multiple linear regression analysis and logistic regression analysis and identified relations between health literacy and perceived control over care and, subsequently, visits to primary health care. The results suggest that some patients may be less able to exercise control over their care because of poor health literacy. Functional, interactive and critical health literacy varies according to the patients' ability to exercise control. For Chinn and McCarthy (2013) health literacy is a complex and evolving construction. The authors carried out research to develop a tool to measure health literacy in primary health care, encompassing functional, communicative and critical health literacy, after consulting 146 health professionals and health care users. The results of the study indicated that the Health Literacy Scale provides health professionals with relevant information on health literacy needs as well as on the capacity of understanding by health service users.

Merkur, Sassi and McDaid (2013) report that controlled observational studies highlight evidence on the effectiveness of health promotion and disease prevention interventions to reduce risk factors by intervening in health determinants such as: risk of tobacco and alcohol consumption, increased physical activity, adoption of a healthy diet, psychological protection and emotional well-being, reduction of environmental damage, and increased environmental safety. According to the authors, this effectiveness culminates in increased cost-benefit whenever interventions in different health determinants are streamlined simultaneously as already outlined by Rosales, Coe, Stroupe, Hackman and Zapien (2010), when they stated that public and social health services, in order to solve complex health and social issues, such as diabetes, increasingly use collaborative and community-based approaches. Merkur *et al.* (2013) warn of the need for caution on the part of policymakers as to the assumptions made about the persistence of the effect of health promotion interventions on long-term behavioural changes. They also add that interventions aimed at children are more likely to be more effective and profitable.

3. DIABETES LITERACY AND PREVENTION

Success in addressing diabetes requires competencies to increase adherence and compliance that supersede the person's prior positions of blame in a "what-should-do" system, based on an educational biomedical model (Beaser & Brown, 2013, p. 399).

In partnership with the American institutions of health and higher education, Vojta, Koehler, Longjohn, Lever and Caputo (2013) implemented a National Diabetes Prevention Program in the United States of America, whose intervention lasted from July 2010 to December of 2011, whose data were analysed in February 2012. They designed a model of group intervention, consisting of 16 sessions with monthly follow-up, conducted by educators in lifestyle training. The results were evaluated in the following items: infrastructure (communities involved and trained personnel), involvement (evaluation and involvement of people with pre-diabetes), program results (attendance and weight loss) and cost of intervention. The program was implemented in less than two years in 46 communities in 23 states, with more than 500 lifestyle coaches trained.

Shue, O'Hara, Marini, McKenzie, and Schreiner (2010) reported that patients with diabetes, with poor health literacy, often struggle with poor health management. They proposed to develop a video with a multidisciplinary group to help these patients better understand their disease (increase in diabetes literacy) and improve the communicational process with health professionals. The results indicated that the patients evaluated the intervention as useful and informative, leading them to consider a behavioural change, also indicating an improvement in the communication process with the attending physician.

Diabetes Mellitus is a health condition that is complex in the long term (Stiles, 2011). To achieve better results, diabetic people should have a good understanding of their condition, as well as adopt a vigilant self-care approach (Stiles, 2011). However, according to the author, this may be difficult for patients with low health literacy, because they may have difficulties in obtaining, understanding and applying health information (Stiles, 2011). Health literacy encompasses factors such as culture, empowerment, motivation and the quality of individual exchanges with the health system. Nurses' understanding of health literacy (as a concept) is critical to helping patients achieve self-management of their long-term condition (Stiles, 2011). Health literacy strategies should focus on providing information in a variety of formats, as well as trying to improve patient access to health services (Stiles, 2011).

Based on the premise that cognitive impairment is common in older adults with diabetes, the authors developed a study of 537 African-American, Indian-American, and Caucasian individuals, including men and women aged over 60 years, hypothesizing the association of health literacy with cognitive function, indicating that it is independent of education. In the study, the measures of cognitive function included the Mini-Mental State Exam (MMSE), Verbal Fluency, brief attention and Digit Span tests were applied. Health literacy was assessed using S-TOFHLA. The results indicated that cognitive functions were associated with health literacy, regardless of other factors of education. Each unit increase in MMSE, Digits

Backward, Verbal Fluency or Brief Attention has been associated with an increased assumption of adequate health literacy, respectively. The authors add that deficient cognitive function may undermine health literacy and increased literacy is a factor in maintaining cognitive function.

4. METHOD

We established three specific objectives for this study: (a) identify the levels of knowledge that higher education students have about diabetes; (b) relate the levels of knowledge about diabetes with socio-demographic and clinical variables; and (c) validate the Diabetes Knowledge (DKQ) questionnaire for a general public of higher education students.

4.1 Participants

Our sample consisted of 432 students, of a total of approximately 700, of the School of Communication, Administration and Tourism of Mirandela (unit belonging to the Polytechnic Institute of Bragança).

4.2 Material

A questionnaire was given out, composed of a first part with socio-demographic and clinical information of the respondents and a second part composed of the 35-item Diabetes Knowledge Questionnaire – DKQ (Sousa, 2003). The original DKQ is divided into 7 dimensions: Identity, Causes, Duration, Treatment, Limitations, Control and Complications.

4.3 Procedures

After formulating the formal request to the Direction of the Polytechnic Institute of Bragança (IPB) and the respective authorisation, the questionnaires were applied to the 432 students of our sample, between February 15, 2016 and March 18, 2016. Students were asked for legal consent. A cross-sectional observational study, using quantitative methods, was performed.

Statistical operations were performed using SPSS v23 for OSX and the modelling of structural equations was done using AMOS v.22.

5. RESULTS

Table 1 shows that the distribution by gender is almost uniform (51.2% of males), that the majority is moved from outside the District of Bragança (53.9%) to study, the majority attend the first year of an undergraduate course (44.7%) and most have relatives with diabetes (52.3%). None of the respondents have diabetes themselves.

Table 1 - Socio-demographic data

		N	%
Gender	Female	211	48,8%
	Male	221	51,2%
	Total	432	100,0%
Residence	Moved from outside the district	229	53,9%
	Moved from inside the district	45	10,6%
	From the municipality	151	35,5%
Study year	First undergraduate	193	44,7%
	Second undergraduate	136	31,5%
	Third undergraduate	76	17,6%
	Fourth undergraduate	0	0,0%
	Masters	27	6,3%
Relatives with diabetes	Yes	226	52,3%
	No	128	29,6%
	Don't know	78	18,1%

Source: Research team (2016)

In terms of knowledge about diabetes, Table 2 shows that the mean number of correct answers is 11.27 out of a possible 35 and that none of the respondents scored on more than 29 questions. In terms of gender, female respondents achieve an average of just over 1 point higher.

Table 2 - Mean scores by gender

Gender	Mean	N	SD	Min.	Max.
Female	11,8863	211	5,56403	,00	29,00
Male	10,6833	221	5,58400	,00	29,00
Total	11,2708	432	5,60024	,00	29,00

Source: Research team (2016)

This information led us to conclude that the average knowledge about diabetes is low and far under the 50% of correct answers. As such, the first objective outlined in our study was achieved.

To find answers for the second objective, i.e. if there is a relationship between socio-demographic and clinical data and knowledge about diabetes, Mann-Whitney and Kruskal-Wallis tests were performed, as our data had a non-normal distribution according to the Shapiro-Wilk tests performed ($p < 0.001$).

From the tests carried out, it was concluded that only for the independent variable “Course” a statistically significant relation existed ($p < 0.001$), being that, as can be observed through Tables 3 and 4, course “14” (undergraduate course in Marketing) has the highest mean rank.

Table 3 - Kruskal-Wallis test results – Mean rank of correct answers per course

Course	N	Mean Rank
1	1	16.00
3	10	227.70
4	13	246.69
5	14	184.50
6	13	120.04
7	74	202.35
8	46	206.60
9	98	190.21
10	49	209.07
11	24	224.46
12	10	262.90
13	29	179.84
14	25	419.86
15	12	266.54
16	14	256.82
Total	432	

Source: Research team (2016)

Table 4 - Kruskal-Wallis test statistics - Correct answers per Course

	Total correct answers
Chi-Square	93.742
df	14
Asymp. Sig.	.000
a. Kruskal Wallis Test	
b. Grouping Variable: Course	

Source: research team (2016)

Performing pairwise comparisons, including the Bonferonni correction, only the pairs that included course 14 (undergraduate course in Marketing), showed statistical significant differences (p , as can be observed in Table 5. The remaining pairs did not show any statistical difference ($p=1$).

Table 5 - Dunn-Bonferroni pairwise comparisons and Bonferroni correction (Adj. Sig.)

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
1-14	-403.860	125.827	-3.210	.001	.140
6-14	-299.822	42.190	-7.106	.000	.000
13-14	-240.015	33.673	-7.128	.000	.000
5-14	-235.360	41.187	-5.714	.000	.000
9-14	-229.651	27.646	-8.307	.000	.000
7-14	-217.509	28.542	-7.621	.000	.000
8-14	-213.262	30.658	-6.956	.000	.000
10-14	-210.789	30.325	-6.951	.000	.000
11-14	-195.402	35.260	-5.542	.000	.000
3-14	-192.160	46.166	-4.162	.000	.003
4-14	-173.168	42.190	-4.104	.000	.004
16-14	163.039	41.187	3.959	.000	.008
12-14	-156.960	46.166	-3.400	.001	.071
15-14	153.318	43.331	3.538	.000	.042
Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05.					

Source: Research team (2016)

As such, from the socio-demographic comparisons, only attending or not the undergraduate course in Marketing makes a statistical significant difference when it comes to knowledge about literacy with a clear superior knowledge by the population from this course, when compared to all other groups. With this step we concluded the research for our second objective.

To achieve our third objective, validate the Diabetes Knowledge Questionnaire for a general public of higher education students, we submitted our data to a Principal Component Analysis to analyse the validity of the theoretical construct for the studied population. The first results, after extracting components with an eigenvalue equal or above 1, resulted in 7 factors, not presenting, however, theoretical coherence. Sousa, McIntyre, Martins and Silva (2015) initially obtained 13 components, but as verified in their study it was necessary to reduce to 3 components and items from 35 to 20. With our sample the same type of reductions were necessary. However, the grouping of the items per component in our sample did not follow the same distribution as with the study of Sousa *et al.* (2015), nor did the elimination of certain items coincide with the ones eliminated in that study. We did however follow the same methodology of eliminating items with loading factors under 0.40 and/or items that didn't have theoretical consistency with the remaining items of the same component. This led to the results shown in Table 6, with a 19 items questionnaire loading to three components.

Table 6 – Principal Component Analysis – Rotated Component Matrix

	Component		
	1	2	3
Incl_Q4aRC	,900		
Incl_Q6bRC	,897		
Incl_Q6dRC	,861		
Incl_Q7cRC	,818		
Incl_Q4cRC	,807		
Incl_Q7dRC	,757		
Incl_Q2eRC	,699		
Incl_Q2cRC	,689		
Incl_Q6cRC	,637		
Incl_Q6aRC	,630		
Incl_Q1aRC	,567		
Incl_Q4dRC	,556		

Incl_Q7bRC	,537		
Incl_Q3bRC		,829	
Incl_Q3aRC		,818	
Incl_Q3eRC		,749	
Incl_Q5bRC		,467	,405
Incl_Q4eRC			,747
Incl_Q5dRC			,662
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			

Source: Research team (2016)

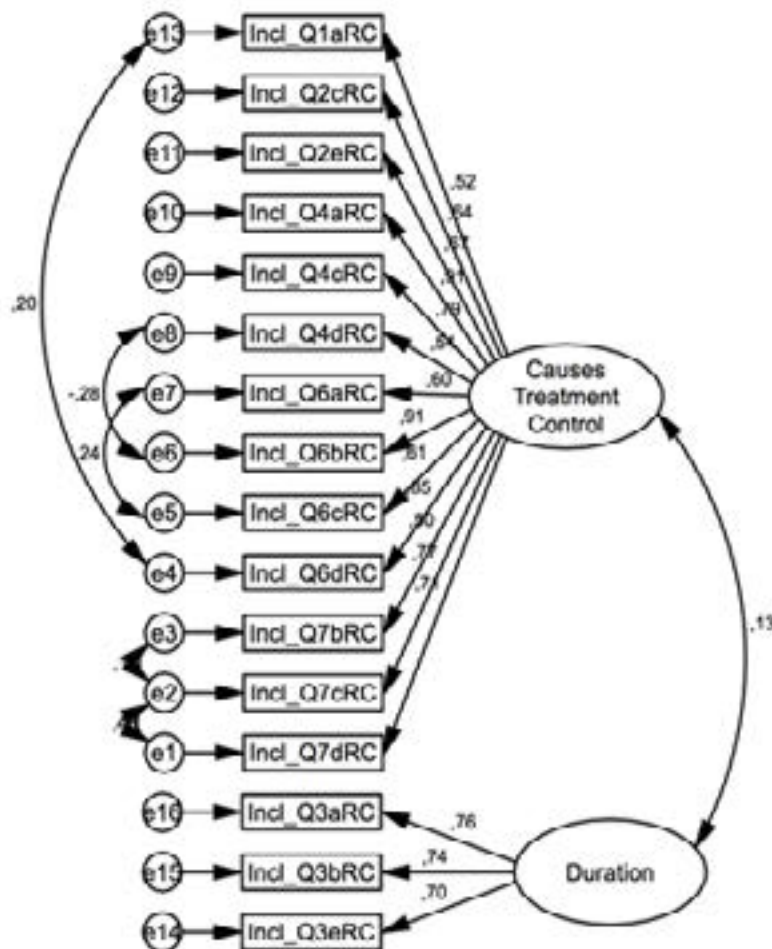
Notwithstanding ending with 3 components as in the study of Sousa *et al.* (2015), our 19 items loaded to 3 components that could be best described as measuring knowledge about diabetes in the areas of: Causes, Treatment and Control of Diabetes, explaining 37.40% of the total variance; Duration of Diabetes, explaining 13.84% of the total variance; and Limitations Originated by Diabetes, explaining 6.04% of the total variance.

Although the item Incl_Q5bRC loaded to two factors we considered it belonging to component 3, given relation and consistency of the question with the remaining two questions of the same component.

Notwithstanding the differences of measured knowledge between our results and the ones from Sousa *et al.* (2015), we have to bear in mind that our sample was composed out of individuals not carrying diabetes, contrary to the other study, and therefore differences in interpretation were expected.

Finally, to validate the questionnaire, we performed Structural Equation Modelling, resulting initially in a non-acceptable result. A further analysis to the fit indices and data, led us to eliminate the third component, as the statistics showed contradictory results and low reliability of the data. As a result, we ended with a two-dimensional model measuring knowledge about: Causes, Treatment and Control of Diabetes; and knowledge about Duration of Diabetes, as depicted in Figure 1.

Figure 1 - AFC generated bifactorial model - standardised factorial weights



Source: Research team (2016)

After eliminating the third group, the results indicated a good quality of adjustment of the model supporting the factorial validity of the questionnaire, with: CMIN/DF=1.645; CFI=0.983; TLI=0.979; PCFI=0.803; RMSEA=0.039. According to the literature, the aforementioned indices are recommended for acceptance when: CMIN/DF < 2 (Ullman, 2001), CFI ≥ 0.95, TLI ≥ 0.95 and RMSEA < 0.6 (Hu and Bentler, 1999), being it that all our indices are within the consensual area of “good fit”.

From the result of the confirmatory factor analysis, we can conclude that the questionnaire is validated for the studied population, measuring in a statistically significant way the knowledge about the causes, treatment, control and duration of diabetes, for a public of higher education students not carrying diabetes.

6. DISCUSSION OF RESULTS

The diabetes knowledge questionnaire (Sousa, 2003), which evaluates people’s knowledge about diabetes and its treatment, was applied by the authors on a population of people with diabetes (239 participants). In our study we intended to validate the scale for a population of public higher education, so the original version (Sousa, 2003) was applied to higher education students (432 participants).

From the statistical treatment performed and the Confirmatory Factor Analysis with good results, we can conclude that the objectives we set ourselves were reached, and can even affirm that validation for a non-diabetic population of higher education students was achieved.

Sousa *et al.* (2015) performed a CFA on a sample of people carrying diabetes, reducing the initial questionnaire (Sousa, 2003), from 35 to 20 items, obtaining results consistent with a “good fit”. Our analysis, on a population of higher education students, showed also consistent results and even higher than the ones obtained by Sousa *et al.* (2015), as depicted in Table 7.

Table 7 - Comparison between studies

Study	CFI	PCFI	TLI	RMSEA
Sousa <i>et al.</i> (2015)	0.908	0.774	0.892	0.052
Our	0.983	0.803	0.979	0.039

Source: Our: Research team (2016); Sousa *et al.* (2015)

This leads us to consider that the results obtained statistically are valid both in statistical terms and in terms of their theoretical construct, concluding our third objective.

Our participants responded correctly to 21,61% of the answers, showing a low knowledge about diabetes, being it that these results are in line with other studies like the one performed by Okoh and Jaja (2014), whose results made the authors conclude that the awareness and knowledge shown by adolescents was extremely reduced and possibly representative of the general knowledge of the Nigerian population. Also the results of the research carried out by Al-Sarayra and Khalidi (2012) led the authors to the conclusion that there is a low level of consciousness and knowledge among university students. The same type of conclusions were obtained in the research carried out by Shin and Schlenker (2012), concluding the level of knowledge among American students was low, just as the research from Khan, Gomathi, Shechnaz and Muttappallymyalil (2012), evidencing an inadequate knowledge about diabetes among university students from the United Arab Emirates, notwithstanding being exposed to information from several sources.

The results obtained in our research reinforce the results of the European study about health literacy performed in several countries like Portugal, Poland, The Netherlands, Ireland, Spain, Greece, and Germany, amongst others, where Portugal appeared as the second country with the most inadequate knowledge about health and also as the second highest in health (Escobal, 2016).

The results of our analysis lead us to conclude that the level of literacy on diabetes in the population is very low, and this fact is worrying when we consider that diabetes is a disease with great incidence in Portugal. These results are even more worrying when we consider that 52.3% of the sample has relatives with diabetes, leading us to suppose that at least this group had a higher level of knowledge.

Low levels of literacy have confirmed that reduced awareness of common and serious diseases, such as diabetes, is worrying, leading to questions about what measures should be implemented in terms of information dissemination and public awareness of the risks of these same diseases.

Finally, we can’t fail to mention the surprising result of the undergraduate students in marketing who scored, on average, almost twice as much as the second highest average course. Although it was first suspected that there might have been some kind of concerted action in the production of the answers in the classroom, this possibility was discarded since the high average occurs among the students of the several years of this degree, but it was not possible to identify the reason for this discrepancy with the remaining sample.

7. CONCLUSIONS

Health literacy is a field of research whose objectives are to explore the existing disparities in this area. Some economists estimate that a low level of health literacy could cost the US health care system more than \$73 billion a year and the Swiss

system \$1.5 billion a year, with no estimates for the Portuguese reality. Assessing health literacy to introduce measures to promote it is therefore crucial to strengthening resilience in the face of adversity (Saboga-Nunes *et al.*, 2014).

To achieve an adequate level of health knowledge, it becomes necessary to identify and satisfy basic needs in order to adopt behavioural changes, practices and attitudes that aim at the maintenance of health promoting lifestyles (Silva, Pereira, Lima, Machado de Matos & Martins, 2014).

It is highlighted that there is a high level of illiteracy in diabetes, and that their ignorance is associated with myths and false concepts rather than uncertainty. This fact becomes relevant because it may influence the general public in the search decision, and even avoids the search for more knowledge about the pathology, since there seems to be an awareness of knowledge based on false conceptualisations.

We conclude, therefore, that the initiatives that currently exist with regard to the dissemination of information must be re-equated in order to achieve a greater degree of literacy.

REFERENCES

- Beaglehole, R., & Lefévre, P. (2004). *Diabetes Action Now!* Genebra: Organização Mundial de Saúde e Federação Internacional da Diabetes.
- Beaser, R.S., & Brown, J.A. (2013). Preventive Intervention in Diabetes. A New Model for Continuing Medical Education. *American Journal of Preventive Medicine*. 44(4S4): S394 –S399.
- Chinn, D., & McCarthy, C. (2013). All Aspects of Health Literacy Scale (AAHLS): Developing a tool to measure functional, communicative and critical health literacy in primary healthcare settings. *Patient Education and Counseling*. 90: 247–253.
- Correia, L.G. (2010). Epidemiologia da Diabetes Mellitus. In J.S. Nunes (Coord Ed), *Diabetes uma abordagem global* (pp. 1-9). Algés: Grupo de Estudos da Diabetes Mellitus, Sociedade Portuguesa de Endocrinologia, Diabetes e Metabolismo.
- DeWalt, D. A., Berkman, N. D., Sheridan, S., Lohr, K. N., & Pignone, M. P. (2004). Literacy and health outcomes. *Journal of general internal medicine*. 19(12): 1228-1239.
- Feudtner, C. (2011). Diabetes: La paradoja de la tecnologia moderna. *Boletín de la Organización Mundial de la Salud*. 89: 90-91.
- Freedman, D.A, Bess, K.D., Tucker, H.A., Boyd, D.L., Tuchman, A.M., & Wallston, K.A. (2009). Public Health Literacy Defined. *American Journal of Preventive Medicine*. 36(5): 446–451.
- Heide, I., Heijmans, M., Shuit, A.J., & Rademakers, E.U.J.(2015). Functional, interactive and critical health literacy: Varying relationships with control over care and number of GP visits. *Patients Education and Counseling*. 98: 998-1004. DOI:http://dx.doi.org/10.1016/j.pec.2015.04.006
- International Diabetes Federation (IDF). (2015). *Calling the World to Act on Diabetes*. Belgium: Brussels.
- Merkur, S., Sassi, F., & McDaid, D. (2013). *Promoting health, preventing disease: is there an economic case?* Copenhagen: WHO Regional Office for Europe.
- Nurse, J., Dorey, S., Yao, L., Sigfrid, L. & Yfantopolous, P. (2014). *The Case for Investing in Public Health: A public health summary report for EPHO 8*. Denmark: World Health Organization.
- Nutbeam, D. (2008). The evolving concept of health literacy. *Social Science & Medicine*. 67:2072-2078.
- Organização Mundial de Saúde (2012). *World Health Statistics 2012*. França: Organização Mundial de Saúde.
- Rosales, C.B., N., Coe, M.K., Stroupe, N.R., Hackman, A., & Guernsey de Zapien, J. (2010). The Culture of Health Survey: A Qualitative Assessment of a Diabetes Prevention Coalition. *Journal Community Health*. 35: 4–9.
- Saboga-Nunes, L., Sørensen, K., Pelikan, J., Cunha, M., Rodrigues, E., & Paixão, E. (2014). Cross-cultural adaptation and validation to Portuguese of the European Health Literacy Survey (HLS-EU-PT). *Atencion Primaria*. 46(1): 12-13.
- Shue, C.K., O'Hara, L.L.S., Marini, D., McKenzie, J., & Schreiner, M. (2010) Diabetes and Low-Health Literacy: A Preliminary Outcome Report of a Mediated Intervention to Enhance Patient-Physician Communication. *Communication Education*. 59(3): 360-373.
- Silva, J.P.X., Pereira, H.C.V., Cruz de Lima, A.K., Machado de Matos, C.R., & Martins, R.L. (2014). Programas e novas ferramentas de promoção da saúde, prevenção e/ou Gestão das doenças. Projeto de saúde na comunidade: uma estratégia de promoção da saúde. *Referência*. III(S): 87–98.
- Sousa, M. (2003). *Estudos dos conhecimentos e representações de doença associados à adesão terapêutica nos diabetes tipo 2*. Masters Thesis. Universidade do Minho.
- Sousa, M.R., McIntyre, T., Martins, T., & Silva, E. (2015). Questionário dos Conhecimentos da Diabetes (DKQ): propriedades psicométricas. *Revista de Saúde Pública*. 33(1):33-41.
- Stiles, E. (2011). Promoting health literacy in patients with diabetes. *Nursing Standard*. 26(8): 35-40.
- Unwin, N., & Marlin, A. (2004). Diabetes Action Now: Para aumentar la conscienciación en todo el mundo. *Diabetes Voice*. 49(2): 27-31.

- Vojta, D., Koehler, T. B., Longjohn, M., Lever, J. A., & Caputo, N. F. (2013). A coordinated national model for diabetes prevention: linking health systems to an evidence-based community program. *American journal of preventive medicine*. 44(4): S301-S306.
- Whiting, D.R., Guariguata, L., Weil, C., & Shaw, J. (2011). IDF Diabetes Atlas: Global Estimatives of the prevalencew of diabetes for 2011 and 2030. *Diabetes Research and Clinical Practice*. 94: 311-321.

MENTAL HEALTH AND SLEEP-VIGIL DISTURBANCES IN HIGH SCHOOL STUDENTS: SLEEP HYGIENE CONSULTATION

Ana Galvão
Instituto Politécnico de Bragança
(anagalvao@ipb.pt)

Maria José Gomes
Escola Superior de Saúde,
Instituto Politécnico de Bragança
(mgomes@ipb.pt)

Marco Pinheiro
Escola Superior de Tecnologia e Gestão,
Instituto Politécnico de Bragança
(mpinheiro@ipb.pt)

Sílvia Ala
Escola Superior de Saúde,
Instituto Politécnico de Bragança
(silvia.ala@ipb.pt)

ABSTRACT

Sleep disturbance has consequences on cognitive level as well as on the metabolic balance of youth. The improvement of literacy levels on sleep habits and rest promotes their suitability.

This study aimed to evaluate the mental health levels (anxiety, depression and stress) and sleep quality of higher education students through a descriptive and correlational study, quantitative and transversal in nature, on a non-probabilistic and by convenience sample of 510 higher education students. The Pittsburgh Sleep Quality Index and the Depression, Anxiety and Stress Scale were used.

Among the results we underline a poor quality of sleep in most of the sample as well as a statistically significant correlation between sleep quality and mental health in the analysed aspects, noting also the statistically significant poorer quality of sleep among female students and higher levels of depression and anxiety among male students.

We conclude that the Sleep Hygiene Consultations performed by the clinical office of the Polytechnic Institute of Bragança, are appropriate and timely to improve the literacy levels about sleep and rest habits, and to promote its fitness in the course of academic activities, contributing to a healthy development with less risk of anxiety, depression, stress and other risk behaviours.

Keywords: Sleep Quality, Mental Health, Higher Education Students.

JEL Classification: C93, Y90

1. INTRODUCTION

Today's society adopts inadequate lifestyles, motivated by changes in the pace of work, which in many cases extends beyond 8 hours a day, and by work schedules that involve shifts in various professional groups. Globalization and new information / communication technologies, as well as increased competitiveness, have created a 24-hour online society where the day goes on for the night, affecting sleep quality and increasing stress levels (Paiva & Penzel, 2011).

According to the National Mental Health Plan 2007-2016 (2008), mental health problems are currently the main cause of disability and one of the most important causes of morbidity in our societies. Indeed, mental health needs are of such magnitude that they require timely and creative responses from health services, with the involvement of other public structures and community bodies, within the framework of a clear, dynamic and Requirement of our day.

According to the WHO (2011), one in five children has evidence of mental problems and of these, about half have a psychiatric disorder.

It is equally important to be aware of sleep and rest habits, as well as recommended sleep practices and the consequence of lack of rest in behaviour, learning and development of young people, but also of their impact on performance.

Mental health and socio-emotional skills are the common pillars for promoting a healthy lifestyle and the prevention of risky behaviours.

Risk behaviours, such as psychoactive substance use, anxiety, depression, suicide risk, and self-inflicted injuries, among others, emerge and require specific interventions at the level of assessment and treatment.

At present, lifestyles show marked influence on sleep hygiene. There are several factors that contribute to both its maintenance and its failure. From the Latin "somnus", sleep is one of the most important biological needs of our body and a fundamental element for the cognitive functions. It is defined as a behavioural state characterized by physiological, periodic and reversible rest, immobility and relative abolition of sensitivity to external stimuli, with temporary withdrawal of consciousness.

The transition to higher education is a factor of change of habits and lifestyle for students, with particular impact on changing sleep habits, not always for the better. Irregularities between social and academic hours may promote variation in sleep schedules and constitute a predisposing factor for making sleeping more difficult. Studies show that college students

sleep on average less than 7 hours a night, take more than 30 minutes to fall asleep and that most show low sleep quality. It is also described that the students of more advanced years in their courses have more hours of sleep than the students of the first years. Stress is the most pointed factor as a justification for poor sleep quality and difficulty in initiating sleep, followed by anxiety and emotional factors. Excessive daytime drowsiness, as a non-restorative measure of sleep at night, has a negative impact on students' academic and psychomotor performance, with consequences on learning and memory consolidation, as well as mood, triggering feelings of anxiety, fatigue and irritability. As such, the population of higher education students is at particular risk to evidence a decrease in sleep quality.

Caetano and Thomaz (2012) analysed the responses of youngsters and found that sleep habits and disturbances, negatively influencing quality of life, also generate stress, impatience and unavailability, irritability, aggressiveness, distractions and apathy, or on the contrary, to situations of hyperactivity, discomfort, difficulty of interaction, sadness, isolation, lack of mood and energy. Paiva (2015) states that those who sleep well have a great ability to adapt to adverse circumstances, such as stress.

The National School Health Programme 2015, in Axis 1 - Training, covers the following areas of intervention: mental health and social-emotional skills, affection and sexuality education, healthy eating and physical activity, body hygiene and oral health, sleep and rest, postural education, prevention of tobacco consumption, alcoholic beverages and other psychoactive substances, as well as other substance independent additive behaviours.

Sleep and rest habits are the basic biological rhythm of the human species and are fundamental for good health and quality of life, with special significance in children and young people. Primary sleep disturbances may be due to changes in the quantity or quality of sleep (dysphonia), or to abnormal behavioural or physiological events associated with sleep (nocturnal terrors, nightmares, somnambulism, etc.). Sleep disturbances have cognitive consequences on the metabolic balance of children and young people. Improving literacy about sleep and resting habits promotes their adequacy throughout their academic journey.

In general, sleep among young people assumes itself as an obstacle, that is, with increasing responsibilities due to social paradigms centred on "having" and "success", society has changed and developed new habits of life, occupying less time to sleep and more time for leisure and work. Higher education students sleep less and less every night, and they find that they sleep a few hours during the week and compensate at the weekend, which indicates an obvious disturbance of sleep (Paiva, 2015).

Coelho, Lorenzini, Suda, Rossini and Reimão (2010), in a sample of 49 university students revealed a statistically positive correlation between the scores that assessed sleep quality and depression, that is, the greater the loss in sleep, the higher the levels of depression. Prior and Ribeiro (2011) related sleep pattern and depression, and inferred that this is influenced only by insomnia, and that this relationship was statistically significant.

In a study by Chang, Ford, Mead, Cooper-Patrick, and Klag (1997), conducted among university students, it was found that the risk of developing depression was higher among students who complained of insomnia during college time compared to those who did not report sleep problems. In a similar study, Pinto *et al.* (2012), covering a sample of 1613 youngsters between 12 and 18 years of age, concluded that daytime sleepiness (a sign of insufficient or poor sleep) is correlated with anxiety symptoms ($R_s = 0.371$), depression ($R_s = 0.327$) and stress ($R_s = 0.405$).

Clark and Watson (1991) defined the tripartite model in which the symptoms of anxiety and depression come together in three basic structures. The practical use of this model has led to the construction of several measures, such as Lovibond and Lovibond's Depression, Anxiety and Stress Scale (DASS) (1995), whose objective is to discriminate these three dimensions.

Stress is related to sleep on a bilateral basis (Sahed & Gruber, 2002), that is, an excessively stressful life can disturb the wake-sleep cycle, and sometimes sleep itself is a "stressing" factor for the teenager who attaches greater importance to other areas of his life and has little time to sleep. On the other hand, the anxiety symptoms increase with the irregularity of adopted sleep schedules. There seem to be greater sleep difficulties, namely early awakenings, among students with higher levels of anxiety (Almondes & Araújo, 2003). Also, Dahl (2002) relates the personal regulation of the sleep-wake cycle in adolescents' lives with affective and cognitive processes, confirming the close connection between sleep deprivation and emotional changes.

Given the aforementioned, various studies indicate a significant relationship between the quality of mental health and the quality of healthy sleep habits.

2. METHOD

To assess mental health (levels of anxiety, depression and stress) and the quality of sleep of higher education students, we performed a descriptive-correlational, quantitative and transversal study on a sample of 510 higher education students.

A three-part questionnaire was applied to the students in the sample. The first part consisted of a socio-demographic questionnaire about the respondents as well as about substance use habits. The second part of the questionnaire consisted of the 19 questions from the Pittsburgh Sleep Quality Index (Portuguese version adapted by Ramalho, 2008), focusing on 7 components of sleep quality: subjective quality; latency; duration; usual efficiency; disorders; use of hypnotic medication; and diurnal dysfunction. Responses to the questions were given on a Likert scale of 0 to 3 points, with 0 meaning "Very Good" and 3 meaning "Very Poor". The overall score is obtained by adding each component by its relative weight and a total score equal or above 5 is considered to indicate a poor quality of sleep.

The final part of the questionnaire consisted of a set of 21 questions, the Anxiety Depression and Stress Scale - DASS (Portuguese version adapted by Ribeiro, Horado, & Leal, 2004). Each of the three dimensions is measured by a set of 7 items and answers given on a Likert scale of 0 to 3 points where 0 means "Nothing" and 3 "Most of the time." According to

the authors of the original scale (Lovibond & Lovibond, 1995), the several levels for the three dimensions can be classified according to Table 1 (scorings obtained from the DASS subscales have to be multiplied by 2 to compare with the table according to the authors):

Table 1 - Levels of Anxiety, Depression and Stress

	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Low	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely severe	>27	>19	>33

Source: Lovibond & Lovibond (1995)

3. ANALYSIS OF RESULTS

From the answers to the socio-demographic questions, of the 510 respondents, 364 (71.4%) are female, the most represented students are the undergraduate nursing students (81; 15.9%), 181 (35.5%) attend the second year of their respective course and 404 (79.5%) of the students are displaced, that is, they are not from the city where they study.

In terms of the variables measured, sleep quality, level of depression, level of anxiety and level of stress, the average values obtained by gender and in total are those that are presented in Table 2.

Table 2 - Average scores and Standard Deviations of the PSQI and the DASS subscales

Gender		PSQI	Depression	Anxiety	Stress
Male	Mean	9.2466	7.9247	6.2260	10.0000
	N	146	146	146	146
	SD	4.58718	3.52349	2.51004	4.51052
Female	Mean	7.8214	6.5110	6.9835	9.6896
	N	364	364	364	364
	SD	5.23797	4.09964	2.81275	5.55660
Total	Mean	8.2294	6.9157	6.7667	9.7784
	N	510	510	510	510
	SD	5.09674	3.99149	2.74854	5.27588

Source: Authors (2017)

From Table 2, we can conclude that, on average, male respondents have a relative better quality of sleep although presenting levels of depression, anxiety and stress above those of their female colleagues.

We emphasise that both genders have a PSQI score above 5, meaning poor sleep quality levels. In terms of stress, anxiety and depression, according to the classification made by Lovibond and Lovibond (1997), the three dimensions are at the “moderate” level, which is a worrying factor since it is the third step in a total of 5, and anxiety among male respondents is even on severe levels.

In terms of the internal consistency of the scales used for the 4 dimensions, the Cronbach alphas were calculated and we concluded that the one of the PSQI is weak ($\alpha = 0.584$), the internal consistency of the subscale to measure anxiety is good ($\alpha = 0.866$) and that the internal consistencies of the subscales for measuring stress and depression is excellent ($\alpha = 0.917$ for stress and $\alpha = 0.922$ for depression).

We also conducted tests to relate the results of the 4 dimensions with socio-demographic data, namely gender. The hypothesis of whether or not gender has an influence on the four measured dimensions, using the Mann-Whitney test, according to the data presented in Table 3, rejects the zero hypothesis ($p < 0.05$) for all dimensions except for the dimension stress, that is, gender has a statistically significant relationship with sleep quality and the levels of depression and anxiety.

Table 3 - Mann-Whitney test results for grouping factor “gender”

	Gender	N	Mean Rank	Sum of Mean Rank
PSQI	Male	146	227.21	33173.00
	Female	364	266.85	97132.00
	Total	510		
Depression	Male	146	278.63	40680.00
	Female	364	246.22	89625.00
	Total	510		
Anxiety	Male	146	289.72	42298.50
	Female	364	241.78	88006.50
	Total	510		
Stress	Male	146	259.91	37947.00
	Female	364	253.73	92358.00
	Total	510		

Source: Authors (2017)

The quality of sleep perceived by the respondents and the quality of sleep measured through the PSQI were also compared. Table 4 shows that all the groups demonstrate a quality of sleep above 5 points, that is, a poor quality of sleep.

Table 4 - Relation between self perceived sleep quality and the PSQI and the DASS subscales

Self perception of sleep quality		PSQI	Depression	Anxiety	Stress
Very good	Mean	6.1875	3.7500	5.2031	6.6406
	N	64	64	64	64
	SD	5.02336	1.87718	3.83045	4.09555
Good	Mean	7.8918	6.3684	6.6784	9.3947
	N	342	342	342	342
	SD	4.64044	1.90044	3.72855	4.90009
Poor	Mean	10.0745	9.6383	8.2979	12.5213
	N	94	94	94	94
	SD	5.36865	2.34108	3.91257	5.32942
Very poor	Mean	15.5000	12.7000	13.0000	17.2000
	N	10	10	10	10
	SD	7.10634	3.62246	5.41603	6.17882
Total	Mean	8.2294	6.7667	6.9157	9.7784
	N	510	510	510	510
	SD	5.09674	2.74854	3.99149	5.27588

Source: Authors (2017)

It is also worth noting that there is a relationship between the measured sleep quality and the remaining 3 measured dimensions, that is confirmed by the correlation between the 4 dimensions that in all combinations is significant at the 0.01 level as presented in Table 5.

Table 5 - Spearman correlation between the measured dimensions

	PSQI	Stress	Anxiety	Depression
PSQI	1.000	.449**	.396**	.397**
Stress		1.000	.806**	.826**
Anxiety			1.000	.791**
Depression				1.000

** Correlation is significant at the 0,01 level (bilateral)

Source: Authors (2017)

We can therefore conclude that the results show poor sleep quality for the majority of students surveyed, as well as a statistically significant correlation between sleep quality and mental health in the analysed dimensions, and also the statistically significant poorer sleep quality among female students and higher levels of depression and anxiety among male students.

These results are in line with the complaints made by students who use psychology consultations in the clinical office of the Polytechnic Institute of Bragança (IPB).

4. DISCUSSION OF RESULTS

The results of the present study are in line with other studies carried out, namely with those of Caetano and Thomaz (2012), Paiva (2015) and Pinto *et al.* (2012). The poor quality of sleep among students of higher education is symptomatic and there is an urgent need to take measures to inform students about the possible consequences and the measures to be taken to reverse the situation.

In the study of Boscolo, Sacco, Antunes, Mello and Tufik (2007), it was verified that the period of study and sleep habits are associated and can influence academic performance, being that students with fewer complaints about sleep showed better performance in memorising words. When inefficient diurnal behaviours occur in which there is greater instability in the overall performance of the youth, including their academic performance, they occur simultaneously with interrupted nights of sleep or insufficient quantity (Dewald, Meijer, Oort, Kerkhof & Bögels, 2010).

Also, the relationship between sleep quality and mental health, which is confirmed in our study, is worrying and may lead to other psychic problems and risky behaviours. However, as in the present study, it has been difficult to determine cause and consequence, and there may even be a circular and alternating relationship as the parameter of anxiety as an endogenous factor affects the temporal expression of the sleep-wake cycle pattern, and the irregularity of the sleep-wake cycle derived from school schedules and academic demands (exogenous factors) cooperate to increase the state of anxiety (Almondes & Araújo, 2003).

A good night's sleep is essential for physical and mental wellbeing, but sleep is sometimes modified or even disturbed by biological and environmental factors (Kabrita, Muça, & Duffy, 2014). The preservation of its quality is fundamental, since those who sleep well have a high capacity of adaptation to adverse circumstances, such as stress, anxiety, among others.

It is also noteworthy that female students, despite having a poorer quality of sleep than male colleagues, present lower mean levels of stress, anxiety and depression, and this difference is statistically significant for anxiety and depression. This result, together with the fact that women need, on average, more sleep time than men (Horne, 2007), leads us to recommend a focus on this apparent better resistance on the part of women to stress, anxiety and depression in future studies.

Thus, the results obtained in our study lead us to conclude that the sleep quality levels of the students of the sample, as well as the levels of anxiety, depression and stress, show values that we can classify as worrying, being that the 4 dimensions are correlated and a group of these students can enter a decreasing spiral with worsening indicators.

These results are in line with previous studies on the same problem and lead us to think that the implementation of a Sleep Hygiene Consultation programmes can be an efficient help in solving this problem.

5. CONCLUSIONS

There is evidence of a relationship between sleep habits and students' mental health. It will be important, however, to continue to gauge the cause in this correlational relationship, in order to propose action measures on the origin of the problem instead of trying to correct the consequence.

Based on the National Mental Health Plan 2007-2016 (2008), the following promotion and prevention strategies were favoured:

(...) Mental health education programmes in schools, teacher awareness, youth violence prevention, counselling for children and adolescents with specific problems, drug abuse prevention, personal and social development programmes, suicide prevention and eating disorders; (...) programmes for the prevention of depression (second cause of disability in the European Union) (...)

In general, young people should have knowledge about the importance of sleep hygiene, changing harmful lifestyles through more appropriate behaviours such as physical exercise (dance, gymnastics, athletics...), playing music, do yoga, among others.

In this context, and considering the results of our study, the Sleep Hygiene Consultation inserted in the clinical office of IPB, makes perfect sense. In particular, the comparative results between the perceived quality of sleep and the measured quality of sleep lead us to understand that in most of the situations the subjects assume to have a good quality of sleep when in reality and according to the defined standards that same quality is considered to be poor, having consequences at various levels.

Improving literacy about sleep and resting habits will promote students' fitness throughout academic activities and thus contribute to a healthy development with fewer risks of anxiety, depression and stress.

REFERENCES

- Almondes, K., & Araújo, J. (2003). Padrão do ciclo sono-vigília e a sua relação com a ansiedade em estudantes universitários. *Estudos de Psicologia*. 8(1): 37-43.
- Boscolo, R. A., Sacco, I. C., Antunes, H. K., Mello, M. T. D., & Tufik, S. (2007). Avaliação do padrão de sono, atividade física e funções cognitivas em adolescentes escolares. *revista portuguesa de ciências do desporto*. 7(1): 18-25.
- Caetano, T., & Thomaz, J. (2012). *A Influência do Sono na Qualidade de Vida: Uma Amostra de Estudantes do Ensino Superior de Leiria*. Lisboa: Centro de Estudos de Gestão do Instituto Superior Técnico (CEG-IST)
- Chang, P., Ford, D. E., Mead, L. A., Cooper-Patrick, L., & Klag, M. J. (1997). Insomnia in young men and subsequent Depression. *American Journal of Epidemiology*. 146(2): 105-114.
- Clark, L. A., & Watson, D. (1991). Tripartite model of anxiety and depression: psychometric evidence and taxonomic implications. *Journal of abnormal psychology*. 100(3): 316.
- Coelho, A. T., Lorenzini, L. M., Suda, E. Y., Rossini, S., & Reimão, R. (2010). Qualidade de sono, depressão e ansiedade em universitários dos últimos semestres de cursos da área da saúde. *Neurobiologia*. 73(1): 35-39.
- Dahl, R. (2002). *The regulation of sleep arousal, affect, and attention in adolescence: some questions and speculations*. In M. Carskadon (Ed.). *Adolescent Sleep Patterns: Biological, Social and Psychological Influences*. Cambridge: Cambridge University Press.
- Dewald, J. F., Meijer, A. M., Oort, F. J., Kerkhof, G. A., & Bögels, S. M. (2010). The influence of sleep quality, sleep duration and sleepiness on school performance in children and adolescents: a meta-analytic review. *Sleep medicine reviews*. 14(3): 179-189.
- Horne, J. A. (2007). *Sleepfaring: The Secrets and Science of a Good Night's Sleep*. Oxford: Oxford University Press.
- Kabrita, C. S., Hajjar-Muça, T. A., & Duffy, J. F. (2014). Predictors of poor sleep quality among Lebanese university students: association between evening typology, lifestyle behaviours, and sleep habits. *Nature and science of sleep*. 6: 11.
- Ministério da Saúde, Alto Comissariado da Saúde, Coordenação Nacional para a Saúde Mental, Portugal. (2008). *Plano Nacional de Saúde Mental 2007-2016 — Resumo Executivo*. Lisboa: Coordenação Nacional para a Saúde Mental.
- Paiva, T. (2015). *Bom sono, boa vida*. (7th Ed.). Alfragide: Oficina do Livro.
- Paiva, T., & Penzel, T. (2011). *Centro de medicina do sono: Manual prático*. Lisboa: Lidel.
- Pinto, T., Amaral, C., Silva, V., Silva, J., Leal, I., & Paiva, T. (2012). Hábitos de sono e ansiedade, depressão e stress: que relação? *Actas do 12º colóquio de psicologia e educação*, Lisboa.
- Prior, L., & Ribeiro, O. (2011). *A influência do padrão de sono na depressão em doentes em cuidados paliativos*. Masters Thesis. Escola Superior de Saúde, Instituto Politécnico de Viseu. On the website of: Instituto Politécnico de Viseu: <https://repositorio.ipv.pt/bitstream/10400.19/1655/1/PRIOR%20Lucia%20Maria%20Rodrigues%20A%20influência%20do%20padrão%20de%20sono%20na%20depressão%20em%20doentes%20em%20Cuidados%20%20Paliativos.pdf>
- Ribeiro, J. L. P., Honrado, A. A. J. D., & Leal, I. P. (2004). Contribuição para o estudo da adaptação portuguesa das escalas de ansiedade, depressão e stress (DASS) de 21 itens de Lovibond e Lovibond. *Psicologia, Saúde & Doenças*. 2: 229-239.
- WHO - World Health Organization. (2011). *International Statistical Classification of diseases and related health problems* (10thed). Geneva.

REACHING FOR THE MOON: AN OBSERVATIONAL STUDY ON THE INVISIBILITY OF WOMEN IN CITY URBANIZATION

Marta Gorete Rodrigues Ornelas
Instituto Superior Miguel Torga
(mgrornelas@gmail.com)

Rafael Fernandes de Mesquita
Universidade Potiguar; Instituto Federal do Piauí
(rafael.fernandes@ifpi.edu.br)

Fátima Regina Ney Matos
Universidade Potiguar; Instituto Superior Miguel Torga
(fneymatos@globo.com)

Maria Manuel Rocha Teixeira Baptista
Universidade de Aveiro
(mbaptista@ua.pt)

ABSTRACT

“Reaching for the moon” portrays the story of Lota de Macedo Soares, who designed one of the largest architectural projects in the city of Rio de Janeiro, Flamengo Park, and her homoaffective relationship with the award-winning American poet Elizabeth Bishop. Through an observational study within a qualitative approach, based on a foucaultian framework, the paper intends to explore how the hegemony of discourses, norms and behaviors related to gender roles are also visible in the reproduction of (symbolic?) patterns of exclusionary and patriarchal urbanization. The historical invisibility of Lota’s role in the design and construction of the world’s largest urban park, a World Heritage Site, is demonstrative of how gender norms regulate the way conditions appear on how to appear in the public space; how the public and private are distinguished, and how this distinction is instrumented in the service of sexual politics. The visibility of the feminine figure in the monuments has as reverse: the invisibility in the historical construction. The contribution of this study goes beyond the fictional and cinematographic limits, it aims at thinking about the conditions under which the processes of forgetting and invisibility of women in the construction of public spaces are operated.

Keywords: Invisibility, Gender, Recognition, Power.

1. INTRODUCTION

In the discourse on gender, heterosexual identities are seen as natural, although attributes are included in the sexed body (Rich, 1999; Sunderland, 2004). Symbolic differences and anatomical differences between men and women are emphasized in the social construction of gender to justify power relations. In Western society, the relations of symbolic domination of the masculine over the feminine, considering the work of cultural valorization of biological attributes of man, are marked by ‘naturalization’.

This naturalization aims to decontextualize the social construction of gender, referring to the determinism of evolutionist theses the issues of body and corporeity. Rosaldo (1995) points out that the justification of natural origins for gender issues is an ideological construction that leads to the acceptance that “what we are today is something more (other) than the product of our history and our world, more particularly, that our gender systems are primordial, trans-historical and essentially unchanged in their roots” (p. 15).

These are ideological constructions of femininity and masculinity associated with the expectations that have been created about what is appropriate for women and men. Thus, to speak of gender is to refer to a set of beliefs, broadly shared by society, about the feminine and the masculine, which are independent of the concrete reality of each human being - his capacities and aspirations, his physical and psychological individuality -, a set of beliefs that, as prejudices, conditions the lives of one or the other, restricting their choices, their paths and projects of life.

The denunciation of images associated with the naturalization of the female and male condition was always present in the different feminist movements. It is, however, with Beauvoir’s (1967) critique of the nature of the body as the surface of a cultural invention, evident in the classic assertion, “no one is born a woman, becomes a woman” (p. 9), that opens the way to a radical interpretation of gender by the second wave of feminisms. The centrality that sexual policies assume from this point on in feminist struggles requires a more powerful conception of power, capable of giving a reason for daily practices and habits, for which the liberal and Marxist theoretical tradition seems to have no answers.

Foucault’s (1975) notion of a “micro-physics of power” allows us to analyze how power relations operate in different ways, in an intricate network of connections which include family, workplaces, or other marginal institutions. The notion of micro-power, points to micro-social conditions, questioning the sense of public / private distinction, in which it is difficult to think of the conditions in which subjectivities are shaped and worked in family, group, and school contexts. As Duncan (1006) points out, the public-private distinction is not neutral, it is gendered, it serves a context of domination, shadowing the micropower that functions in private contexts (family, interpersonal relationships, group, etc.).

This binary opposition has been used to legitimize oppression and dependence on the basis of gender. It has also been used to regulate, normalize, sexuality. The private appears as an ideal type, which has traditionally been associated and confused with the domestic, the embodied, the natural, family, property, the gloomy interior of the home, personal life,

intimacy, passion, sexuality, the good life, care, shelter, unpaid labor, reproduction and immanence. On the other hand, the public sphere appears in this binary opposition as an ideal type that traditionally is the domain of the disincarnate, abstract, cultural, rational, critical public discourse, citizenship, civil society, justice, the market, wage labor, production, polis, state, action, militarism, heroism and transcendence (Duncan, 1996). Against this dichotomy, it should be said that the private is also part of the political sphere. There is a dynamic of power that is a political even in minor everyday practices, in gestures, in the relation to space, in language, in the ways in which the world is received from the very beginning.

In this article we assume the concept of gender as an analytical category, following the theoretical proposal of Joan Scott (2008), in which “the core of the definition depends on the integral connection between two proposals: gender is a constitutive element of social relations, which Based on the perceived differences between the sexes, and gender is a primary form of the symbolic relations of power” (p. 65). This perspective of Foucauldian influence allows us to unite the gender relational category with the polymorphic dimension of power relations in terms of subjectivation, embodiment and subjection (Foucault 1975; Butler, 1997; Haraway, 1995). In addition, it helps us realize how, despite the dissemination of power, the gender device operates in different ways in the subordination of women, in interaction with other devices of power, such as sexuality, constitute a “situated experience” (Adán, 2006), according to what the current discourses in a society allows.

As Foucault argues (1969) discursive practices are inserted in historical regimes of truth, from which the subjects of knowledge are legitimized and the objects and rules of production and validation of knowledge are delimited.

The objective of this article is to explore the way in which the hegemony of discourses, norms and behaviors related to gender roles are also visible in the reproduction of (Symbolic) patterns of exclusionary and patriarchal urbanization.

2. GENDER AND IDENTITY

Walter Lippman (1922) argues in his pioneering analysis of stereotypes that they play an important role in human judgments and information processing, functioning as “pictures in our heads” (p. 4), giving explanation, justification, of certain actions and differentiations between groups and people.

Gender stereotype is directly related to the fact that conceptions of the feminine and the masculine are erected in a dichotomous way and are mutually opposite, mutually exclusive, as in the sexual differences between women and men. These beliefs include the characteristics, skills and competencies considered as “innate” to men and women, the attitudes, behaviors and (re)actions expected of each other, activities and social roles accepted as appropriate to each sex.

As in other dimensions of life, the labor markets and the division in the functional organization of labor are also marked by this stereotype. Most jobs are sexually typified as female or male and, therefore, naturally occupied by women or men, respectively.

In a deeper analysis as proposed by Billing and Alvesson (1994) we can also say that a certain work has a certain gender symbolism. “The concept of gender symbolism then goes a bit deeper than sex typing, meaning not only that a particular job is openly viewed as women’s or men’s work, but it also refers to non-explicit meanings, unconscious fantasies and associations” (Alvesson & Billing, 2009, p. 70).

Ideas about what is feminine/masculine are historically rooted in the cultural systems of meanings and ideas, and later considered appropriate as work for women or men. There are, in a vaguer or more specific way, certain ideas about the characteristics of each type of work and the more masculine or feminine qualities it is required to possess (Alvesson & Billing, 2009). This division of labor between “female” and “male” workplaces is considered a key element in the subordination of women to work and society (Acker, 2009; Alvarez & Billing, 2009; Hirata, 2007).

As Butler (2009) argues “Gender norms have everything to do with how and in what way we can appear in public space; How and in what way the public and private are distinguished, and how that distinction is instrumental in the service of sexual politics” (p. ii).

Thinking gender according to ideas about what is appropriate and natural to male and female people, giving them shared and “normal” traits of masculinity or femininity, respectively, does not allow equating adequately many of the problems associated sexual policies.

Social constructions of gender “imprison” people to the representations of sex and, therefore, can be a great obstacle to overcoming the rigid and oppressive divisions that occur in different cultures. It is this focus on the body that is implicit in the affirmations: “this is a man,” in contrast to “this is a woman.”

Bringing gender into the sex organs and other bodily signals implies taking into account a huge variety of outcomes in the “women” category, from striptease dancer, elite swimmer, grandmother and business woman. In the same way, when certain values such as individualism, aggression, competition, sport and drink are associated with men, it is necessary to take into account that any person can have these characteristics and yet continue to be seen as feminine according to other dimensions, such as appearance or maternity, for example (Alvesson & Billing, 2009).

The notion that men and women can be defined from complete and exhaustive concepts is very critical. As Butler (1990) argues, “gender norms have everything to do with how and in what way we can appear in public space; how and in what way the public and private are distinguished, and how that distinction is instrumentalized in the service of sexual politics (p. ii). There is nothing called “sex” or “gender” that precedes our own concepts.

The process by which “normality” is delimited, and from which one defines who is “inside” and who is “outside”, or rather, who is “inside” but kept “outside”, allows one to understand in what ways performativity and precariousness are close concepts, as defended by Butler (2009).

In the assertion that gender is performative underlies the idea that the appearance of gender is usually understood as a sign of its internal or inherent reality; That this reality is induced by mandatory norms that impose identification with the male gender or with the female gender, and thus its reproduction is always a negotiation with power and, finally, that there is no gender without the reproduction of norms that are at risk to undo or redo the norm in unexpected ways, thus opening up the possibility of a transformation of the reality of gender into different lines.

As for precariousness, it describes the set of different conditions to which the living beings can be subjected, of their own will or by accident. Thus, precariousness also refers to the political conditions in which some populations do not have access to social and economic support networks, being more exposed to injury, violence and death, as well as politically induced conditions that expose populations to the arbitrary violence of the State and other forms of aggression that are not registered by the State, against which the late does not offer protection. Thus, precariousness may refer to populations subjected to hunger or sex workers who have to defend themselves against street violence and police persecution (Butler, 2009, p. i-ii).

3. METHODOLOGICAL PROCEDURES

To grasp or interpret the complex phenomena derived from human and social relations, is a task that requires quite a lot of the researcher. This requirement to enter the field of meanings is a fundamental characteristic of qualitative research, since, as Goldenberg (2004) affirms, “qualitative data consists of detailed descriptions of situations with the aim of understanding individuals in their own terms” (p. 53).

The qualitative approach to research provides a contribution to a closer investigation of social phenomena and seeks to “study things in their natural settings, trying to understand, or interpret, the phenomena in terms of meanings that people impart to them” (Denzin & Lincoln, 2006, p. 17). The scenario presented here is fictitious, but based on real stories and portrays the narrative involving human relationships, enabling their analysis and understanding.

Among its various techniques of data collection, we make use of observation, as a spectator of the observed content. Patton (2002) assigns to this work the purpose of “describing the scenario that was observed, the activities that took place in this scenario, the people who participated in those activities and the meanings of what was observed in the perspectives of those observed” (p. 262).

The observational study in film language, a methodology characterized by Machado & Matos (2012), is adequate to achieve this work, because it allows “the observer to feel part of what he sees described in the film and make possible the decoding and coding of various symbols, either with texts, with the images or with the behaviors observed in the characters” (p. 12).

To perform this study, we follow the path proposed by Machado & Matos (2012), in the following steps: the construction of a research objective; selecting a movie; the general view of the film narrative; the identification of scenes and their detailed description; the construction of a theoretical framework and the production of a final report, without the pretension of exhausting the discussions about what could be observed.

This type of analysis, as we pointed in some previous works, is relevant and has consistent methodological proposals, since the film is made by elements of the real world, such as the human relations exposed there, for example, although has fictitious characters (Machado, Ipiranga & Matos, 2013), are analyzes of representations. Visual methods help sensory perception and comprehension of the situation represented, which can be systematically visualized repeatedly for attention to the proposed research problem (Matos, Lima & Giesbrecht, 2010).

Thus, during the later sections, the observational study is presented, with a brief summary of the film in narrative, and the considerations obtained from the filmic analysis, related to the previously presented approaches, in order to base what was perceived in the study.

4. THE OBSERVATIONAL STUDY

The movie “Flores Raras” (international title: Reaching for the moon) is set between the years 1950 and 1967 in two main scenarios, New York City, while portraying the work of Elizabeth Bishop as a poet and later teacher, and in Rio de Janeiro, Brazilian city where the writer gets acquainted to Lota de Macedo Soares, the companion of his old friend Mary Morse.

“How is ‘it’ here?” The question Elizabeth addresses to Mary relates to her relationship with Lota. The response reflects the need for discretion over the exposure of her homosexuality, a social camouflage that is strengthened by life in a house away from the urban center of Rio de Janeiro, as well as the family of protagonists who do not accept their sexualities. “How close were you in college?” The following dialogue between Lota and Mary about Elizabeth also reinforces the perceived difficulty of social acceptance of the lesbian being, something the two Americans tried to hide during adolescence.

Lota begins an affective relationship with Elizabeth. The film shows the conviviality of the two at home, moments of intimacy, walks and support in the parallel works that develop. However, after winning the Pulitzer Prize in 1956 for her book “North & South - A Cold Spring”, the poet is invited to a homage in the city of Rio de Janeiro and, even if accompanied by Lota, does not present her as his family or as any other proximity bond. The situation is repeated on other public occasions.

“That’s not visible! Give them a beautiful park ... And then you’ll make history as you deserve”. Lota encourages the governor, a friend she supported during the electoral process, to build a park for which she will be responsible for the work and development. At the end of the construction, Lota tries to turn a park into a foundation to separate the administration and protect it from the probable instability of government, but the military put her aside in the process. Lota is hospitalized with depression and dies after a meeting with Elizabeth in New York.

The invisibility of Lota's role in the construction of the Flamengo Park allows us to understand the importance of the "silent curriculum" in our daily life (Moi, 1990, p. 271). The reproduction of discourses based on the nature/culture dichotomy, alongside the masculine/feminine dichotomy, where the feminine appears particularly related to naturalized aspects, frame the pragmatic dimension of the discourses with the mechanisms that regulate the places of enunciation, elaboration and authority for the construction of meanings (Foucault, 1969).

It is from this performative function of the discourses and the productive operability of the concepts of sex and gender that one can understand the response of one of the interviewees to the newspaper *O Globo*¹, in a report about Lota de Macedo Soares, to Flamengo Park visitors. The journalist at one point writes: Arnaldo de Oliveira, a retired merchant. Thirty years ago he lived in Flamengo, did daily walks in the Aterro, with other retirees. He never imagined that it had been done by a woman. He always thought it was the work of Burle Marx.

It is the "proper place of woman" that is challenged here. "Where did you study architecture? I was born an architect". The justification that Lota did not have a diploma in architecture is not enough to explain the forgetting of his name in this work, since Burle Marx also did not have formal education in architecture. In the same way that his political positions on the right are also insufficient justification, since the park of Flamengo received the name of Parque Brigadeiro Eduardo Gomes, in homage to a soldier linked to the ideals of right wing that, in 1964, participated in the dismissal of João Goulart from the presidency and, in the Castelo Branco government, was minister of aeronautics.

The forgetting of Lota in history operates from two great impossibilities: being a woman and being a lesbian. The question is thus posed by Butler: "What do we call those who do not and cannot appear as" subjects "within hegemonic discourse?" (2009, p. iii). Lota's recognition is deeply marked by norms about sex and gender, which somehow condition her "eligibility."

Lota, wanting to impose herself in the public space, breaks with the normative discourse that defines women, in patriarchal societies, as the Other, as the non-essential in relation to man, as a mere object of immanence. Women are thus denied both culturally and socially, subjectivity, autonomy and creativity (Beauvoir, 2009).

The Lota can tolerate his rebellious spirit when driving a jaguar or when wearing men's outfits. It is always possible to frame these attitudes in a kind of "rich girl eccentricity" or associate them with the spirit of the era strongly marked by modernism and feminist struggles. "What? Nobody is looking?" However, her behavior is publicly measured when it comes to the affection she shows for her female partners, her sexual orientation, her position as head of household, or as an authority in the carrying out of the park's works.

The woman can inspire a monument, but no one expects her to monumentalize. The construction of a monument, "monumentalization," "elevation," is not tied to the "nature" of the woman. The visibility of the feminine in the monuments is paid with the invisibility in the historical construction. As Beauvoir (2009) explains, "condemned to play the role of the Other, the woman was also condemned to possess only a precarious force: slave or idol, it is never she who chooses her destiny" (p. 134).

The widespread tendency to identify "with one or the other pole of an inevitable binary opposition between the two sexes" (Bauer, 2001, p. 38) puts Lota at risk of not being qualified as subject of recognition. She is a woman, but she does not fit into the "feminine", she is not a man, but presents herself with competences normally recognized to the masculine gender.

Lota's forgetfulness is saturated with power, precisely at the moment when it is discarded of recognition, in a double movement that simultaneously allows to expel and to confine. That is, expulsion is not operated by forms of law or obligation, but through an exercise of power that depends on barriers and obstacles, through a certain confinement that deprives it of public recognition (Butler & Spivak, 2012). It is an expulsion that keeps "in".

The invisibility of Lota's importance in history happens through complex modes of governmentality, in ways not easily reducible to sovereign acts, and can happen through modes of instrumentality that are not necessarily initiated or supported by a sovereign subject (Ibid, p. 34-35). The process occurs in a very underground way.

Lota is not prohibited from working, conducting, or being politically active, by any legal framework, but by a set of disciplinary techniques and practices that have developed and generalized precisely, according to Foucault (1975), when establishing formal and codified form of the politically free subject in the 19th century. XIX. As explained by Oksala (2016): "There are forms of power, such as disciplinary power, that do not function according to the dichotomous distinction between legal and illegal but use much more subtle distinctions, by operating on the sliding scale of healthy/Sick and normal/abnormal, for example" (p. 474).

In modern societies, all dimensions of life are guided by a mode of governance that Foucault (1991) called governmentality (which includes the rule of others and self-government). Order is established and reproduced not only from what compels people, bodies and things, but also in a dynamic process in which they are simultaneously an active part. It is in this sense that the constitution of what is "normal" is produced by the hegemony of discourses, norms and behaviors (where the relation between knowledge and power is included). As Lorey (2006) explains:

"The normalized subject itself is, once again, a historical construct in an ensemble of knowledge forms, technologies, and institutions. This ensemble is aimed at the individual body as well as the life of the population as a whole. Normalization is lived through everyday practices that are perceived as self-evident and natural" (s/p).

Performativity is associated with those who qualify to become a recognizable subject and precariousness characterizes all unqualified lives as recognizable, readable, and between those that common sense suggests that we regret their loss.

Based on these definitions, it is possible to see how precariousness can be associated with gender norms, since those who do not live by their gender according to the established standards are more likely not to meet the profile necessary to be considered deserving recognition.

¹ Edição de 2 de Julho de 1994, caderno "Ela".

It is from this association between performativity and precariousness that one can elucidate the conditions in which Lota de Macedo Soares, despite his proven professional competence, is relegated to invisibility. The economic conditions, cultural and intellectuals of Lota are not enough to keep her from precariousness, because her life is colonized by the dominant culture, which pushes her to an unrecognized life. Some of the issues raised by Butler (2009) may here be adapted to think of Lota's right over his professional achievements and about who he loved. How could he claim a right that is not even recognized as such? It is not economically precarious, it is not culturally precarious, but how does one live in unrecognizable life? If what and how you love is already a kind of nothing or nonexistence, how can you possibly explain the loss of this non-thing, and how would it become publicly grievable? Subjugation to conformity could be an "exit", a "solution", but it would be another (tragic) dimension of precariousness.

5. FINAL CONSIDERATIONS

This article presents a study about the invisibility of female work in architecture from an analysis of the movie Flores Raras (Reaching for the moon). From the viewing of this film, it was concluded that Foucault's analyzes of power and resistance, of the production of subjectivities, of gender, in the case, in the context of micro-powers and also of disciplinary powers, appeared as the most susceptible to justify the invisibility of the work of Lota in History. This invisibility happens through complex modes of governmentality, through which subjects assume (govern) themselves and assume the roles that social contexts make available.

Like gender relations, the design of cities is far from neutral, reproducing dominant patterns and discourses. As Duncan (1996) explains, "As a normative ideal the public sphere is open to all; In practice, however, it is much more restricted" (p.130). Since what constitutes collective memory and historical accounts is organized around public events, those that escape normativity become invisible.

The discourses and roles attributed to the genre include, as Butler (2009) and Lorey (2006), in a foucaultian line emphasized, the performativity proper of acts of language. If the production of subjectivity (i.e., the configuration of a world in the process of education, socialization) is always achieved through a singular appropriation of the various modes of culture, a process in which language has a nuclear role, discourses, practices have a performative dimension in the whole of this process, making available the conditions of this production. In Lota's case this performativity also leads to a precariousness and a lack of recognition of her work.

It is not a formal, legal exclusion. Contemporary modes of governmentality go further by the ways in which subjects appropriate norms and all the normativity underlying language and practices, so that it is often the subjects themselves who monitor their behavior according to the expected standards. The subjects are urged to govern themselves, to put into practice the norms in their own interest. Even rebellion has this context (when one does the opposite of what is expected of us) of normativity, underlying performativity and precariousness.

In a review of the course of this article, with a note on the future of gender studies, we cannot address gender issues without taking into account these diffuse modes of power, which occur both at the micro level and at the macro level of social contexts and dominant discourses. Moreover, cannot address these problems without examining its own conditions of production, performativity, division, and even the definition of gender.

REFERENCES

- Acker, J. (2009). "From glass ceiling to inequality regimes". *Journal Sociologie du travail*, Vol. 51.No 2 pp. 199–217. Doi:10.1016/j.soctra.2009.03.004
- Adán, C. (2006). *Feminismo y conocimiento. De la experiencia de las mujeres al ciborg*. A Coruña: Spiralía
- Alvesson, M. & Billing, Y.D. (2009). *Understanding Gender and Organizations* (2^a ed.). New Delhi: Sage
- Bauer, N. (2001) *Simone de Beauvoir, Philosophy, & Feminism*. New York: Columbia University Press.
- Beauvoir, S. de (2009). *O Segundo Sexo*. Lisboa: Edições Quetzal. Vol. I
- Beauvoir, S. de (1967). *O Segundo Sexo*. São Paulo: Edições Difusão Européia do Livro, Vol II
- Billing, Y.D. & Alvesson, M. (1994). *Gender, Managers and Organizations*. Berlin/New York: de Gruyter.
- Butler, J. (1990). *Gender trouble: feminism and the subversion of identity*. New York: Routledge.
- Butler, J. (1997). *The Psychic Life of Power*, California: Stanford University Press,
- Butler, J. (2009). Performativity, Precarity and sexual Politics. *Antropologia Iberoamericana*, 4(3), i-xiii. Obtido em <http://www.aibr.org/antropologia/04v03/criticos/040301b.pdf>
- Butler, J. e Spivak, G. (2012). *Quem canta o Estado-nação? Linguagem, Política, Pertença*. Lisboa: Edições Unipop.
- Calás, M.B. & Smircich, L. (2006). Do ponto de vista da mulher: abordagens feministas e estudos organizacionais. In Clegg, S. R., Hardy, C. & Nord, W.R. (orgs). *Handbook de Estudos Organizacionais – Modelos de análise e novas questões em estudos organizacionais*. V. 1. São Paulo: Atlas.
- Cockburn, C. (1981). The material of male power. Nova York, *Feminist Review*, n. 9, out, p. 41-58.

- Denzin, N. K. & Lincoln, Y. S. (2006) O planejamento da pesquisa qualitativa: teorias e abordagens. Porto Alegre: Bookman.
- Duncan, N. (ed.) (1996). *Bodyspace: Destabilizing Geographies of Gender and Sexuality*. Routledge.
- Foucault (1969). *L'archéologie du savoir*. Paris: Gallimard
- Foucault, M.(1975). *Surveiller et punir : Naissance de prison*, Paris:Gallimard,
- Foucault, M. (1991). “Governmentality”.InBruchell, G. *et al.* (Eds).*The Foucault Effect: Studies in Governmentality*, Chicago: The University of Chicago Press. pp. 87–104.
- Goldenberg, M. (2004). A arte de pesquisar. *Rio de Janeiro: Record*.
- Haraway, D (1995). *Ciencia, cyborgs y mujeres.La reinvención de la naturaleza*. Madrid: Cátedra
- Hirata, H. (2007).“A precarização e a divisão Internacional do trabalho”.*Sociologias*, No 21, pp-24-41. Doi.org/10.1590/S1517-45222009000100003.
- Lippman, W. (1921) *Public Opinion*. New York: Harcourt, Brace and Co.
- Lorey, I.(2006).“Governmentality and Self-Precarization: On the normalization of cultural producers”, traduzidopor Lisa Rosenblatt and Dagmar Fink.European Institute for Progressive Cultural Policies.Disponível em: <http://eipcp.net/institute> (acedido em 10, Julho,2016)
- Machado, D. Q., Ipiranga, A. S. R., & Matos, F. R. N. (2013). “Quero matar meu chefe”: retaliação e ações de assédio moral. *Revista Pretexto*, 14(1), 52-70.
- Machado, D. Q.; Matos, F. R. N. (Org.) (2012) Estudos observacionais em linguagem fílmica. Curitiba, PR: CRV.
- Matos, F. R. N., Lima, A. C., & Giesbrecht, C. M. (2011). Estudo observacional das relações de poder no filme O Óleo de Lorenzo. *Cadernos Ebape*. BR, 9(2), 438-449.
- Moi, T. (1999) *What is a woman? And Other Essays*. Oxford: Oxford University Press.
- Oksala, J. (2016). Microphysics of Power. In L. Disch and M. Hawkesworth (Eds), *The Oxford Handbook of Feminist Theory* (pp.472-489)
- Patton, M. Q. (2002). *Qualitative research and evaluation methods*. London: Sage Publications.
- Rich, A. (1999). Compulsory Heterosexuality and Lesbian Existence. In Agleton, P. & Parker, R. (eds.). *Culture, Society and Sexuality: A Reader*. Londres: UCL Press, p. 199-225.
- Rosaldo, M. (1995). O uso e abuso da antropologia: reflexões sobre o feminismo e o entendimento intercultural. Porto Alegre, *HorizontesAntropológicos*, n. 1, p. 11-36.
- Saffioti, H. (1976). Trabalho feminino e capitalismo. São Paulo, *Perspectivas*, v.1, p. 119-163.
- Scott, J.W. (2008) *Género e historia*. Cidade do México: FCE:Universidad Autónoma da la Ciudad de Mexico.
- Sunderland, J. (2004). *Gendered Discourses*. Nova York: Palgrave MacMillan.
- Woodfield, R. (2007). *What Women Want from Work Gender and Occupational Choice in the 21st Century*. Palgrave Macmillan.

THE CINEMATOGRAPHIC CULTURAL PRACTICE IN THE PEDAGOGY STUDENTS TEACHING TRAINING

Áurea Regina Guimarães Tomasi
Centro Universitário UNA e Faculdade de Educação
da Universidade do Estado de Minas Gerais- UEMG
(aureagt@gmail.com)

Deisiane Aparecida Damasceno Ávila
Centro Universitário UNA
(deiseavila@yahoo.com.br)

Wânia Maria de Araújo
Centro Universitário UNA e Faculdade de Design
da Universidade do Estado de Minas Gerais- UEMG
(waniamariaaraujo@gmail.com)

Ari Silva Gobira
Centro Universitário UNA
(abr@abrconsultoriaambiental.com.br)

ABSTRACT

This report presents part of a research on public culture policies, more specifically, for libraries and movie theaters in the city of Belo Horizonte / Brazil. Following from the presupposition that, although culture is an attribute that belongs to the human being, the access to libraries and cinema, as cultural practices capable of contributing to the strengthening of citizenship, is still very restricted in Brazil. Thus, it was intended to know the access of pedagogy students to these cultural assets. It was based on an interdisciplinary theoretical reference, with a main focus on the discussion about the so-called art cinema in opposition to the commercial cinema, mainly the Hollywood ones, and a quantitative/qualitative methodology was used. It was sought to know the conceptions and cinematographic practices of Pedagogy students, whether attending movie theaters, by television, internet or other means. About a hundred public and private pedagogy students were asked, among other things, about the criteria for choosing the films they watch and about the importance of cinema in their lives and in the teacher training. It also questioned about what the objectives and criteria of selection and screening of films in college and elementary schools should be. The findings and analysis of the collected data aim to contribute to a reflection and possible expansion of the offer of this cultural practice, as a possibility of enhancing the skill and the formation of future pedagogues.

Keywords: Culture, Movie Theater, Teacher Training, Interdisciplinarity.

1. INTRODUCTION

Culture is a human being's inherent practice, and even if it is universal, produced even unconsciously, in contemporary society, it is also considered as a citizen's right. Therefore, it is necessary for the State and public policies to stimulate their production and to promote the access of the majority of the population to cultural goods and services such as libraries, museums, theater and cinema, among other services, activities, practices and cultural manifestations.

However, although the Federal Constitution contemplates this right, the public policies in this area are still very incipient. In this scenario, there are parallel initiatives of non-governmental institutions that seek to develop this cultural practice in an attempt to fill this gap of the public policies.

In the first stage of this research, among the different cultural practices, it was decided to investigate the offer of the art cinema, because it is a modality of culture capable of enabling the strengthening of citizenship, when considering quality cinema, opposing art cinema to the commercial cinema explored by the mass industry. It was assumed that access and familiarity with the language of art cinema contributed to citizenship and local development.

Continuing this investigation, this study was deepened, seeking to know the cinematographic cultural practice of students of pedagogy. Believing that access to art cinema makes it possible to improve a more critical view, it is important to know if future educators have access to the seventh art and in what way.

With an essentially sociological foundation focusing on culture, citizenship, local development and cinema as a world reading that contributes to an emancipatory practice, a quantitative-qualitative research was used. The scenario is the city of Belo Horizonte, where the access to cinema was analyzed by pedagogy students of public and private higher education institutions. Finally, the quality of this access was analyzed starting from the frequency and extending to the genre of films and their unfolding in the personal and professional formation of the researched students.

2. INTERDISCIPLINARITY IN THE TEACHING FORMATION: CULTURE AND CINEMA

Considering the importance of the educator as a mediator in the formation of children and adolescents, it becomes necessary to know their worldview and their cultural practices related to reading in the scope of the cinematographic

culture. It is considered important to explore this universe of the formation of future educators, in order to understand what possibilities they may or may not offer the students as future readers. Although the relation between an educator and an intense cultural practice and his or her work with the students, and the effect of the former on the latter, is not mechanical, the reading attitude and the posture of the educator specifically in relation to cinema should have influences on those students with whom he/she will work.

This concern with teacher formation is based on a perspective that teacher education should be interdisciplinary, as defended by Thiesen (2008: 545)

The need for interdisciplinarity in the production and socialization of knowledge in the educational field has been discussed by several authors, mainly by those who research the curricular theories and educational epistemologies. In general, the literature on this subject shows that there is at least a consensual position on the meaning and purpose of interdisciplinarity: it seeks to respond to the need to overcome the fragmented vision in the processes of production and socialization of knowledge.

It is also emphasized that interdisciplinarity should include the introduction of new areas of knowledge and also culture, as well as to make possible the dialogue and interaction between these different fields. Morin (2010:44) emphasizes the importance of culture related to the sciences in general and the humanities:

It is the novel and the film that show the relations of the human being with the other, with society, with the world. [...] And the miracle of a great novel, like a great film, is to reveal the universality of the human condition, by immersing itself in the singularity of individual destinies located in time and space.

This way, it is justified the importance of improving the teacher's perspective in reading the world from the cinematographic text because, as Lopes (2007: 37) clarifies, "To educate by the cinema or to use the cinema in the school process is to teach to see different. It is to educate the gaze, to decipher the puzzles of modernity in the frame of the imaginary space". Therefore it is necessary to know and to reflect on the quality of the cinematic readings practiced by the future educators, on this depends, to a large extent, the contribution of these to their future students.

Language and, therefore, cinematographic literacy is an additional instrument that the teacher can use for human and citizen education as far as cinema as art deals with social, cultural and political aspects. Besides this, cinema brings to reflection and discussion elements that are both universal and of diversity, which serve as criticism for an education that is intended to be integral. However, for this purpose, it is necessary, in the words of Lopes (2007), a cinematographic literacy, which enables the teacher and his students to master specific codes for reading in this sense. Hence the importance that justifies the effort to know a little more about the students' practices around this art still so little valued in the school environment and even in university.

In this context, analyzing the cultural practices of students of pedagogy related to cinema was also made pertinent by the fact of composing the reflection around the demands and interests of the population by the "seventh art" as a way to broaden their cultural repertoire and, consequently, to construct new perceptions and interpretations of reality. In addition, it is also important to investigate to what extent actions directed to the cinema have been contemplated in the curriculum and the practices of formation in pedagogy from an interdisciplinary perspective as well as if it has been the focus of the cultural policies and to what extent they can be propellers of actions that lead to local development.

3. CULTURE, CITIZENSHIP AND LOCAL DEVELOPMENT

Since the concept of culture is polysemic, the idea here is not to exhaust considerations about its meaning, but to emphasize how it is also relevant to elucidate questions regarding the actions developed by the public power or by other social actors related to the field of public policies. This is because culture, in addition to guiding and influencing the way individuals interpret the reality in which they are inserted, is also part of the field of conflicts and struggles for the conquest of social and political rights. This way, culture is defended in this study not only as something present in the daily actions of subjects delineating, in a way, their behaviors in the most diverse situations, but as an important and constitutive element of reflection in the field of public policies.

To briefly consider the concept of culture, it is worth mentioning Benedict's (1972) idea that culture can be thought of as a lens through which men see the world. The lenses are diverse and this leads to thinking about the cultural diversity that makes humanity up, that is, how different are the ways of seeing and interpreting the world, of living and experiencing daily life. Therefore, one of the ways to notice the presence of culture in the daily lives of individuals regardless of place and how they live is to dwell on the various ways of giving meanings to the events and material objects that each society processes over time.

These meanings are the result of conflicts and tensions between their various groups over what will be considered as valid and culturally constructed by them. In addition, it is important to emphasize that culture is always the result of a collective process, that is, it always refers to a collective production that expresses the world view(s) of the many groups of subjects of a society. Another important point to consider relates to the fact that culture is inserted in time, in history which has as consequence the change of aspects that compose it, changes that can be related to the forms of behavior, to the content of meanings that cover the events or objects of a given society (Laraia, 2003).

For DaMatta (1986), culture can be understood as a code through which people in a given group classify, think, and modify both the world and themselves. This way, culture is present in all social groups and allows them to express themselves

and present themselves socially in different ways because they share different codes and the changes that occur in the settings where they live are also reflections of the transformations that occur within these codes from the actions that the individuals of these groups perform.

Among the actions carried out by individuals who contribute, in a certain way, to the transformations of culture, the interest here is to highlight those that refer to the conquest of rights, corroborating the practice and political action of individuals in a society and, in turn, be related to the pressure that the citizens put in the public power for the implementation of public policies. This means that actions to exercise citizenship can also be thought of as reflections of transformations in the field of culture. In the Brazilian case, we can think how the process of re-democratization of the country, begun in the 1980s, contributed to this change in the culture and political practices of its citizens, since this process culminated not only in the change of the way of governing the country, but also in a new configuration in power relations (Jara, 1997). This new political culture, democratic and participatory, aimed at the departure of the military regime and, moreover, pointed to the institutional legitimation of the new social actors.

The change observed was the transformation from a centralized way of addressing public issues to a decentralized way of managing, making decisions that came to rely on a greater or lesser degree of social participation. The 1988 Constitution, through the federative pact, expanded municipal responsibilities as well as their collection capacity, since one of the objectives was the decentralization of the treatment of public issues. It was in this scenario that the popular participation had an institutional recognition being understood as a new form of practicing citizenship. This practice contained the idea that popular groups demanded a new way of expressing interests and demands, as well as a way of demonstrating their ability to participate in the public management. This was a demonstration that communities were aware of the need to make decisions about a way of life. According to Jara (1997: 213), decisions always reveal the values from which men organize and reorganize their social relations. Almost every social decision of collective change compromises the fate of society as a whole and therefore has a historical impact.

The new Brazilian context that now counts on decentralized actions when regarding the public management of resources also began to count on the participation of the citizens, not only in the exercise of collective actions that meant pressure to the public power for the fulfillment of the rights guaranteed to all Brazilians by the 1988 Constitution, as well as to exercise control over public expenditures. Citizens call for their role in deciding the development model to be implemented not only in the country but also in the localities where they live their daily lives. In this sense, it is clear that the perception of the citizens involved in the struggles for their rights in relation to the management of public resources does not consider that this action is exclusive to the State and the economic elites, since civil society plays an important role in this process. This way, since the enactment of the 1988 Constitution, municipalities have been enlarged with administrations that count on the effective participation of the population through committees, councils and other deliberative bodies (Martins, Caldas, 2009). In this way, when they actively participate in the administrative process, they move towards the construction of citizenship (Tenório, 2004).

In the 21st century, this scenario of citizen participation in decisions and directions to adopt in their local spaces of daily experiences has undergone changes, but the idea of collectively building development processes has not cooled down, only gained new “nuances.” In these new “nuances”, we highlight the actions related to local development that, according to Ávila (2000), make it possible for the subjects of a given territorial space to recognize their capacities, skills and competences to increase the culture of solidarity and, this way, be able to manage and use the resources of their locality with a view to finding solutions to issues of all order and nature present in their daily lives.

According to Tenório (2004), thinking about local development implies taking into account the economic, social, cultural, physical-territorial, environmental and scientific-technological dimensions, as well as analyzing the different interrelated patterns of the various social actors. According to the author, local development processes involve the efforts of both state actors, civil society and capital to construct projects from the negotiation of interests that may be divergent and conflicting. But for this to happen, it is necessary that the actors involved in the process gain visibility, be strengthened and develop socio-economic proposals that boost local potential in order to achieve the improvement of the quality of life of the population.

And an interdisciplinary education that includes and promotes actions geared to culture can contribute to local development, through teacher formation, which will then be deployed in the education of a new generation when these students of pedagogy become teachers and educators.

4. CINEMA AS CULTURAL AND CITIZEN PRACTICE

In this study, cinema is considered a practice capable of contributing to criticality through art. It is assumed that non-commercial, quality art cinema makes it possible to read the world and the criticality that builds the citizen. But for this, a literacy of the cinematographic language is necessary, which will happen from the familiarity of the subjects with this modality of the culture, as Martin (2003: 28) emphasizes: “It is necessary to learn to read a film, to decipher the sense of images as one deciphers that of words and concepts, to understand the subtleties of cinematographic language. [...] there are as many interpretations of each film as there are spectators”.

Access to cinema becomes, therefore, a condition for this reading to take place:

According to the French sociologist Pierre Bourdieu (1979), the experience of people with cinema contributes to developing what can be called “competence to see”, that is, a certain socially valued disposition to analyze, understand and appreciate any story told in cinematographic language. However, the author points out that this “competence” is not only acquired by watching films; the cultural atmosphere in which people are immersed -

which includes, in addition to school experience, the degree of affinity they hold with the arts and the media - is what allows them to develop certain ways of dealing with cultural products, including cinema (Duarte, 2002: 13).

This author warns that “going to the movies” is a “social practice” that will allow certain taste and a qualification for the choice and appreciation of the different genres of films. Also according to her:

In audiovisual societies such as ours, the mastery of this language is a fundamental requisite for transitioning well through the most different social fields.... It is undeniable that the relations between spectators, between them and the movies, between film-makers and cinema and so on are deeply educational. The world of cinema is a privileged space for the production of relations of “sociability”, in the sense that Simmel gives the term, that is, an autonomous or playful form of “socialization”, a possibility of full interaction among unequals, as a function of values, in function of common values, interests and goals. “(Duarte, 2002: 14-17)

For Lopes (2007: 37), the film brings us a new look, broadening our knowledge and bringing us questions and criticism about issues that were common to us and which we named easily with the way it was culturally passed to us. “[...] but educates in the sense that it broadens and questions our knowledge of familiar and easily-named appearance contexts”

It is also important to discuss the place occupied by cinema and to emphasize its colonizing and acculturation role, especially in the Hollywood film industry as opposed to the art cinema that allows reflection (Lopes, 2007) and focuses on alterity and cultural diversity (Bergala, 2006).

According to Lopes (2007), it is also necessary to consider that the industrialization of culture, such as the American monopoly, not only can standardize the means of expression of cinema, but also impose the consumption of this culture early on to children and young people who are not taught reflection and criticism.

Lopes and Teixeira (2003: 10) show that cinema is an artistic creation that implies a “way of looking” that presupposes an idea about the world, “a historical-social, philosophical, aesthetic, ethical, poetic, existential idea “. Hence the importance of allowing access to art cinema that in form and content can enable a more critical world view in the sense of not only showing the world how it is but how it could be and still give clues on why it is not different than what it is.

Bergala (2006: 46-47) warns of the real danger in relation to cinema that “can, however, cause deeper and more lasting damages: that of mediocrity or artistic nullity. Worse than bad movies are mediocre movies.” And, to avoid this danger, he defends the permanent contact with the art film that stimulates emotion and thought for the “formation of this taste that allows him to take some distance away from the bad films”, which he calls “popcorn film”. Hence the importance of students of Pedagogy, future educators, to have access and a greater familiarity with cinema, but cinema as art.

In opposition to cinema as art is the hegemony of commercial cinema, like the Hollywood films that occupy most cinemas. On this “Hollywood strand,” Lopes (2007: 70-84) uncovers its numerous traps that are not always perceived by the spectator. He explains that Hollywood films use sophisticated and advanced technological resources, creating an imaginary and unreal universe that subtly contributes to alienation, creating a “dream world [...] of the American dream, according to which all men would have the same assets to succeed in life”.

This author shows that it is a type of cinema that does not portray the world as it is, bringing unreal, extraordinary, almost immortal characters, or shows the world as it is, but without possibilities for change, without questioning social inequality, exploitation, encouraging acceptance and compliance.

In general, Hollywood films show the western white man as superior and “ridicules” other peoples such as Indians, blacks and Latin Americans. Reinforcing manichaeism between good and evil, all those who escape the standard of the American man are seen as subversive, perverse, “psychopathic” or “amoral”. In relation to the woman, she has a secondary role in relation to the man or it is someone who causes his “perdition”. In addition, it is a kind of film that manipulates sentimentality, stimulates individualism, consumerism, sex and violence, intensely exploiting action and catastrophes, or what the author calls “instant culture.” In short, all these are formulas that do not make possible or allow to think or to reflect (Lopes, 2007, p. 70-84).

In the face of a controversy about the exhibition of films in this hollywoodian perspective versus the art films, Lopes (2007, p. 94) states: “We defend a cinema of reflection of thought and resistance to banal forms. A cinema that has difficult access to the distributor market, restricted to the rooms of a circuit that survives only in the great capitals of the first world”. But as this author points out, the art film, the one that stimulates feeling and thinking, that is, besides the time that the spectator stays in a movie theater, that touches the feeling, that leads to the reflection, that allows intertextualities with other cinematographic or written texts or with his own life and that contributes with the criticality of the subjects, this one is of difficult access to the majority of the population.

And thinking about the role of cinema in school, it is important to think that the school needs to work so that both the student and the teacher stop being just a passive viewer and also begin to criticize, to understand the political interference, the intentions behind the scenes, that are able to critically read the images and understand the codes behind them. As put explicitly by Lopes (2007: 87): “It is important that the school subject goes from a passive agent to an active, free, responsible and critical subject of the media, through different forms of creative expression. - Through images, codes, symbols, relationships, emotions and sensations”. Lopes (2007) also highlights the interlocution between school and cinema as something that produces relationships, creates senses and meanings for school subjects and promotes learning from the everyday life.

In spite of the great inequality in the production, distribution and access to the art cinema, there are some initiatives in the sense of socializing this type of cinema. With the law of cinema in the school, these questions raised here become even more pertinent. The law that adds to articles 8 to 26 of the No. 9,394 Law of December 20, 1996, which establishes the guidelines

and bases of national education, to compel the exhibition of films of the national production in primary schools and was signed by President Dilma Rousseff in Brasília, June 26, 2014; according to the website of the Federal District, the law adds article 8, which reads: “Paragraph 8: The exhibition of films of national production shall constitute a complementary curricular component integrated with the pedagogical proposal of the school, and its exhibition shall be mandatory for at least 2 (two) hours per month”. (Brasil, 2014)

Around the enacted law, many discussions arise, as for example how these films would enter the classroom, how they would be chosen, what criteria would be used in that choice and of course one can not help but wonder if teachers are prepared to use this resource, if they have access to cinema and if there is in their formation a preparation to use cinema as a source of knowledge.

Increasingly, the responsibility of teachers is getting bigger in society, a responsibility to form a citizen capable of not only knowing how to do, but also having a critical thinking and a political and social conscience. Cinema can be an ally, when used as a didactic resource, but will the teacher be prepared to use this resource?

For Duarte (2002), when it comes to cinema, it is necessary to develop a “competence to see”, disposition to analyze and to understand any story told in cinematographic language. According to this author, this competence is not only acquired by watching films, but it is necessary to know the directors, the ideologies behind the films and to understand even the ways a light is placed, the soundtrack, the place where the plot happens, therefore the language of cinema needs to be understood so they can use a film as a didactic resource, so that it is not only there in the classroom as entertainment or as a way to cover up a hole in the absence of a teacher or an unforeseen event.

The teacher should *get all* the information about the film to make it available to the students, before showing it in the classroom. Having all this information, the teacher will help the student to watch the film with a more critical look, as Lopes (2007) says.

This research therefore is proposed to know, firstly, if the pedagogy students have had access to cinema and, if so, what is the quality of this cinema. It is interesting to know, besides their frequency, whether it is an art cinema or the so-called Hollywood popcorn cinema. It also sought to know what unfolding this cinema has in the lives of students, whether the cinema is just entertainment or if it touches the feeling and provokes reflection and the formation of citizens.

Although broad and interdisciplinary teacher formation is advocated, including aspects of knowing different disciplines and citizen and cultural formation, these latter aspects are generally relegated and left to the responsibility of each student. Especially cinema, although it is a fundamental component for the strengthening of citizenship, is a cultural asset that has not yet been explored, is not well offered, is not valued enough. In this context, cinema seems to occupy a place of non-priority cultural practice, which demands a greater knowledge and questions about its access, with the aim of enabling and stimulating a greater familiarity with this cultural expression in order to strengthen citizenship through art, creativity and criticality.

5. THE PLACE OF CINEMA IN THE STUDENTS' LIVES

It was sought to carry out an investigation in the form of an essentially quantitative research, considering that a survey was carried out to identify the cinematic practice of students, although at the same time it has been sought to apprehend their conceptions in relation to cinema and the contributions that the seventh art brings to the teacher, human and citizen formation.

The sample included a group of 105 students from two pedagogy courses and a questionnaire was applied to 52 students from a private college and 53 from a state public university. The sample consisted of 93% of female respondents distributed from the 1st to the 8th period of the pedagogy course with the highest concentration in the first 3 semesters of the course. There will be no distinction here between the respondents of the two colleges, private and public, for there were no striking differences between the responses of one group and another.

Two thirds of the students are single and very young, half of them are in the age group of up to 25 years old. Only a fifth of them is over 30 years old.

Most of them live in their own homes with not very high schooled parents. About 40% have parents with incomplete primary education. Only about 10% of the parents of these students have a college degree.

Internet access takes place at home, college and on the cell phone, by 98% of the students in this sample and this is the support used by half the respondents to access movies. Television was the next indicated and only 6% pointed at the movie theaters.

About half of these students watch movies weekly and only 11% daily. Regarding the purpose or the unfolding of this cultural practice, almost half (40%) believes that cinema serves at the same time to excite, amuse and reflect. When isolated, the fun was the most pointed purpose (25%), followed by emotion (10%) and lastly reflection (3%).

A huge number of students (70%) do not have a cinema near their homes, and 92% of them attend rooms located inside shopping malls. Only the remaining 8% attend movie club rooms and art cinemas. The attendance at movie theaters is not very intense, being monthly for practically half the students of the research, followed by 18% attending every 2 months and 9% fortnightly. The rest goes even more rarely. And when they go to the movie theaters for the most part, these students are accompanied by friends, family members. Only 6% have the habit of going alone. However, when watching movies at home, 47% have a habit of watching it without any company.

Asked about how they make their choices, initially regarding the nationality of the films they watch, most, 28% pointed to those of North American origin, while 33% prefer these alongside the French. Only 6% pointed to films of Brazilian

origin as their favorite. It is still quoted Indian and Chinese in small percentages and *yet al.* ways accompanied by the North American cinema, which was pointed, if counted with the ones of other nationalities, by 94% of the respondents.

Other aspects related to the criteria of choice concern the theme, the synopsis, the advertising and the indication of friends. A total of 66% of the respondents pointed out these 4 aspects being that the advertising surpasses the indication of friends. But it is noteworthy that only 4% cited the director of the film as a criterion and *yet al.* alongside the theme and actors.

In another block of questions, students were asked what keeps them from attending movie theaters, and free time (54%) was the most chosen factor, followed by the entrance fee (41%). The location was pointed out by only 5%.

6. THE IMPORTANCE OF CINEMA IN EDUCATION

The last block of questions was mainly about the importance of cinema in college and elementary school. The students of this sample are unanimous about the importance of cinema in the school and university space, and about 74% said that teachers exhibit films in their classes with predominance of documentaries (67%) on art films (23%). But most of them (81%) do not have any information about the law that intends to oblige the monthly exhibition of Brazilian films in elementary school.

It is interesting to note in the answers of these Pedagogy students that when asked about the importance of cinema in their formation, objectives such as “possibility of acquiring a view of a different and expanded reality, of leaving the common place of showing the culture of society and reality, of reflecting in a critical way” surpasses preferably didactic/academic objectives such as “to understand the subject, to emphasize what the teacher presents in the class, to improve the understanding of the content of the subjects, to help with learning”.

However, in pointing out the criteria that the elementary school teacher should adopt to show films for the students, these students reversed their previous opinion and emphasized aspects of schooling such as: “to help the content of the subjects, to facilitate the learning of the worked content, to help the content of the subject and the topics dealt in the classroom”. They also revealed a concern about the “adequacy to the age group of the students according to the indicative classification of the film” and, finally, with the “education in general, with the pedagogical contribution aiming to add something to the development of the student”. In a much smaller number, some respondents pointed out the importance of criteria in choosing films that would allow students access to the cultural context, reality, reflection on prejudice, diversity, art and aesthetics. Only 3 students mentioned entertainment and pleasure and 2 mentioned the students’ taste and interest.

7. FINAL CONSIDERATIONS

These findings reveal that pedagogy students do not escape the prevailing conception in school practices and apply them even in practices that are preferentially social and cultural. Just as the school institution “literacy” literary reading practices (Soares, 2007), the principles governing times and school spaces also seem to regulate the seventh art as alerts Bergala (2006) about the risk of the school making it compulsory the exhibition of movies.

The results of this brief survey, although they can not be generalized, serve to provoke a reflection on the risks of an excessive schooling of the culture in the teacher formation and of the need to rethink the possibilities of the inclusion of cinema in the practices of the pedagogy students as well as in those of fundamental education so that this art is an enrichment of the human citizen and aesthetic formation of educators, of children and the adolescents.

In order to do so, different strategies may be thought of to broaden the offer and discussion of films, mainly the art ones, in the school and university space, with a view mainly to inclusion and respect for culture, not allowing cinema to be adopted simply as another instrument of school work. One of these possibilities is indicated by Morin (2010: 84-85), proposing a reform of thought that could for example “institute, in all universities and colleges, an epistemological or transdisciplinary tithe, which would withdraw 10% of the duration of the courses for a common teaching, oriented to the presuppositions of the different knowledges [...]”. Thus, cinema could perhaps be included in teacher formation and have the space and importance that are due without being adulterated in its essence, in order to fulfill its role in education with care not to de-characterize it as art.

REFERENCES

- Ávila, V. F. *et al.* (2000). *Formação educacional em desenvolvimento local: relato de estudo em grupo e análise de conceitos*. Editora UCDB. Campo Grande.
- Benedict, R. (1972). *O Crisântemo e a Espada*. Perspectiva. São Paulo.
- Bergala, A. (2006) *L'hypothèse cinéma*. Petit traité de transmission du cinéma à l'école et ailleurs. Petit Bibliothèque des Cahiers du cinéma. Paris.
- BRASIL, (2014) *Lei N° 13.006, de 26 de junho de 2014*. (2014) Accessed in 14th of August 2016 on the Web site of Presidência da República Casa Civil. Subchefia para Assuntos Jurídicos: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2014/lei/l13006.htm.
- DaMatta, R. (1986). *O que faz o brasil, Brasil?* Rocco. Rio de Janeiro.

- Duarte, R. (2002). *Cinema e Educação*. Autêntica. Belo Horizonte.
- Jara, C. J. (1997). Construindo o Poder Local. *Caderno CRH*. 26(27): 211-233.
- Laraia, R. de B. (2003). *Cultura: um conceito antropológico*. 16 ed. Jorge Zahar Editor. Rio de Janeiro.
- Lopes, J. de S. M. (2007). *Educação e Cinema: novos olhares na produção do saber*. Profedições. Porto.
- Lopes, J. de S. M. Teixeira, I. A de C. (2013). *A escola vai ao cinema*. Autêntica. Belo Horizonte:
- Martin, M. (2003). *A linguagem cinematográfica*. Editora Brasiliense. São Paulo.
- Martins, R. D'A.; Caldas, E. de L. (2009). Visões do Desenvolvimento Local: uma análise comparada de experiências brasileiras. *Interações*. 10(2): 207-218.
- Morin, E. (2010). *A cabeça bem feita*. Repensar a reforma, reformar o pensamento. Bertrand Brasil. Rio de Janeiro.
- Soares, M. (2007) *A escolarização da leitura literária - O jogo do livro infantil e juvenil*. Autêntica. Belo Horizonte.
- Tenório, F. G. (2004) Cidadania e desenvolvimento local: casos brasileiros. In: *IX Congreso Internacional del CLAD sobre la Reforma del Estado y de la Administración Pública*, Madrid.
- Thiesen, J. da S. (2008). A interdisciplinaridade como um movimento articulador no processo ensino-aprendizagem. *Revista Brasileira de Educação*. 13(39): 545-598.

IMPACT OF SERVICE QUALITY, BRAND IMAGE, PERCEIVED VALUE, CUSTOMERS' SATISFACTION AND BEHAVIOURAL INTENTIONS IN THE TRADITIONAL RETAILING IN THE NORTH OF PORTUGAL

Cláudia Miranda Veloso

Instituto Politécnico de Bragança; Universidade de Aveiro; UNIAG
(claudiamiranda@ipb.pt; cmv@ua.pt)

Paula Odete Fernandes

Instituto Politécnico de Bragança; NECE; UNIAG
(pof@ipb.pt)

Daniel Margaça Magueta

Universidade de Aveiro
(dmagueta@ua.pt)

ABSTRACT

In the service sector mainly in the traditional retailing, customers and the employees are key actors in service interplay. The quality and performance of any service are dependent on customer expectations and the efficiency the company is able to serve its customers. The crucial point of customer satisfaction is to identify the important attributes, considered by customers as their needs and expectations. The purpose of this study is to suggest the adaptation of SERVQUAL in evaluating the perceived quality of service offered by traditional retailing, namely in traditional retail stores in the North Region of Portugal. The proposed conceptual model aims to analyse if: (1) perceived service quality (five dimensions of SERVQUAL) directly contribute to customer satisfaction, customer-perceived value and brand image; (2) brand image and customer-perceived value directly contribute to customer satisfaction; (3) brand image directly contribute to customer-perceived value; (4) customer satisfaction directly influences the intention to return and WOM recommendation (Word-of-Mouth communication intention); and (5) the intention to return has a direct impact on WOM recommendation. This research is of particular interest to the literature on the retailing and to the practitioners, since there are few studies in this field which apply to the Portuguese traditional retailing.

Keywords: Customer Satisfaction, Traditional Retailing, North of Portugal, Service Quality.

JEL Classification: M10, M31

1. INTRODUCTION

The term quality is very present in the business segment, where all organizations aim to provide quality to their customers, suppliers, partners and others. But it is not as simple as it sounds, because to benefit from quality, organizations must be ready to meet the expectations of their customers. With this, we can define that, in order to stay in the market more and more competitive, companies from all sectors have already adhered to quality, and be it consumer goods or services. Presently, providing quality of service is seen as the way to remain competitive in markets where global competition and technology have turned products and services into commodities (Nadiri and Gunay, 2013). Globalisation, strong competition, instable consumer demands and changes both in economic, technological and political systems force enterprises to learn faster and to adopt themselves to environmental changes (Ginevičius and Gudačiauskas, 2004). Some of the fastest growing sectors of the global economy are related to the focus on customer satisfaction. In a period of economic recession, remarkable performance will depend on those retailers who are able to create customer loyalty by answering to consumer demand (Ghosh, Tripathi and Kumar, 2010). Furthermore, customer needs and buying patterns have altered enormously. To meet several needs, enterprises to adopt customer-oriented marketing strategies and differentiated to rise a competitive advantage in the market, which allows them to stand out in the competition (Ko, Kim, Kim and Woo, 2007). Additionally, Ko *et al.* (2007) advocate that improved relationships with consumers can main to better customer loyalty, retention, effectiveness and profitability. Consequently, it is central to make a durable, strong and consistent relationship with customers in today's competitive society.

The replacement of small family owned, traditional stores with modern retailing is a universal phenomenon. However, traditional retail systems exist as well in less developed countries as in developed economies where traditional retail formats often operate alongside modern retailing. In recent years, the retail industry has drastically changed, with consumers increasingly informed and varying their route to purchase between in- traditional store, online and modern retailing. Therefore it is crucial for traditional retailers to offer an experience to someone going into their store that they could not receive via another

channel or in modern retailing. Some of the fastest growing sectors of global economy are related to the consumption of experiences (Pine and Gilmore, 2008). Despite the increasing variety of ways in which we can purchase merchandises, the in-store experience is still the first thing that springs to mind for the majority of people when thinking about a retailer; so whether it be through great customer service, a nice shopping atmosphere, cutting advantage in-store technology or an pleasant checkout experience, retailers are looking to create an in-store environment which will offer something different to their customers. During this evolution, quality has acquired a very important weight in all industries of the economy and has become a key factor of business survival. Undoubtedly, the term quality is very present in the retailing industry, where all organizations aim to provide quality to their customers. But it's not as simple as it sounds, because to benefit from quality, organizations must be ready to meet the expectations of their customers. With this, we can define that, in order to remain in the market increasingly competitive, companies from traditional retailing have already adhered to quality.

The traditional retail industry is not indifferent to customer loyalty and satisfaction with the service. Although most customers do not immediately associate a commercial surface with a service, the service is one of the main tools in obtaining consumer satisfaction and loyalty (Yuen and Chan, 2010). Continued aggressive promotion based in price, such as the creation of coupons, temporary discounts, and others, while widely used, often have a minimalist effect on company results, as they tend to attract the wrong customers, and this does not always mean profit (Sirohi, McLaughlin and Wittink, 1998). Somewhat, the retail store must find a way to differentiate itself so it can stand apart from other retailers and drive more consumers to its store. Service quality is one way to accomplish this. Retailers need an efficient way to assess the service quality of their store (Simmers and Keith, 2015). However, the focus on customer retention in this area of business is one of the right strategies to generate profits (Sirohi *et al.*, 1998). Loyalty is an important step in ensuring that consumers perform something that is beneficial to the firm, whether through purchase or simple word of mouth (WOM). It is believed that satisfaction is a consequence of the quality of the service, and guaranteeing it, increases the likelihood of involving the customer and loyalty. Several studies have shown that there is a positive relationship between quality of service and consumer loyalty (Yuen and Chan, 2010).

In a highly competitive industry, as is the retailing sector, it is critical that organizations have a good knowledge of the business aspects that are important to their customers (Yuen and Chan, 2010). Only with a deep understanding, is it possible to respond positively to the expectations of customers regarding the services offered. To this extent, the strategy for creating competitive advantage resides in providing a high quality of service which results in satisfied customers (Shemwell, Yavas and Bilgin, 1998) and customer retention (Callan and Kyndt, 2001), dimensions which are essential for the survival of the retail industry.

From the review of literature on quality, it has been found that research efforts are concentrated on defining and measuring quality in the manufacturing sector. Since service quality is an elusive concept, there is considerable debate in relevant literature concerning which is the best way to conceptualize this phenomenon. Although an all embracing definition of service quality is not yet possible, definitions of service quality proposed by researchers revolve around the idea that it is the result of the comparison customers make between their expectations about service and their perceptions of the way the service has been performed (Grönroos, 1984; Parasuraman, Zeithaml and Berry, 1985, 1988). If service quality is to be improved, it must be reliably assessed and measured. According to the SERVQUAL model (Parasuraman, Zeithaml and Berry, 1988), service quality can be measured by identifying the gaps between customers' expectations of the service to be rendered and their perceptions of the actual performance of the service.

Numerous authors have studied the relationship between perceived service quality and customer satisfaction in the services industry (Al Khattab and Aldehayyat, 2012; Chiou, Droge and Hanvanich, 2002; Cronin and Taylor, 1992; Ekinci, Dawes and Massey, 2006; Jamal and Naser, 2002; Mohsin & Locker, 2009; Monteiro & Veloso, 2013; Zaibaf, Taherikia and Fakharian, 2013; Zhang and Prybutok, 2005), confirming that service quality is an important antecedent of satisfaction. In this regard, Dabholkar, Thorpe and Shepherd (2000) argue that traditionally, most researchers conclude that customer satisfaction resulting from a particular experience of consumption, leads to an evaluation / attitude about the quality of service over a period of time. However, the reverse situation has stood out as the most relevant. The services sector is one of the most important sectors of the Portuguese economy. About 68.4% of the employed population work in this area of activity in 2016, with 21.2% of the Portuguese active population working in the trade, hospitality and catering sector (INE, 2017). Only in 2016 did the services sector actively contribute 76.9% to the national gross value added, with trade, accommodation and catering contributing 21.6% to the national wealth (INE, 2017).

While the quality of service in the retail industry has been extensively researched internationally (Dabholkar *et al.*, 2001; Das *et al.*, 2010; Durvasula and Lysonski, 2010; Khare *et al.*, 2010; Martinelli and Balboni, 2012; Mahfooz, 2014; Minh and Huu, 2016; Nadiri and Gunay, 2013; Simmers and Keith, 2015; Tang *et al.*, 2015; Yuen and Chan, 2010; Yu and Ramanathan, 2012), there has been little research done in Portugal to examine service quality as an antecedent of satisfaction and behavioural intention of customers in the Portuguese retail industry. The choice of this topic is due to the need for retailers to properly understand whether the service meets customer perceptions in the different dimensions of SERVQUAL, contribute to their satisfaction and behavioural intention (intention to return and recommend services), since they are determinant variables in maximizing profit, market share, and return on investment (Hackl and Westlund, 2000).

In the Portuguese retail industry, few research has been undertaken to directly evaluate the relationship between service quality, customer satisfaction and behavioural intentions. In this context, the main objective of this paper is to propose a methodology that allows for the examination of the antecedents and consequences of customer satisfaction, in traditional retailing sector in North of Portugal. We specifically intend to present a conceptual model is used as a framework to identify the dimensions of service quality and examining the interrelationships among customer satisfaction, perceived value, brand image and behavioral intentions and service quality in the traditional retail industry.

In this paper, after this present introduction, a review of the main literature on customer satisfaction, service quality, brand image, perceived value and their behavioural intention is made, then we propose the conceptual model and research hypotheses, ending with the presentation of the findings and the contribution of the research. This research is mainly important for retail managers (survival and growth of retail companies), politicians (wealth creation, economic growth, etc.) and for the development of the literature in the Portuguese traditional retail industry.

2. THEORETICAL BACKGROUND

2.1 Service Quality, Perceived Value, Brand Image, Consumer Satisfaction and Behavioural Intentions

2.2.1 Service Quality

In these last decades there has been several research in the area of service quality (e. g. Amin *et al.*, 2013; Ladhari, 2009) and it is discussed lots for the aim that no consensus has been reached thus far on its definition and measurement. Early studies on service quality defined it as a measure to which a service provides customer needs, and implicates a comparison of customer expectations with their perceptions of actual service performance (Parasuraman *et al.*, 1985; Parasuraman *et al.*, 1988). Service quality has assumed a major role both in public and private institutions, as an indispensable requirement to the costumers' satisfaction. There are two basic ways to define quality: one from the viewpoint of the service provider and the other from the costumer's perspective. Firstly, it should be noted that the measurement of service quality is an important area of academic and scientific interest, which has assumed special prominence after the contribution of various authors (Parasuraman *et al.*, 1985). These authors, who represent the American school, have designed an instrument for measuring quality of service, called SERVQUAL. Initially, the proposed model incorporated 10 dimensions of quality (tangibility, reliability, responsiveness, professionalism, courtesy, credibility, security, access, communication and customer understanding). However, these dimensions were revised and subsequently reduced to five (Parasuraman *et al.*, 1988). The dimensions of courtesy, credibility, security, competence and communication have led to a new dimension: assurance, while the dimensions of understanding/knowing customers generated the dimension of empathy. A Parasuraman *et al.* (1988) suggested the following definitions for the five dimensions:

- Tangibles: Physical facilities, equipment and appearance of personnel;
- Reliability: Ability to perform the promised service dependably and accurately;
- Responsiveness: Willingness to help customers and provide prompt service;
- Assurance: Knowledge and courtesy of employers and their ability to inspire trust and confidence;
- Empathy: Caring, individualized attention the firm provides its customers.

SERVQUAL measures service quality from the customer's perspective of customer perceptions, through the amplitude of the discrepancy that exists between the expectations and perceptions of customers. Cronin and Taylor (1992) view that the validity of the use of expectations in the SERVQUAL model was called into question when consumers had no well-formed expectations and developed the SERVPERF scale which consists of the same 22 "items" of SERVQUAL, although centered only in measuring consumer perceptions regarding the quality of service. Despite the criticisms of SERVQUAL (Buttle, 1996; Cronin and Taylor, 1992), it remains the most widely used theoretical framework for measuring the quality of services so that, in the literature there are numerous studies that apply the SERVQUAL scale to assess quality of services across physical (Donnelly, Hull and Will, 2000; Mukherjee and Nath, 2005) and in digital environments (Wang and Tang, 2003; Kuo, 2003). Despite the diversity of studies in many fields, in this study, SERVPERF will be applied to the traditional trade in the North of Portugal in a similar manner as that of other studies realized at an international level, in the area of the trade industry (Abd-El-Salam *et al.*, 2013; Durvasula and Lysonski, 2010; Khare *et al.*, 2010; Martinelli and Balboni, 2012; Tang *et al.*, 2015; Yu and Ramanathan, 2012; Yuen and Chan, 2010). According to Nadiri and Hussain (2005) service quality increases customer satisfaction, stimulates intention to return, and inspires recommendations.

2.2.2 Customer satisfaction

Customer satisfaction is the outcome of the customer's perception of the value received in a transaction or relationships, where value equals perceived service quality, compared to the value expected from transactions or relationships with competing vendors (Zeithaml, Parasuraman and Berry, 1990). Customer satisfaction is a mighty immaterial asset like to service quality and can be attained through the compliance of customer expectations (Jayasankaraprasad and Kumar, 2012; Oliver, 1980). Also, customer satisfaction is a function of the disagreement between a customer's expectations previous to buying and their perception of the same service subsequently Anderson and Sullivan (1993) and Oliver (1980) will be significant if the perception is placed at a higher level than the expectation. More value for customer incomes great satisfaction, which can benefit the retail enterprise in the long term (Cronin, Brady and Hult, 2000) and generate higher profits. Customer satisfaction is found to be dependent on the quality of service presented to the customer and is one of the instruments to enhanced value for customers. The major challenges for service industry are service quality and customer satisfaction. According to Gundersen *et al.* (1996) the central point of customer satisfaction is to identify the crucial attributes, considered by customers as their needs and expectations. As Valdani (2009) points out, enterprises exist because they have a customer to serve. The key to customer satisfaction lies in identifying and anticipating customer needs and especially in being able to satisfy them. Enterprises which are able to rapidly understand and to satisfy customers' needs, make greater profits than those which fail to understand and satisfy them (Dominici and Guzzo, 2010).

In order to be successful, especially in the service industry, managers must concentrate on retaining existing customers by implementing effective strategies towards customer satisfaction and loyalty, since the cost of attracting new customers is higher than the cost of retaining existing (Dominici and Guzzo, 2010). On the other hand Bennett and Rundle-Thiele (2002), argued that for customers to escalate their loyalty, their perceived value of the good or service presented need be at par with reality, forming an integral part of the corporate aims of the organization.

Additionally, Sirdeshmukh *et al.* (2002), reported that customers' satisfaction has close relationship to brand loyalty as well as service quality. Analogous claim is presented by Hoq and Amin (2010), who postulated that customer satisfaction is the emotional tendency of a customer towards repurchase of products and services offered by a retail store. In order to be successful, especially in the retail industry, managers must concentrate on retaining existing customers by implementing effective strategies towards customer satisfaction and loyalty, since the cost of attracting new customers is higher than the cost of retaining existing ones (Yuen and Chan, 2010).

2.2.3 Brand Image

The concept of brand image has been widely studied by researchers in the area of marketing (Abd-El-Salam *et al.*, 2013; Kim and Kim, 2005; Kim and Lee, 2010; Sahin and Baloglu, 2011; Yu and Ramanathan, 2012). For Kim and Kim (2005) a "brand symbolizes the essence of the customers' perceptions of the organizations". Also, Keller (1993) defined corporate image as perceptions of an organization reflected in the associations held in consumers' memory. Corporate image is defined as the "general impression" left in the customers' mind as a result of accumulative impressions or feelings, attitudes, ideas and experiences with the firm, saved in memory, transformed into a positive/negative sense, retrieved to rebuilding image and recalled when the name of the firm is heard or brought to ones' mind (Bravo, Montaner, & Pina, 2009). According to Sahin and Baloglu (2011) brand image is defined as the perception of customers about a brand or a product labelled with that brand. Different authors consider brand image as an important component of strong brands and a determinant in the obtainment of competitive advantages (Lim and O'Cass, 2001).

An overall assumption is that a promising corporate image will have a positive impact on consumers' behaviour towards the brand, such as the opportunity to command premium prices, buyers who are more loyal, and more positive word-of-mouth reputation (Martenson, 2007). Some researchers developed in last years, have tested the effect of corporate image on customer satisfaction and loyalty (Kim and Lee, 2010; Yu and Ramanathan, 2012). Their empirical findings showed that corporate image plays the important role in founding and retaining customer loyalty in the markets. Additionally, these authors found that customer satisfaction and corporate image perceptions positively influence service loyalty, with satisfaction having a greater influence on loyalty than image.

Thus, corporate image is believed to create a positive effect on customers' satisfaction. When customers are satisfied with the service provided of company, their attitude toward the company is enhanced (Srivastava & Sharma, 2013).

2.2.4 Perceived Value

Nowadays the retailers are more worried with the pricing strategy attached the effectiveness and the competitiveness of the market. A broad pricing model is largely a crucial requirement for achieving a unique corporate success, this argument has been supported by many researchers as Ailawadi and Keller (2004). These authors proved that the application of a pricing strategy improves the volume of sales and profit margin. Also, the study developed by Hinz *et al.* (2011) showed up to 20% rise in revenue due to the execution of a price setting, thus strengthening customers' satisfaction and loyalty. According to Matzler *et al.* (2006) the pricing strategy is a main determinant to strengthen and improve the customers' satisfaction and loyalty, indeed in the retail industry, the pricing strategy and the value perceived is as much or even more important than the perceived service quality in the corporate strategy. Therefore, it can be contended that a suitable pricing model and a favourable perceived value positively strengthen the business's global success in the retail industry (Nikhashemi, Paim, Sidin and Khatibi, 2014). Some research have also related that perceived value variation has beyond the close relationship with quality service adopts a significant relationship with product delivery and customers' expectations and loyalty (Hellstrand, 2010). Several authors have also found numerous perceived value influences on quality service. This does not mean that the perceived value will have be low to exist satisfaction, but that the value perceived by the customer will take into account the received and its relationship with the price paid. Previous studies on goods have showed that the perceived value relationship was considered enough important for customer satisfaction (Qin and Prybutok, 2008).

2.2.5 Behavioural intentions

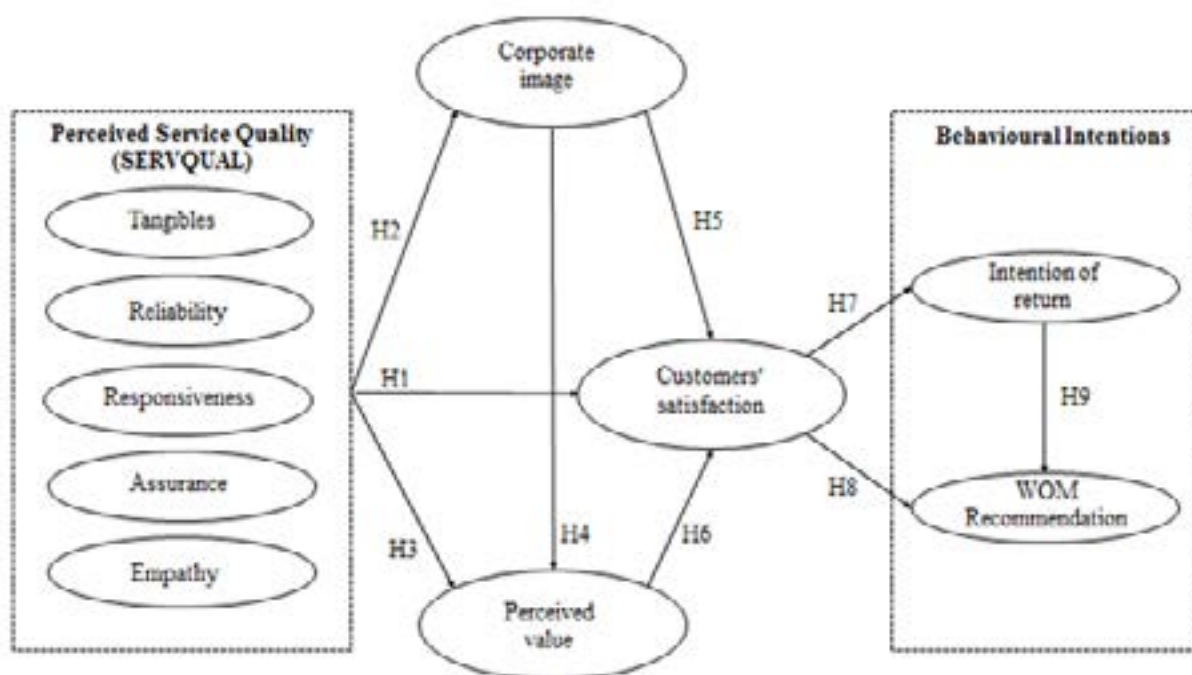
The literature suggests behavioural intentions as a construct which permits the evaluation of customer loyalty (Yang and Peterson, 2004). These are behaviours related to the intention to repurchase and even to the intention of recommending the product/service (Clemes *et al.*, 2008; Lai and Chen, 2011; Sumaedi *et al.*, 2012; Yuen and Chan, 2010; Zeithaml *et al.*, 1990). Some studies developed in service industry have found the positive relationship between perceived service quality and loyalty (De Ruyter and Van Birgelen, 1998; Wong *et al.*, 1999). Customers frequently develop an attitude toward purchasing based on a prior service experience or, still, this attitude can also be influenced by previous information, based on the image of the retail in the market and even by word of mouth (WOM recommendation). With reference to the previous conception, customer loyalty has been usually defined as occurring when customers repetitively buying goods or services over time and retain positive attitudes towards the enterprise delivering the goods or services (Yuen and Chan, 2010). Service providers are increasingly developing loyalty, as they consider that it helps to rise income, and leads to largest market share, effectiveness and profitability (Al-Wugayan, Pleshko, and Baqer, 2008). In this sense, behavioural intentions can be define as the customer's judgment about the likeliness to repurchase in this firm or the willingness to recommend the firm

to others. We conceptualize behavioural intentions as a higher-order construct consisting of (1) positive word of mouth (Boulding, Kalra, Staelin and Zaithaml, 1993), (2) willingness to recommend (Parasuraman, Zeithaml and Berry, 1991), and (3) intentions to continue buying from a particular service provider (Bowen and Shoemaker, 1998). Based on previous definition, behavioural intention in this study may be described as a stated likelihood to repurchase in the hypermarkets in the North of Portugal and to recommend the hypermarkets to family, friends and others in the future. Research has established the many benefits of behavioural intention, such as making it a tendency for retailers to follow, as well as developing and maintaining a loyal customer base (Yuen and Chan, 2010). There is also ample evidence of the influence of service quality on behavioural intentions, a huge body of research has demonstrated the significant relationship between service quality and customers' behavioural intentions (Parasuraman *et al.*, 2005; Sousa and Voss, 2010). According to Chaudhuri and Holbrook (2001), behavioural intentions, and not attitudinal intentions, can be related to increased market share. Zeithaml *et al.* (1996), compiled a list of specific positive behavioural intentions, included loyalty, switching intentions, willingness to pay more, external response, and internal response. In a multi-industry study, the authors later provided evidence of the significant effect of perceived service quality on customers' favourable behavioural intentions, such as repurchase, tendency to say positive things and recommend the company (Zeithaml, Berry and Parasurama, 1996). In addition Cronin and Taylor (1992), find a favourable association between service quality and repurchase intentions. Also, Zeithaml *et al.* (1996) and Fullerton (2005), find a positive relationship between service quality and behavioural intentions. Moreover, preceding research has demonstrated associations between service quality and particular dimensions of behavioural intentions, like as Parasuraman *et al.* (1988), find a favourable relationship between service quality and willingness to recommend the firm, and Boulding *et al.* (1993), find a positive correlation between service quality and repurchase intentions, saying positive things, and willingness to recommend. Several authors point out that customers may not necessarily buy the greater quality service and that there may be other factors that define consumer choice, such as satisfaction (Ryu and Han, 2010; Wang *et al.*, 2004). Therefore, we expect customers who perceive the quality of the service as high to be more likely to demonstrate intentions, and we again believe that this relationship will hold regardless of the buyers' collectivist orientation. Loyal customers are main assets to firms, they make proportionally more purchases at their 'first choice' store than customers who shift (Knox & Denison, 2000). Usually, great service quality leads to customer loyalty, as it increases customer confidence towards and satisfaction with the company. It is supposed that positive perceptions of service quality enhances the possibility of customers being dedicated in supporting the company and developing and strengthening loyalty behaviour (Yuen and Chan, 2010).

3. CONCEPTUAL RESEARCH MODEL AND HYPOTHESES

In according this theoretical background, the aim of this study is to, as Figure 1 indicates, propose a model that consists of evaluating the impact of: (1) service quality on customer satisfaction, brand image and customer-perceived value; (2) brand image on customer-perceived value; (3) brand image, customer satisfaction and customer-perceived value on behavioural intentions (intention to return and WOM recommendation) and (4) intention to return on WOM recommendation.

Figure 1. Research model



The retail managers should focus their attention on customer service quality evaluation as they must have actual knowledge that the service quality perceived by the client meets their expectations, as contended by Parasuraman *et al.* (1985, 1988). Based on these assumptions the purpose of this study is to examine whether the perception of the services provided in the different dimensions of SERVQUAL, exceeds the customer expectations.

However, the main objective of this study is to test the conceptual model shown in Figure 1, which includes four research hypotheses, as explained below.

The relationship between service quality and satisfaction has not been consensual in the literature as several authors argue that, on the one hand, both concepts are identical, while others consider them as distinct (Dabholkar, 1995; Dabholkar *et al.*, 2000; Oliver, 1993). According to Dabholkar (1995), while evaluation of service quality is essentially cognitive, for its part, satisfaction integrates both cognitive and affective components. This author claims that these two concepts are distinct for recent consumers of a product. However, in the long run, the affective dimension tends to be blurred and to that extent, the concepts tend to overlap. Meanwhile, Ngobo (1999) also reinforces the distinction between perceived quality and satisfaction level of the three dimensions. Assuming that these two concepts are distinct, a question that immediately arises relates to the order of their occurrence in the mind of the consumer and as such, the causal relationship between them. In this regard Dabholkar *et al.* (2000) argues that, most investigators traditionally hold that consumer satisfaction results from a particular consumer's experience of a service which leads to an evaluation/attitude on the overall quality of service over a given period of time (Parasuraman *et al.*, 1988). Recently, however, the reverse situation has stood out as the most relevant. This position is particularly evidenced by Oliver (1993) who suggested that the quality of service should be an antecedent of consumer satisfaction irrespective, of the experiential or the time factor. Similarly, Cronin and Taylor (1992) analysed the effect of these concepts in both directions and concluded that the quality of service perceived exerts a greater impact on customer satisfaction than otherwise. Recently, several authors have considered service quality as an important antecedent of satisfaction (Chiou *et al.*, 2002; Ekinci *et al.*, 2008; Mahfooz, 2014; Martinelli and Balboni, 2012; Nikhashemi *et al.*, 2014; Saleh and Ryan, 1991; Yuen and Chan, 2010; Zhang and Prybutok, 2005). Most studies assessing the relationship of service quality on customer satisfaction demonstrate the existence of a statistically significant level in studies of the service industry. Moreover, the literature suggests that perceived service quality positively influences perceived brand image (Oh, 1999; Yu and Ramanathan, 2012) and the perceived value (Howat and Assaker, 2013; Nikhashemia *et al.*, 2016; Ryu *et al.*, 2008). In line with this, and based on SERVQUAL, the following hypotheses are proposed in the present study.

H1: The quality perceived by the customers has a positive influence on their satisfaction.

H₁₁ – The higher the tangibility, the greater the degree of the customers' satisfaction.

H₁₂ – The higher the reliability, the greater the degree of the customers' satisfaction.

H₁₃ – The higher the assurance, the greater the degree of the customers' satisfaction.

H₁₄ – The higher the responsiveness, the greater the degree of the customers' satisfaction.

H₁₅ – The higher the empathy, the greater the degree of the customers' satisfaction.

H2: The perceived service quality by the customers has a positive influence on perceived brand image.

H3: The perceived service quality by the customers has a positive influence on perceived value.

The study of image has received increasing attention in the literature on marketing (Chen and Tsai, 2007; Ryu *et al.*, 2008; Wu, Yeh and Hsiao, 2011), since it affects the individual's subjective perception (Chen and Tsai, 2007). In the area of service industry, Ruy *et al.* (2008) confirm that the corporate image of a restaurant positively and significantly influences the perceived value. Thus, this study proposes the following hypothesis:

H4: The brand image perceived by the customers has a positive influence on the perceived value.

The relationship between image and perceived value on customer satisfaction has gained little attention in the services industry literature (Ryu *et al.*, 2008). These authors have evaluated the impact of the image of a restaurant and perceived value on customer satisfaction and they found a positive and significant relationship between these constructs. In the area of retail industry, Yu and Ramanathan (2012) confirm that the corporate image of a retail store positively and significantly influences customer satisfaction. In this sense, we intend to propose the following hypotheses:

H5: The perceived brand image by the customers has a positive influence on their satisfaction.

H6: The perceived value by the customers has a positive influence on their satisfaction.

In reviewing the literature, we have found that marketing services have extensively researched behavioural attitudes (e.g. Andreassen and Lindestad, 1997; Bobbitt and Dabholkar, 2001; Dabholkar, 1996; Zeithaml, Parasuraman and Berry, 1996). These are behaviours related to the intention to repurchase and even to the intention of recommending the product/service (Clemes *et al.*, 2008; Lai and Chen, 2011; Sumaedi *et al.*, 2012; Yuen and Chan, 2010; Zeithaml *et al.*, 1990). Several concepts have been examined as antecedent factors of behavioural intentions, such as service quality (Brown, Churchill and Peter, 1993; Zeithaml *et al.*, 1996) and satisfaction (Andreassen and Lindestad, 1997; Oliver, 1999). According to Liang and Zhang (2011, p. 156), "*it is generally believed that satisfaction leads to repeat purchases and positive WOM recommendations*", assuming that if customers are satisfied with a product/service, they are more likely to continue to purchase it, and are more willing to spread positive WOM. Thus, we propose our seventh and octave hypotheses:

H7: Customer satisfaction positively influences intention to return.

H8: Customer satisfaction positively influences WOM recommendations

According to Nadiri and Hussain (2005, p. 471), “service quality promotes customer satisfaction, stimulates intention to return, and encourages recommendations”. Oh (1999) found a positive and significant relationship between intention to return and WOM recommendations. In this study we intend to uphold the following hypothesis:

H9: Intention to return positively influences WOM recommendations.

4. METHODOLOGY

A questionnaire was designed as the survey instrument, which were included all the constructs of the proposed model. The questions in the questionnaire were based on a review of the literature in the area of the service industry, described above in the theoretical background. This study was applied to customers from of traditional retail stores during the months of February and March 2017. It was used a non-probabilistic sampling using convenience technique. The questionnaires were distributed online and the answers came from several cities and places of the north of Portugal. In this study, respondents were required to fill out a three-page three sections. The first section consisted of a standard demographic profile of respondents. The second section contained the characterization of purchase process. The last section includes the statements of dimensions and their sub dimensions. The measurement items to measure primary and sub-dimensions of service quality were adapted from several researchers (Chen *et al.*, 2011; Cronin and Taylor, 1992; Dabholkar *et al.*, 1996; Wu *et al.*, 2011) and a series of items focusing on the behavioural intentions, customer satisfaction, perceived value and corporate image, which were adapted on the basis of several researchers’ results (Nadiri and Gunay, 2013; Nikhashemi *et al.*, 2014; Nikhashemia *et al.*, 2016; Ryu *et al.*, 2008; Wu *et al.*, 2011; Wu, 2013; Yu and Ramanathan, 2012; Yuen and Chan, 2010; Zeithaml *et al.*, 1996). Respondents were asked to use a five-point Likert-type scale (where 5–point scales anchored 1 = “strongly disagree” and 5 = “strongly agree”) to record their perceptions. Construct reliability will assessed by using the Cronbach’s alpha coefficient.

Data analysis will be conducted using the Statistical Package for Social Science (SPSS) for Windows (version 20.0). For the descriptive analysis it will used absolute and relative frequency tables. The Spearman correlation coefficient it will used to measure the intensity of the linear correlation between variables. Multiple linear regression will used in order to estimate models that could identify the determinants of the behaviour of the variables under analysis. The significance level of 5% will assumed. Additionally, to test the causal relationship between different constructs, we will use the structural equation model, given that the theoretical model includes the complex relationships between latent variables measured with different items that are presented simultaneously as independent and dependent variables.

5. FINDINGS AND CONTRIBUTION OF RESEARCH

The objective of this study was proposes a conceptual model to identify the dimensions of service quality and examining the interrelationships among customer satisfaction, corporate image, perceived value and customer loyalty and service quality in the traditional trade, in addition to investigate the impact of customer satisfaction, service quality, perceived value and corporate image on customer loyalty in the traditional commerce in the North of Portugal. This methodological approach is similar to that used by some researchers, mentioned in the theoretical background to analyse those constructs in other service industries. So, it is believed that the model proposed will permit to evaluate the hypotheses presented, as well as to contribute to the retail managers better understand the implications of the dimensions of service quality, of perceived value, of corporate image on the customer satisfaction and on behavioural intentions, and the consequently on the profitability of the retail stores.

The customer satisfaction and the customer loyalty process allows for significantly increased revenue from traditional retail store by obtaining sales growth and a better return of investments. With this in mind, the manager retail needs to know the real customer service needs and expectations, so that the service is tailored to the customer’s satisfaction, in order to retain them and attract potential new customers. Thus, this study proposes to develop and analyze a conceptual model that aims to explain the relationship between the five dimensions of SERVQUAL, brand image, perceived value, customer satisfaction and behavioural intentions (intentions to return and WOM recommendation).

Based on research conducted in bibliographic data bases, we have identified a gap in the literature about the retailing in Portugal, which relates to the knowledge of the factors affecting customer satisfaction and behavioural intention. It is hoped that this research will contribute to the development of the literature, politicians (wealth creation, economic growth, etc.) and managers of traditional retail stores (the survival and growth of traditional trade). From a practitioners’ point of view, the understanding of the factors that influence customers’ satisfaction and behavioural intentions, on the one hand, may contribute to the retail manager’s development when establishing strategies and contribute to the improvement of services provided by the traditional retail stores and consequently increase profit, market share, and improve return on investment (Hackl and Westlund, 2000).

Findings are expected to report high levels of perceived quality and a significant relationship between service quality dimensions and customer satisfaction and their behavioural intentions, and yet we expected to prove that the brand image, the perceived value and service quality dimensions are interrelated (Ryu *et al.*, 2008; Wu, 2013; Yu and Ramanathan, 2012). Furthermore we will try to show like as Ryu *et al.* (2008) also have demonstrated, that the relationships between brand

image and perceived value dimensions and the relative importance of the dimensions of service quality can provide useful insights for how firms should allocate resources in the traditional retail stores. Retail service providers need to recognize the importance of service quality dimensions in order of their significance, and implement appropriate strategy for competitive advantage over domestic and international players competing for share of an expanding consumer base (Mahfooz, 2014). Moreover, we will try in this study, show that improving customers' perceptions of service quality can effectively increase satisfaction levels through high levels of value perceived and of brand image. In this way, the findings of this study will aid retailing management to identify that both customer satisfaction and value perceived directly affect behavioural intentions. Consequently, retail management should make more effort to increase perceptions of satisfaction and value perceived in order to build the favourable customers' behavioural intentions.

The study results will help traditional trade stores owners and managers to recognize and prioritize the primary and sub-dimensions of service quality. Trade management should realize that the significance customers accentuate is based on each of the primary and sub-dimension of service quality. Moreover, traditional trade management should structure their infrastructure, processes, operations and resource allocation in terms of the relative importance of the service quality dimensions to their target at specific customers. Simultaneously, the retail managers should dedicate special attention to the perceived value and the brand image that gives to the market, whether through communication actions or interaction with society where operate.

REFERENCES

- Abd-El-Salam, E. M., Shawky, A. Y., & El-Nahas, T. (2013). The impact of corporate image and reputation on service quality, customer satisfaction and customer loyalty: testing the mediating role. Case analysis in an international service company. *Journal of Business and Retail Management Research*, 8(1), 130-153.
- Ailawadi, K., & Keller, K. (2004). Understanding retail branding: conceptual insights and research priorities. *Journal of Retailing*, 80(4), 331-342.
- Al Khattab, S. A., & Aldehayyat, J. S. (2012). Perceptions of Service Quality in Jordanian Hotels. *International Journal of Business and Management*, 6 (7), 226-233.
- Al-Wugayan, A., Pleshko, L. P., & Baqer, S. M. (2008). An investigation of the relationships among consumer satisfaction, loyalty, and market share in Kuwaiti loan services. *Journal Of Financial Services Marketing*, 13(2), 95-106.
- Andreassen, T., & Lindestad, B. (1997). Customer loyalty and complex services, the impact of corporate image on quality, customer satisfaction and loyalty for customers with varying degrees of service expertise. *International Journal of Service Industry Management*, 4, 1-33.
- Barsky, J., & L., N. (2003). Customer satisfaction: applying concepts to industry- wide measures. *The Cornell Hotel and Restaurant Administration Quarterly*, 44 (4), 173-183.
- Bennett, R., & Rundle-Thiele, S. (2002). A comparison of attitudinal loyalty measurement approaches. *The Journal of Brand Management*, 9(3), 193-209.
- Blanchard, R., & Galloway, R. (1994). Quality in Retail Banking. *International Journal of Service Industry Management*, 5 (5), 5 – 23.
- Bobbitt, L., & P.A., D. (2001). Integrating attitudinal theories to understand and predict use of technology-based self-service: The Internet as an illustration. *International Journal of Service Industry Management*, 12 (5), 423 – 450.
- Boulding, W., Kalra, A., Staelin, R., & Zaithaml, V. A. (1993). A dynamic process model of service quality: From expectations to behavioral intentions. *Journal of Marketing Research*, 30(1), 7-27.
- Bowen, J. T., & Shoemaker, S. (1998). Loyalty: A strategic commitment. *Cornell and Hotel Restaurant Administration Quarterly*, 39(1), 12-25.
- Bravo, R., Montaner, T., & Pina, J. (2009). The role of bank image for customers versus non-customers. *Internatinal Journal of Bank Marketing*, 27(4), 315-334.
- Brown, T. C., & Peter, J. (1993). Improving the measurement of service quality. *Journal of Retailing*, 69 (1), 127-139.
- Buttle, F. (1996). SERVQUAL: review, critique, research agenda. . *European Journal of Marketing*, 30 (1), 8–32.
- Callan, R. J., & Kyndt, G. (2001). Business travellers' perception of service quality: a prefatory study of two European city centre hotels. *International Journal of Tourism Research*, 3 (4), 313-323.
- Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty. *Journal of Marketing*, 65(2), 81-93.
- Chen, C., Lee, H., Chen, S., & Huang, T. (2011). Tourist behavioral intentions in relation to service quality and customer satisfaction in Kinmen National Park, Taiwan. *International Journal of Tourism Research*, 13(5), 416-432.
- Chen, C.-F., & D., T. (2007). How destination image and evaluative factors affect behavioral intentions? *Tourism Management*, 28, 1115–1122.

- Chiou, J. D., & Hanvanich, S. (2002). Does customer knowledge affect how loyalty is formed? *Journal of Service Research*, 5 (2), 113-124.
- Clemes, M. D., Gan, C., Kao, T. H., & Choong, M. (2008). An empirical analysis of customer satisfaction in international air travel. *Innovative Marketing*, 4, 50-62.
- Cronin, J. J., Brady, M. K., & Hult, G. T. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.
- Cronin, J., & Taylor, S. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing*, 56(3), 55-68.
- Cronin, J., & Taylor, S. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing*, 56 (3), 55-68.
- Dabholkar, P. (1995). The convergence of customer satisfaction and service quality Evaluations with increasing customer patronage. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 8, 32-43.
- Dabholkar, P. (1996). Consumer evaluations of new technology-based self-service operations: an investigation of alternative models. *International Journal of Research in Marketing*, 13 (1), 29-51.
- Dabholkar, P. A., Thorpe, D. I., & Rentz, J. O. (2001). A measure of service quality for retail stores: scale development and validation. *Journal of the Academy of Marketing Science*, 24 (1), 3-16.
- Dabholkar, P. S., & Thorpe, D. (2000). A comprehensive framework for service quality: An investigation of critical conceptual and measurement issues through a longitudinal study. *Journal of Retailing*, 76 (2), 139-173.
- Das, A., Kumar, V., & Saha, G. C. (2010). Retail service quality in context of CIS countries. *International Journal of Quality & Reliability Management*, 27(6), 658-683.
- De Ruyter, M., & Van Birgelen, M. W. (1998). Consumer ethnocentrism in international services marketing. *International Business Review*, 7(2), 185-202.
- Dominici, G., & Guzzo, R. (2010). Customer satisfaction in the hotel industry: a case study from Sicily. *International Journal of Marketing Studies*, 2(2), 3-12.
- Donnelly, M. H., & Will, V. (2000). Assessing the quality of service provided by market research agencies. *Total Quality Management*, 11 (4/6), S490-S500.
- Durvasula, S., & Lysonski, S. (2010). Diagnosing service quality in retailing: the case of Singapore. *Journal International Business and Entrepreneurship Development*, 5 (1), 2-17.
- Ekinci, Y. (2001). The validation of the generic service quality dimensions: an alternative approach. *Journal of Retailing and Consumer Services*, 8 (6), 311-324.
- Ekinci, Y. D., & Massey, G. (2008). An extended model of the antecedents and consequences of consumer satisfaction for hospitality service. *European Journal of Marketing*, 42 (1/2), 35 –68.
- Fullerton, G. (2005). The impact of brand commitment on loyalty to retail service brands. *Canadian Journal of Administrative Sciences*, 22(2), 97-110.
- Furrer, O., Liu, B. S.-C., & Sudharshan, D. (2000). The relationships between culture and service quality perceptions: basics for cross-cultural market segmentation and resource allocation. *Journal of Service Research*, 2 (4), 355-371.
- Ghosh, P., Tripathi, V., & Kumar, A. (2010). Customer expectations of store attributes: A study of organized retail outlets in India. *Journal of Retail and Leisure Property*, 9 (1), 75 – 87.
- Ginevičius, R., & Gudaciuskas, R. (2004). Brand valuation model. *Journal of Business Economics and Management*, 5 (3), 143-153.
- Grönroos, C. (1984). A Service Quality Model and its Marketing Implications. *European Journal of Marketing*, 18 (4), 36–44.
- Gundersen, M. H., & Olsson, U. (1996). Hotel guest satisfaction among business travelers: what are the important factors? . *The Cornell Hotel and Restaurant Administration Quarterly*, 37 (2), 72-81.
- Hackl, P., & Westlund, A. (2000). On structural equation modeling for customer satisfaction measurement. *Total Quality Management*, 11 (4/5/6), S820–S825.
- Hellstrand, P. (2010). Price Impact on Guest Satisfaction: SQ Insight Hospitality Consulting. 10, 1-7. Sherman Oaks.
- Heskett, J. S., & C.W.L., H. (1990). *Breakthrough Service*. New York: The Free Press.
- Hinz, O., Hann, I., & Spann, M. (2011). Price discrimination in E-commerce? An examination of dynamic pricing in name-your-own price markets. *MIS Quarterly*, 35 (1), 81-98.
- Hofstede, G. (1990a). Measuring organization cultures: a qualitative and quantitative and quantitative study across twenty cases. *Administrative Science Quarterly*, 35 (2), 286-316.
- Hofstede, G. (1990b). Managerial culture and work-related values in India. *Organization Studies*, 11 (1), 106.
- Hoq, M. Z., & Amin, M. (2010). The role of customer satisfaction to enhance customer loyalty. *African Journal of Business Management*, 4(12), 2385-2392.

- Howat, G., & Assaker, G. (2013). The hierarchical effects of perceived quality on perceived value, satisfaction, and loyalty: empirical results from public, outdoor aquatic centres in Australia. *Sport Management Review*, 16 (3), 268-284.
- INE. (2017). *Instituto Nacional de Estatística*. Retrieved 02 24, 2017, from www.ine.pt
- Ishaq, M. I. (2012). Perceived Value, Service Quality, Corporate Image and Customer Loyalty: Empirical Assessment from Pakistan. *Serbian Journal of Management*, 7 (1), 25-36.
- Jamal, A., & Naser, K. (2002). Customer satisfaction and retail banking: an assessment of some of the key antecedents of customer satisfaction in retail banking. *International Journal of Bank Marketing*, 20 (4), 146 – 160.
- Keller, K. (1993). Conceptualizing, measuring, and managing customer-based equity . *Journal of Marketing*, 57(1), 1-22.
- Khare, A., Parveen, C., & Rai, R. (2010). Retailer behavior as determinant of service quality in Indian retailing. *Journal of Retail & Leisure Property*, 9 (4), 303-317.
- Kim, H.-B., & Kim, W. (2005). The relationship between brand equity and firms performance in luxury hotels and chain restaurants. *Tourism Management*, 26, 549-560.
- Kim, Y.-E., & Lee, J.-W. (2010).). Relationship between corporate image and customer loyalty in mobile communications service markets . *Africa Journal of Business Management*, 4(18), 4035-4100.
- Knox, S. D., & Denison, T. J. (2000). Store loyalty: Its impact on retail revenue. An empirical study of purchasing behaviour in the UK. *Journal of Retailing and Consumer Services*, 7(1), 33-45.
- Ko, E., Kim, S. H., Kim, M., & Woo, J. Y. (2007). Organizational characteristics and the CRM adoption process. *Journal of Business Research*, 61(1), 65-74.
- Kuo, Y.-F. (2003). A study on service quality of virtual community websites. *Total Quality Management*, 14 (4), 461-473.
- Lai, W., & Chen, C. (2011). Behavioral intentions of public transit passengers: The roles of service quality, perceived value, satisfaction and involvement. *Transport Policy*, 18(2), 318-325.
- Laroche, M., Ueltschy, L. C., Abe, S., Cleveland, M., & Yannopoulos, P. P. (2004). Service quality perceptions and customer satisfaction: Evaluating the role of culture. *Journal of International Marketing*, 1(2), 58-85.
- Lewis, R., & Booms, B. (1983). The Marketing Aspects of Service Quality. In U. (eds) (Ed.), *Emerging Perspectives on Services Marketing* (pp. 25-8). Chicago: American Marketing Association.
- Liang, R., & Zhang, J. (2012). The effect of service interaction orientation on customer satisfaction and behavioral intention: the moderating effect of dining frequency. *Asia Pacific Journal of Marketing and Logistics*, 24(1), 153-170.
- Lim, K., & O'Cass, A. (2001). Consumer brand classifications: an assessment of culture-of-origin versus country-of-origin. *Journal of Product & Brand Management*, Vol. 10, No. 2, pp. 120–136, 10(2), 120-136.
- Mahfooz, Y. (2014). Relationship between Service Quality and Customer Satisfaction in Hypermarkets of Saudi Arabia. *International Journal of Marketing Studies*, 6(4), 10-22.
- Martenson, R. (2007). Corporate brand image, satisfaction and store loyalty: A study of the store as a brand, store brands and manufacturer brands. *International Journal of Retail & Distribution Management* 35, no. 7: 544–55, 35(7), 544-555.
- Martinelli, E., & Balboni, B. (2012). Retail service quality as a key activator of grocery store loyalty. *The Service Industries Journal*, 32(14), 2233-2247.
- Mattila, A. S. (1999). The role of culture and purchase motivation in service encounter evaluations. *Journal of Services Marketing*, 13 (4/5), 376–389.
- Matzler, K., Bidmon, S., & Grabner-Kräuter, S. (2006). Individual determinants of brand affect: the role of the personality traits of extraversion and openness to experience. *Journal of Product & Brand Management*, 15(7), 427-434.
- Minh, N. V., & Huu, N. H. (2016). The relationship between service quality, customer satisfaction and customer loyalty: an investigation in Vietnamese retail banking sector. *Journal of Competitiveness*, 8(2), 103-116.
- Miranda Veloso, C., & Monteiro, A. (2013). Determinants of customers satisfaction and behavioural intentions in the luxury hotels: the impact of national culture and SERVQUAL dimensions. In Santos, J., Serra, F. and Águas, P. In *Strategies Tourism Organizations and Destinations*. Algarve, Portugal: TMS Conference Series (2013). ISBN: 978-989-8472-41-0.
- Mohsin, A., & Lockyer, T. (2009). Consumer perceptions of service quality in luxury hotels in New Delhi, India: a exploratory study. *International Journal of Contemporary Hospitality Management*, 22(2), 160-173.
- Monteiro, A., & Veloso, C. (2013). Measuring service quality, brand image, perceived value, customers' satisfaction and behavioural intentions in the hotel industry: a study of the hotel in the North of Portugal. *6th Annual EuroMed Conference of the EuroMed Academy of Business* (pp. 1568-1582). Cascais, Portugal: ISBN: 978-9963-711-16-1.
- Mukherjee, A., & Nath, P. (2005). An Empirical Assessment of Comparative Approaches to Service Quality Measurement. *Journal of Services Marketing*, 19 (3), 174-184.

- Nadiri, H., & Gunay, N. (2013). An emperical study to diagnose the outcomes of customers' experiences in trendy coffee shops. *Journal of Business Economics and Management*, 14 (1), 22-53.
- Nadiri, H., & Hussain, K. (2005). Perceptions of service quality in North Cyprus hotels. *International Journal of Contemporary Hospitality Management*, 17 (6/7), 469-480.
- Ngobo, P. (1999). Decreasing returns in customer loyalty: does it really matter to delight the customers? . *Advances in Consumer Research*, 26, 469-476.
- Nguyen, T., Cao, T., & Phan, T. (2015). Cultural Influences on Overall Service Quality Expectations: Evidence from Vietnamese Customers. *Asian Social Science*, 11 (25), 151 – 159.
- Nikhashemi, S. R., Paim, L. H., Sidin, M., S., & A., K. (2014). Driving Forces of Hypermarket's Customer Loyalty: An Empirical Study in Malaysia. *Australian Journal of Basic and Applied Sciences*, 8(3), 377-386.
- Nikhashemia, S. R., Tarofderb, A. K., Gaura, S. S., & Haque, A. (2016). The Effect of Customers' Perceived Value of Retail Store on Relationship between Store Attribute and Customer Brand Loyalty: Some Insights from Malaysia. Fifth International Conference on Marketing and Retailing.
- Oh, H. (1999). Service quality, customer satisfaction, and customer value: A holistic perspective. *International Journal of Hospitality Management*, 18 (1), 67-82.
- Oliver, L. (1999). Whence consumer loyalty? . *Journal of Marketing*, 63 (4), 33-44.
- Oliver, R. (1993). A conceptual model of service quality and service satisfaction: compatible goals, different concepts. In T. Swartz, D. Bowen, & S. Brown (Eds.), *Advances in Service Marketing and Management: Research and Practice* (pp. 65-85). Greenwich: JAI Press.
- Oliver, R. L. (2010). *Satisfaction. A Behavioural Perspective on the Consumer* (Second Edition ed.). New York: M.E. Sharpe.
- Parasuraman, A. Z., & Berry, L. (1985). A conceptual model of service quality and its implications for future research . *Journal of Marketing*, 49 (1), 41-50.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1991). Refinement and reassessment of the SERVQUAL scale. *Journal of Retailing*, 67(4), 420-450.
- Parasuraman, A., Zeithaml, V., & Berry, L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(1), 41-50.
- Parasuraman, A., Zeithaml, V., & Berry, L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Parasuraman, A., Zeithaml, V., & Malhorta, A. (2005). E-S-QUAL: a multiple-item scale for assessing electronic service quality. *Journal of Retailing*, 64(1), 12-40.
- Pine, J. B., & Gilmore, J. H. (2008). *The Experience Economy: Work is Theatre and Every Business a Stage*. Boston, MA: Harvard Business School Press.
- Qin, H., & Prybutok, V. (2008). Determinants of customer-perceived service quality in fast food restaurants (FFRs) and their relationship to customer satisfaction and behavioural intentions. *Quality Management Journal*, 15(2), 35-50., 15(2), 35-50.
- Ruy, K., Han, H., & Kim, T.-H. (2008). The relationships among overall quick-casual restaurant image, perceived value, customer satisfaction, and behavioral intentions. *Management Hospitality*, 27, 459-469.
- Ryu, K., & Han, H. (2010). Influence of the quality of food, service, and physical environment on customer satisfaction and behavioural intention in quick-casual restaurants: moderating role of perceived price. *Journal of Hospitality & Tourism Research*, 34(3), 310-329.
- Sahin, S., & Baloglu, S. (2011). Brand personality and destination image of Istanbul. *An International if Tourism and Hospitality Research*, 22(1), 69-88.
- Saleh, F., & Ryan, C. (1991). Analysing service quality in the hospitality industry using the SERVQUAL model. *Services Industries Journal*, 11 (3), 324-343.
- Shemwell, D. J., Yavas, U., & Bilgin, Z. (1998). Customer-service provider relationships: an empirical test of a model of service quality, satisfaction and relationship-oriented outcomes. *International Journal of Service Industry Management*, 9 (2), 155-168.
- Simmers, C., & Keith, N. (2015). Measuring retail store service quality: the disparity between the retail service quality Scale (RSQS) and Comment Cards. *International Academy of Marketing Studies Journal*, 19 (2), 117-126.
- Sirdeshmukh, D., Singh, J., & B., S. (2002). Consumer trust, value, and loyalty in relational exchanges. *The Journal of Marketing*, 66(January), 15-37.
- Sirohi, N., McLaughlin, E. W., & Wittink, D. R. (1998). A model of consumer perceptions and store loyalty intentions for a supermarket retailer. *Journal of Retailing*, 223 - 245.

- Sousa, R., & Voss, C. (2010). The impacts of e-service quality on customer behavior in multi-channel e-services. *Total Quality Management & Business Excellence*, 23(7/8), 769-787.
- Srivastava, K., & Sharma, N. (2013). Service Quality, Corporate Brand Image, and Switching Behavior: The Mediating Role of Customer Satisfaction and Repurchase Intention. *Services Marketing Quarterly*, 13, 274-291.
- Sumaedi, S., Bakti, I., & Yarmen, M. (2012). The empirical study of public transport passengers' behavioral intentions: the roles of service quality, perceived sacrifice, perceived value, and satisfaction (case study: paratransit passengers in jakarta, indonesia). *International Journal for Traffic and Transport Engineering*, 2(1), 83-97.
- Szymanski, D., & Henard, D. (2001). Consumer satisfaction: a meta-analysis of the empirical evidence. *Journal of the Academy of Marketing Science*, 29(1), 16-35.
- Tang, Y., Stanworth, J., Chen, W., Huang, S., & Wu, H. (2015). Toward a measure of Chinese hypermarkt retail service quality. *Total Quality Management*, 26(3), 327-338.
- Tanvir, M. S., Hussain, A., & Janjua, S. (2011). A Remedy based Concept: Impact of Encounter Service, Culture and Employees Training on Customers Satisfaction of Hospitality Industry. *Interdisciplinary Journal of Contemporary Research in Business*, 3(2), 1237-1247.
- Valdani, E. (2009). *Cliente & Service Management*. Milan: Egea.
- Wang, Y., & Tang, I. (2003). Assessing Customer Perceptions of Website Service Quality in Digital Marketing Environments. *Journal of End User Computing*, 15(3), 14-31.
- Wang, Y., Lo, H., & Yang, Y. (2004). An integrated framework for service quality, customer value, satisfaction: Evidence from China's telecommunication industry. *Information Systems Frontiers*, 6(4), 325-340., 6(4), 325-340.
- Wen, C., Qin, H., R., P. V., & Blankson, C. (2012). The role of national culture on relationships between customers' perception of quality, values, satisfaction, and behavioral intentions. *Quality Management Journal*, 19(4), 7-23.
- Wisnalmawati, Idrus, Surachman, & Rahayu, M. (2014). Effect of Store Image on Store Loyalty and Perceived Quality as Mediation (Customers of Batik Tulis Village Store at Yogyakarta Special Region). *International Journal of Business and Management Invention*, 3(11), 20-30.
- Wong, A., Dean, A., & White, C. (1999). The impact of service quality on customer loyalty in the hospitality industry. *International Journal of Customer Relationship Management*, 2(1), 81-89.
- Wu, H. (2013). An empirical study of the effects of service quality, perceived value, corporate image and customer satisfaction on behavioral intentions in the Taiwan quick service restaurant industry. *Journal of Quality Assurance in Hospitality & Tourism*, 14(4), 364-390.
- Wu, J., Lin, Y., & Hsu. (2011). An empirical analysis of synthesizing the effects of service quality, perceived value, corporate image and customer satisfaction on behavioral intentions in the transport industry: a case of Taiwan high-speed rail. *Innovative Marketing*, 7(3), 83-100.
- Yang, Z., & Peterson, R. T. (2004). Customer perceived value, satisfaction, and loyalty: The role of switching costs. *Psychology & Marketing*, 21(10), 799-822.
- Yu, W., & Ramanathan, R. (2012). Retail service quality, corporate image and behavioural intentions: the mediating effects of customer satisfaction. *The International Review of Retail, Distribution and Consumer Research*, 22 (5), 485-505.
- Yuen, E. F., & Chan, S. S. (2010). The Effect of Retail Service Quality and Product Quality on Customer. *Journal of Database Marketing & Customer Strategy Management*, 17(3), 222-240.
- Zaibaf, M. T., & Fakharian, M. (2012). Effect of perceived service quality on costumer satisfaction in hospitality industry: Gronroos' service quality model development. . *Journal of Hospitality Marketing & Management*, 22 (5), 409-504.
- Zeithaml, V., Berry, L., & Parasurama, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31-46.
- Zeithaml, V., Parasuraman, A., & Berry, L. (1990). *Delivering Quality Service*. New York: The Free Press.
- Zhang, X., & Prybutok, V. (2005). A Consumer Perspective of E-Service Quality. *IEEE Transactions on Engineering Management*, 52(4), 461-477.

PADRÕES DE MOBILIDADE DO IDOSO EM FARO

Manuela Pires Rosa
Centre for Spatial and Organizational Dynamics,
University of Algarve
(mmrosa@ualg.pt)

José Rodrigues
Centro de Investigação Marinha e Ambiental da
Universidade do Algarve
(jirodrig@ualg.pt)

Celeste Gameiro
Centro de Estudos em Património, Paisagem e
Construção da Universidade do Algarve
(mgameiro@ualg.pt)

Rui Alves
Instituto Politécnico de Castelo Branco
(ruialves@ipcb.pt)

RESUMO

A análise dos padrões de mobilidade do idoso é desenvolvida considerando o eixo urbano Faro/Montenegro-Gambelas e é suportada por inquéritos à mobilidade desenvolvidos em 2013, no âmbito do projeto de investigação INLUT - Integração dos usos do solo e transportes em cidades de média dimensão.

Considerando os dados dos 226 idosos inqueridos (com idade igual ou superior a 60 anos), foram realizadas 334 viagens num dia, onde 30,2 % foram efetuadas em automóvel (como condutores), 57,8 % a pé, 2,4 % em transporte público e 1,2 % em bicicleta.

Com a presente comunicação pretende-se analisar se os padrões de mobilidade do idoso se alteram com o envelhecimento, focalizando o estudo nas faixas etárias de 60-64 anos, 65-69 anos, 70-74 anos, 75-79 anos e idosos com idade superior ou igual a 80 anos.

Os resultados indicam uma mudança substancial do modo de deslocação, sobretudo a partir dos 75 anos, com um aumento da marcha a pé e uma redução no uso do automóvel como condutor.

Palavras-chave: Idoso, Envelhecimento, Mobilidade, Género, Marcha a Pé.

1. INTRODUÇÃO

O envelhecimento é um processo dinâmico normal que vem acompanhado de transformações biológicas, psicológicas e sociais no idoso, o que tem implicações na sua capacidade funcional e motora.

Efetivamente a capacidade funcional (ex. força muscular) a determinada altura da vida das pessoas entra em declínio, situação que está relacionada por fatores associados ao estilo de vida, mas também a fatores externos sociais, ambientais e económicos (Kalache & Kickbusch, 1997).

Em 2011, Portugal tinha cerca de 19% da população com 65 ou mais anos de idade, comparativamente com 16% em 2001 (INE, 2012).

O Gabinete de Estratégia e Planeamento procedeu à análise dos Censos de 2011 em termos de informação sobre deficiências ou incapacidades, e concluiu que as pessoas com 65 ou mais anos de idade representam 56% da população com pelo menos uma dificuldade (GEP, 2016).

Estudos internacionais evidenciam que a mobilidade diminui com o aumento da idade (Metz, 2000; Alsnih & Hensher, 2003) e que as pessoas à medida que se tornam mais velhas optam por diminuir a condução de automóveis (Rosenbloom, 2001).

Analisando inquéritos sobre a mobilidade realizados na União Europeia considerando as pessoas com idade igual ou superior a 55 anos, 44,8 % andam de automóvel (no grupo etário dos 40-54 andam 61,3 %), 20,8 % de transportes públicos (no grupo etário dos 40-54 utilizam-no 14,1 %), 19,3 % a pé (no grupo etário dos 40-54 andam a pé 13,0 %) e 0,8 % utilizam motociclo (no grupo etário dos 40-54 utilizam-no 1,7 %), entre outros modos (European Commission, 2007). Ou seja, há uma tendência para uma redução da utilização de automóvel e de motociclo, um acréscimo na marcha a pé e no uso de transportes públicos.

Com o presente estudo pretende-se analisar se os padrões de mobilidade do idoso que reside na cidade de Faro, se alteram com o envelhecimento, focalizando o estudo nas faixas etárias de 60-64 anos, 65-69 anos, 70-74 anos, 75-79 anos e idosos com idade superior ou igual a 80 anos. Analisam-se algumas perceções sobre os meios de transporte e hábitos de deslocação. Considera-se a área urbana delimitada pelo eixo Faro/Montenegro-Gambelas.

Esta análise é suportada por inquéritos à mobilidade realizados no âmbito do projeto de investigação INLUT - Integração dos usos do solo e transportes em cidades de média dimensão, que foi desenvolvido pela Universidade de Trás-os-Montes e Alto Douro, a Faculdade de Arquitetura da Universidade de Lisboa e a Universidade do Algarve. O projeto foi financiado pela Fundação para a Ciência e a Tecnologia e teve como um dos objetivos específicos analisar os padrões de deslocação dos habitantes de cidades de média dimensão.

2. O EIXO URBANO FARO/MONTENEGRO-GAMBELAS

A cidade de Faro localiza-se no litoral sul de Portugal Continental, é capital de distrito e sede do município de Faro que detém 202,57 km² de área e 64 560 habitantes. A cidade detém um grande número de serviços administrativos importantes para a região, e múltiplas atividades comerciais e económicas, devido à sua tradicional capacidade atrativa. Tem uma boa rede de equipamentos culturais e mantém bons níveis de oferta de eventos, por isso é considerada uma cidade polarizadora de atividades culturais.

A cidade, em 2011, apresentava uma população de 44119 habitantes, distribuídos por 47% homens e 53% mulheres, registando um aumento demográfico em relação a 2001, período no qual apresentava uma população residente de 41307 habitantes (INE, 2012). No município há 28572 pessoas economicamente ativas empregadas, 3% dedicam-se ao setor primário, 13% ao secundário e 84% ao terciário. As mulheres têm uma contribuição importante constituindo 50,97 % dos ativos. Há 11654 pessoas com idade superior ou igual a 65 anos, o que traduz 18 % da população municipal.

A cidade ocupa uma área de cerca de 12 km² e tem uma densidade populacional de cerca de 3646,4 hab/km², sendo considerada compacta e detentora de usos mistos urbanos, sobretudo nas zonas tradicionais. O clima é temperado, do tipo mediterrânico, com temperaturas amenas, invernos suaves e verões quentes. A orografia é suave.

A taxa de motorização do concelho de Faro é elevada, registando-se 496 veículos ligeiros/1000 hab. e 705 veículos/1000 hab. no ano de 2011 (ISP, 2012).

Considerando as deslocações pendulares ocorridas no concelho de Faro, regista-se um domínio do transporte individual motorizado (60%), seguido do modo pedonal (33%) (INE, 2012).

Nas últimas décadas a cidade expandiu-se principalmente a norte e poente do segundo anel circundante que constitui a Av. Calouste Gulbenkian, com a localização de equipamentos coletivos de educação, saúde e comércio em zonas residenciais. A expansão urbana deu-se, também na Freguesia de Montenegro, especialmente com a construção do Campus de Gambelas da Universidade do Algarve (1986) e as sucessivas ampliações do aeroporto, consolidando, em conjunto com a cidade de Faro, num eixo urbano denominado Faro/Montenegro-Gambelas (Figura 1). Esta zona de estudo tem uma área total de 10,0 km² (1007,6 ha). A altitude varia entre 1 m e 42 m.

Nos últimos anos o município tem promovido medidas integradas para uma mobilidade sustentável. Destaca-se a nova rede urbana de transportes coletivos (detentora de uma razoável cobertura espacial e temporal), a organização do estacionamento, com taxação na Baixa e no Mercado Municipal, técnicas de acalmia de tráfego, mobilidade elétrica e melhorias pontuais nas infraestruturas pedonais e cicláveis. O estacionamento na cidade de Faro é suportado por um sistema de parques de estacionamento pagos (mais centrais) e por parques de estacionamento não pagos. No centro da cidade tem vindo a ser implementada a política do utilizador pagador, com estacionamento pago quer na via pública, quer em parques subterrâneos. Este sistema é complementado por oferta de transporte público com vista a potencializar a transferência modal. Atualmente, de forma generalizada, não existe défice de lugares de estacionamento face à procura revelada.

Na freguesia de Montenegro não existe estacionamento pago nem atividade de fiscalização sistemática. Verificando-se frequentemente a existência de estacionamento ilegal (em segunda fila e em cima dos espaços pedonais).

Os transportes públicos têm uma razoável cobertura espacial e temporal (praticamente toda a população encontra-se a 400 m de uma paragem de autocarro) e tem-se vindo a assistir a um melhoramento da articulação entre os modos ferroviário e rodoviário.

No caso do modo ciclável, para além da Ecovia do Algarve, que na sua génese tem uma função eminentemente de lazer, são escassos e dispersos os percursos adaptados às bicicletas, não existindo uma rede de ciclovias. Existe uma perceção generalizada pela população do concelho de Faro que o uso da bicicleta é extremamente perigoso.

Com exceção do centro da cidade de Faro, os espaços pedonais não constituem uma rede articulada e agradável à sua usufruição. A ocupação dos passeios por automóveis, a desorganização do mobiliário urbano e a largura reduzida não contribuem para o incentivo a caminhar. No entanto, registam-se preocupações, por parte da autarquia, em proceder a melhoramentos.

Figura 1. Eixo urbano Faro/Montenegro-Gambelas



Fonte: Alves *et al.* (2015)

3. PADRÕES DE MOBILIDADE DO IDOSO NO EIXO URBANO FARO/MONTENEGRO-GAMBELAS EM 2013

Os inquéritos foram realizados nos meses de novembro e dezembro de 2013 aos residentes na cidade de Faro e na freguesia de Montenegro e estava estruturado em três grupos de perguntas: (1) os dados do inquirido, do seu agregado familiar e da sua habitação, (2) caracterização das viagens referentes ao dia anterior ao inquérito e (3) avaliação de perfis (atitudes). Os inquiridos deveriam ter idade superior ou igual a 17 anos e as viagens a pé inferiores a 5 minutos não foram contabilizadas.

Considerando os dados gerais, os 1277 inquiridos realizaram 2363 viagens/dia, sendo 44,8 % efetuadas em automóvel (como condutor), 40,5 % a pé, 4,3 % em transporte público e 2% em bicicleta.

Dos 1277 inquiridos, 226 tinham idades superiores ou iguais a 60 anos, o que corresponde a 17,7 % da amostra. Estes idosos residem na cidade de Faro e em Montenegro, localizado a cerca de 4 km. A análise da distribuição das residências, permite verificar que os idosos vivem, sobretudo, em bairros tradicionais com exceção do centro histórico de Faro (Figura 2).

Apresenta-se a caracterização socioeconómica dos 226 idosos, nomeadamente: género, posse de habitação, situação face ao mercado de emprego, instrução, rendimento do agregado familiar, posse de carta de condução e posse de passe de transportes coletivos.

111 inquiridos são homens (49,1 %) e 115 mulheres (50,9%) (Tabela 1), 77,4 % tem habitação própria, 18,1 % aluga casa e 4,4 % vive em casa de familiar; 176 estão reformados (77,9 %) 10 são domésticas (4,4 %), 6 estão desempregados (2,7%), e 34 pertencem à população ativa (15,0 %).

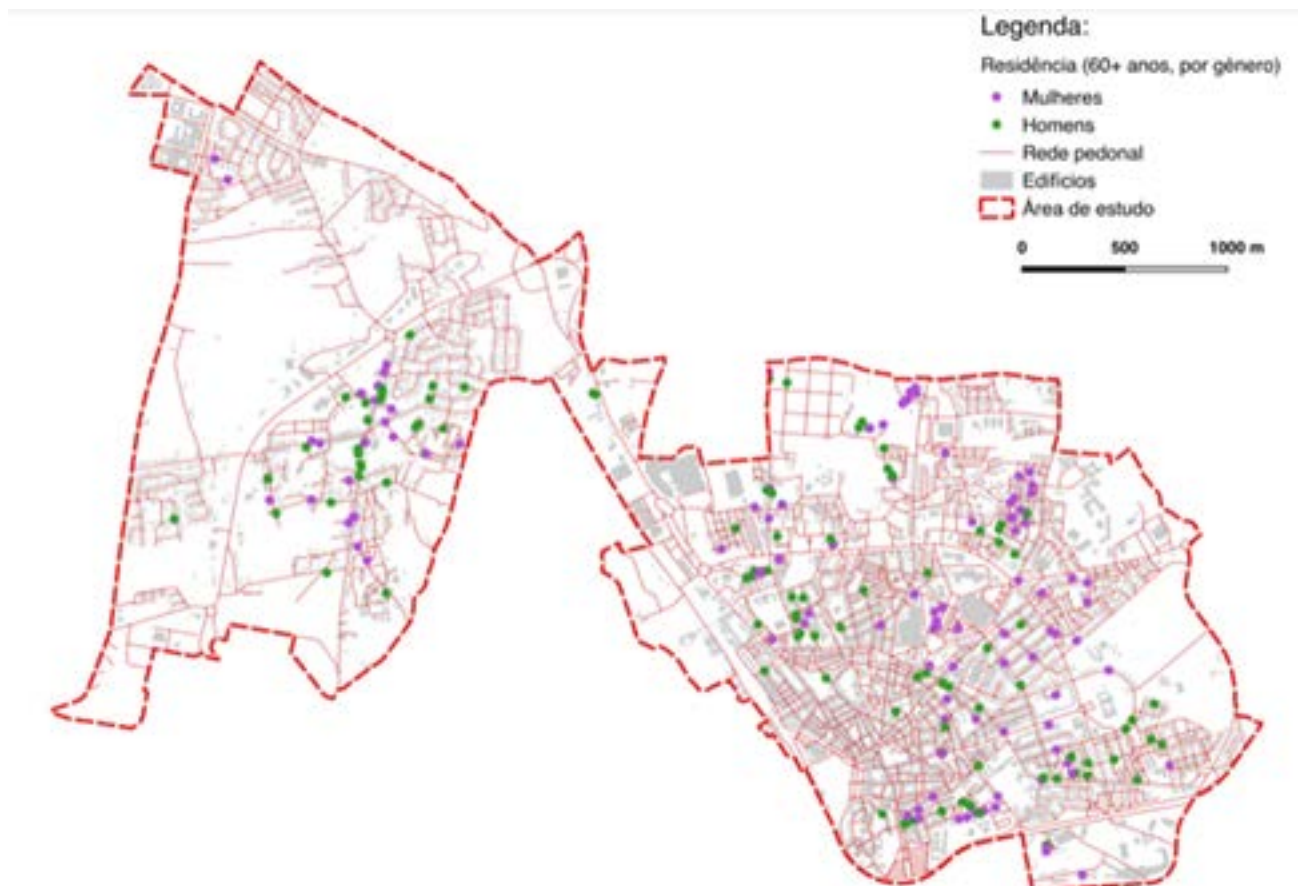
68 inquiridos não tem instrução (30,1 %), 27 tem o 1º ciclo do ensino básico (11,9 %), 31 tem o 2º ciclo do ensino básico (13,7 %), 27 tem o 3º ciclo do ensino básico (11,9 %), 21 tem o ensino secundário (9,3 %), 45 tem ensino pós-secundário (19,9 %) e 7 tem ensino superior (3,1 %).

Cerca de 56,2 % dos agregados familiares dos idosos inquiridos têm rendimento mensal líquido igual ou inferior a 1000 euros.

Dos inquiridos 58,4 % possui carta de condução e 7,5 % tem passe de transportes coletivos.

Os correspondentes aglomerados familiares possuem 216 automóveis. Há 70 famílias que não têm automóvel (31,0 %).

Figura 2. Localização das residências dos idosos inqueridos com 60 ou mais anos de idade



Fonte: elaboração própria

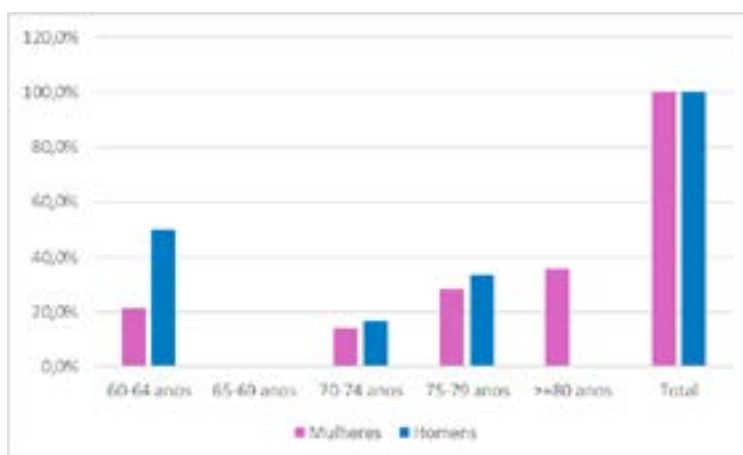
Tabela 1. Caracterização dos grupos etários das mulheres e homens seniores inqueridos

Grupo etário	Total	N.º de mulheres seniores	N.º de homens seniores	% de mulheres reformadas	% de mulheres ativas	% de homens reformados	% de homens ativos
60 - 64 anos	49	27	22	48,1	29,6	63,6	27,3
65 - 69 anos	71	31	40	71,0	19,4	87,5	10,0
70 - 74 anos	53	23	30	82,6	13,0	96,7	3,3
75 - 79 anos	34	20	14	80,0	10,0	78,6	21,4
>= 80 anos	19	14	5	85,7	7,1	100	0,0

Fonte: elaboração própria

20 inquiridos consideraram que têm mobilidade condicionada (8,8 %), registrando-se uma maior percepção, sobretudo por parte do homem idoso no grupo etário dos 60-64 anos. Nas faixas de idade dos 70-74 anos e dos 75-79 anos registou-se uma percepção crescente, tanto por parte da mulher como do homem (Figura 3).

Figura 3. Percepção dos idosos inquiridos sobre mobilidade condicionada



Fonte: elaboração própria

Dos 226 inquiridos, 61 mulheres e 57 homens realizaram no total 334 viagens/dia (neste estudo não se consideraram as deslocações com duração inferior a 5 min). Destas viagens 30,2 % foram efetuadas em automóvel (como condutor) e 57,8 % a pé, registando-se apenas 2,4 % em transporte público e 1,2 % em bicicleta (Tabela 2). Considerando o conjunto das viagens em automóvel como condutor e em automóvel como passageiro, a percentagem afeta a este meio aumenta para 38,6 % do total das viagens. As mulheres utilizam menos o automóvel e andam mais a pé e de transportes públicos. A extensão média das viagens, num dia, foi de 597 m, as viagens das mulheres são mais extensas (872 m) e a dos homens são curtas (321 m).

Em relação à mobilidade das mulheres, foram realizadas 171 viagens por 66 % das mulheres 51 % dos homens realizaram 163 viagens. As mulheres (que se deslocaram) realizaram em média 2,80 viagens num dia e os homens 2,86 viagens, revelando-se ativos.

Tabela 2 – Viagens realizadas pelos idosos por modo de transporte e género

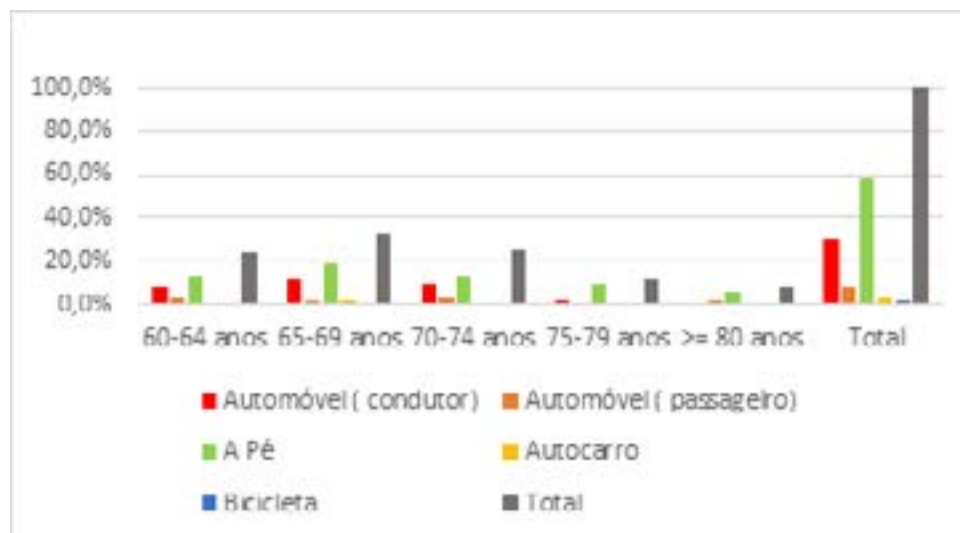
Modo de transporte	Nº de viagens	%	Homens		Mulheres	
			Nº de viagens	%	Nº de viagens	%
A pé	193	57,8	77	47,2	116	67,8
Bicicleta	4	1,2	4	2,5	0	0,0
Transporte público	8	2,4	0	0,0	8	4,7
Mota/Motociclo	0	0,0	0	0,0	0	0,0
Automóvel (condutor)	101	30,2	78	47,9	23	13,5
Automóvel (passageiro)	28	8,4	4	2,5	24	14,0
Total	334	100,00	163	100,00	171	100,00

Fonte: elaboração própria

Analisando a mobilidade por grupos etários e por género (Figuras 4, 5 e 6), constata-se que a faixa de idosos com 65-69 anos tem maior mobilidade em relação ao grupo dos com 60-64 anos, possivelmente por se encontrarem reformados e com mais tempo disponível.

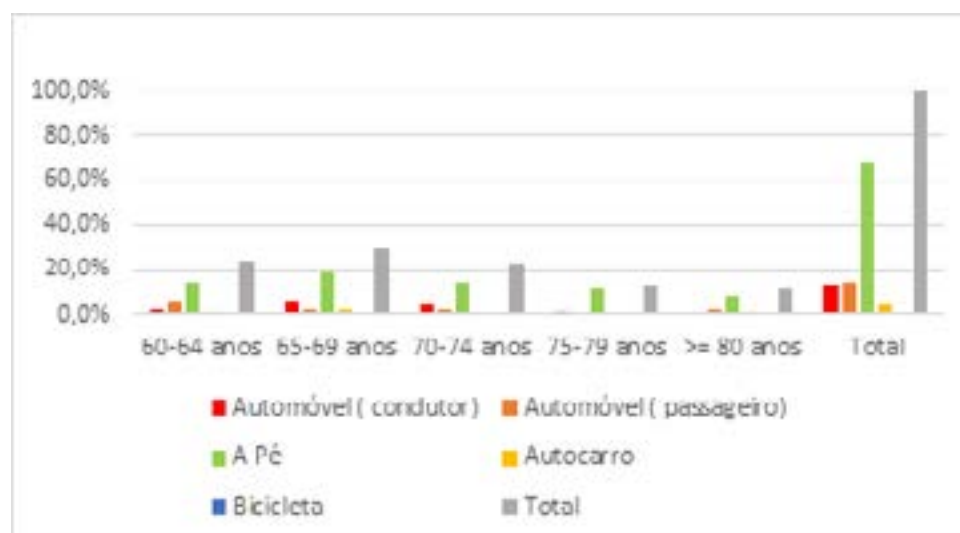
Nos grupos etários dos 70-74 anos, 75-79 anos e ≥ 80 anos ocorre uma progressiva diminuição da mobilidade, independentemente do meio de transporte que utilizam. Essa diminuição é visível na marcha a pé e na utilização do automóvel nas suas deslocações, neste último caso, acontece, sobretudo, a partir do grupo etário dos 75-79 anos. Esta tendência de diminuição da mobilidade tanto ocorre nas mulheres como nos homens.

Figura 4. Mobilidade dos idosos por grupo etário



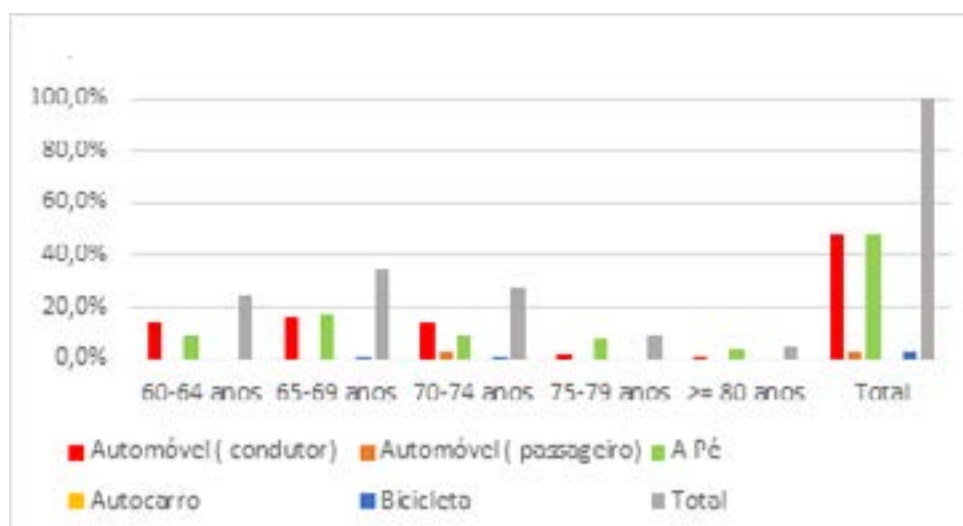
Fonte: elaboração própria

Figura 5. Mobilidade das mulheres idosas por grupo etário



Fonte: elaboração própria

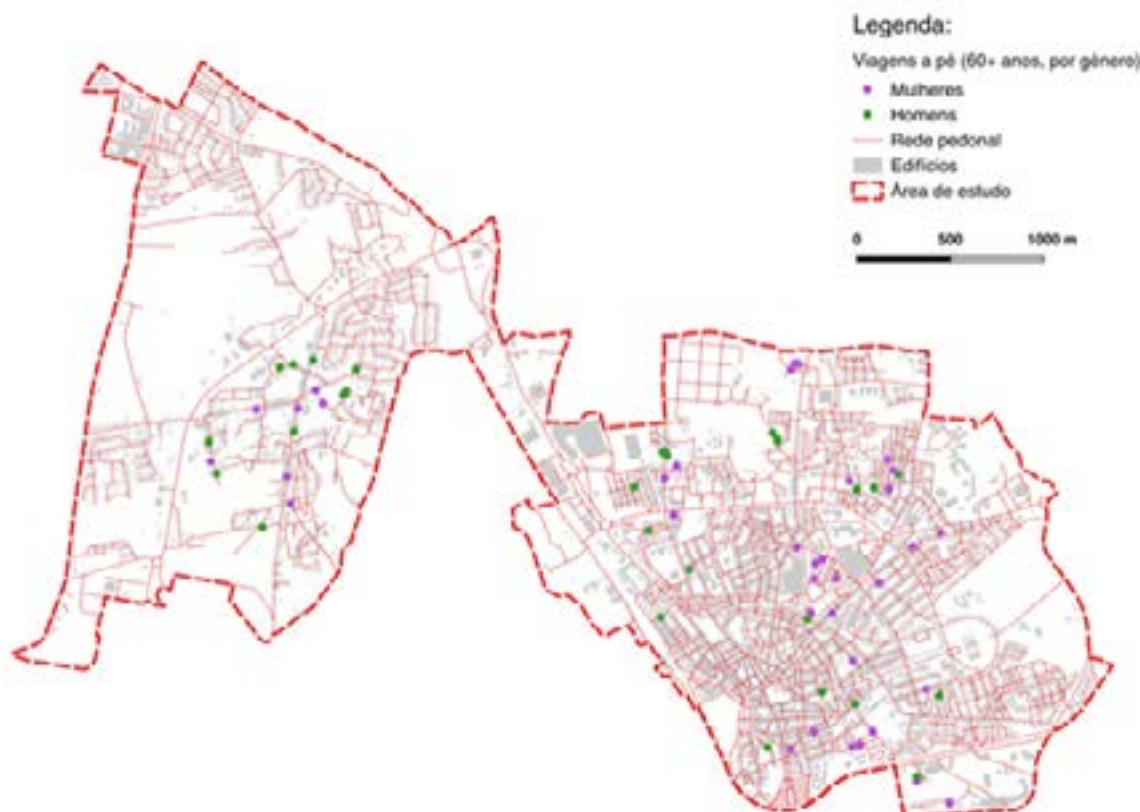
Figura 6. Mobilidade dos homens idosos por grupo etário



Fonte: elaboração própria

A análise da distribuição espacial das residências dos idosos que marcham a pé (Figura 7) permite concluir que, tanto no caso da cidade de Faro como no Montenegro, estão localizadas nos bairros tradicionais, que são caracterizados por deterem usos mistos urbanos. A proximidade de serviços e residências é, geralmente, um fator determinante pela escolha deste modo de transporte.

Figura 7. Localização das residências dos idosos que se deslocam somente a pé



Fonte: elaboração própria

4. ATITUDES EM RELAÇÃO ÀS DESLOCAÇÕES

Os inquéritos à mobilidade realizados no âmbito do projeto de investigação INLUT, consideravam as atitudes dos inqueridos em face aos meios de transporte que utilizam.

A análise dos padrões de mobilidade dos idosos permitiu averiguar que há um grande número de viagens realizadas a pé e, em oposição, há um pequeno número de viagens realizadas em transporte público. Pretende-se averiguar se as afirmações proferidas no inquérito justificam estes padrões.

Um conjunto de afirmações é referente ao transporte público: as “A rede de transportes pública é adequada”, “É agradável andar de autocarro”, “Os transportes públicos devem de ser melhorados com financiamento de quem anda de automóvel”, “Usar transportes públicos é impraticável” e “Andar de autocarro é caro”. Os resultados destas afirmações encontram-se na Figura 8.

Na primeira análise às afirmações das atitudes relativas ao transporte público é possível constatar que as respostas às atitudes “A rede de transportes pública é adequada” 52,2 % das mulheres concordam/concordam totalmente e somente o fazem 42,3 % dos homens. 21,7 % das mulheres e 17,1 % dos homens discordam/discordam totalmente. Estes resultados são consensuais com a maior utilização de transportes públicos por parte da mulher.

Em relação à afirmação “É agradável andar de autocarro” 60,9 % das mulheres concordam/concordam totalmente e somente o fazem 42,3 % dos homens. 16,5 % das mulheres e 24,3 % dos homens nem concordam nem discordam, traduzindo, possivelmente, a não utilização deste meio de transporte.

As respostas a estas duas afirmações estão em concordância com a afirmação “Usar os transportes públicos é impraticável”, onde 47,8 % das mulheres discordam/discordam totalmente, e 49,5 % dos homens o assume, mostrando que existe uma certa concordância na praticabilidade da utilização do transporte público. Contudo, na afirmação “Os transportes públicos devem ser melhorados com financiamento de quem anda de automóvel” 53,0 % das mulheres e 59,5 % dos homens discordam/discordam totalmente, traduzindo uma certa valorização coletiva do automóvel.

Apesar das afirmações descritas anteriormente, e atendendo a que a rede de transporte pública de Faro é bastante adequada e que a viagem de autocarro é agradável, na realidade não se traduz nos padrões de mobilidade havendo uma percentagem reduzida de viagens realizadas por transporte público, possivelmente pelo facto de tanto as mulheres como os homens terem uma posição marcada em relação ao preço da viagem de autocarro. 56,5 % das mulheres consideram que as viagens de autocarro são caras, e 45,9 % dos homens também o afirmam. Esta situação pode efetivamente influenciar os padrões de mobilidade apresentados anteriormente.

Estas opiniões se atendidas pelo meio institucional e empresarial poderiam contribuir para uma efetiva transferência modal.

No que respeita às opiniões referentes aos modos suaves (Figura 9) na afirmação “Sempre que possível prefiro ir a pé” 84,3 % das mulheres e 76,6 % dos homens concordam/concordam totalmente, possivelmente trata-se de um indicador de envelhecimento saudável. Mas os valores baixam quando respondem à afirmação “É agradável andar a pé no meu bairro” com 33,9 % das mulheres e 45,9 % dos homens a concordarem/concordarem totalmente.

Figura 8. Atitudes dos idosos em relação aos transportes públicos



Fonte: elaboração própria

Figura 9. Atitudes dos idosos em relação à marcha a pé



Fonte: elaboração própria

5. CONSIDERAÇÕES FINAIS

Em termos de caracterização dos inquiridos idosos constata-se que a maioria tem posse de casa e posse de carta de condução e 15 % ainda integram a população ativa. Na faixa dos 60-64 anos, cerca de 30 % ainda trabalha. Os idosos são, geralmente, considerados pessoas com mobilidade reduzida, no entanto, somente uma pequena percentagem tem perceção dessa condição.

Comparando os resultados gerais da mobilidade intraurbana considerando o eixo urbano Faro/Montenegro-Gambelas com os da mobilidade das pessoas com idade igual ou superior a 60 anos, conclui-se que estas andam mais a pé, utilizam menos os transportes coletivos, usam menos o automóvel como condutoras. Considerando o género, constata-se que apenas uma pequena percentagem de mulheres idosas usa o automóvel como condutora, é muito ativa em termos de marcha a pé e utiliza mais os transportes públicos. Assumem ser agradável andar de autocarro.

Constata-se que a faixa de idosos com 65-69 anos tem maior mobilidade em relação ao grupo dos com 60-64 anos, possivelmente por se encontrarem reformados e com mais tempo disponível.

Nos grupos etários dos 70-74 anos, 75-79 anos e ≥ 80 anos ocorre uma progressiva diminuição da mobilidade, independentemente do meio de transporte que utilizam. Essa diminuição é visível na marcha a pé e na utilização do automóvel nas suas deslocações, neste último caso, acontece, sobretudo, a partir do grupo etário dos 75-79 anos. Esta tendência de diminuição da mobilidade tanto ocorre nas mulheres como nos homens.

Assim, os resultados indicam uma mudança substancial do modo de deslocação, sobretudo a partir dos 75 anos, com um aumento da marcha a pé e uma redução no uso do automóvel como condutor.

Tanto os homens idosos como as mulheres assumem que sempre que possível preferem andar a pé, traduzindo esta preferência um indicador de envelhecimento ativo e saudável. No entanto, a maioria não considera agradável andar a pé no seu bairro. Esta perceção deve ser considerada nas políticas de regeneração urbana, que devem integrar a opinião do idoso nos processos de participação pública.

Efetivamente, os espaços exteriores, os edifícios, os transportes constituem características fundamentais do ambiente físico de uma cidade, e exercem uma grande influência sobre a mobilidade individual, a independência e a qualidade de vida dos idosos (OMS, 2009).

Assim, na gestão urbana e da mobilidade estão a desenvolver-se abordagens que atendem às necessidades dos idosos (*Age Sensitive Design*) de forma a potenciarem a sua qualidade de vida, a sua segurança e a contribuir para um envelhecimento ativo.

AGRADECIMENTOS

Este estudo teve como suporte uma base de dados produzida no âmbito do Projeto de Investigação “Integração de Usos do Solo e Transportes em cidades de média dimensão” referência FCT PTDC/AUR-URB/111013/2009, financiado pela Fundação para a Ciência e Tecnologia, com cartografia em formato digital fornecida pela Câmara Municipal de Faro.

REFERÊNCIAS

- Alsnih, R. & Hensher, D. A. (2003). The mobility and accessibility expectations of seniors in an aging population. *Transportation Research Part A*, vol. 37(10): 903–916.
- Alves, R. *et al.* (2015). *InLUT – Integração dos usos do solo e transportes em cidades de média dimensão – RELATÓRIO FINAL*. Disponível em 14 de setembro de 2016 em <http://inlut.fa.utl.pt/media/wp-content/uploads/2015/12/Relatorio-final.pdf>.
- European Commission. (2007). *Eurobarometer, Attitudes on issues related to EU Transport Policy Analytical Report*, Brussels: Flash Eurobarometer.
- GEP (2016). Estatísticas sobre Deficiências ou Incapacidades. Gabinete de Estratégia e Planeamento.
- INE (2012). *Censos 2011. Resultados definitivos*, Lisboa: Instituto Nacional de Estatística.
- ISP (2012). *Seguros/Estatísticas 2012. Distribuição Anual do Parque Automóvel Seguro*, Lisboa: Instituto de Seguros de Portugal.
- Kalache A. & Kickbusch I. (1997). A global strategy for healthy ageing World Health, v.4: 4 -5.
- Mercado R., Páez, A., Scott, D. M., *et al.* (2007). Transport policy in aging societies: an international comparison and implications for Canada. *The Open Transportation Journal*, vol.1: 1–13.
- Metz D H (2000). Mobility of older people and their quality of life. *Transport Policy*, vol.7(2): 149–152.
- OMS. (2009). Guia Global das Cidades Amigas das Pessoas Idosas. Organização Mundial da Saúde. Edição de Fundação Calouste Gulbenkian.
- Rosenbloom S. (2001). Sustainability and automobility among the elderly: an international assessment. *Transportation*, vol.28(4): 375–408.

INCORPORAÇÃO DA EXPERIÊNCIA DE CONSUMO NO DESENHO DO SERVIÇO DE ALOJAMENTO HOTELEIRO NO ALENTEJO

Nicolau Miguel Almeida
Instituto Politécnico de Portalegre, Portugal
(nicolau@estgp.pt)

RESUMO

A maioria dos estudos sobre experiência de consumo tende a centrar-se mais na perspectiva do consumidor e não tanto na perspectiva das operações, em especial como a experiência de consumo é incorporada no desenho do serviço de alojamento hoteleiro. Para analisar a incorporação da experiência proporcionada no desenho do serviço prossegue-se os seguintes objetivos: 1) identificar e analisar os fatores e a sua importância relativa que levam um determinado estabelecimento hoteleiro no Alentejo a incorporar ou não a experiência de consumo no desenho do serviço de alojamento (ECDS); 2) evidenciar as características que diferenciam os que incorporam dos que não incorporam a ECDS; 3) propor um modelo para calcular a probabilidade de um determinado estabelecimento hoteleiro incorporar a ECDS; 4) identificar os tipos de estabelecimentos onde é maior a propensão de incorporar a ECDS. É proposto um modelo de análise que será empiricamente testado em cento e vinte e um estabelecimentos hoteleiros no Alentejo. Esta investigação permitirá compreender a perceção dos dirigentes dos estabelecimentos hoteleiros no Alentejo sobre a expectativa de experiência de consumo por parte do cliente, o que tem implicações para o marketing e para a gestão das operações.

Palavras-chave: Desenho do Serviço de Alojamento Hoteleiro, Experiência de Consumo, Marketing, Gestão de Operações, Alentejo.

JEL Classification: M11, M31

1. INTRODUÇÃO

O termo experiência tem surgido cada vez mais no vocabulário do marketing e verifica-se que a literatura sobre o conceito de experiência, sendo este um fator importante para a competitividade e o sucesso da oferta das empresas, tem crescido rapidamente, o que evidencia a existência de um debate fervente entre académicos e profissionais sobre o tema da experiência. Por isso, a compreensão da perceção dos dirigentes dos estabelecimentos hoteleiros no Alentejo sobre a expectativa de experiência de consumo por parte do cliente, através da evidência sobre a propensão para o estabelecimento hoteleiro incorporar a experiência de consumo no desenho do serviço de alojamento torna-se relevante na temática da experiência de consumo.

Verifica-se ainda que o intenso debate em torno do conceito de experiência desperta cada vez mais a atenção dos investigadores e profissionais do marketing, na passagem do serviço para a experiência, razão pela qual interessa analisar a incorporação da experiência de consumo no desenho do serviço, inicialmente a partir de uma revisão da literatura, procurando, deste modo, apresentar quais são as principais abordagens, debates e controvérsias.

Posto isto, salienta-se que se trata de uma literatura vasta e rica, pelo que as questões básicas - o que é a experiência?, quando e onde surgiu este conceito?, quem lançou este conceito?, por que razão surgiu?, qual o significado deste conceito para o marketing e para a gestão das operações? e como utilizá-lo? ou, dito de outro modo, como operacionalizá-lo? - servirão de fio condutor.

Neste sentido, Pennington (2016) defende a incorporação da experiência na estratégia de negócio de maneira que a empresa opere o conceito ao longo de todas as funções e na cadeia de valor. Assim, conhecer o que interessa na experiência do cliente é um novo território, o que apela à mudança, ou seja, à procura de métricas que permitam medir a experiência de serviço composta por fases, tal como Jüttner, Schaffner, Windler and Maklan (2013) as designam, podendo estas ser observadas em contexto de alojamento hoteleiro. Estas fases são a tomada de decisão, a reserva, a chegada ao estabelecimento hoteleiro e *check-in*, a estada, as experiências no local, o *check-out* e a partida, e o tempo após a estada.

Pode-se então considerar que a criação de uma experiência memorável (Lindgreen, Vanhamme and Beverland, 2009), como suplemento de um produto ou de um serviço, abrange o processo mental, um estado da mente (podendo ser uma sensação ou uma emoção) que é valorizado na combinação de um produto ou serviço com um momento considerado único de consumo, cuja vivência se torna memorável, por constituir uma experiência emocionalmente rica, logo única e memorável.

Daqui decorre que a experiência do cliente é originada em um conjunto de interações entre o cliente e o produto ou serviço, a empresa ou uma parte da sua organização, interações essas que provocam reações (Gentile, Spiller and Noci, 2007).

No campo da expectativa de experiência interessa, por exemplo, Lindgreen *et al.* (2009) que obtiveram resultados da sua investigação empírica que interpretam em reações geralmente positivas das pessoas, muito embora a maioria destas não tenha tido uma experiência anterior às situações hedónicas associadas aos encontros de serviço nos quais essas pessoas participam com expectativas relativamente vagas. Significa que estas expectativas formadas estarão relacionadas com as experiências

anteriormente vivenciadas e serão comparadas com as memórias que resultam de uma experiência atual emocionalmente rica. Numa avaliação holística, a experiência como um todo, na sua avaliação geral, tem mais significado do que a soma das partes.

Meyer and Schwager (2007) definem a experiência como uma resposta interna e subjetiva do cliente a qualquer contacto direto ou indireto deste com a empresa. Estes autores entendem que as empresas devem identificar as componentes das experiências que resultam em satisfação do cliente, realçando que a maioria das experiências não é consequência das ofertas das empresas, o que requer a reformulação do interesse no conhecimento das expectativas de experiência.

Torna-se, então, necessário enquadrar os encontros de serviços, entre clientes e prestadores (Voss, Roth and Chase, 2008), pois não só compreendem múltiplas interações de serviço e canais de distribuição, como também envolvem a componente temporal significativa e a estratégia de operações da empresa. Esta estratégia consiste em lidar com cada vez mais encontros de serviços e mais complexos. Neste sentido, Chauhan and Manhas (2014) verificam que a experiência do cliente é um constructo multidimensional.

O encontro de serviço é caracterizado por um processo de elevada participação do cliente (Chathoth, Altiney, Harrington, Okumus and Chan, 2013). Neste contexto de encontro de serviço, o primeiro processo produtivo a considerar consiste na análise da criação e desenho do serviço de alojamento hoteleiro com o aprofundamento de um conjunto de atividades que o estabelecimento hoteleiro realiza e que requer o conhecimento de todos os fatores que intervêm ou podem afetar o processo (Pérez, 2004).

Posto isto, nenhum modelo proposto na literatura é adequado para avaliar a formação da intenção por parte dos estabelecimentos hoteleiros de incorporar a experiência de consumo no desenho do serviço, pelo que se torna relevante encontrar resposta para as seguintes questões:

- 1) Que fatores determinam a intenção de incorporar a experiência de consumo no desenho do serviço (ECDS) do estabelecimento hoteleiro no Alentejo?
- 2) Qual a propensão do estabelecimento hoteleiro para incorporar a ECDS?
- 3) Há tipologias de estabelecimentos hoteleiros no Alentejo com maior propensão para incorporar a ECDS?

Para analisar a incorporação da experiência proporcionada no desenho do serviço e encontrar respostas para as questões de investigação explicitadas, torna-se necessário prosseguir os seguintes objetivos:

- identificar e analisar os fatores e a sua importância relativa que levam um determinado estabelecimento hoteleiro no Alentejo a incorporar ou não a experiência de consumo no desenho do serviço de alojamento;
- evidenciar as características que diferenciam os que incorporam dos que não incorporam a ECDS;
- propor um modelo para calcular a probabilidade de um determinado estabelecimento hoteleiro incorporar a ECDS;
- identificar os tipos de estabelecimentos onde é maior a propensão de incorporar a ECDS.

Para o prosseguimento destes objetivos, dada a relevância do tema aqui explanada, esta comunicação abrange o enquadramento teórico, com destaque para o debate sobre a passagem do conceito de serviço para o de experiência, o conceito de experiência de consumo vivenciada, a incorporação da experiência de consumo no desenho do serviço e as variáveis determinantes da experiência de consumo que farão parte da proposta de modelo de análise do qual derivam as hipóteses de investigação, terminando esta comunicação com as considerações finais, incluindo uma descrição do caminho a seguir para obter as respostas às questões de investigação, o teste das hipóteses e os contributos.

2. ENQUADRAMENTO TEÓRICO

2.1 Passagem do conceito de serviço para o de experiência

As economias mundiais desenvolvidas estão dominadas por empresas de serviços. Enquanto as tecnologias que suportam o serviço evoluíram rapidamente, as abordagens para projetar e gerir como o cliente vivencia a experiência de entrega do serviço permanecem praticamente primitivas (Dasu and Chase, 2013). Ainda segundo Dasu and Chase (2013), as abordagens típicas para a melhoria da experiência de serviço incluem normalmente a análise de inquéritos de satisfação e a realização de sessões de *feedback* em *focus group*. Significa que o desenho do serviço é mais suportado no conhecimento das expectativas do cliente (Zeithaml, Bitner and Gremler, 2009), por parte de uma organização, seja esta com ou sem fins lucrativos, para que a perceção de qualidade do serviço, por parte do cliente, coincida com a sua expectativa, o que, assim sendo, permite concluir que o desenho do serviço é orientado para proporcionar a experiência única e memorável.

A passagem do serviço para a experiência, quer ao nível das operações quer do marketing, deve assegurar que a satisfação do cliente com o estabelecimento hoteleiro e a consequente intenção do cliente em retornar podem ser controlados em cada momento de interação entre o prestador do serviço e o cliente, sendo este um coprodutor do serviço de alojamento.

O estabelecimento hoteleiro, enquanto unidade de análise, encontra-se situado no destino turístico Alentejo. Murphy, Pritchard and Smith (2000) focam a sua atenção no que designam por produto destino e entendem este produto como um conjunto complexo de elementos e de experiências, cuja perceção pelo turista é necessário compreender. Para estes autores, “o destino pode ser visto como uma amálgama de produtos e oportunidades de experiências individuais que combinam na forma de uma experiência total na área visitada.”

Esta noção de destino turístico, dando corpo a uma experiência, está na linha de pensamento de Smith (1994), o qual realça o papel importante dos serviços do destino na criação da experiência e descreve o modo como os vários *inputs* do destino podem produzir uma experiência (*output*) para os turistas. Posto isto, a gestão de marketing centrar-se-á mais na experiência do que no produto ou serviço.

Na abordagem da experiência de serviço, Johns (1999) evidencia que os clientes têm diferentes visões dos fornecedores de serviços consoante a natureza dos serviços. A este propósito, Chade and Mattsson (1996) referem que o cliente avalia a totalidade dos serviços encontrados e não apenas a interação com o fornecedor do serviço.

Na perspetiva do processo de produção turística, que interessa à gestão de operações, Smith (1994) separa os conceitos de serviço e experiência, considerando que o serviço prestado é um produto intermédio e que a experiência é o produto final.

O modelo de Smith (1994), reconhecendo o papel da experiência humana, tendo esta o lado positivo e negativo tal como muitas atividades humanas (Ryan, 2002) no produto de turismo, indica os elementos (recursos naturais e infraestruturas; serviços; hospitalidade; liberdade de escolha; envolvimento do turista) que podem ser aplicados a uma experiência turística, embora com um nível elevado de intangibilidade. O conceito de intangibilidade é utilizado pelo marketing de serviços desde os anos 60 (Baker, 2000). E este conceito coloca desafios à competitividade das empresas quando procuram focar-se no cliente, ou seja na experiência que este vivencia no encontro de serviço.

Para Gentile *et al.* (2007), hoje em dia competir no mercado global tornou-se crescentemente difícil, pelo que somente a criação de vantagens competitivas duradouras parece oferecer a via para a sobrevivência de empresas. Porém, persiste a questão de saber por onde deve a empresa começar a desenvolver a sua vantagem competitiva. De facto, são vários os autores, nomeadamente, Craig and Douglas (2000), Farinet and Ploncher (2002), Kotler and Keller (2009) ou Peppers and Rogers (2000) que defendem que uma das vias principais para atingir essa vantagem competitiva é por meio de um maior enfoque no cliente.

A perspetiva de um enfoque no cliente acarreta a ideia central de expandir a transação com base na noção de relação com cliente para um conceito de experiência do cliente em contínuo. A implicação que este enfoque tem é precisamente a necessidade de considerar aspetos relativos ao lado emocional e irracional do comportamento do cliente (Holbrook and Hirschman, 1982), em que se tem em conta todas as experiências resultantes do conjunto de interações entre a empresa e os seus clientes.

Eis então o ponto fundamental, isto é, tais experiências desempenham um papel fundamental ao determinar as preferências dos clientes, as quais, por sua vez, influenciam as decisões de compra dos mesmos (Gentile *et al.*, 2007). Significa então que, enquanto a teoria económica clássica vê o consumidor como um ator lógico e racional, cujas decisões de compra são baseadas em elementos racionais, os recentes desenvolvimentos nas áreas da economia e do marketing, em particular no chamado Marketing Experiencial (*Experiential Marketing*), apontam para o conceito de experiência do cliente (*customer experience*). Defendem então a exploração de elementos intangíveis relacionados com o valor emocional percebido pelos clientes. Daí ser inteligível que para Shaw and Ivens (2005) cada vez mais gestores vejam a experiência do cliente como o próximo campo de batalha pela competitividade.

No entanto, ainda segundo Gentile *et al.* (2007), apesar do entusiasmo sobre o tema, a realidade indica algo bem diferente e longe do que aquela literatura defende ou que as empresas afirmam ser a sua declaração de intenção. Ou seja, a literatura científica sobre o tópico revela limitações e insuficiências, as quais são próprias nos campos de investigação que ainda estão longe de atingir a sua maturidade, sobretudo quando existe uma falta de terminologia precisa e de um modelo conceptual que permita operacionalizar o conceito, neste caso, de experiência e assim apoiar a adoção das respetivas práticas.

No que concerne ao estado da arte sobre o Marketing Experiencial, Gentile *et al.* (2007) e Lanier (2008) fazem uma importante síntese. Lanier (2008) refere que só nos últimos vinte cinco anos os investigadores de marketing e de gestão começaram a referir-se às experiências como tendo a sua lógica e valor específicos.

Holbrook and Hirschman (1982) defendem o reconhecimento dos aspetos relacionados com a experiência de consumo, pelo que esta última está dirigida para a busca de fantasias, sensações e divertimento. A abordagem sobre o processamento de informação deve ser enriquecida com a adição de uma perspetiva experiencial e, assim, expandir a investigação sobre o comportamento do consumidor.

Deste modo, Arnould and Price (1993), partindo da descida de rios como componente em crescimento da indústria de serviços de lazer no Colorado (EUA), assinalam a importância da comercialização de experiências hedónicas para o marketing, existindo uma relação complexa entre as expectativas e satisfação dos clientes e a experiência de tipo extraordinária (*extraordinary experience*).

Estes entendimentos iniciais deram origem a um movimento na investigação que explora muitos aspetos da produção e do consumo de experiências, exemplificativos em Carù and Cova (2007), Joy and Sherry (2003), Kozinets, Sherry, Storm, Duhachek, Nuttavuthisit and Deberry-Spence (2004), LaSalle and Britton (2003) e Shaw and Ivens (2002).

Larnier (2008) refere também que embora se tenha aprendido bastante com a investigação desenvolvida, ainda existe alguma confusão com respeito à natureza das experiências, suas dimensões principais e características essenciais, sendo que para este autor é possível distinguir dois tipos de enfoques, um relativo às experiências proporcionadas pela empresa (*firm-driven experiences*), ou seja, as experiências que são desenvolvidas ou oferecidas pelas empresas e nas quais os consumidores participam, o outro com referência às experiências de consumo (*consumption-driven experiences*), isto é, as experiências que são construídas pelos consumidores e as quais podem ou não envolver ofertas das empresas.

As experiências proporcionadas pela empresa e as suas práticas denominadas de marketing experiencial (O'Sullivan and Spangler, 1998; Schmitt, 1999), têm dado origem a uma explosão de livros e artigos. No entanto, existe pouco consenso sobre o que o mesmo implica. Para Larnier (2008) existe confusão entre académicos do marketing e profissionais quanto à natureza da experiência baseada no mercado: esta experiência é uma função subjetiva do consumidor ou uma função objetiva da oferta, ou ambas? Bem, dependendo da perspetiva, encontra-se várias respostas a estas questões.

Dito isto, o ponto importante da revisão de Larnier (2008) é ter um conceito geral de experiência que anteceda a análise do marketing experiencial.

Neste sentido, Carù and Cova (2003) contribuem, no campo da gestão, com a definição de experiência, sendo esta um acontecimento de interação entre a necessidade ou desejo do consumidor e o consumo, necessariamente dependente da

compra de produtos ou serviços no mercado ou de outro tipo de aquisição, por exemplo, através da família, de amigos ou da posição pessoal e profissional; aquele acontecimento pode estar associado a uma sensação subjetiva ou emoção de uso do produto ou de consumo do serviço.

Esta definição coloca uma ênfase no processo de decisão de compra do consumidor, no qual a expectativa de experiência pode ser gerada no consumidor aquando das suas escolhas inseridas no referido processo de decisão. Não obstante, se a ênfase fosse colocada nas atividades de consumo, então é sugerido que em qualquer organização, seja ela com fins lucrativos ou não, uma cadeia de valor é identificada, cujo *output* final pode ser traduzido pelo conceito de experiência.

Nestas duas perspetivas, a do processo de decisão de compra do consumidor e a da cadeia de valor na organização da oferta de serviços, a existência de alguns desenvolvimentos na conceptualização da experiência não é suficiente, uma vez que a necessidade de construção de um caminho sólido para a estrutura do conhecimento futuro, o qual permita a compreensão do fenómeno da experiência, mais do que mudar o estilo e a forma de teorizar a experiência, é cada vez mais premente Uriely (2005).

Acrescenta-se também que no campo da Psicologia sobre experiência, a literatura apresenta os três componentes de todas as experiências: o sujeito da experiência (pessoa que vivencia a experiência e sobre quem reside os efeitos da experiência, por exemplo, o consumidor), o objeto da experiência (o que é experimentado, por exemplo, a oferta do mercado) e o processo da experiência (ato de experimentar o objeto pelo sujeito) (Russon, 2003).

Tendo em conta aqueles três componentes ou dimensões, segundo a ordenação de Larnier (2008), na literatura sobre o comportamento do consumidor a experiência é usualmente definida em termos do sujeito da experiência e mais frequentemente em termos do processo da experiência, sendo que o objeto da experiência é várias vezes desvalorizado ou considerado apenas como um *input* menor no processo de consumo (veja-se Dalli and Romani, 2007; Holt, 1995). Assim sendo, nesta literatura, a experiência é, em linhas gerais, referida como uma experiência de consumo (Carù and Cova, 2007; Holbrook and Hirschman, 1982).

Já na literatura sobre gestão e estratégia de marketing, a experiência é normalmente definida em termos do objeto da experiência, pelo que o enfoque incide fundamentalmente em como criar uma oferta de experiência que atraia os consumidores para aspetos memoráveis (Marconi, 2005; Pine II and Gilmore, 1999), o que significa que o processo da experiência é, de modo geral, tido como garantido e os sujeitos da experiência são vistos simplesmente como efeitos passivos do processo. Deste modo, nesta literatura, a experiência faz referência ao marketing experiencial (Marconi, 2005; O'Sullivan and Spangler, 1998).

Por sua vez, Larnier (2008) argumenta ideia central de que quer se fale de experiência de consumo ou de marketing experiencial, as três dimensões de uma experiência (sujeito, objeto e processo) estão todas presentes e devem ser tidas em conta e ser explicadas umas em relação às outras.

A diferença entre as duas abordagens (experiência de consumo e marketing experiencial) reside no seu enfoque, pois a experiência de consumo incide principalmente no sujeito e processo, enquanto que o marketing experiencial tem como foco fundamentalmente o objeto.

Por outro lado, o objeto da experiência pode ser basicamente tudo para a abordagem da experiência de consumo (por exemplo, pode-se ter uma experiência de consumo com a alface que cresce na própria horta ou comprada no estabelecimento comercial) e aí o consumidor é definido em termos do ato de consumo e não do seu papel no processo de troca de valor, pelo que é visto como a fonte da experiência (Belk and Costa, 1998; Kozinets, 2002).

Para a abordagem do marketing experiencial o objeto é especificamente uma oferta do mercado e que é desenvolvido por uma empresa e apresentado aos consumidores pela experiência que a oferta pode proporcionar. O grau de participação do consumidor na produção/criação da experiência é variável, mas a plataforma básica é criada ou montada pela empresa e oferecida ao consumidor normalmente por meio de um preço.

Para Gentile *et al.* (2007), o conceito de experiência do cliente (*customer experience*) foi concebido primeiramente nos meados da década de 1980 quando, junto com a corrente dominante do comportamento do consumidor, a qual considerava os clientes como decisores racionais, surge uma abordagem experiencial que proporcionou uma visão original sobre o comportamento do cliente (Holbrook and Hirschman, 1982). Foram então reconsideradas variáveis até à data afastadas, como as emoções e as sensações (Addis and Holbrook, 2001).

O conceito de experiência do cliente ganhou mais relevância na década de 1990, sobretudo com o livro sobre *Experience Economy* de Pine II and Gilmore (1999), em que as experiências são apresentadas como a nova oferta económica e como o passo seguinte depois das matérias-primas, bens e serviços, numa chamada progressão do valor económico (*progression of economic value*).

Mas, tal como Gentile *et al.* (2007) realçam, o ponto de partida é o modo renovado de considerar o próprio conceito de consumo, ou seja, como uma experiência holística que envolve uma pessoa (em oposição ao cliente) num todo em diferentes níveis e em toda a interação entre a pessoa e a empresa ou a oferta da empresa (LaSalle and Britton, 2003). Ainda nesta perspetiva, as empresas não vendem experiências mas antes fornecem os artefactos e os contextos que conduzem às experiências, os quais podem ser empregues de forma apropriada pelos consumidores para cocriar as suas próprias e únicas experiências (Carù and Cova, 2003; Carù and Cova, 2007).

De facto, Schmitt (1999) defende que um *marketer* necessita de providenciar o ambiente e cenários certos para fazer emergir as experiências desejadas pelos clientes. Mais recentemente Carù and Cova (2007) referem-se à experiência de consumo, na qual identificam um contínuo de experiências de consumo que se estende das experiências que são principalmente construídas pelos consumidores até àquelas que são em boa parte desenvolvidas pelas empresas, passando pelas experiências que são cocriadas pelos consumidores e empresas.

De acordo com esta perspetiva, o papel da empresa muda em cada fase desse contínuo: desde a empresa a perseguir uma abordagem quase tradicional de marketing de produto ou de serviço, à adoção por parte da empresa de uma abordagem

holística e de imersão do marketing experiencial (assim proporcionando experiências por meio das quais um consumidor “mergulha” numa experiência que é total e detalhadamente desenvolvida pela empresa), passando por uma fase de cocriação, na qual a empresa fornece ao consumidor uma plataforma básica que é usada por este para moldar e obter a sua própria experiência (Gentile *et al.*, 2007).

Apesar das diversas contribuições científicas, existem, segundo Gentile *et al.* (2007), diversas interpretações e conceptualizações com respeito à experiência do cliente, sendo que apenas algumas empresas têm adotado esta perspectiva, o que se pode explicar por duas razões fundamentais: pela ausência de uma terminologia comum e de um modo de pensar partilhado na literatura existente, por um lado, e pela falta de uma abordagem estruturada de gestão, a qual pode ser apenas ultrapassada por uma compreensão mais profunda do papel desempenhado pela experiência do cliente, por outro.

2.2 O conceito de experiência de consumo vivenciada

Tal como referido no ponto anterior, no campo da gestão, a definição de experiência por Carù and Cova (2003), como sendo um acontecimento de interação entre a necessidade ou desejo do consumidor e o consumo, coloca uma ênfase no processo de decisão de compra do consumidor, no qual a expectativa de experiência tanto pode ser gerada no consumidor, aquando das suas escolhas, como nas atividades de consumo, o que sugere que em qualquer organização, seja ela com fins lucrativos ou não, uma cadeia de valor é identificada, cujo *output* final pode ser traduzido pelo conceito de experiência. E esta resulta de um processo de coprodução e de cocriação de valor com elevada participação e influência do cliente (Oyner and Korelina, 2016).

Significa que tanto a perceção após a vivência da experiência de consumo como a variação da perceção devido à vivência da experiência conduz à satisfação do cliente (Sharma and Rather, 2015). Deste modo, a perceção de qualidade do serviço após a vivência da experiência de estada no hotel, com a variação de perceção de qualidade durante a vivência, quando comparado com a respetiva expectativa, conduz à satisfação do cliente com a experiência vivenciada no hotel. Significa que o cliente encontrou melhor do que esperava (Zeithaml *et al.*, 2009).

A economia da experiência bem como o sistema de produção da experiência, ou seja, a maneira de produzir e entregar a experiência, abrangem várias indústrias (Sundbo and Darmer, 2008). Segundo Sundbo and Darner (2008), o referido sistema inclui o modelo geral de negócio, a estrutura de organização e gestão da produção da experiência, a gestão estratégica dos recursos humanos e das capacidades necessárias, para criar a experiência, a maneira como a empresa inova, e a maneira como a experiência é entregue.

Não obstante, em vez de produção da experiência e sua entrega, assume-se a utilização dos termos “proporcionar” a experiência pela empresa (oferta económica) e “revelador” enquanto a experiência dura (abastecimento ou entrega pela empresa), os quais são utilizados por Pine II and Gilmore (1998) e Gilmore and Pine II (2002).

Para Schmitt (1999), uma experiência é um acontecimento individual que ocorre como resposta a um estímulo, o qual provoca diferentes sensações, emoções, comportamentos e valores relacionais que substituem os valores funcionais. E Bigné, Andreu and Gnoth (2005) referem que existe uma relação entre as emoções, a satisfação e a experiência. Na sua investigação, estes autores concluem que na experiência turística as emoções podem ser elementos explicativos da satisfação do turista.

As experiências são proporcionadas e também cocriadas através da interação entre o cliente e o prestador do serviço, numa perspectiva de cocriação de valor, tal como sugerem Prahalad and Ramaswamy (2003) e Chathoth *et al.* (2013). Para Heinonen, Strandvik, Mickelsson, Edvardsson and Sundström (2010), o cliente do serviço é mais considerado o foco da atenção no processo de interação e cocriação de valor, numa lógica dominante do cliente de serviço, do que na lógica dominante do serviço. Sabe-se que a lógica dominante do serviço tem sido usada por Vargo and Lusch (2004) e Lusch and Vargo (2011).

Também Lusch, Vargo and O'Brien (2007) referem que a lógica dominante do serviço fornece a *framework* para clarificar o conceito de serviço e o seu papel na troca de valor e na competitividade da empresa através do serviço. Neste processo de troca, a prestação do serviço e o consumo do mesmo ocorrem em simultâneo, o que traduz a natureza interativa das atividades de serviço.

Mas, para Grönroos and Ravald (2011), a lógica de serviço deve permitir a criação recíproca de valor, sendo esta a base do negócio. Significa que o fornecedor é um facilitador da criação de valor do cliente com recursos e processos interativos (bens, atividades de serviço, informação, etc.) e, durante as interações com o cliente, o fornecedor torna-se um cocriador de valor.

Por outro lado, a experiência do cliente, como um constructo, deve ser conceitualmente validado, o que é aliás proposto na investigação conceitual de Palmer (2010). De facto, Palmer (2010) aborda a experiência do cliente no âmbito da gestão da experiência do cliente, matéria que tem vindo a assumir importância na literatura, cuja evidência é corroborada pelo autor ao afirmar que muitas empresas abordam a gestão da experiência do cliente como sucessor da gestão da relação com o cliente.

Não obstante, Frow and Payne (2007) defendem que a experiência necessita de ser considerada ao longo do ciclo de vida da relação com o cliente. Ora, Palmer (2010) conclui que a experiência pode ser formada dentro de qualquer parte do processo de prestação do serviço, mesmo na que não é controlada pela empresa.

Ainda segundo Frow and Payne (2007), a relação do cliente com o fornecedor do serviço pode englobar centenas de experiências que se manifestam em diferentes pontos de contacto e momentos, envolvendo a memória do cliente. Os mesmos autores defendem que a memória na experiência de serviço é objeto de debate, pelo que se questiona o efeito da memória. Por outro lado, a memória presume “respostas aprendidas,” podendo estas serem inconsistentes com a definição de experiência do cliente, que enfatiza as respostas a estímulos da empresa, tal como Jüttner *et al.* (2013) referem, também citando os autores atrás referidos.

Para Knutson, Bleck, Kim and Cha (2009), a experiência do cliente é um constructo interno com natureza pessoal e individualizada, e que é extremamente difícil de medir. Não obstante, para medir a experiência de serviço do cliente, Jüttner

et al. (2013) propõem uma métrica que integra duas técnicas estabelecidas no comportamento do consumidor e no marketing de serviços, isto é, a *laddering technique* (Reynolds and Gutman, 1988; Reynolds and Philips, 2008) e a *sequential incident technique* (Gremler, 2004; Strauss and Weinlich, 1997). De salientar que Jüttner *et al.* (2013) consideram que tais técnicas são acessíveis às pequenas empresas.

Por outro lado, é relevante que Jüttner *et al.* (2013) assumam que a experiência do cliente é composta por quatro vias (forte influência do processamento cognitivo, processamento maioritariamente cognitivo, processamento maioritariamente emocional e forte influência do processamento das emoções) de interação em contínuo entre o processamento cognitivo e as emoções. Contudo, não é possível perceber qual das quatro vias ocorre em primeiro lugar. Tal constitui um interesse de investigação futura, exatamente por não se saber, em concreto, a que via se dirigem os estímulos da empresa e qual dos processamentos é atingido em primeiro lugar e os restantes, numa certa ordem, se tal for possível. Consequentemente, não é perceptível à empresa a direção das respostas, pela intensidade das reações dos clientes, aos estímulos.

Através de investigação anterior, verifica-se que as respostas cognitivas e emocionais predizem a satisfação do cliente (e.g. Homburg, Koschat and Hoyer, 2006; Phillips and Baumgartner, 2002). Também a definição de estímulos de natureza cognitiva e emocional, para a experiência do cliente, tem sido um tema que tem conduzido a literatura sobre o desenho da experiência de serviço (e.g. Berry, Carbone and Haeckel, 2002; Laros and Steenkamp, 2005; Mattila and Enz, 2002).

Por sua vez, Woodruff, Cadotte and Jeukens (1983) entendem a satisfação como uma resposta emocional positiva ou negativa à desconfirmação entre o que se espera e o que se encontra numa determinada zona de diferença. Já Hunt (1977) tinha entendido que o prazer retirado da experiência de consumo é a avaliação de que a experiência foi, no mínimo, tão boa como se esperava que fosse. Isto implica avaliação cognitiva.

Giese and Cote (2000) encontraram na literatura uma definição unânime que considera a satisfação como um tipo de resposta, é emocional, baseada numa avaliação cognitiva de expectativas, produtos, experiências de consumo, entre outros, que ocorre num período específico, tal como antes da compra, depois do consumo ou depois da experiência alargada.

Por outro lado, a Organização Mundial de Turismo (OMT, 1985) define satisfação do cliente de turismo como um conceito psicológico que envolve o sentimento de bem-estar que resulta da obtenção do que alguém deseja e espera de um produto ou serviço. Sendo a satisfação um estado emocional do turista, o levantamento da questão das emoções e da sua importância no processo de decisão de compra, tal como abordado por Holbrook and Hirschman (1982), tem perfeito enquadramento. Estes autores introduziram o conceito de consumo hedónico, no qual o comportamento do consumidor é influenciado por estímulos sensoriais (visão, audição, olfato, tato e paladar) e por emoções positivas ou negativas, tal como o prazer ou mau humor, e ainda por fantasias do consumidor sobre aspetos que nunca experienciou. Também Parasuraman, Zeithaml and Berry (1988) entendem a satisfação como o conjunto das emoções que resultam da confirmação ou não das expectativas e sentimentos formulados previamente em relação à experiência de consumo. Por isso, as emoções positivas têm efeito na satisfação.

2.3 Incorporação da experiência de consumo no desenho do serviço

Para gerir o desenho da qualidade do serviço é necessário arte na reunião das expectativas do cliente com a experiência que se quer consistente ao longo dos pontos de contacto que integram a prestação do serviço (Lovlie, Downs and Reason, 2008). Por sua vez, o desenho do serviço consiste em gerar ideias e na sua implementação, conduzindo ao crescimento dinâmico da empresa e do lucro (Nixon, 2010). Contudo, segundo Voss *et al.* (2008), o modelo de desenho do serviço experiencial resulta de um complexo agrupamento de ofertas tangíveis e intangíveis desenhadas com a intenção de evocar a resposta “Wow!”

Deste modo, a experiência do cliente tornou-se bastante importante, por permitir diferenciar o serviço e agregar-lhe valor (Sarmiento and Patrício, 2014). As experiências são vivenciadas em cada um dos aspetos da oferta do serviço, abrangendo a qualidade do atendimento ao cliente, o ambiente circundante e a confiança, bem como a interação do cliente com o prestador do serviço e com outros clientes. Portanto, o valor é cocriado pelo cliente em cada momento e ponto de encontro, através das suas interações com o prestador do serviço (Vargo and Lusch, 2004).

Por sua vez, Sarmiento and Patrício (2014), no estudo da experiência de serviço com utilização de tecnologia, referem a necessidade de aprofundar a compreensão da interação do cliente com o prestador do serviço nas diferentes tarefas envolvidas nas operações de serviço, identificando os detalhes em diferentes pontos de contacto do serviço, os momentos e o que estava envolvido para melhorar a experiência de interação. Neste sentido, Patrício, Fisk and Cunha (2008) sugerem a utilização do *Service Experience Blueprint* (SEB), o qual, segundo os mesmos autores, permite a compreensão dos detalhes da experiência de interação do cliente em cada ponto de contato, a conexão entre pontos de contato e o mapeamento de resultados.

Por exemplo, no serviço com dispositivos móveis, outros métodos, tal como observações, entrevistas, mapeamento de contexto e mapeamento de viagem permitem compreender a experiência do cliente e integrar as diferentes dimensões da experiência de acordo com a sua importância em relação aos diferentes estágios de desenvolvimento e prestação do serviço, o que facilita a incorporação da experiência no desenho do serviço (Sarmiento and Patrício, 2014).

Para Khan, Garg and Rahman (2015), a experiência do cliente incorpora a interação entre o prestador do serviço e o cliente, incluindo os aspetos funcionais e emocionais desenvolvidos através de diferentes pontos de contacto com preocupação pela qualidade da experiência nas operações do hotel. Esta evidência resulta do estudo empírico que estes autores realizaram com os hóspedes de hotéis na Índia, a fim de capturar a verdadeira essência do constructo experiência do cliente.

Ainda assim, continua-se a não encontrar na literatura uma abordagem ou um trabalho empírico que permita compreender a incorporação da experiência de consumo do serviço de alojamento nas operações do hotel, com base no conhecimento das expectativas do cliente.

2.4 Variáveis determinantes da experiência de consumo

No estudo com estabelecimentos de bebidas, Bujisic (2014) utiliza as variáveis qualidade do produto, qualidade do serviço, meio ambiente físico, meio ambiente social, informação conveniente e percepção da equidade de preços como antecedentes da experiência do cliente, sendo esta tratada com as dimensões estado experiencial cognitivo e estado experiencial afetivo, e ainda a variável moderadora tipo de estabelecimento. O resultado da experiência de consumo é analisado ao nível do comportamento de fidelização do cliente. Ora, para além deste estudo, outros não são encontrados que permitam, com base no conhecimento das expectativas do cliente, compreender a incorporação da experiência de consumo do serviço de alojamento nas operações do hotel.

3. PROPOSTA DE MODELO DE ANÁLISE

Os estudos prévios não propõem um modelo que seja adequado para avaliar a formação da intenção por parte dos estabelecimentos hoteleiros de incorporar a experiência de consumo no desenho do serviço ou que expliquem a incorporação ou não da experiência no desenho. Por isso, desenvolve-se um modelo explicativo da incorporação ou não da ECDS, do qual derivam as hipóteses de investigação (Figura 1). Neste sentido postula-se que a intenção de incorporação da ECDS, por parte dos responsáveis dos estabelecimentos hoteleiros no Alentejo, está associada, pelo menos, aos seguintes fatores relacionados com as expectativas dos clientes, enquanto coprodutores do serviço:

- Tipologia de estabelecimento hoteleiro;
- Qualidade do produto;
- Qualidade do serviço;
- Meio ambiente físico;
- Meio ambiente social;
- Serviço conveniente;
- Percepção da equidade do preço;
- Incorporação da ECDS dos concorrentes.

Assim, a definição de um modelo explicativo da formação da intenção de incorporar a ECDS, integrando um conjunto de fatores que facilitam a incorporação, é desenvolvido para ser testado empiricamente nos estabelecimentos hoteleiros no Alentejo.

Com este modelo de análise procura-se encontrar resposta para as questões de investigação levantadas.

3.1 Qualidade do produto

Para Peri (2006), os clientes têm geralmente elevadas expectativas em relação à qualidade do produto, o que muitas vezes é mais importante que outros atributos de qualidade, e reconhece que a qualidade dos produtos nas indústrias de restauração e bebidas é o principal atributo a ser considerado como condição necessária para satisfazer as expectativas do cliente, o que, segundo Namkung and Jang (2007) está relacionado com a natureza do constructo qualidade, por exemplo, dos alimentos em ambiente de restaurante, tal como seja o sabor, a apresentação, a variedade, a frescura, a temperatura e a opção pelo saudável, os quais podem ser considerados como fatores de qualidade.

3.2 Qualidade do serviço

Segundo Zeithaml *et al.* (2009), a qualidade do serviço é um atributo importante que afeta a escolha e o comportamento de compra do consumidor, para além de ser um antecedente da satisfação do cliente (Qin and Prybutok, 2008), sendo esta um antecedente da sua fidelização (Polyorat and Sophonsiri, 2010). Zeithaml *et al.* (2009) definem a qualidade do serviço como a percepção do cliente em relação a cada interação que supera a expectativa gerada, sendo essa qualidade vista como um benefício intangível proporcionado pelos colaboradores da empresa no seu desempenho em cada ponto e momento de contacto da prestação do serviço.

A qualidade é percebida durante o consumo que ocorre em simultâneo com a produção do serviço, em cada momento de interação no ponto de contacto, sendo o cliente um coprodutor. Significa que as expectativas do cliente são pontos de referência para a percepção da qualidade do serviço prestado.

Pode incluir os fatores: pontualidade, responsividade, segurança, atenção pessoal, simpatia e empatia (Bujisic, 2014; Kim, Ng and Kim, 2009; Rust and Oliver, 1994; Stevens, Knutson and Patton, 1995).

3.3 Meio ambiente físico

Encontra-se evidência de que a qualidade do meio ambiente físico tem uma importância significativa na indústria de serviços (Bitner, 1990; Wall and Berry, 2007). Bitner (1990) utiliza o conceito de *servicescape* para se referir ao ambiente físico construído ou artificial no qual o encontro de serviço ocorre e que tem efeito, quer no prestador do serviço quer no cliente, o qual faz o seu julgamento de acordo com o que encontra e observa ao nível das dimensões: condições do ambiente, *layout* do espaço e funcionalidade, sinais, símbolos e objetos. Trata-se de elementos tangíveis com impacto na percepção de qualidade por parte do cliente ao efetuar a comparação com as expectativas geradas.

O ambiente, ou seja, o conjunto das evidências físicas e de outros elementos tangíveis, contribui para a qualidade da experiência do cliente. Deste modo, Katsigris and Thomas (2008) referem que um bom ambiente físico inclui o que designam

por fatores “soft”, abrangendo a imagem, estilo, conforto, marketing e ambiente, e “hard”, incluindo a eficiência operacional, custo, segurança, limpeza e manutenção, ergonomia, ruído e alocação de espaço, o que, segundo Bujisic (2014), na hotelaria, em termos de desenho das instalações, tem contribuído para o aumento das taxas de ocupação.

Pode incluir os fatores: qualidade do espaço físico, qualidade dos acessos, iluminação, design, decoração, mobiliário, instalações físicas, *layout*, conforto, limpeza e aparência do pessoal de contacto (Ryu and Jang, 2008).

3.4 Meio ambiente social

Segundo Heide and Gronhaug (2006), o conceito de ambiente social é geralmente conhecido como “atmosfera” e pode influenciar a percepção de qualidade do cliente quanto ao ambiente em que ocorre o encontro de serviço, o que traduz a sinergia de clientes e do prestador com o ambiente da prestação do serviço. Por sua vez, Bitner (1992) refere que o *servicescape* e a atmosfera representam dois conceitos de uma configuração de serviço.

Para Heide and Gronhaug (2006), a atmosfera é criada por indivíduos no ambiente da prestação do serviço e consiste em características que podem representar alguns atributos físicos que não se limitam ao ambiente, sendo, de acordo com estudos, essencial para suscitar sentimentos agradáveis e gerar satisfação no cliente.

Pode incluir os fatores: programa de eventos, música ambiente, número de clientes em interação uns com os outros e com o prestador do serviço, a aparência do cliente, o humor do cliente, a apreciação do cliente (Bujisic, 2014).

3.5 Serviço conveniente

A conveniência do serviço constitui um tópico que tem merecido atenção na investigação de marketing (Colwell, Aung, Kanetkar and Holden, 2008) e está relacionado com o tempo e o esforço dos consumidores na aquisição de produtos ou serviços no processo de consumo (Brown, 1990), muitas vezes inseparável do contexto de serviço e do processo de consumo do cliente (Berry, Seiders and Grewall, 2002). Berry *et al.* (2002) desenvolveram cinco dimensões de conveniência de serviço: percepção de tempo e despesa na tomada de decisão de compra (decisão conveniente), percepção do tempo e esforço para o início da prestação do serviço (acesso conveniente), percepção de tempo e esforço imputados a uma transação (transação conveniente), percepção do tempo e esforço para o consumidor experienciar os principais benefícios do serviço (benefícios convenientes), percepção do tempo e esforço para o cliente reiniciar o contacto com a empresa, após a experiência dos benefícios do serviço (pós-benefício conveniente). Para além destes, segundo Bitner (1992), junta-se a percepção da informação prestada sobre produtos e serviços comunicada ao cliente, podendo usar sinais ou símbolos apropriados (informação conveniente).

Assim, pode incluir-se os fatores: localização, estacionamento, mapa de viagem e acesso, informação de preços e serviços, informação de atrações e de eventos, características do pessoal de contacto, forma de atendimento, falhas e segurança.

3.6 Percepção da equidade de preços

Na avaliação de um serviço, a equidade de preço torna-se um dos fatores mais importante a considerar pelo cliente. De acordo com Chung and Petrick (2013), alguns clientes são influenciados nas suas decisões por preços baixos e outros estão dispostos a pagar mais por um produto de melhor qualidade. O julgamento do preço justo é explicado como uma impressão do cliente sobre o processo de transação que sugere tratar-se de preço razoável e aceitável (Chung, Kyle, Petrick and Absher, 2011). Pode incluir os fatores: estratégia de comunicação de preços e expectativa do cliente, comunicação e explicação da variabilidade de preços ao cliente (Choi and Mattila, 2005).

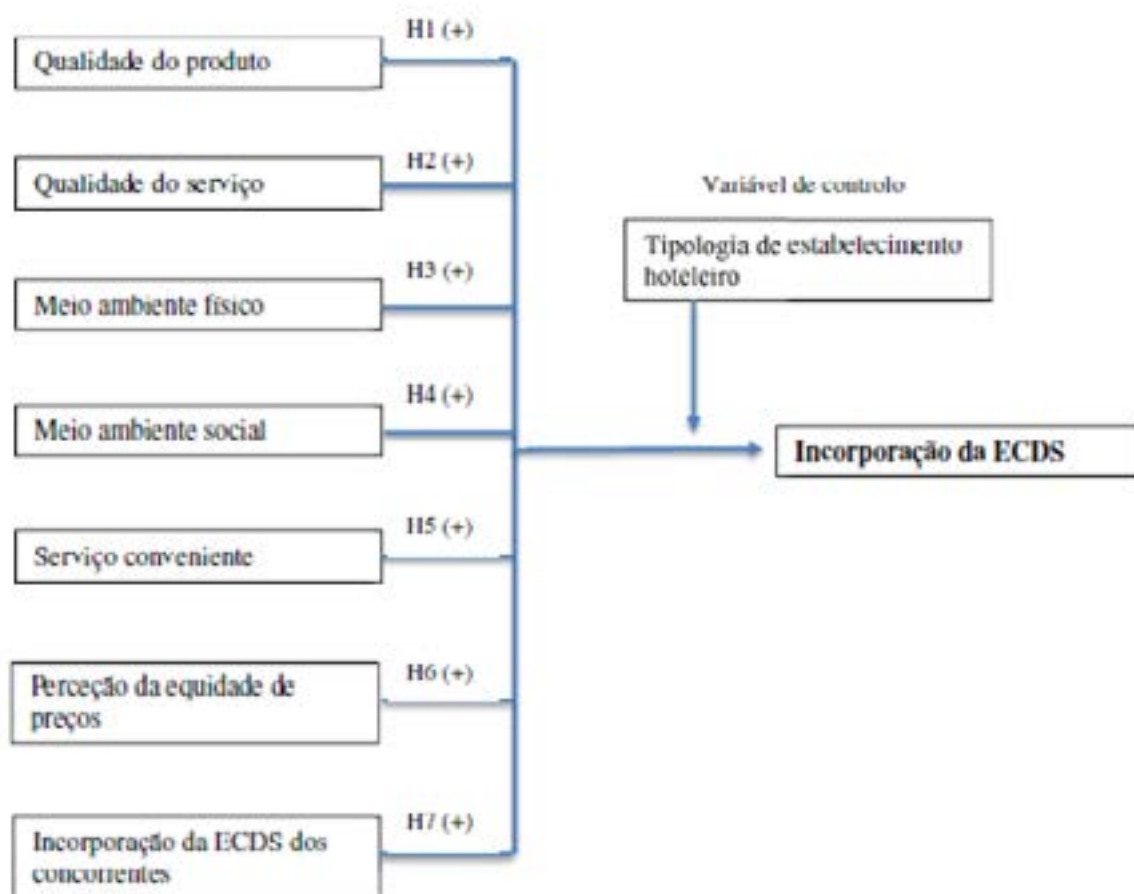
3.7 Incorporação da ECDS dos concorrentes

Segundo Krassa (1988), as decisões tomadas diariamente dependem geralmente das percepções dos decisores das empresas sobre os seus parceiros que trabalham em ambientes similares e que já tomaram decisões semelhantes. Por sua vez, Carr and Harris (2004) defendem que existe uma tendência para a imitação. Ora, se o contexto ambiental envolve fatores relacionados com a envolvente externa onde o estabelecimento hoteleiro se insere, e se este entende que uma parte dos concorrentes já incorpora a ECDS ou tem a intenção de incorporar, então tal pode influenciar positivamente a decisão de incorporação da ECDS.

3.8 Tipologia de estabelecimento hoteleiro

Vários estudos utilizam fatores que moderam ou controlam o efeito de variáveis na experiência de consumo (por exemplo, Verhoel, Lemon, Parasuraman, Roggeveen, Tsiros and Schlesinger, 2009; White and Dahl, 2006). No estudo de Verhoel *et al.* (2009), o tipo de estabelecimento atua como um moderador entre vários antecedentes da experiência do cliente. Também Walls, Okunus, Wang and Kwun (2011) evidenciam que o efeito do ambiente físico e da qualidade do serviço na experiência do cliente é diferente conforme a tipologia de estabelecimento hoteleiro.

Figura 1 – Proposta de modelo de análise



3.9 Hipóteses propostas para teste

- H1: Os estabelecimentos com maior nível de concordância com a qualidade do produto nas expetativas do cliente identificadas têm maior propensão para incorporar a ECDS;
- H2: Os estabelecimentos com maior nível de concordância com a qualidade do serviço nas expetativas do cliente identificadas têm maior propensão para incorporar a ECDS;
- H3: Os estabelecimentos com maior nível de concordância com o meio ambiente físico nas expetativas do cliente identificadas têm maior propensão para incorporar da ECDS;
- H4: Os estabelecimentos com maior nível de concordância com o meio ambiente social nas expetativas do cliente identificadas têm maior propensão para incorporar a ECDS;
- H5: Os estabelecimentos com maior nível de concordância com o serviço conveniente nas expetativas do cliente identificadas têm maior propensão para incorporar a ECDS;
- H6: Os estabelecimentos com maior nível de concordância com a percepção da equidade de preços nas expetativas do cliente identificadas têm maior propensão para incorporar a ECDS;
- H7: Os estabelecimentos que percebem uma maior incorporação da ECDS dos concorrentes têm maior propensão para incorporar a ECDS.

4. CONSIDERAÇÕES FINAIS

No seguimento do enquadramento teórico, verifica-se que a respostas às questões de investigação apenas podem ser analisadas ao nível da proposta de modelo de análise antes desenvolvido, não significando que este traduza as respostas, como se fosse a resolução de um problema de investigação formulado. Mas, pode constituir a explicação de um caminho a seguir.

Na hotelaria e em outras indústrias a qualidade do serviço e a satisfação do cliente com a experiência de consumo vivenciada são determinados pelo desenho do serviço que resulta, em parte, do conhecimento e interpretação das expetativas do cliente em cada momento e ponto de contacto no encontro de serviço e do processo de interação com o cliente. Assim, segundo Zeithaml *et al.* (2009), o foco no cliente implica que o estabelecimento hoteleiro reconheça que os clientes possuem diferentes tipos de expetativas quanto ao desempenho do serviço. As expetativas são crenças sobre a prestação do serviço,

constituindo motivos de escolha da experiência, e que servem como padrões ou pontos de referência em relação aos quais o desempenho é julgado. Uma vez que os clientes comparam as suas percepções de desempenho do serviço com esses pontos de referência, quando avalia a qualidade do serviço, o conhecimento profundo sobre as expectativas de experiência do cliente (motivos de escolha) é fundamental para os profissionais de marketing e para a gestão das operações associadas à prestação do serviço de alojamento.

O modelo de análise proposto será empiricamente testado nos estabelecimentos hoteleiros no Alentejo. Tratar-se-á de um estudo correlacional que testa o conjunto das sete hipóteses, sendo a unidade de análise o estabelecimento hoteleiro de uma população de cerca de 121 estabelecimentos registados no Turismo de Portugal. Para testar as hipóteses realizar-se-á um conjunto de testes estatísticos, nomeadamente, a análise fatorial confirmatória (AFC) e a regressão logística, a qual permite a evidência no sentido de se considerar os fatores que serão determinantes e significativos no cálculo da probabilidade de um dado estabelecimento hoteleiro poder incorporar a ECDS. Também é possível obter a evidência da tipologia de estabelecimento que terá maior propensão para incorporar a ECDS.

Assim, o desenho da investigação caracteriza-se por: propósito de teste de hipóteses; tipo correlacional; seccional no horizonte temporal; a unidade de análise é o estabelecimento hoteleiro; o tipo de estudo é de campo, através de inquérito aos dirigentes dos estabelecimentos hoteleiros.

O modelo será testado com dados obtidos através de questionário construído com base no modelo explicativo desenvolvido. O questionário será disponibilizado via Google Forms, o qual será previamente testado junto de 30 estabelecimentos hoteleiros escolhidos aleatoriamente na base de dados de 121 estabelecimentos, antes da aplicação definitiva. Este processo de recolha de resposta será operacionalizado em junho e julho de 2017.

Procurar-se-á, então, estimar a probabilidade de um determinado estabelecimento hoteleiro incorporar a ECDS, utilizando o modelo de regressão logística (Almeida, 2008) que permitirá evidenciar uma relação não linear entre a variável dependente binária e o conjunto de variáveis explicativas. Esta abordagem de regressão logística, utilizando um modelo não linear (Long, 1997), envolve o conceito fundamental de *odds ratio* (Menard, 2001), para além dos conceitos de probabilidade e de transformação *logit*.

Segundo Almeida (2008), o interesse na utilização de um modelo *logit* assenta basicamente nos seguintes motivos (Hair, Andersosn, Tatham and Black., 2001):

- 1) permite modelar fenómenos em que a variável dependente é binária;
- 2) é uma técnica genérica e robusta, pois a sua aplicação é apropriada a várias situações de investigação, permitindo operar quer com regressores quantitativos quer com regressores *dummy*;
- 3) não pressupõe a normalidade multivariada do conjunto dos regressores, sendo este um pressuposto, por exemplo, da análise discriminante que também permite modelar variáveis dependentes binárias;
- 4) é uma técnica com bastantes semelhanças relativamente à regressão linear múltipla.

O modelo de regressão logística é consistente com o modelo representado na Figura 1 do qual derivam as sete hipóteses de investigação. A confirmação destas hipóteses permitirá responder às questões de investigação números um e dois. A resposta à questão número três será possibilitada pela divisão das observações em grupos por tipologias de estabelecimentos hoteleiros. Com a aplicação do referido modelo de regressão logística na análise dos dados encontrar-se-á algum fator ou fatores que discriminem entre os tipos de estabelecimentos com maior ou menor propensão para a incorporação da ECDS.

Esta investigação permitirá compreender a percepção dos dirigentes dos estabelecimentos hoteleiros no Alentejo sobre a expectativa de experiência de consumo por parte do cliente, através da evidência sobre a propensão para o estabelecimento hoteleiro incorporar a experiência de consumo no desenho do serviço de alojamento, bem como verificar esta propensão por tipologia de estabelecimento, e sobre a importância dos fatores que determinam a intenção de incorporar a referida experiência no desenho do serviço, o que assegura que o problema em estudo é relevante para a comunidade científica, por permitir ainda fornecer alguns contributos essenciais: formulação de estratégias e definição de práticas de gestão de operações conducentes ao melhor nível de qualidade em cada momento e ponto de contacto entre pessoal de contacto e cliente, tornando a experiência de consumo única e memorável, o que tem implicações para o marketing e para a gestão das operações.

REFERÊNCIAS

- Addis, M. and Holbrook, M. B. (2001). On the conceptual link between mass customisation and experiential consumption: an explosion of subjectivity. *Journal of Consumer Behaviour* 1 (1): 50 – 66.
- Almeida, N. M. (2008). *Uma avaliação de comunicação de marketing na hotelaria*. Tese de doutoramento não publicada. Lisboa: ISEG - Universidade de Lisboa.
- Arnould, E. J and Price, L (1993). River Magic: extraordinary experience and the extended service encounter. *Journal of Consumer Research* 20 (1): 24(22).
- Baker, M. J. (2000). *Marketing Theory: a student text*. London: Thomson Learning.
- Belk, R. W. and Costa, J. A. (1998). The Mountain Man Myth: A Contemporary Consuming Fantasy. *Journal of Consumer Research* 25 (3): 218 – 240.
- Berry, L., Carbone, L. and Haeckel, S. (2002). Managing the total customer experience. *MIT Sloan Management Review*. 43 (3): 95 – 89.

- Berry, L. L., Seiders, K. and Grewal, D. (2002). Understanding service convenience. *The Journal of Marketing* 66: 1 - 17.
- Bigné, J. E., Andreu, L. and Gnoth, J. (2005). The theme park experience: An analysis of pleasure, arousal and satisfaction. *Tourism Management*. 26 (6): 833 – 844.
- Bitner, M. J. (1992). Servicescapes: the impact of physical surroundings on customers and employees. *The Journal of Marketing* 56(2): 57-71.
- Bitner, M. J. (1990). Evaluating service encounters: the effects of physical surroundings and employee responses. *The Journal of Marketing* 54 (April): 69 - 82.
- Bitner, M. J. (1992). Servicescapes: the impact of physical surroundings on customers and employees. *The Journal of Marketing* 56 (2):57 - 71.
- Brown, L. G. (1990). Convenience in services marketing. *Journal of Services Marketing* 4 (1): 53 - 59.
- Bujisic, M. (2014). Antecedents and Consequences of Customer Experience in Beverage Establishments. *Electronic Theses and Dissertations*. Paper 4549. Florida, Orlando: University Of Central Florida.
- Carù, A. and Cova, B. (2003). Revisiting consumption experience: a more humble but complete view of the concept. *Marketing Theory* 3 (2): 259 - 278.
- Carù, A. and Cova, B. (2007). *Consuming experience*. London, UK: Routledge.
- Carr, C. and Harris, S. (2004). The impact of Diverse National Values on Strategic Investment Decisions in the Context of Globalization. *International Journal of Cross Cultural Management* 4 (1): 77 – 79.
- Chad, D. D. and Mattsson, J. (1996). An Empirical of Customer Satisfaction in Tourism. *The Service Industries Journal* 16 (3): 305 – 320.
- Chauhan, V. and Manhas, D. (2014). Dimensional analysis of customer experience in civil aviation sector. *Journal of Service Research*. 14 (April – September): 75 – 98.
- Chathoth, P., Altinay, L., Harrington, R. J., Okumus, F. and Chan, E. S. W. (2013). Co-production versus co-creation: A process based continuum in the hotel service context. *International Journal of Hospitality Management*. 32 (March): 11 - 20.
- Choi, S. and Mattila, A. S. (2005). Impact of information on customer fairness perceptions of hotel revenue management. *Cornell Hotel and Restaurant Administration Quarterly* 46 (4): 444 - 451.
- Chung, J. Y. and Petrick, J. F. (2013). Price Fairness of Airline Ancillary Fees An Attributional Approach. *Journal of Travel Research* 52 (2): 168 - 181.
- Chung, J. Y., Kyle, G. T., Petrick, J. F. and Absher, J. D. (2011). Fairness of prices, user fee policy and willingness to pay among visitors to a national forest. *Tourism Management* 32 (5): 1038 - 1046.
- Colwell, S. R., Aung, M., Kanetkar, V. and Holden, A. L. (2008). Toward a measure of service convenience: multiple – item scale development and empirical test. *Journal of Service Marketing* 22 (2): 160 – 169.
- Craig, C. S. and Douglas, S. P. (2000). Configural Advantage in Global Markets. *Journal of International Marketing* 8 (1): 6-26.
- Dalli, D. and Romani, S. (2007). Consumption Experiences and Product Meanings: Pasta for Young Italian Consumers (pp. 65 – 78). In A. Carù and B. Cova (Eds.). *Consuming Experience*. Oxon: Routledge.
- Dasu, S. and Chase, R. B. (2013). *The customer service solution. Managing emotions, trust, and control to Win your customer's business*. USA: McGraw-Hill.
- Farinet and Ploncher (2002). *Customer Relationship Management*. Milan: ETAS.
- Frow, P. and Payne, A. (2007). Towards the “perfect” customer experience. *Journal of Brand Management*. 15 (2): 89 – 101.
- Gentile, C., Spiller, N. and Noci, G. (2007). How to sustain the customer experience: an overview of experience components that co-create value with the customer. *European Management Journal*. 25: 395 – 410.
- Giese, J. L. and Cote, J. A. (2000). Defining consumer satisfaction. *Academy of Marketing Science Review*. 2000(1): 1 – 24.
- Gilmore, J. H. and Pine II, J. (2002). Customer experience places: the new offering frontier. *Strategy and Leadership*. 30 (4): 4 – 11.
- Gremler, D. (2004). The critical incident technique in service research. *Journal of Service Research*. 7 (1): 65 – 89.
- Grönroos, C. and Ravald, A. (2011). Service as business logic: implications for value creation and marketing. *Journal of Service Management*. 22 (1): 5 – 22.
- Hair, Jr. J. F., Anderson, R. E., Tatham, R. L. and Black, W. C. (2001). *Análisis Multivariante*. 5ª edición. Madrid: Prentice Hall.
- Heide, M. and Gronhaug, K. (2006). Atmosphere: conceptual issues and implications for hospitality management. *Scandinavian Journal of Hospitality and Tourism* 6 (4): 271 - 286.

- Heinonen, K., Strandvik, T., Mickelsson, K.-J., Edvardsson, B., Sundström, E. and Andersson, P. (2010). A customer-dominant logic of service. *Journal of Service Management*. 21(4): 531 - 548.
- Holbrook, M. B. and Hirschman, E. C. (1982). The experiential aspects of consumption: consumer fantasies, feelings, and fun. *Journal of Consumer Research*. 9 (2): 132 – 140.
- Holt, D. B. (1995). How Consumers Consume: A Typology of Consumption Practices. *Journal of Consumer Research* 22 (1): 1 – 16.
- Homburg, C., Koschate, N. and Hoyer, W. (2006). The role of cognition and affect in the formation of customer satisfaction: a dynamic perspective. *Journal of Marketing*. 70 (3): 21 – 31.
- Hunt, K. H. (1977). Customers Satisfaction / dissatisfaction – Overview and Future Directions. In
- Johns, N. (1999). What is this thing called service? *European Journal of Marketing* 33(9/10): 958 – 974.
- Joy, A. and Sherry, J. F. (2003). Speaking of Art as Embodied Imagination: A Multisensory Approach to Understanding Aesthetic Experience. *Journal of Consumer Research* 30 (2): 259 – 282.
- Jüttner, U., Schaffner, D., Windler, K. and Maklan, S. (2013). Customer service experiences. Developing and applying a sequential incident laddering technique. *European Journal of Marketing*. 47 (5/6): 738 – 768.
- Katsigris, C. & Thomas, C. (2008). *Design and equipment for restaurants and foodservice: a management view*. NJ: John Wiley and Sons.
- Khan, I., Garg, R. J. and Rahman, Z. (2015). Customer Service Experience in Hotel Operations: An Empirical Analysis. *Procedia-Social and Behavioral Sciences* 189: 266 – 274.
- Kim, W. G., Ng, C. Y. N. and Kim, Y. (2009). Influence of institutional DINESERV on customer satisfaction, return intention, and word-of-mouth. *International Journal of Hospitality Management* 28 (1): 10 – 17.
- Kotler, P. and Keller, K. L. (2009). *Marketing Management*. 13th edition. New Jersey: Pearson.
- Kozinets, R. V (2002). The Field Behind the Screen: Using Netnography for Marketing Research in Online Communities. *Journal of Marketing Research* 39 (1): 61-72.
- Kozinets, R. V., Sherry, J. F., Storm, D., Duhachek, A., Nuttavuthisit, K. and Deberry-Spence, B. (2004). Ludic agency and retail spectacle. *Journal of Consumer Research* 31 (3): 658 - 672.
- Knutson, B. J., Beck, J. A., Kim, S., and Cha, J. (2009). Identifying the dimensions of the guest's hotel experience. *Cornell Hospitality Quarterly* 50(1): 44 - 55.
- Krassa, A. (1988). Social Groups, Selective Perceptions, and Behavioral Contagion in Public Opinions. *Social Networks* 10 (1): 109 – 136.
- Lanier, C. D. (2008). *Experiential Marketing: Exploring the dimensions, characteristics, and logic of firm – driven experiences*. Dissertation of Doctor of Philosophy. Lincoln: Faculty of the Graduate College at the University of Nebraska.
- Laros, F.J.M. and Steenkamp, J.-B.E.M. (2005). Emotions in consumer behavior: a hierarchical approach. *Journal of Business Research*. 58: 1437-1445.
- LaSalle, D. and Britton, T. A. (2003). *Priceless: Turning Ordinary Products into Extraordinary Experiences*. Boston: Harvard Business School Press.
- Lindgreen, A., Vanhamme, J. and Beverland, M. B. (2009). *Memorable Customer Experiences. A Research Anthology*. Gower Publishing Limited. England.
- Long, J. S. (1997). *Regression Models for Categorical and Limited Dependent Variables*. Advanced Quantitative Techniques in the Social Sciences Series 7. Thousand Oaks, CA: Sage.
- Lovlie, L., C. Downs, C. and Reason, B. (2008). Bottom-line experiences: measuring the value of design in service. *Design Management Review* 19 (1): 73 - 79.
- Lusch, R. F. and Vargo, S. L. (2011). Service-dominant logic: a necessary step. *European Journal of Marketing*. 45 (7/8): 1298 – 1309.
- Lusch, R. F., Vargo, S. L. and O'Brien (2007). Competing thought service: Insights from service-dominant logic. *Journal of Retailing*. 83 (1): 5 – 18.
- Marconi, J. (2005). *Creating the Marketing Experience: new strategies for building relationships with your target market*. South-Western Pub.
- Mattila, A.S. and Enz, C.A. (2002). The role of emotions in service encounters. *Journal of Service Research*. 4 (4): 268-277.
- Menard, S. (2001). *Applied Logistic Regression Analysis*. Second Edition. Sage University Papers Series on Quantitative Applications in the Social Sciences, 07-106. Thousand Oaks, CA: Sage.
- Meyer, C. and Schwager, A. (2007). Understanding customer experience. *Harvard Business Review*. 85 (2): 117 – 126.

- Murphy, P., Pritchard, M. P. and Smith, B. (2000). The destination product and its impact on travel perceptions. *Tourism Management* 21 : 43 - 52.
- Namkung, Y. and Jang, S. (2007). Does Food Quality Really Matter in Restaurants? Its Impact On Customer Satisfaction and Behavioral Intentions. *Journal of Hospitality & Tourism Research* 31 (3): 387 - 409.
- Nixon, N. W. (2010). *A study of the experiential service design*. Thesis for the degree of Doctor of Philosophy. UK: University of Westminster.
- Oyner, O. and Korelina, A. (2016). The influence of customer engagement in value co-creation on customer satisfaction. *Wordwide Hospitality and Tourism Themes* 8 (3): 327 – 345.
- O’Sullivan, E. L. and Spangler, K. J. (1998). *Experience Marketing: Strategies for the new Millennium*. USA: Venture Publishing Inc.
- Palmer, A. (2010). Customer experience management: a critical review of an emerging idea. *Journal of Service Marketing*. 24 (3): 196 – 208.
- Patrício, L., Fisk, R. and Cunha, J. F. (2008). Designing multi-interface service experiences: the Service Experience Blueprint. *Journal of Service Research* 10(4): 318 - 334.
- Parasuraman, A., Zeithaml, A. V. and Berry, L. L. (1988). SERVQUAL: A multiple – item scale for measuring consumer perception of service quality. *Journal of Retailing*. 64 (1): 12 – 40.
- Pennington, A. (2016). *The Customer Experience Book. How to design, measure and improve customer experience*. UK: Pearson.
- Peppers, D. and Rogers, M. (2000). *One to One Sales Force*. New York: Currency/Doubleday.
- Pérez, A. C. (2004). *Primer proceso: diseño y creación del producto turístico*. In Fernando Bayón Maríné and Inmaculada Martín Rojo (Eds.). Operaciones y Procesos de producción en el sector turístico (pp. 195-224). Madrid: Editorial Síntesis.
- Peri, C. (2006). The universe of food quality. *Food Quality and Preference* 17 (1/2): 3 - 8.
- Phillips, D.M. and Baumgartner, H. (2002). The role of consumption emotions in the satisfaction response. *Journal of Consumer Psychology*. 12: 243-252.
- Pine II, P. J. and Gilmore, J. H. (1998). Welcome to the Experience Economy. *Harvard Business Review*. July-August: 97-105.
- Pine II, P. J. and Gilmore, J. H. (1999). *The experience economy: work is theatre & every business a stage*. Boston: Harvard Business School Press.
- Polyorat, K., and Sophonsiri, S. (2010). The influence of service quality dimensions on customer satisfaction and customer loyalty in chain restaurant context: a thai case. *Journal of Global Business and Technology* 6(2): 64 -76.
- Prahalad, C. K. and Ramaswamy, V. (2003). The New Frontier of Experience Innovation. *MIT Sloan Management Review*. 44 (4): 12-18.
- Qin, H. & Prybutok V.R. (2008). Determinants of customer-perceived service quality in fast food restaurants and their relationship to customer satisfaction and behavioral intentions. *Quality Management Journal* 15(2): 35 - 50.
- Reynolds, T. J. and Phillips, J. M. (2008). A review and comparative analysis of laddering research methods: recommendations for quality metrics. *Review of Marketing Research*. 5: 130 – 174.
- Reynolds, T. and Gutman, J. (1988). Laddering theory, methods, analysis end interpretation. *Journal of Advertising Research*. 28 (1): 1 – 31.
- Russon, J. (2003). *Human Experience: Philosophy, Neurosis, and the Elements of Everyday Life*. New York: State University of New York.
- Rust, R. T. and Oliver, R. L. (1994). *Service quality: New directions in theory and practice*. CA: Sage Publications.
- Ryan, C. (2002). *The Tourist Experience*. Second Edition. London: Continuum.
- Ryu, K. and Jang, S. (2008). DINESCAPE: a scale for customers’ perception of dining environments. *Journal of Foodservice Business Research* 11 (1): 2 - 22.
- Sarmento, T. and Patrício, L. (2014). Incorporating the customer experience along different iterative cycles of service design. *Proceedings of ServDes2014-Fourth Service Design and Innovation Conference*. Lancaster, United Kingdom: 301 – 312.
- Schmitt, B. H. (1999). *Experiential Marketing*. The Free Press. NY.
- Sharma, J. and Rather, R. A. (2015). Understanding the customer experience: An exploratory study of “A” category hotels. *International Journal on Customer Relations* 3 (2): 21 – 31.
- Shaw, C. and Ivens, J. (2002). *Building Great Customer Experiences*. Basingstoke: Palgrave Macmillan.
- Smith, S. L. J. (1994). The Tourism Product. *Annals of Tourism Research* 21(3): 582 - 595.
- Stauss, B. and Weinlich, B. (1997). Process-oriented measurement of service quality. Applying the sequential incident technique. *European Journal of Marketing*. 31 (1): 33 – 55.

- Stevens, P., Knutson, B., and Patton, M. (1995). DINESERV: A tool for measuring service quality in restaurants. *Cornell Hotel and Restaurant Administration Quarterly* 36 (2): 56 - 60.
- Sundbo, J. and Darmer, P. (2008). *Creating Experiences in the Experience Economy*. Edward Elgar Publishing Limited. UK.
- Uriely, N. (2005). The Tourist Experience: Conceptual Developments. *Annals of Tourism Research* 32 (1): 199 – 216.
- Vargo, S. L. and Lusch, R. F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*. 68 (January): 1–17.
- Verhoel, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M. and Schlesinger (2009). Customer Experience Creation: Determinants, Dynamics, and Management Strategies. *Journal of Retailing* 85 (1): 31 – 41.
- Voss, C., Roth, A. V. and Chase, R. B. (2008). Experience, service operations strategy, and services as destination: Foundations and Exploratory Investigation. *Production and Operations Management*. 17 (3): 247 – 266.
- Wooddruff, R. B., Cadotte, E. R. and Jeukins, R. L. (1983). Modeling Consumer Satisfaction Process Using Experience – Based Norms. *Journal of Marketing Research*. 20 (August): 296 – 304.
- Wall, E. A. and Berry, L. L. (2007). The combined effects of the physical environment and employee behavior on customer perception of restaurant service quality. *Cornell Hotel and Restaurant Administration Quarterly* 48 (1): 59 - 69.
- Walls, A., Okunus, F., Wang, Y. and Kwun, D. J-W. (2011). Understanding the consumer experience: An exploratory study of Luxury Hotels. *Journal of Hospitality Marketing & Management* 20 (2): 166 – 197.
- White, K., and Dahl, D. W. (2006). To Be or Not to Be? The Influence of Dissociative Reference Groups on Consumer Preferences. *Journal of Consumer Psychology* 16 (4): 404 - 414.
- Zeithaml, V. A., Bitner, M. J. and Gremler, D. D. (2009). *Services Marketing. Integrating Customer Focus Across the Firm*. Fifth Edition. Singapore: McGraw-Hill.

MACHO ONDE ?! MAL ONDE ?! CORPO, IDENTIDADE E SAÚDE EM CLÍNICAS DE FISIOTERAPIA

Diogo Nogueira Protásio Lopes de Oliveira
Universidade de Évora
(dnprotas@gmail.com)

RESUMO

As questões de gênero ligadas às diversas masculinidades expressas no atual contexto político, social e econômico brasileiro exige um repensar tanto sobre o acolhimento destes homens e suas queixas nos serviços de saúde, quanto sobre a eficácia das intervenções no acompanhamento da sua carreira como homem doente e na afirmação de sua identidade. Observamos pacientes que se questionavam sobre sua masculinidade ao se confrontar com o próprio corpo, com suas limitações e facilidades, no decorrer do tratamento fisioterapêutico. O resultado da observação participante em clínicas de Fisioterapia na cidade de Belém sugere que há um repensar sobre as atitudes viris por parte deles, ao se depararem com suas incapacidades. «Os homens mudam» foi o título dado ao encontro dirigido por Welzer-Lang (2014) sobre a resistência do masculino a aceitar as mudanças sobre si trazidas por um novo contexto social. É no panorama embebido do pensamento de influência feminista que os homens ensaiam um repensar o masculino, as expressões de masculinidade. As questões ligadas à identidade de gênero, à orientação sexual e a representação do masculino chegam às clínicas de Fisioterapia como lugar privilegiado para uma intervenção no aspecto social.

Palavras-chave: Corpo, Masculinidade, Identidade, Saúde.

JEL Classification: I12

1. INTRODUÇÃO: MASCULINO TAMBÉM É GÊNERO?

O masculino e as formas de abordá-lo em ciências humanas ainda são temas de discussão. Contudo, é Welzer-Lang (2002) que nos chama a atenção para o fato de Nicole-Claude Mathieu em 1971 alertar sobre a necessidade de estudar o homem e o masculino como uma categoria de mesmo patamar que a das mulheres e do feminino. Inseparáveis, feminino e masculino são as categorias de sexo, componentes do sistema estrutural que cobre a totalidade do campo social. Fala-se em sistema social de sexo para se referir ao funcionamento dialético das relações sociais entre os sexos.

O masculino é gênero a partir da relação com o feminino, e portanto não é pressuposto a partir do sexo. O homem se constrói como tal ao incorporar práticas que são reconhecidas como masculinas dentro do grupo social no qual se insere. Contudo, no que se refere ao indivíduo, há um história e uma permanente afirmação da identidade masculina. O corpo, a corporeidade dos homens e a saúde são alguns dos vários aspectos que compõem a identidade masculina.

Corpo, identidade e saúde do homem são os três eixos que gostaríamos de tratar nesse artigo. A motivação surge da demanda indireta dos próprios homens, usuários do serviço fisioterapêutico. Por questões diversas, em geral ligadas a uma momento de bifurcação biográfica, muitos trouxeram as sessões de tratamento físico queixas ligadas a sua identidade como homem. Aparentemente, o ambiente terapêutico criado em um ginásio de reabilitação física contribui para que homens se sintam à vontade de trazer questões paralelas ao tratamento, mas que contribuem para a sua saúde.

Concomitante às reflexões individuais, é criado no Sistema Único de Saúde – SUS (programa brasileiro de saúde pública) o projeto voltado para atenção integral a saúde do homem, indistintamente do gênero declarado. Uma resposta do governo à uma necessidade social face aos altos índices estatísticos de morbidade e mortalidade ligado aos homens supostamente produtiva. É da crítica feminista em sua leitura do social que denuncia tais agravos resultantes da construção de uma identidade de gênero no qual se tem por modelo o masculino viril e a prática heterossexual como norma. O mal está no androcentrismo¹ (Welzer-Lang, 2010).

Percebemos que a Fisioterapia contemporânea contribuído com abordagens onde se busca compreender os homens em sua totalidade, tendo em conta os fatores biológicos, psíquicos e sociais que o integram. A nós interessa ao modo como os homens sustentam aquele modelo ao reagir a uma doença física, especificamente a um trauma de natureza ortopédica. Em outras palavras, nos questionamos sobre os possíveis impactos, se há algum, do tratamento fisioterapêutico na construção de uma identidade masculina. Buscamos com isso perceber se os recursos usados na Fisioterapia podem contribuir para o desenvolvimento de um masculino baseado na não violência.

Interessa-nos compreender se os homens se apropriam das técnicas corporais praticadas nos ginásios terapêuticos, e como eles o fazem. Partimos da hipótese que se a consciência corporal sexuada oriunda do processo de socialização é reforçada ao longo da vida, uma mudança nas práticas corporais imposta por um transtorno no sistema musculoesquelético,

¹ O androcentrismo é uma mistificação coletiva visada pelos homens em esconder a forma de interação (real, virtual ou imaginária) entre eles e os modos de construção do masculino centrado sobre as atividades de luta, concorrência e poder, tendo as mulheres sempre em minoria.

por exemplo, poderia ser percebida como um momento de bifurcação biográfica² (Bidart, 2006). Haveria portanto uma adaptação ou o desenvolvimento de uma nova imagem de si próprio?

Foi no exercício profissional como fisioterapeuta que nos deparamos com as queixas de clientes em relação a sua autoimagem, sobretudo no que tange a representação do corpo. A carreira (Dramon, 2008) de doente por vezes os fazia notar diferenças de como se percebiam antes e após o trauma. Acontecia dos clientes tomarem consciência da necessidade de uma nova condição pessoal a partir do percurso trilhado durante o tratamento. Os antigos referenciais de identidade já não eram mais coerentes com a percepção de si no presente, depois de submetidos ao tratamento fisioterapêutico.

Assim, em um primeiro momento apresentamos como se construiu a identidade do homem belenense. Tomamos por base estudos históricos e antropológicos em torno de temas ligados ao mito, a religião e política local.

Em seguida, daremos maior atenção para as reflexões sobre masculinidade e saúde no contexto atual. A esse propósito pensamos ser importante alargar a discussão sobre as questões da masculinidade, cuidado e saúde no o contexto amazônico, de modo que, apesar de esse estudo ser realizado em um cenário micro-social como clínicas de fisioterapia, os resultados obtidos possam convergir com as reflexões atuais inerente ao processo de mudança vivido por homens quanto ao pensar e expressar a sua masculinidade em esfera mais ampla, macrossocial.

Em um terceiro tópico, abordaremos as questões de escolha metodológica, as dificuldades e potencialidades vividos na pesquisa de campo, antes de se entrar na discussão dos resultados propriamente dito.

Gostaríamos com isso ressaltar o panorama de fundo das práticas corporais associadas ao masculino e as questões de gênero no âmbito dos profissionais da saúde. O benefício desta pesquisa é ressaltar a necessidade de se repensar a abordagem terapêutica e as práticas corporais no cuidado de homens em situação de vulnerabilidade ou sofrimento, assim como incluir o tratamento fisioterapêutico no rol de estratégias para repensar a saúde do homem e as expressões de masculinidade.

2. BELENENSE³ DE RAIZ⁴: HISTÓRIA, MITO, IDENTIDADE

A cidade de Belém, capital do estado do Pará, foi fundada há 400 anos, no início do período colonial de Portugal sobre o Brasil. Viveu a chamada *Belle Époque*, período de maior desenvolvimento econômico e social, entre os anos de 1850 e 1920 com a exploração da floresta de seringueiras, extração de látex e exportação da borracha (Duarte, 2007). A partir destas datas, se pode dividir a história da cidade em três etapas: do descobrimento à *Belle Époque*, momento marcada pela presença religiosa e termina com a revolta dos Cabanos; a *Belle Époque* em si com a formação de uma elite burguesa; e o período contemporâneo, já após a queda da monarquia no país e a consolidação da República Federativa do Brasil.

O marco temporal coincide aproximadamente com os elementos que se agregam na construção da identidade. Maués (2005) resalta que a identidade do povo na Amazônia ocidental está apoiada em três pilares: a memória da «Cabanagem» - revolta popular ocorrida na primeira metade do século XIX – ainda presente no sentimento de pessoas nascidas nas cidades mais marcadas pelo movimento de libertação; a religiosidade, notoriamente a fé católica nos santos populares – em especial a «festa do Círio» dedicada a Nossa Senhora de Nazaré; e as personagens lendárias, geralmente ligados à natureza e presentes nos rituais de cura praticados pelo caboclos⁵ da região. Ribeiro (2015) destaca que esta identidade regional, rica em historicidade e simbolismos, traz em si a mistura complexa de característica próprias de ribeirinhos, de caboclos e de cidadãos na composição do que é ser paraense⁶.

Ricci (2006) esclarece que esta mistura se dá justamente porque no movimento da «Cabanagem» havia um interesse comum de liberdade partilhado por indígenas, negros e mestiços. Era o esboço de um sentimento patriota, algo novo para a época já que não havia ainda a noção de nação brasileira ou de pátria (no sentido de terra mãe ou local de origem). Foi justamente em torno da revolta contra o poder autoritário exercido pela capital do império e pelos portugueses que se criou um romance nacional com seu heróis e símbolos. O sentimento de se apropriar de um território e defender a cultura local cresceu justamente com a revolta da «Cabanagem».

Neste sentido, a «Cabanagem» está mais próxima do pensamento independentista concebido na América espanhola e no Caribe do que dos movimentos similares desencadeados nas demais regiões do Brasil, nos quais era forte a atitude política de base republicana e contra o escravagismo. Ricci (2012) defende a teoria de que a Amazônia ocidental foi profícua em técnicas de luta armada voltada à resistência contra qualquer tipo de poder autoritário, para além do sistema colonial. De fato, a «Cabanagem» teve grande influência anarquista, o que gerou momentos de grande incerteza nas principais cidade do estado por falta de um governo efetivo.

A «Cabanagem» é mencionada como marco ideológico na luta contra uma dominação institucionalizada. O movimento foi dissipado por divergências internas, por opressão do governo e intervenção da Igreja (Ricci, 2012). A referência à esta memória revolucionária pode ser ainda vista no imaginário do belenense como componente de sua identidade masculina na medida em que o homem cabano é qualquer um dos que luta pela cultura local, seja ele mestiço, negro, branco ou indígena.

Outro fator é a presença Católica na região. É importante dizer que foram os religiosos da Companhia de Jesus os primeiros a chegar na Amazônia, portanto os verdadeiros colonizadores da região. Tal marca é notada tanto no nome da cidade hoje Belém – mas Santa Maria de Belém do Grão-Pará quando da sua fundação – e no calendário civil ainda repleto de festividades religiosas ao longo de todo o ano. Talvez o «Círio de Nossa Senhora de Nazaré» seja a mais importante delas.

² Entendemos por bifurcação como um momento de crise a partir da qual se abre uma encruzilhada imprevisível ao início de na trajetória biográfica de uma pessoa, mas que implica uma tomada de decisão a partir da qual há uma mudança importante na orientação pessoal.

³ Belenense ou belemense diz-se de quem nasce na cidade de Belém, capital do Estado do Pará.

⁴ A expressão « de raiz » é usada entre brasileiros para indicar algo que está na estrutura de sua formação e, portanto, inseparável de sua identidade. Há no francês o equivalente « de souche » que designa geralmente uma linhagem de família, origem, estirpe.

⁵ Caboclo é um termo específico para designar a mestiçagem entre índios e brancos. Atualmente se refere genericamente aos nativos da região que ainda vivem longe dos centros urbanos.

⁶ Paraense é a pessoa nascida no território do Estado do Pará.

O mito originário da festa fala de um caboclo que encontra uma estatueta de Nossa Senhora às margens do rio e a leva para casa. Misteriosamente, a estatueta some e é reencontrada novamente no mesmo local na beira do rio. Fato que se repete noites seguidas até que o caboclo decide por construir um altar dedicado a Santa no lugar onde sempre aparecia a imagem (IPHAN⁷, 2006). Em poucas palavras, o chamado «Círio de Nazaré» consiste em uma série de procissões que encenam o ato de ir buscar a estatueta no que era o limite da cidade antigamente, trazê-la ao centro e reencontrá-la no seu ponto de origem. A primeira procissão oficial data de 1793 (Almeida, 2013), época em que a Igreja exercia grande poder local. Ainda hoje esta é uma celebração tão importante quanto as do Natal e Páscoa para a comunidade católica da cidade de Belém (Maués, 2008).

Almeida (2013) acrescenta que o culto a Nossa Senhora foi desde o início uma manifestação popular. Apesar de ter sido institucionalizado pela Igreja, há divergências entre as expressões segundo os preceitos Católicos e outras formas de expressão de fé ou respeito pelo tradicional culto à Virgem de Nazaré. Pode-se citar a «corda do Círio» e a «festa das Chiquitas» como exemplos de afirmação da identidade do povo.

A «corda do Círio» é um elemento incorporado à procissão já no século XIX, fase posterior a *Belle Époque* com decadência dos valores burgueses e perda de prestígio no panorama nacional. A berlinda na qual estava sendo conduzida a estatueta da Virgem de Nazaré ficou de rodas atoladas em um lamaçal, ao que os devotos atrelaram uma corda e conduziram-na até a Basílica, ponto final da procissão. O gesto se tornou símbolo da devoção e superação do povo, representado por uma demonstração de força e fé que se perpetua até nossos dias (IPHAN, 2006).

Ribeiro (2015) refere que ainda mais recente é a «Festa das Chiquitas» (ou Filhas da Chiquita, ou ainda das Maria Chiquitas). Criada já em meados da década de '70 por um grupo de artistas e intelectuais – no qual a presença de gays, lésbicas e travestis não eram exceção – em uma atitude quase carnavalesca, mas sobretudo irreverente e contestatória, de demonstrar a sua fé em Nossa Senhora de Nazaré. A festa inicia logo após o fim da procissão noturna e vai até o raiar do dia seguinte quando inicia a procissão principal. O nome «Maria Chiquita» faz alusão tanto a Virgem Maria, Mãe de Jesus, quanto a folclórica personagem da mulher negra presente nas antigas músicas de carnaval.

Estes dois exemplos nos mostra o quanto a construção da identidade masculina local é atravessada tanto por estereótipos de força e superação quanto por questões de gênero e reivindicações sociais. Pode-se falar em dualidade, um conceito explorado por Maués (2006) a partir da análise que faz dos mitos presentes na região. Segundo aquele autor, a cultura e a natureza amazônica são indissociáveis do humano quando se trata do caboclo, pois ele como pessoa está intimamente ligado ao rio, à floresta que o circunda e nutre. É desta simbiose que nasce personagens como a do «boto» (uma espécie de golfinho de água doce), ao mesmo tempo peixe e mamífero, aspecto esse que confere a ele uma certa humanidade.

Diz a lenda que o boto assume a forma de um homem quando sai das águas do rio para seduzir as moças jovens durante a noite; ou ainda em uma mulher que seduz os pescadores, deixando-os loucos. A urbanização e instrução vinda com a modernidade fez dessas histórias um tentativa de explicar o que era visto como desvio de conduta (homossexualidade, por exemplo), doenças graves, ou ainda a gravidez indesejada de uma menina solteira – sem que o verdadeiro autor fosse revelado, até para proteger a honra da moça (Maués, 2008).

A partir dos estudos citados podemos perceber que o homem belenense pode ser um misto de valoroso, robusto e visionário com algo de contestador, transviado e sedutor. Adjetivos que, para além do caráter de cada indivíduo, estão inscritos no corpo daqueles que se identificam com a região e se reconhecem nela. São fruto da miscigenação de traços e culturas europeias, africanas e ameríndias. O homem belenense é um tipo único ainda ligado com a natureza que o cerca e lhe confere sentido.

3. MASCULINIDADES EM BELÉM: CORPO, VIRILIDADE, SAÚDE

Pimentel (2011) é quem traz a lume a discussão sobre masculinidade em Belém. Afirma que o padrão de masculinidade atravessa um momento de ruptura. As imagens fantasmáticas do pênis ereto e da penetração sexual perde pouco a pouco o sentido de virilidade e potência. Passa-se a valorizar características como os laços afetivos de amizade, a capacidade de escuta e abertura para o diálogo, o desenvolvimento pessoal e a elaboração de um senso crítico através da literatura, arte e esporte. Neste momento reconhecido como de transição entre modelos do masculino, reconhece, contudo, que há ainda uma pluralidade de expressões de masculinidade coexistentes. No mais, a autora insiste sobre a necessidade de maior trabalho das instituições públicas e da família para a formação de homens com masculinidades mais sensíveis ao outro, no sentido de ser viril sem ser necessariamente violento.

O Ministério da Saúde do Brasil, se mostrando sensível às questões sociais ligadas ao masculino, institucionalizou a Política Nacional de Atenção Integral à Saúde do Homem – PNAISH na no ano de 2009 através da Portaria 1.944. O objetivo do programa é diminuir as taxas de morbidade e mortalidade dos homens, considerada como elevada em comparação aquelas das mulheres no país. Além disso, tais medidas visam a criação de espaços no serviço de saúde (hospitais, clínicas especializadas, postos de saúde e serviços em geral) nos quais os usuários possam ser melhor acolhidos em suas necessidades enquanto homens. Na sequência desta lei, um setor estratégico foi criado em cada estado da federação para se dedicar especificamente à temas relativos à saúde do homem.

Em Belém, as ações em saúde com homens se limitam ao nível primário de intervenção. São organizadas campanhas de despistagem do diabetes, hepatites, hipertensão arterial e câncer de próstata (por exemplo, com a adesão a campanha internacional «Novembro Azul»). A secretaria de estado investe em encontros e palestras informativas destinados aos usuários e profissionais como forma de conscientização da população em geral e capacitação das equipes de agentes de saúde. No pano de fundo destas medidas, há o combate ao preconceito de que saúde do homem se restringe às doenças sexuais e genitais; bem como, contra o descaso dos homens com sua saúde e sua agressividade para consigo e com os outros.

⁷ Instituto do Patrimônio Histórico e Artístico Nacional – IPHAN.

No entanto, Separavich & Canesqui (2013) chamam a atenção para o risco de se colocar os homens em uma atitude de vitimização, ao não se levar em conta a relação de dominação e poder do masculino para com o sexo feminino, existente desde o início do processo de socialização. Mencionam ainda que as questões de gênero tornam-se ainda mais evidentes quando os dados estatísticos mostram que os fatores externos (exposição a uma situação risco, acidentes de automóvel, violência) são as principais causas de morte de homens entre 20 e 59 anos. É de extrema importância ter sempre uma abordagem relacional de modo a pensar o gênero na construção da identidade dos homens e do corpo masculino. Postura essa que é facilmente esquecida quando se fala de políticas públicas no campo da saúde.

A tendência é frequentemente de fazer do corpo uma propriedade da medicina, reduzindo-o ao aspecto biológico. Um exemplo claro é de pensar a impotência sexual masculina como uma dificuldade de ereção por fatores hormonais, sem se preocupar com as questões emocionais e afetivas, com os laços sociais também como causadores de disfunção. Esse tipo de abordagem reforça a ideia de pênis como um símbolo do macho viril, do sexo forte, eleva a função reprodutiva ao patamar mais importante, pondo em detrimento a percepção de si na relação com o corpo na construção da identidade masculina. Por vezes, o corpo masculino não é nem mesmo considerado nas intervenções de saúde pois aparece como secundário a outros aspectos como o papel de pai, de provedor, de marido, o que reforça ainda mais um padrão de masculinidade hegemônica (Gomes, 2014).

Percebemos que a falta de um olhar sobre o gênero no âmbito do sistema de saúde brasileiro faz com que os homens tenham ainda mais dificuldade de ter acesso ao serviço de saúde, a adotar medidas preventivas e a aprender a cuidar por si de sua saúde. A caricatura é do homem viril incompatível com a fragilidade associada ao necessitar de cuidados ainda vigora no país. Em resumo, o imaginário androcêntrico é nocivo aos próprios homens. Como resultado, eles não se sentem acolhidos nos serviços de públicos de saúde, por acreditar que ali não é espaço para eles.

Logo, as medidas de saúde pública não deveriam ser dissociadas do contexto onde serão aplicadas. No caso dos belenenses, sabemos que a construção da identidade local tem suas raízes na historicidade da região, na religião e seus símbolos, e nos mitos que afirmam o sentimento de pertencer a um território em particular. De que modo tais características podem ser associadas às ações de intervenção em saúde para melhor atender as necessidades da população alvo? Eis um dos desafios que o sistema de saúde local deve enfrentar no que se refere à saúde dos homens na região amazônica.

Percebe-se que o modo com que o sistema de saúde aborda as questões sobre o masculino determinam a relação do próprio homem com o seu corpo e sua saúde, na construção da masculinidade como forma de expressão, e na interação social. Corpo, saúde e identidade (no caso deste estudo, a identidade masculina, mas não só) são facetas da estrutura social atravessada por questões de gênero. O estudo do corpo na interface entre os aspectos biomédicos e psicossociais dá outro sentido às práticas corporais praticadas por homens que se vem em busca de uma afirmação de sua masculinidade.

4. QUE CORPO É ESSE? O MASCULINO NOS GINÁSIOS FISIOTERAPÊUTICOS

Le Breton (2010) anuncia que a existência é corpórea, portanto é através da formação dada ao corpo que cada sociedade se estrutura. Por essa razão, os estudos sociais sobre o corpo e as práticas corporais são também legítimos. Heritié (2003) menciona a natureza sensível do corpo é o que concede uma dimensão afetiva à vida em sociedade.

No mesmo sentido, Meidani (2007) explica que não é o indivíduo que se inscreve em um grupo social, mas as normas sociais e seus valores que são inscritas no corpo. As marcas do social próprias ao indivíduo são incorporadas de maneira a permitir que ele possa fazer uso de suas práticas corporais.

O masculino se constrói na relação com o outro, notadamente no conflito entre os gêneros. Para os homens, o processo de reconhecimento de si passa pela negação do feminino e de tudo que o assemelha como baliza para descrever tudo que é viril. Welzer-Lang (1994) afirma que negar a presença do outro em si gera sofrimento e desencadeia a atitude violenta percebida e registrada no corpo.

Connell (1992) é quem primeiro desenvolve a ideia de que há um modelo universal de masculino tendo por base parâmetros históricos, linguísticos e sociais. Apresenta o conceito de uma masculinidade hegemônica comum a todas as culturas estruturadas sobre as diferenças sociais intrínsecas às questões de gênero.

Acrescenta ainda que as definições de virilidade e de masculinidade não são de todo evidentes, nem tão pouco a relação direta entre os dois termos. Estes conceitos são uma construção social, portanto mudam de acordo com o contexto histórico e social. É conveniente falar de masculinidades (no plural) para incluir atores com identidade e orientação divergente ao da norma, por serem esses a muitas vezes denunciar problemáticas quotidianas nas relações entre os sexos (Connell, 2013).

Acreditamos que o aspecto político na construção do sujeito sexuado é apenas um dos fatores se articula com a percepção próprio corpo e a consolidação de uma identidade de gênero. Logo, o conceito de masculinidade hegemônica poderá ser utilizado como ótica de leitura em alguns casos, mas que não pode ser usada neste estudo por preferirmos o método compreensivo sobre o sujeito, tendo por baseados seus relatos.

5. COMO ABORDAR O TEMA SOBRE CORPO E MASCULINIDADE?

Com frequência durante os tratamentos de fisioterapia surge a reflexão sobre o falar do corpo e o gesto como expressão: «Quando se fala do corpo, não é o próprio corpo que fala? Ou ainda, o que se diz deste corpo que fala?». Há o cuidado em fisioterapia de se perceber o corpo inscrito no mundo social que o organiza e dá sentido, antes mesmo de se tentar percebê-lo a partir de suas estruturas anatômicas e fisiológicas. Afinal, a Fisioterapia em sua origem tinha por objetivo primeiro reabilitar pessoas com dificuldades motoras ao convívio social.

O tratamento fisioterapêutico intervém justamente no registro corporal, nas feridas, na dor. Em Fisioterapia, o corpo é ao mesmo tempo instrumento de trabalho e objeto de estudo. Mais comumente visto através do prisma da biomecânica, o corpo traz em si a expressão do indivíduo e as suas representações sociais. A experiência profissional nos mostra que o gesto, também chamado de prática corporal, é o limite do tratamento terapêutico.

Foi a necessidade de acolher, acompanhar e cuidar de jovens adultos no percurso de construção da sua identidade enquanto homens que nos instigou a ponderar sobre as consequências das certas práticas corporais na afirmação social de uma imagem viril. Este estudo centra-se sobre a pessoa, particularmente sobre os homens que se declaram masculinos, heterossexuais e viris. Tem-se por base, contudo, que o masculino possui diversas formas de expressão podendo inclusive ser plural, de características passíveis de mudança. Para nós, a identidade deve ser afirmada continuamente, portanto deve ser sempre compreendida no contexto específico de tempo e espaço social. É necessário um recorte na biografia do indivíduo para se abordar as questões de identidade, no caso usamos o tempo no qual se submeteram ao tratamento fisioterapêutico.

Como a construção da identidade é atravessada pelas questões de gênero, trataremos as práticas corporais como meio pelo qual cada pessoa toma consciência de seu corpo como sexuado, sendo essa apenas uma etapa na construção da identidade individual. Logo, um trabalho de análise sobre o masculino deve sempre considerar que esse está inserido em um sistema social de sexo situado em um espaço e tempo determinado. É tendencioso pensar o masculino separado do feminino ou, ainda mais grave, fora da análise sob a ótica de uma teoria feminista. Optamos por uma leitura preferencialmente diferencialista, contudo sem perder de vista que os homens passaram por uma construção social para o viril – entenda-se, através da violência. Sendo esse com frequência um fator que os leva à práticas de risco e ao adoecimento.

Utilizamos como método etnográfico de observação participativa para uma análise compreensiva sobre como as práticas corporais usadas em Fisioterapia. O papel de observador foi facilitado pelo fato de o pesquisador ter a formação profissional em Fisioterapeuta, o que justificava a sua presença no ginásio terapêutico. Além disso facilitava obter informações quanto a história do paciente e de que modo os recursos fisioterapêuticos contribuíram para a construção de uma identidade masculina dos homens ali envolvidos.

Os maiores desafios foram: estar atento a vários atendimentos que aconteciam ao mesmo tempo no ambiente e não intervir diretamente no tratamento. Foram escolhidas duas clínicas, uma de natureza pública, outra privada, para assim se ter um apanhado mais amplo quanto a expressões de vários tipos de masculinidades.

A escolha do terreno foi baseada em quatro aspectos: 1. Estudos recentes sobre masculinidade e identidade desenvolvidos na cidade; 2. Abertura recente na Secretaria Estadual de Saúde do setor de saúde do homem voltado a implementação de projetos de prevenção primária e conscientização dos profissionais da saúde a respeito do tema; 3. Local de nosso exercício profissional, portanto, onde primeiro se teve contato com a demanda de clientes; 4. Facilidade de acesso a clínicas no setor público e privado, por intermédio de nossa rede de relacionamentos profissional.

Acompanhamos os profissionais durante dois meses consecutivos. As anotações eram feitas ao final de cada hora de atendimento ou registradas em áudio e imediatamente transcritas durante os períodos de intervalo. Ao término do período de observação, oferecemos uma devolutiva aos diretores das instituições onde foram realizadas a parte de campo, de modo a contribuir com a melhoria dos serviços prestados.

Foram considerados como informantes, homens de idade entre 20 e 60 anos que se declaravam ativos profissionalmente, de orientação heterossexual e oriundos da região. Dez deles foram tidos como informantes privilegiados por terem aderido verdadeiramente ao tratamento e se mostrarem mais dispostos a participar das entrevistas. Frequentavam o ginásio terapêutico de duas a três vezes semanais de acordo com o programa estabelecido pelo/a fisioterapeuta responsável. Os atendimentos duravam entre três quartos a uma hora.

Vale ressaltar que ambos os ginásios terapêuticos eram frequentados tanto por homens quanto por mulheres, indistintamente. Comumente, havia sempre um/a acompanhante que também interagira ou mediava a relação entre profissional e o usuário.

Não raro, era a partir da interação entre usuários que surgia a pergunta sobre o que quer dizer verdadeiramente ser um homem; ou ainda de que maneira se poderia continuar a expressar uma masculinidade após ter vivido ou ser portador de um problema de saúde. Havia sempre emoção envolvida na fala e no gesto ao falar do assunto.

Por outro lado, surgia em nós perguntas como: A sessão fisioterapêutica seria o momento favorável para se por em questão as práticas corporais viris? Como eles se apercebem de seu corpo e sua saúde? O trauma os faz ter mais atenção com o seu corpo? Quais práticas corporais da fisioterapia que eles se apropriam? Os que passaram pela batalha contra o seu corpo é um 'homem de verdade'? Se há mudanças na autoconsciência quais seriam essas? O objetivo era observar se através do uso de técnicas corporais seria possível chama-los a atenção para um modelo de masculino mais complacente.

6. RESULTADO E DISCUSSÃO

Em nossas observações iniciais, nos surpreendeu o fato de fisioterapeutas não praticarem em si mesmos as técnicas que recomendavam às outras pessoas. No caso de fisioterapeutas homens, era ainda mais difícil que eles reconhecessem a necessidade de se cuidar. Todos tinham dificuldades em aceitar ajuda de um colega, a não ser a dor os impedia de trabalhar ou praticar esporte. Notamos que muitos homens fisioterapeutas acumulavam cirurgias ou disfunções de ordem ortopédica. A narrativa sobre o fato dava um sentido viril à lesão. Em um dado momento, nos sentimos forçados a sugerir que, dentro de uma mesma equipe, eles ao menos se tratassem uns aos outros.

O mesmo não acontecia com as mulheres fisioterapeutas. Elas aproveitavam os momentos de pausa para serem atendidas por outras colegas. Faziam isso como rotina dentro da sua semana de trabalho. Welzer-Lang (1993) explica que no que se

⁸ Sobre a expressão 'homem de verdade' é usada em um jargão popular para fazer distinção entre o homem e os outros (crianças, mulheres, idosos, homossexuais), geralmente associado a capacidade de penetração com do pênis ereto (Welzer-Lang, 1994).

refere às tarefas domésticas, as mulheres assumem uma atitude preventiva enquanto os homens seguem em geral um padrão remediador. Por analogia, ousamos dizer que em relação ao corpo e a saúde, os homens conservam uma postura idêntica, como se houvesse uma regra geral de como o masculino gerencia o que é do âmbito da sua intimidade. Eles se apropriam de um discurso médico para justificar suas práticas e perpetrar assim a violência contra si e contra os outros.

Boltanski (1971) fala do distanciamento entre classes sociais na relação entre terapeuta e paciente. Em nossa observação, notamos o uso de palavras distintas como «cliente» e «paciente» de acordo com o capital do usuário. Segundo a classe social do usuário, ele poderia descrever o fisioterapeuta como aquele que detém um conhecimento específico para melhorar a saúde (o doutor); ou como um colega em quem confio e a quem recorro para discutir um problema ligado a sua formação profissional. Vale ressaltar que a formação profissional em fisioterapia deu acesso a uma classe social mais elevada, em alguns casos.

Ressaltamos esse aspecto pois, aparentemente, o modo de lidar com o corpo é distinto em cada classe social. Via de regra, pudemos observar que quanto mais baixa a classe, ainda menos atenção se faz ao corpo. Soma-se o fato de falta de infraestrutura básica e exposição a violência em meios sociais menos favorecidos no Brasil.

Percebemos também que os homens não se sentem deslocados quando se trata de estar atento aos cuidados corporais. Eles apenas buscam mais facilmente o esporte como meio de autoafirmação. Tem dificuldade de falar do sofrimento, mesmo de encontrar palavras que descrevam a dor que sentem. No mais, não reconhecem que têm a necessidade de ajuda para encontrar um modo de se cuidar sem que os faça sentir ferido quanto a sua masculinidade.

A construção da identidade masculina se dá comumente através de uma prática de risco (Meidani, 2005). Por consequência destes atos é que muitos homens são encaminhado ao tratamento em clínicas de fisioterapia. As causas mais comuns são o excesso de consumo de álcool, acidentes no trânsito e a prática de esporte. O corpo do homem é vítima da afirmação do viril.

Vale ressaltar a invisibilidade de homossexuais, travestis e intersex ao sistema de saúde, notadamente às clínicas de fisioterapia. Talvez por falta de acesso ou ausência de políticas públicas para estes grupos específicos, apesar de constar na portaria sobre saúde do homem a necessidade de atender aos diversos grupos.

Rupturas no percurso de vida como a morte (do pai ou avô), o divórcio, o nascimento de um filho, são também momentos em que os homens são encaminhados ao tratamento fisioterapêutico. A lesão ortopédica é facilmente associada ao panorama de vida pelo qual atravessa, como se o corpo expressa a dor que vem de um outro lugar. A maturidade enquanto homem surge a partir da travessia de uma fase de sofrimento. Pimentel (2011) cita, por exemplo, o pai e o avô como os modelos de masculinidade mais mencionados pelos homens entrevistados em Belém.

Ao se submeter a um tratamento fisioterapêutico, os usuários entram em contato direto com as suas fraquezas. Consequentemente, podem surgir questões mais profundas ligadas a estrutura mais essencial da pessoa como as que constituem a sua identidade. Muitas vezes, o usuário vai buscar sustento em suas raízes, o que no caso dos homens tange a sua afirmação de gênero e virilidade. É neste sentido que percebíamos as constantes referências a uma identidade local, a uma história pessoal, a um passado muitas vezes ainda presente e, paralelamente, uma elaboração sobre o que é ser homem, masculino e viril naquele contexto.

Uma preocupação era de não fazer da Fisioterapia uma prática corporal de afirmação do viril, mas para a construção de uma identidade masculina saudável. Dizemos em especial nos casos onde a intervenção cirúrgica é incontornável. Observamos que usuário tende a afirmá-la como um troféu, símbolo de uma masculinidade viril pronta para superar qualquer obstáculo. Ao dar um tal significado à intervenção, o tratamento equipara-se a um campeonato ou ainda o corpo do macho viril é reconhecido como um campo de batalha. Aspectos inerentes ao mundo social como o preço pago, o local onde foi realizada e com qual médico responsável agregam valor. O homem apresenta a doença aos seus parceiros como um capital social, para ser reconhecido como modelo a ser seguido. Do mesmo modo as cicatrizes tornam-se marcas de virilidade.

O corpo exposto pelo homem não é o mesmo daquele que ele se apropria. Aparentemente, mesmo num momento de debilidade ou no processo de reabilitação, o demonstra o seu aspecto viril. No plano de fundo, há sempre o sofrimento seja de qual ordem for mas com predominância de um dos aspectos: físico, emocional, social. Para encobrir sua debilidade, o homem supervaloriza o corpo para se consagrar como macho.

Em nossa passagem pela observação de campo, pudemos constatar que as técnicas corporais usadas no tratamento fisioterapêutico mostram-se favoráveis para ajudar os homens que se encontram no processo descoberta e construção de sua masculinidade, não obstante o contexto social no qual se inserem e a estrutura do sistema de saúde brasileiro muitas das vezes não lhes sejam acolhedores em suas necessidades.

7. CONSIDERAÇÕES FINAIS

«Os homens mudam» foi o título dado ao encontro dirigido por Welzer-Lang (2014) sobre a resistência do masculino a aceitar as mudanças sobre si trazidas por um novo contexto social. É no panorama embebido do pensamento de influência feminista que os homens ensaiam um repensar o masculino, as expressões de masculinidade. As questões ligadas à identidade de gênero, à orientação sexual e a representação do masculino chegam às clínicas de fisioterapia como lugar privilegiado para uma intervenção no aspecto social.

A Fisioterapia em sua origem estava restrita aos hospitais de reabilitação ortopédica. Atualmente, questões de ligadas ao corpo e identidade são temas corriqueiros em sessões de tratamento fisioterapêutico, já com profissionais visto como agentes de saúde em um espectro de atuação mais alargado. Por exemplo, relatamos neste artigo constatações resultantes da observação participante em clínicas fisioterapia no que se refere às questões em torno do masculino.

Geralmente os homens fazem uso de práticas corporais de cunho esportivo, o que fez das salas de fisioterapêuticos verdadeiros ginásios de esporte. Um risco que se corre em tornas as práticas de saúde um ambiente viril. Nota-se que o

sistema de saúde no brasileiro não está ainda de todo preparado para acolher os homens em suas necessidades. A tendência é sempre a de reforçar a ideia de que homens masculinos nunca adoecem. A solução seria abordar as questões do masculino sempre dentro de uma perspectiva de gênero, tendo em mente que a construção da identidade é sempre atravessada pelas questões ligadas ao sexo.

Ainda assim, mesmo que haja uma tentativa de capitalizar a doença ao se valorizar as cicatrizes marcas de superação, permitir que os homens construam uma carreira de doente através do processo fisioterapêutico os ajuda a reestruturar uma identidade masculina saudável. Há inclusive aqueles que aderem plenamente a uma expressão diversa de masculinidade ao se apropriar de novas práticas corporais, sobretudo de cuidado com o corpo, às quais não se atribuem valor viril.

Discutir sobre quais novos modelos ou expressões do masculino coexiste atualmente vai para além do que nos propomos neste artigo. No entanto, observamos que o homem belenense tende a reafirmar suas raízes históricas, religiosas e míticas na busca de sentido ao que entende por masculino.

As sessões fisioterapêuticas se mostram um local favorável para se abordar as questões ligadas a masculinidade e a virilidade a partir do momento em que com suas técnicas apresenta práticas corporais menos agressivas. Através dessas é que os homens em tratamento fisioterapêutico puderam perceber melhor o seu corpo, repensar seus gestos e lidar de modo saudável com seus próprios limites. Isso diminui a violência contra si e contra o outro, notadamente a mulher no contexto social. A mentalidade do « sem dor não há ganho » sede espaço para pequenos ganhos distribuídos ao longo do tratamento de reabilitação.

O corpo responde ao tratamento e se recupera no ritmo particular a cada um a partir do momento em que os homens são acolhidos em suas necessidades. O medo, a dor, o sofrimento são compreendidos como parte do processo de reparação, não mais como fatores contrários ao ser homem ou como obstáculos a serem vencidos para se afirmar viril. A partir desse momento é que os homens puderam se apropriar verdadeiramente do seu corpo e expressar-se masculinos sem necessidade de aprovação.

Foi no momento do tratamento fisioterapêutico no qual surgia a questão do que é ser homem, afinal. Aqui o masculino foi percebido também como uma construção social a partir de uma orientação pessoal na formação da identidade, semelhante a como se passa com as mulheres e os outros gêneros. O ser homem e masculino depende da maneira como o indivíduo percebe, se apropria do seu corpo, e se integra na cultura e sociedade na qual se reconhece. Assim, ao longo do artigo usamos como exemplo os elementos componentes da masculinidade do homem belenense.

Esperamos com este artigo estimular a intervenção social no âmbito da corporeidade e saúde dos homens a partir de práticas corporais usadas em Fisioterapia. Pretendemos chamar atenção também para a necessidade de repensar o sistema de saúde brasileiro sob a perspectiva do gênero no que se refere ao programa de saúde do homem. Por fim, há ainda a necessidade de maior estudo na região sobre a relação entre identidade e o processo de saúde e doença para a expressão do masculino em sua diversidade em uma atitude de não-violência.

BIBLIOGRAFIA

- Almeida, I. (2013). É dia de festa : reflexão sobre os movimentos de transformação do Círio de Nazaré e sua relação com o espaço da cidade de Belém/PA. *Revista Conexão – Comunicação e Cultura*, 12(24): 157-186.
- Bidart, C. (2006). Crises, décisions et temporalités: autour des bifurcations biographiques. *Cahiers internationaux de sociologie* 1(120): 29-57.
- Boltanski, L. (1971). Les usages sociaux du corps. *Annales Économies, Sociétés, Civilisations*. 26(1): 205-233.
- Connell, R. (1992). A very straight gay: masculinity, homosexual experience, and the dynamic of gender. *American Sociological Review*, 57(6): 735-751.
- Connell, R. (2013). Masculinidades Hegemônicas: repensando o conceito. *Revista Estudos Feministas*, 21(1): 241-282.
- Darmon, M. (2008). La notion de carrière : un instrument interactionniste d'objectivation. *Politix*. 2(82): 149-167.
- Duarte, C. (2007). Asilo da Mendicidade em Belém do Pará: a Pobreza Urbana como contra-face da Belle-Époque na Amazônia. *Encontro Nacional da Anpur*, 12: 01-19.
- Heritier, F. (2003). Une anthropologie symbolique du corps. *Journal des africanistes*, 73(2): 9-26.
- Gomes, R. (2014). Corpos masculinos no campo da saúde : ancoragem na literatura. *Ciência & Saúde Coletiva*, 19(1): 165-172.
- IPHAN. (2006). *Dossiê IPHAN I Círio de Nazaré*. Biblioteca Noronha Santos. Rio de Janeiro. ISBN: 85-7334-024x
- Le Breton, D. (2010). Mauss et la naissance de la sociologie du corps. *Revue du MAUSS*, 36(2): 371-384.
- Maués, R. (2005). Um aspecto da diversidade cultural do caboclo amazônico: a religião. *Estudos Avançados*, 19(53): 259-274.
- Maués, R. (2006). O simbolismo e o boto na Amazônia : religiosidade, religião, identidade. *História Oral*, 9(1): 11-28.
- Maués, R. (2008). O Círio de Nazaré identidade regional amazônica. *Revista Espaço e Cultura*, 24: 57-68.
- Meidani, A. & Welzer-Lang, D. (2005). Manière de boire et rapports sociaux de genre chez les jeunes (18-25 ans). *Les Cahiers de L'TREB*, 17: 67-70.
- Meidani, A. (2007). *Les fabriques du corps*. Presses Universitaire du Mirail. Toulouse. ISBN : 978-2-85816-804-0.

- Pimentel, A. (2011). Interrogando Masculinidades em Belém do Pará. *Revista Contextos Clínicos*, 4(1): 18-27.
- PORTARIA N° 1.944, de 27 de agosto de 2009. Governo Federal, Ministério da Saúde, Diário Oficial da União Seção I, p.61 Col. 01. Acesso em 29 de março de 2017. Disponível em: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2009/prt1944_27_08_2009.html
- Ribeiro, M. (2015). E a Quadrilha Toda Grita... Viva a Filha Da Chiquita! . *Ponto Urbe*, 16: 1-18.
- Ricci, M. (2006). Cabanagem, cidadania e identidade revolucionária : o problema do patriotismo na Amazônia entre 1835 e 1840. *Tempo Revista do Departamento de História da UFF*, 11: 22-30.
- Ricci, M. (2012). Llagas de guerra y actos de fe política : la Cabanagem en la narrativa historiográfica y antropológica. *Boletín Americanista*, 64(1): 33-57.
- Separavich, M. & Canesqui, A. (2013). Saúde do homem e masculinidades na política nacional de atenção integral à saúde do homem : uma revisão bibliográfica. *Revista Saúde e Sociedade*, 22(2): 415-428.
- Welzer-Lang, D. & Filiod, J-P. (1993). Les hommes à l'épreuve du désordre – approche anthropologique de la sexuation de l'espace domestique. *Dialogue*, 121: 82-94.
- Welzer-Lang, D. *et al.* (1994). *La peur de l'autre en soi, du sexisme à l'homophobie*. VLB éditeur. Québec. ISBN-10: 2890055876 ; ISBN-13: 978-2890055872.
- Welzer-Lang, D. (2002) Étudier les hommes et les rapports sociaux de sexe : où sont les problèmes ? in LE FEUVRE, N. (dir.). *Le genre : de la catégorisation du sexe*. *UTINAM – Revue de Sociologie et d'Anthropologie*, 5: 289-312.
- Welzer-Lang, D. (2010). La mixité non ségrégative confrontée aux constructions sociales du masculin. *Revue française de pédagogie*, 171: 15-29.
- Welzer-Lang, D. (2014). Les hommes en changement. *Actes du séminaire européen sur les résistances masculines aux changements*: 109-140.

STRUCTURAL EMPOWERMENT AND SATISFACTION IN NURSING WORK IN PRIMARY HEALTH CARE

Paula Baptista
ARS Algarve
(paulacfb@sapo.pt)

Helena Almeida
Universidade do Algarve
(halmeida@ualg.pt)

Alejandro Orgambidez-Ramos
Universidad de Málaga
(aoramos@ualg.pt)

ABSTRACT

This study aimed to evaluate the influence relationship between structural empowerment, global empowerment and job satisfaction perceived in 151 nurses working in Primary Health Care, Personalized Health Care Units and Family Health Units in the Algarve region. As these nurses, despite performing similar functions, have different incentives, it was also sought to verify if there are significant differences in the perception of structural empowerment, global empowerment and perceived satisfaction in work, in both groups of nurses, with and without incentives. Data were analyzed using SPSS software, version 21. The results obtained show a statistically significant relationship between structural empowerment, global empowerment and job satisfaction, and statistically significant differences between the two groups of nurses, with and without incentives, and nurses receiving incentives have significantly higher levels of structural empowerment, global empowerment, and perceived job satisfaction than nurses who do not receive such incentives. One of the limitations of this study was the fact that the results obtained cannot be extrapolated to all Portuguese nurses. Future research may extend this study to other health units.

Keywords: Nurses, Primary Health Care, Structural Empowerment, Job Satisfaction.

1. THEORETICAL FRAMEWORK

Health care institutions exist for citizens and health professionals exist to serve these citizens. However, this premise is valid only if these professionals see their needs fulfilled, so as to favor their commitment to the quality of care provided (Conselho dos Enfermeiros, 2001). Moreover, within the organizations, the workers have needs for realization, which go through the acquisition of greater autonomy, independence and freedom of action. At this level, empowerment is considered a very powerful tool, since it is a mechanism capable of triggering a greater involvement of nurses in the execution of the activities developed by them within the organization, by gaining greater autonomy, freedom and Independence of action. To that end, we refer the improvement of the environment in which care is provided, according to Kennedy, Hardiker and Staniland (2015), the creation of labor structures that facilitate access to information, support, resources and opportunities that empower and potentiate employees to enable them to carry out their work in a more effective way. All of these assumptions confirm Kanter's (1993) theory, that access to information enables employees to make faster decisions as well as make significant gains in transmitting information to others in order to achieve better results (Gilbert, Laschinger and Leiter, 2010); Access to support allows employees to receive greater feedback and guidance from their peers, subordinates and superiors, allowing them to make extraordinary, innovative and risky decisions without having to go through the riddles of organizational bureaucracy; The access to resources, expresses a greater ability of the worker to obtain economic and material means, and time to do the work effectively (Kanter, 1993), that is, more efficiently and effectively; And, finally, access to opportunities fosters the growth and professional development of workers (Kanter, 1993).

Transposing these premises and the theory of Kanter that underlies to the nursing context, we can say that the empowerment of nurses comes from the following three components: of structures in the workplace necessary and essential to the promotion of empowerment; of the nurses' psychological belief in their own ability to have power; And recognition by the nurse that it is possible to have power in the relationships and health care provided (Manojlovich, 2007). A deeper understanding of these three components could, according to this author, help and strengthen nurses in how to make use of power in their professional practice in order to better care for the patient. In addition to these factors, there are others that also contribute to the empowerment of nurses, such as leadership style, culture, organizational structure, characteristics, knowledge and skills of nurses, social support and effective guidance (Al-Dweik, Al Daken, Abu Snienh and Ahmad, 2015), among others. For example, nurses who maintain a quality relationship with their superior tend to perceive greater structural and psychological empowerment and, consequently, feel greater job satisfaction (Laschinger, Purdy and Almost, 2007).

Satisfaction is therefore a relevant factor in the context of health care, which is critical to success in individual performance, since knowledge of its level or degree can identify the reasons behind possible maladjustments that may have harmful consequences in order to implement measures that can achieve the desired transformations (Batista, Santos, Santos and Duarte, 2010).

Nurses' job satisfaction is therefore described as a positive attitude toward work as a general factor and to the various facets of work that correspond to the needs desired by nurses as a result of the evaluation of their value or equity in their work experience (Liu, Aunguroch and Yunibhand, 2016). According to Chen, Yang, Gao, Liu and Gieter (2015), if nurses feel satisfied with the salary satisfaction dimension and if they receive psychological rewards from the head nurse, they exhibit positive work attitudes.

In the literature several have been the authors that have related the empowerment and the satisfaction in the work of the nurses. Li, Kuo, Huang, Lo and Wang (2013), for example, have shown the relationship between structural empowerment, psychological empowerment and job satisfaction in service nurses of Long-term Care Units, stressing that a satisfactory structural environment can result in high psychological empowerment in the workplace. In addition, this study concluded that structural empowerment is a precedent of psychological empowerment and that this relationship culminates in positive employee retention outcomes, such as job satisfaction (Cicolini, Comparcini and Simonetti, 2014). In another study by Cai and Zhou (2009), which evaluated the relationship between structural empowerment, job satisfaction and nurses' turnover intentions, as well as perceived levels of structural empowerment among Chinese nurses, the results showed that nurses perceive levels of structural empowerment in the workplace, when they perceive greater access to resources, followed by opportunities, support and information. In another study by Avram and Priescu (2012) the impact of the dimensions of structural empowerment (access to Information, resources, workplace support, and development opportunities) on job satisfaction, commitment, fairness and emotional exhaustion in a health facility. These results showed that health professionals, when they access information and receive support in the workplace, associated with opportunities and resources granted by the organization, perceive greater satisfaction and tend to experience less emotional exhaustion when confronted with work. Other studies have confirmed this significant relationship between job satisfaction and structural empowerment (eg Cai, Zhou, Yeh and Hu, 2011; Kanter, 1993; Laschinger and Havens, 1996, among others). For its part, Lautizi, Laschinger and Ravazzolo (2009) aiming to analyze the relationship between structural empowerment, job satisfaction and work stress in nurses in two health care settings in Italy, observed a significant relationship between structural empowerment, global empowerment and job satisfaction, corroborating this close relationship between satisfaction perceived by nurses and the delegation of power by health care institutions.

In a somewhat different context, Ferreira (2011) in a study that aimed to compare the professional satisfaction of nurses who perform their functions in two units offering different incentives, Family Health Units and Health Centers, concluded that satisfaction depends on the type of unit where the professionals work. The results showed that the nurses who work in the Family Health Units who received incentives, had higher levels of satisfaction than those who worked at the Health Center, who did not receive any kind of incentive.

2. PROBLEM, OBJECTIVES AND RESEARCH HYPOTHESES

In 2005, the reform of Primary Health Care was created with the objective of obtaining more and better health care for the citizens, with increased accessibility, proximity in quality and consequent increase in the satisfaction of users of services (Pisco, 2007, 2011). Thus, the reconfiguration of health centers and the implementation of Family Health Units, respectively (Biscaia, Martins, Carreira, Gonçalves, Antunes and Ferrinho, 2008). This new management model and health governance structure aimed to strengthen Primary Health Care to reduce inappropriate use of Differentiated and Emergency Health Care, achieve efficiency gains and better control costs (Lapão and Dussault, 2012). It was also intended to increase the satisfaction of professionals, so as to create good working conditions, improve organization and reward good practices (Pisco, 2007, 2011), raising the interest of wondering if there is a relationship between perceived empowerment and job satisfaction.

What happens, in fact, is that nurses perform similar functions, both in the Family Health Units and in the Personalized Healthcare Units, however, professionals working in the Family Health Units, regardless of the model they are in (model A or Model B), have access to a variable remuneration component, known as incentives, which is included in the commitments letter, contracted annually and which is measured by the performance shown in four areas: access, care performance, efficiency and satisfaction of users (Portaria nº 377-A/2013 de 30 de Dezembro). Incentives may be of an institutional or financial nature. In turn, the nurses working in the Personalized Healthcare Units do not receive any type of incentive regardless of the results obtained. These different rewards that characterize these two groups of health professionals (group with incentives and group without incentives) raise a question that is to ask if there are significant differences in the level of empowerment and job satisfaction in the two groups studied.

The objective of the present investigation was to evaluate the influence relation of structural empowerment, global empowerment and satisfaction perception in the work, and also to verify if there are significant differences in the two groups of nurses that perform functions in units, with and without incentives.

Next, we present the research objectives and hypotheses:

Objective 1 (O1): Describe the levels of structural empowerment, global empowerment and job satisfaction in the study participants.

Objective 2 (O2): To evaluate the relationship between job satisfaction, structural empowerment and global empowerment.

Hypothesis 1 (H1): Work satisfaction relates positively and significantly to structural empowerment and global empowerment.

Objective 3 (O3): To verify if there are significant differences in the level of structural empowerment, global empowerment and job satisfaction in the two groups of nurses, with and without incentives.

Hypothesis 2 (H2): There are statistically significant differences at the level of structural empowerment, global empowerment and job satisfaction in the two groups of nurses, with and without incentives.

3. SAMPLE

The sample consisted of 151 nurses, corresponding to 58.75% of the evaluated population described above. The ages of the nurses are between 28 and 64 years old ($M = 44.04$, $SD = 8.133$), of which 132 are female (87.4%) and 19 are male (12.6%). Regarding their academic degree, 13.2% of nurses have a bachelor's degree, 81.5% have a graduation and 5.3% have a master's degree. 17.2% of the nurses are specialists, in which 12.6% are specialists in community nursing, 0.7% specialists in medical-surgical nursing, 0.7% specialists in rehabilitation nursing, 1.3% specialists in child health and pediatrics nursing and 2% specialists in maternal and midwifery health nursing, and 82.8% of the respondents do not have any specialty. As far as the service provision regime is concerned, all nurses are full time (100%). As to their age in the profession, 99.3% of the respondents were nurses for 1 year or more, and only 0.7% of the respondents were nurses for less than 1 year. In relation to their seniority in the institution 4% have been under 1 year and 96% have been for 1 year or more. Of the nursing professionals who participated in the survey, 23.2% work in another organization than the one where they work and 76.8% work exclusively in the organization.

Of the 151 nurses who participated in the study, 95 (62.9%) performed functions at Personalized Healthcare Unit, did not receive any type of incentives and 56 (37.1%) at Family Health Unit, received incentives.

4. ASSESSMENT INSTRUMENTS AND METHODOLOGY ADOPTED

The scale used in this study to evaluate Structural Empowerment was the Conditions of Work Effectiveness Questionnaire II - CWEQII2, developed by Laschinger, Finegan, and Shamian (2001), and validated for the Portuguese nurses' population by Teixeira, Nogueira and Alves (2016). This scale consists of 4 subscales (12 items), which refer to the 4 empowerment structures defined by Kanter (1993), access to opportunities, information, support and resources, and a measure also developed by Laschinger *et al.* which evaluates Global Empowerment, consisting of 2 items, both measures use a five-point Likert scale (1 - strongly disagree and 5 - strongly agree).

The structural empowerment scale used in this study has a Cronbach Alpha value of 0.77 (sub-scale opportunity), 0.93 (subscale information), 0.92 (sub-scale support) and 0.72 (subscale resources), having a total value of 0.89 (global scale). Regarding the overall measure of Empowerment the value we found from Cronbach's Alpha is 0.86. The scale used to evaluate nurses' perception with work satisfaction was the Lima, Vala and Monteiro (1994) Work Satisfaction Scale, composed of 8 items, using a likert scale of seven points (1-extremely unsatisfied and 7-extremely satisfied). The Cronbach's Alpha for this scale in this study was 0.81.

Based on the objectives of this research, namely to find relationships between the different variables and test the hypotheses, it was decided to collect the information through a questionnaire survey. 205 questionnaires were delivered and 151 questionnaires were received. This is made up of sociodemographic variables, already mentioned previously, and already existing scales in the literature, validated and with psychometric qualities to measure the variables of this study.

The collected data were submitted to different statistical analysis, namely bivariate correlation analysis, parametric tests: T test and ANOVA, were also computerized and treated through SPSS software, version 21. Bivariate correlation analyzes were performed, parametric tests: T-test and ANOVA to analyze the presence of relationships between sociodemographic variables, structural empowerment, global empowerment and job satisfaction. However, no statistically significant differences were found between sociodemographic variables, structural empowerment, global empowerment and job satisfaction.

5. RESULTS PRESENTATION

In order to achieve objective 1 (O1): describe the levels of structural empowerment, global empowerment and job satisfaction in the study participants, and objective 2 (O2): to evaluate the relationships between job satisfaction, structural empowerment and global empowerment, and test hypothesis 1 (H1): job satisfaction relates positively and significantly to structural empowerment and global empowerment, it were calculated averages, standard deviations, asymmetry, kurtosis coefficient, and Pearson's correlation coefficient of the study variables (see table 1).

Table 1 Descriptions and correlations of variables

	<i>Empowerment opportunity</i>	<i>Empowerment support</i>	<i>Empowerment resources</i>	<i>Empowerment information</i>	<i>Empowerment structural</i>	<i>Empowerment global</i>	Job satisfaction
<i>Empowerment opportunity</i>	1	-	-	-	-	-	-
<i>Empowerment support</i>	0,451	1	-	-	-	-	-
<i>Empowerment resources</i>	0,259**	0,441**	1	-	-	-	-
<i>Empowerment information</i>	0,515**	0,662**	0,456**	1	-	-	-
<i>Empowerment structural</i>	0,682**	0,842**	0,697**	0,868**	1	-	-
<i>Empowerment global</i>	0,561**	0,527**	0,572**	0,501**	0,687**	1	-
Job satisfaction	0,524**	0,426**	0,370**	0,410**	0,547**	0,517**	1
Mean	3,6711	3,1479	2,9161	3,1347	3,22	3,43	4,31
SD	0,70025	0,94409	0,84259	0,98295	0,678	0,904	0,858
Asymmetry	-0,800	-0,594	0,052	-0,375	-0,556	-0,593	-0,433
<i>Cronbach Alpha</i>	0,772	0,921	0,728	0,931	0,89	0,86	0,81

The results obtained in Table 1 show that average values of the studied variables of structural empowerment, global empowerment and job satisfaction show a tendency very close to the central point, and professional satisfaction obtained the highest mean score ($M = 4.31$, $SD = 0.858$), while the resource dimension of empowerment showed the lowest average ($M = 2.92$, $SD = 0.84259$). The values of asymmetry and kurtosis respect the parameters that characterize normality in the data distribution ($|SK| < 3$ and $|Ku| < 10$) (Marôco, 2010), thus confirming the hypothesis outlined. Although these results do not allow us to guarantee the normality of the distribution of the responses to the items, the sample size and the magnitude of the coefficients lead us to admit that deviations from normality will not have great expression in the analysis that we will perform.

The results obtained also show the positive and statistically significant correlation of global empowerment in relation to the different dimensions of structural empowerment, such as the opportunity dimension ($r = 0.561$, $p = 0.01$), support ($r = 0.527$, $p = 0.01$), resources ($r = 0.572$, $p = 0.01$) and information ($r = 0.501$, $p = 0.01$). On the other hand, the statistically significant relationship between job satisfaction and all dimensions of structural empowerment (opportunity, support, resources, information) and structural empowerment ($r = 0.547$, $p = 0.01$) and global empowerment ($R = 0.517$, $p = 0.01$), confirming Hypothesis 1 (H1).

To achieve objective 3 (O3): To verify if there are significant differences in the level of structural empowerment, global empowerment and job satisfaction in both groups of nurses, with and without incentives and to test Hypothesis 2 (H2): There are statistically significant differences at the level of structural empowerment, global empowerment and job satisfaction in both groups of nurses, with and without incentives, the t-test was performed.

The results obtained show statistically significant differences in the scores of the structural empowerment ($t(146,069) = -5.308$, $p = 0.00$) regarding the two groups of nurses, namely those who receive and do not receive incentives; Nurses receiving incentives have higher levels of structural empowerment ($M = 3.57$, $SD = 0.472$) than those who do not receive incentives ($M = 3.01$, $SD = 0.697$).

The results also show statistically significant differences in the overall empowerment scores ($t(147,624) = -3.878$, $p = 0.000$) for the two groups of nurses, those who receive incentives and those who do not receive incentives, although professionals receiving incentives also have higher levels of global empowerment ($M = 3.79$, $SD = 0.631$) in relation to those who do not receive ($M = 3.22$, $SD = 0.975$);

Finally, statistically significant differences were also found in job satisfaction scores ($t(149) = -3.220$, $p = 0.002$) for the two groups of nurses, those who receive incentives and those who do not receive incentives, and professionals who do receive incentives are more satisfied ($M = 4.59$, $SD = 0.752$), in relation to those who do not receive ($M = 4.14$, $SD = 0.876$), confirming Hypothesis 2 (H2).

6. DISCUSSION AND CONCLUSIONS

Not intending to close the complex reality of this theme, it was intended to study the relationship between structural empowerment, global empowerment and job satisfaction perceived in nurses who provide health care in Personalized Healthcare Unit and Family Health Unit. Based on empirical models, conceptualizations and evidences, the purpose of

this study was also to understand if there were significant differences in these two health units. This concern arose from the current context in which we live in increasingly competitive societies, in which the degree of demand in relation to the results to be obtained is increasing, leading the nursing professionals of both units to compare, once currently are receiving different incentives for their work.

The obtained results allowed us to conclude that job satisfaction is positively and significantly related to structural empowerment and global empowerment. These very significant association relationships are corroborated by the study by Lautizi and collaborators (2009), which showed that job satisfaction is related in a significant and positive way with structural empowerment and global empowerment. This positive and significant correlation between structural empowerment and job satisfaction has also been evidenced by other studies (eg, Laschinger and Havens, 1996; Laschinger *et al.*, 2001; Cai and Zhou, 2009; Li *et al.*, others). These results show that the managers of the health units should devote particular interest to the empowerment of nurses through the implementation of effective work environments that promote the empowerment of nurses in order to trigger positive attitudes of satisfaction in the nurses' work and also in their individual performance and, consequently, in obtaining greater gains in health care. The managers of these health care providers should also adopt Kanter's model of structural empowerment (1993) as a management tool, since it is a useful model for analyzing and evaluating nursing work environments in order to provide workers Working conditions that aim at achieving goals in a meaningful way.

The results also showed that there are statistically significant differences in structural empowerment, global empowerment and job satisfaction in the two groups of nurses with and without incentives. Incentive workers have higher levels of structural empowerment, global empowerment, and job satisfaction than those who do not receive incentives. Although in the literature it was possible to access, no study on empowerment was found comparing two groups of professionals with and without incentives, a study carried out by Lautizi and collaborators (2009), which aimed to compare two health units in Italy, corroborates the results obtained in the present study, since the authors observed a significant relationship between structural empowerment, global empowerment and job satisfaction. Also, the studies by Cai and collaborators (2011) and Kanter (1993), observed the significant relationship between job satisfaction and structural empowerment, among other observations. Our results are further corroborated by Ferreira (2011), which show that nurses' satisfaction varies according to the type of unit where the professionals work, with professionals working in Family Health Units (with incentives) showing a greater satisfaction regarding those who work in health centers (without incentives). The results obtained in the present study have important practical implications for the Portuguese government in the implementation of equitable measures that benefit the nursing professionals of both units, so that they do not feel inequalities. One possible strategy would be for both nurses, working in Personalized Healthcare Unit and working in to Family Health Unit receive similar institutional and financial incentives since they perform the same functions.

We cannot finish without presenting some theoretical, methodological and practical limitations of the present study. The fact that this study was limited to the nurses of the Health Centers Groupings of the Algarve region does not allow to extrapolate and generalize the results obtained to all Portuguese nurses. The followed quantitative nature methodology could have been complemented by a more qualitative one based on semi-structured interviews where it was possible to raise motives and reasons underlying the identified levels of empowerment and job satisfaction.

We could not end without leaving some clues for future research, namely the idea of extending the study to other regions of Portugal. And, the possibility of also applying the study in other health units and in other organizational contexts, as well as carrying out the same study comparing Family Health Units model A and Family Health Units model B, since they benefit from different incentives.

REFERÊNCIAS

- Al-Dweik, G. Al Daken, L. Abu Snieneh, H. and Ahmad, M. (2015). Work- Related Empowerment among Nurses: Literature Review. *The International Journal of Productivity and Quality Management*, 1-22. Accessed in 8th of March 2016, on the Web site of: https://www.researchgate.net/publication/272161204_Work_Related_Empowerment_among_Nurses_Literature_Review.
- Avram, E. and Priescu, I. (2012). Access to information and empowerment perspectives in health services. *Procedia-Social and Behavioral Sciences*, 33: 949-953. Accessed in 8th of March 2016, on the Web site of: <http://www.sciencedirect.com/science/article/pii/S1877042812002704>.
- Batista, V. L. D., Santos, R. M. F., Santos, P. M. F. and Duarte, J. C. (2010). Satisfação dos enfermeiros: Estudo comparativo em dois modelos de gestão hospitalar. *Revista Referência*, 12(2): 57-69. Accessed in 30th of March 2016, on the Web site of: https://www.google.pt/url?url=https://web.esenfc.pt/v02/pa/conteudos/downloadArtigo.php%3Ffid_ficheiro%3D298%26codigo%3D&rct=j&frm=1&q=&esrc=s&sa=U&ved=0ahUKEwignab7pevLAhWMPBQKXHRUnDkkQFggTMAA&usq=AFQjCNF3hcNT_jLyPhqQa1LcfgOgW4ZtVg.
- Biscaia, A. R., Martins, J. N., Carreira, M. F. L., Gonçalves, I. F., Antunes, A. R. and Ferrinho, P. (2008). Cuidados de Saúde Primários em Portugal, Reformar para novos sucessos. 2th edition, Fundação AstraZeneca. Lisboa. ISBN: 972 872 1641.
- Cai, C. and Zhou, Z. (2009). Structural empowerment, job satisfaction, and turnover intention of chineses clinical nurses. *Nursing and Health Sciences*, 11: 397-403. Accessed in 20th of March 2016, on the Web site of: <http://onlinelibrary.wiley.com/doi/10.1111/j.1442-2018.2009.00470.x/pdf>.

- Cai, C. F., Zhou, Z. K., Yeh, H., and Hu, J. (2011). Empowerment and its effects on clinical nurses in central China. *International Nursing Review*, 58: 138–144. Accessed in 12th of October 2016, on the Web site of: <http://onlinelibrary.wiley.com/doi/10.1111/j.1466-7657.2010.00848.x/pdf>.
- Chen, F. Yang, M. Gao, W. Liu, Y. and Gieter, S. (2015). Impact of satisfactions with psychological reward and pay on Chinese nurses' work attitudes. *Applied Nursing Research*, 28(4): 29-34. Accessed in 9th of November 2016, on the Web site of: <http://www.sciencedirect.com/science/article/pii/S0897189715000610>.
- Cicolini, G., Comparcini, D. and Simonetti, V. (2014). Workplace *empowerment* and nurses' job satisfaction: a systematic literature review. *Journal of Nursing Management*, 22: 855-871. Accessed in 18th of October 2016, on the Web site of: https://www.researchgate.net/profile/Giancarlo_Cicolini/publication/263087641_Workplace_empowerment_and_nurses_job_satisfaction_A_systematic_literature_review/links/53e4c1610cf2fb748710e0e5.pdf.
- Conselho de Enfermagem (2001). Padrões de qualidade dos cuidados de enfermagem- enquadramento conceptual enunciados descritivos. Ordem dos enfermeiros. Lisboa.
- Ferreira, V. L. A. (2011). A Satisfação profissional dos enfermeiros em Cuidados de Saúde Primários. Ph.D. Dissertação. Faculdade de economia, Universidade do Porto.
- Gilbert, S., Laschinger, H. and Leiter, M. (2010). The mediating effect of burnout on the relationship between structural empowerment and organizational citizenship behaviours. *Journal of Nursing Management*, 18: 339–348. Accessed in 20th of October 2016, on the Web site of: http://cord.acadiau.ca/tl_files/sites/cord/resources/Documents/26.pdf.
- Kanter, R. M. (1993). *Men and women of the corporation*. BasicBooks. New York. ISBN: 046 504 4549
- Kennedy, S., Hardiker, N. and Staniland, K. (2015). Empowerment an essential ingredient in the clinical environment: A review of the literature. *Nurse Education Today*, 35(3): 487-492. Accessed in 7th of November 2016, on the Web site of: <http://www.sciencedirect.com/science/article/pii/S0260691714003864>.
- Laschinger, H. K. S. and Havens, D. (1996). Staff nurse empowerment and perceived control over nursing practice conditions for work effectiveness. *Journal of Nursing Administration*, 26(9): 27-35. Accessed in 22th of February 2016, on the Web site of: https://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=26&SID=P26jkz3nxq7BEDd7Bn1&page=1&doc=5.
- Laschinger, H. K. S., Finegan, J. and Shamian, J. (2001). Promoting nurses' health: Effect of empowerment on job strain and work satisfaction. *Nursing Economics*, 19 (2): 42-52. Accessed in 18th of February 2016, on the Web site of: <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=85b294eb-acad-40b7-9fe6-4256b33f141a%40sessionmgr4004&vid=1&hid=4101>.
- Laschinger, H. K. S., Purdy, N. and Almost, J. (2007). The impact of leader-member exchange quality, empowerment, and core self-evaluation on nurse manager's job satisfaction. *Journal of Nursing Administration*, 37(5): 221-229. Accessed in 2th of February 2016, on the Web site of: <http://journals.lww.com/jonajournal/pages/articleviewer.aspx?year=2007&issue=05000&article=00004&type=abstract>.
- Lapão, L. V. and Dussault, G. (2012). From policy to reality: clinical managers' views of the organizational challenges of primary care reform in Portugal. *International journal of health planning and management*. Accessed in 24th of March 2016, on the Web site of: <http://www.ago.com.pt/data/files/pdf/From-policy.pdf>.
- Lautizi, M. Laschinger, H. K. S. and Ravazzolo, S. (2009). Workplace empowerment, job satisfaction and job stress among Italian mental health nurses: an exploratory study. *Journal of Nursing Management*, 17: 446-452. Accessed in 8th of March 2016, on the Web site of: <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2834.2009.00984.x/pdf>.
- Li, C., Kuo, H., Huang, H., Lo, H. and Wang, H. (2013). The mediating effects of structural empowerment on job satisfaction for nurses in long-term care facilities. *Journal of Nursing Management*, 21: 440-448. Accessed in 18th of October 2016, on the Web site of: <http://www.ncbi.nlm.nih.gov/pubmed/23410197>.
- Lima, M. L., Vala, J. and Monteiro, M. B. (1994). Culturas organizacionais. In Vala, M. B., Monteiro, M. B. e Lima, M. L., & Caetano, A. (Eds.) *Psicologia Social e das Organizações -Estudos em Empresas Portuguesas*, Celta Editora. Lisboa.
- Liu, Y., Aunguroch, Y., Yunibhand, J. (2016). Job satisfaction in nursing: a concept analysis Study. *International Nursing Review*, 63: 84-91. Accessed in 20th of February 2016, on the Web site of: <http://onlinelibrary.wiley.com/doi/10.1111/nuf.12056/pdf>.
- Manojlovich, M. (2007). Power and empowerment in nursing: looking backward to inform the future. *Online Journal of Issues in Nursing*, 12 (1). Accessed in 26th of February 2016, on the Web site of: <http://www.nursingworld.org/mainmenucategories/anamarketplace/anaperiodicals/ojin/tableofcontents/volume122007/no1jan07/lookingbackwardtoinformthefuture.htmlsupports>.
- Marôco, J. (2010). *Análise de Equações Estruturais*, Report Number. Però Pinheiro. ISBN: 9899676314
- Pisco, L. (2007). A reforma dos Cuidados de Saúde Primários. Accessed in 10th of October 2016, on the Web site of: http://www.portaldasaude.pt/NR/rdonlyres/9A05F533-B7AE-4256-9F80-7FDD3E7C4FC7/0/CE80Luis_Pisco.pdf.

Pisco, L. (2011). Reforma da Atenção Primária em Portugal em duplo movimento: unidades assistenciais autónomas de saúde familiar e gestão em agrupamentos de Centros de Saúde. Accessed in 10th of October 2016, on the Web site of: <http://www.scielo.br/pdf/csc/v16n6/22.pdf>.

Portaria nº 377-A/2013 de 30 de Dezembro. *Diário da República nº252-I Série*. Ministério das Finanças e da Saúde. Lisboa.

Teixeira, A. C., Nogueira, M. A. & Alves, P. J. P. (2016). Empoderamento estrutural em enfermagem: tradução, adaptação e validação do *Conditions of Work Effectiveness Questionnaire II*. Revista de Enfermagem Referência, 10(4): 39-47. Accessed in 10th of October 2016, on the Web site of: http://ui.esenfc.pt/rr/index.php?module=rr&target=publicationDetails&pesquisa=&id_artigo=2605&id_revista=24&id_edicao=97.

ESCOLA: CENÁRIO DE VIOLÊNCIA SIMBÓLICA

Thania Mara Teixeira Asinelli
Letra Produtos Educacionais Ltda. Curitiba/Brasil
(thaniata@yahoo.com.br)

ABSTRACT

The considerations presented here are based on the experience, on the study and on the researches directed to the Brazilian school context. As a few social instances, formal educational institutions in Brazil exert symbolic violence in an unparalleled way, imposing on their attendees - particularly those who are less favored in the social and economic spheres - a considerable range of useless and inapplicable “knowledge”. School and teachers, arbitrarily, deny students stimulating experiences that do not raise the challenges and dispense reflection. Bourdieu’s assertion undoubtedly illustrates this fact: “[...] the more or less important violence which has been continually aimed at the most deprived schools, is nothing more than the visible manifestation of the permanent effects of the contradictions of the school institution and the violence of an absolutely new kind that the school practices over those who are not meant for it “ (Bourdieu, 1998, p. 264). Ivan Illich (1971) and Daniel Pennac (2007) report similarly to the school as a space for access to literate culture, in which knowledge has meaning and promotes insertion and participation of learners in social practices. In this sense, Literacy is taken as a process that transcends simple decoding. It implies the understanding that methodological referrals must prioritize what is produced and transformed by humanity and taken as an object of reflection in the classroom, taking into account what the student hears and observes in his everyday life, in his games, in the relationship with adults or in spoken and written media.

Discorrer sobre o isolamento de parte expressiva das instituições escolares brasileiras e da distância que mantêm, face à realidade, já se tornou “clichê” e tal repetição, por si só, não tem sido profícua e tampouco opera as mudanças necessárias.

Às agruras físicas e emocionais, à negligência do Estado e das famílias impetradas às crianças brasileiras - especialmente, àquelas menos favorecidas nos âmbitos social e econômico - somam-se à agressão simbólica como força coercitiva e objeto de dominação à qual frequentadores dos bancos escolares encontram-se, amiúde, expostos. A escola, como poucas instâncias sociais, consegue exercer tal violência de forma incomparável, em um “acordo” tácito com seus “subjulgados”.

Paralelamente, aos números importantes de crianças que ingressam no universo escolar, nos deparamos com um enorme contingente, em fase inicial de escolaridade (e mesmo, muito além desta), longe de adquirir, sequer, os instrumentos básicos para uma relativa autonomia na utilização da leitura e da escrita, imprescindíveis ao exercício da cidadania. Convenhamos, que tal constatação não traz novidade alguma, porém, o tema segue merecendo pesquisas, estudos e debates em todas as esferas da sociedade. Entretanto, é imperativo que se vá além da retórica.

Reconhecemos que, a partir dessas considerações, um questionamento se impõe: o que esperar de alunos, frequentadores de uma escola que não lhes assegura um mínimo de conhecimentos úteis e aplicáveis à sua vida? Nesta direção, Bourdieu (1999, pp. 7-8) sinaliza: “[...] violência suave, insensível, invisível a suas próprias vítimas, que se exerce essencialmente pelas vias puramente simbólicas da comunicação e do conhecimento, ou, mais precisamente, do desconhecimento, do reconhecimento ou, em última instância, do sentimento”. Embora, tratando-se da obra “A dominação masculina”, a assertiva supracitada aplica-se ao universo escolar, no sentido do consentimento daqueles que se sujeitam, ordinariamente, a tais forças, atribuindo-lhes legitimidade.

Entre as muitas questões que pairam sobre a insustentabilidade da escola, nos perguntamos por que ela insiste em se manter inapetente para tantas crianças, cujo comportamento (fora dela) é ativo, dinâmico, próprio de quem busca com avidez as respostas e as soluções para suas curiosidades? O que confere a nós (professores e escola) o direito a certas arbitrariedades que negam aos alunos uma experiência estimuladora, em um ambiente destinado a eles e não aos docentes?

Caminharemos rumo à profecia de ILLICH, na obra “Uma sociedade sem escola” (1971)? No espaço de um pequeno-grande livro escrito há tantas décadas, o autor postula a liberdade, o lazer, a independência e a autonomia de crianças e jovens, cuja necessidade de aprender é violentada pela amarga experiência escolar.

Inclinamo-nos, novamente, sobre as palavras de Bourdieu:

“[...] as violências mais ou menos importantes que, continuamente, têm tido como objetivo os estabelecimentos escolares mais deserdados, nada mais são que a manifestação visível dos efeitos permanentes das contradições da instituição escolar e da violência de uma espécie absolutamente nova que a escola pratica sobre aqueles que não são feitos para ela. Como sempre, a Escola exclui: mas a partir de agora, exclui de maneira contínua (...) e mantém em seu seio aqueles que exclui, contentando-se em relegá-los para os ramos mais ou menos desvalorizados. (Bourdieu, 1998, p. 224).

Quais caminhos devemos seguir, para que os frequentadores dos bancos escolares adquiram um mínimo de saberes significativos, úteis e, por que não, atrativos?

São de Pennac (2007) as palavras: “Criança alegre, porém, triste aluno”¹. Gerada pela absoluta falta de interesse no que se refere aos conteúdos, tal constatação pode ser de cada um de nós, professores. O que falta nas aulas e nas escolas para que se tenha a dualidade: “criança alegre, aluno contente”? A resposta, apenas e tão somente, o sistema de ensino e o educador podem dar. Refletir sobre a inutilidade de um sem número de “ensinamentos”, além das estratégias inférteis, é de uma urgência sem precedentes. Pior do que admitir um triste aluno é assumir como concludente tal constatação, depois de tantos anos consagrados à crença de que a escola deveria ser um espaço de reflexão, de produção, não apenas de conhecimento, mas de ruptura com o conformismo, parafraseando Illich.

No entanto, não podemos (e não queremos) “dispensar” a instituição escolar. É absolutamente fundamental a defesa desse espaço-tempo, sobretudo, porque para muitos é a única possibilidade de estabelecer o contato sistemático com o conhecimento produzido historicamente. E, mais do que isso, ser partícipe e construtor dos fatos que constituem a história das sociedades é um direito absoluto, que vai além das legislações e das normas, essas facilmente burláveis.

Retomemos Illich (1971, p. 213):

“Para que um homem possa ‘crescer’, ele precisa do livre acesso aos fatos, aos lugares, aos métodos, aos acontecimentos, aos documentos. Ele precisa ver, tocar, manipular tudo que está ao seu redor, em um meio/ambiente que não seja desprovido de sentido. Esse acesso, hoje, lhe é negado. Desde que o saber se tornou um produto assumiu as características de uma propriedade privada”².

Muito se tem debatido, porém, muito pouco se faz, efetivamente, no sentido de reverter o quadro de fracassos do processo de literacia; *letramento*, no contexto brasileiro (considerado, aqui, no seu sentido mais amplo, ou seja, em todas as disciplinas das áreas de ensino).

Transformar o cenário desalentador de desempenho escolar dos alunos do ensino fundamental brasileiro, em particular, dos que frequentam as escolas públicas implica, por exemplo, proporcionar o acesso à leitura e à linguagem oral e escrita como um processo de pertencimento, revelando a importância que tal processo representa para a vida, nas sociedades letradas. Ou, ainda, permitir que o aluno leve para a sala de aula suas experiências correlatas à leitura e à escrita e as socialize de modo a se fazer entender e sensibilizar os colegas que, por certo, têm outras relações com essa produção humana, quer na dimensão oral, quer na escrita.

Salientemos que o termo Alfabetização adotado, no Brasil, refere-se à etapa inicial do processo de aquisição da leitura e da escrita e, embora, preferencialmente, apontado para as crianças inseridas na escolaridade formal é também dirigido aos Jovens e Adultos, na modalidade do ensino fundamental e médio, que não tiveram acesso à alfabetização ou não a completaram em idade apropriada.

O conceito de alfabetização amplia-se, progressivamente, de acordo com as necessidades sociais e já não basta, apenas, codificar ou decodificar sinais gráficos. Surge daí, o conceito de *letramento*, que Val (2006) define, de forma pertinente, como:

“[...] o processo de inserção e participação na cultura escrita. Trata-se de um processo que tem início quando a criança começa a conviver com as diferentes manifestações da escrita na sociedade (placas, rótulos, embalagens comerciais, revistas, etc.) e se prolonga por toda a vida, com a crescente possibilidade de participação nas práticas sociais que envolvem a língua escrita, como a leitura e redação de contratos, de livros científicos, de obras literárias, por exemplo. (Val, 2006, p. 19)”

A abrangência do supramencionado pressupõe um professor que tenha adquirido e que siga exercendo o seu próprio processo de literacia/ *letramento*. Do contrário, teremos uma séria contradição: esperar do docente um trabalho com o aluno que ele mesmo não interiorizou e não aplica, em seu próprio benefício.

Independente da nomenclatura, relativamente recente para nós brasileiros – *letramento* é uma forma de definir a alfabetização no seu caráter amplo, inserida no contexto social e, como uma “via de mão dupla”, conferindo ao aluno acesso e participação efetiva na produção dos saberes. Assim, alfabetização e *letramento* não caminham separadamente; complementam-se. Mesmo que o termo emprestado de outras realidades - particularmente, das línguas inglesa e francesa - não tivesse sido por nós adotado, ainda assim, seríamos capazes de compreender e de exercer a alfabetização como um processo, portanto, ela é contínua.

Reiteramos, então, o caráter indissociável de *letramento* e alfabetização, pois, necessário se faz vincular código e significado.

Tal preâmbulo tem a finalidade de postular, o que tem sido recorrente: ensinar de forma significativa. Chegaremos um dia, na plenitude do ensino preconizado no discurso acadêmico atual? Muito provavelmente, a dificuldade esteja justamente aí: na impossibilidade de adequar/aplicar o discurso dos programas de formação das Universidades ao “chão” da escola. Formar professores para atuar nos diferentes níveis de ensino, implica em dotá-los de conhecimentos, não apenas didáticos e pedagógicos, mas culturais. Sabe-se, que um repertório desejável constrói-se ao longo da vida; não se adquire um capital cultural, necessário a um educador, apenas durante um curso de formação, mas pode-se, ao menos, minimizar os prejuízos que vêm se acumulando e recaindo sobre os alunos. Esse é o papel fundamental das Universidades e dos programas de formação continuada.

Em contrapartida, há experiências valiosas, embora pontuais, de ações pedagógicas que tratam o aluno não como “culpado” pelas dificuldades de aprendizagem, mas como seres que apreendem no seu tempo e ritmo. Tais experiências, certamente, são fruto do discernimento, da reflexão, do estudo e de uma dose considerável de bom senso do professor.

É o caso da adoção de encaminhamentos metodológicos que priorizam o que é produzido e transformado pela

¹ Pennac, Daniel. “Chagrin d’école”. Paris: Éditions Gallimard, 2007. Tradução da autora.

² Illich, Ivan. *Une société sans école*. Paris: Éditions du Seuil, 1971, p. 213. Tradução da autora.

humanidade, tomado como objeto de reflexão dentro da sala de aula e que o aluno ouve e constata em seu dia a dia, em suas brincadeiras, no convívio com adultos ou na mídia falada e escrita.

A fragilidade da compreensão dos aspectos cognitivos dos alunos, das suas diferentes trajetórias, do tempo de cada um e, sobretudo, a falta de sistematização e organização dos conteúdos da leitura e da escrita, fazem com que os aprendizes transponham etapas e anos escolares sem um mínimo necessário de aquisições de conteúdos, porque o sistema, representado pela escola e professores, não tem a devida clareza do compromisso e da intencionalidade que tais instâncias têm, obrigatoriamente, que exercer.

Para finalizar, retomamos as palavras de Pennac:

“(...) um ensinamento claro, confiante e preciso, acompanhado de uma palavra amigável e de um olhar compreensivo, pode dissipar o sentimento de nulidade (o “chagrin d’école”) instalado nos jovens aprendizes, bem como, trazer leveza aos seus espíritos. (...) Certamente, nós professores não somos os únicos responsáveis pelas transposições de barreiras, mas, essas mulheres e esses homens passam muitos anos de sua juventude, lá, diante de nós. E, um ano de fracasso escolar pode representar uma enorme ameaça; uma perda irreparável”. (Pennac, 2007, pp. 68-69).³

Longe de identificar culpados e inocentes, o que gostaríamos, na essência, seria fazer possível - uma vez identificadas as razões para o atual quadro desanimador do nosso sistema de ensino - o sucesso da busca por uma escola em que nossos alunos e nossos professores sejam parceiros e que os “especialistas” desçam de seus pedestais, tornando acessíveis e aplicáveis o que parece tão coerente nos seus discursos.

Muito além da transposição das fronteiras estabelecidas entre os anos letivos, é direito do aluno que os desafios, as experiências positivas e o sucesso escolares tenham um peso infinitamente maior em sua vidas, do que os momentos de frustrações.

REFERÊNCIAS

- Bourdieu, P. (1999). *A Dominação Masculina*. Rio de Janeiro: Bertrand Brasil.
- Bourdieu, P. (1998). A Escola conservadora: as desigualdades frente à escola e à cultura. In: Nogueira, M. A.; Catani, A. (Org.). *Escritos de educação*. Petrópolis: Vozes.
- Illich, I. (1971) *Une société sans école*. Paris: Éditions du Seuil.
- Pennac, D. (2007). *Chagrin d’école*. Paris: Éditions Gallimard.
- Val, M. G. C. (2006). O que é ser alfabetizado e letrado? In: Carvalho, M. A. F. & Mendonça, R. H. (Org.). *Práticas de leitura e escrita*. Brasília: Ministério da Educação.

³ Tradução da autora.

INITIAL MOTIVATION AND PEDAGOGICAL SUPPORT TO PHYSICAL EDUCATION ACADEMICS OF UNIPAMPA-RS AS SPACES TO LEARN POSITIVELY

Marcio Cossio Baez
UNIPAMPA
(marciocossibaez@hotmail.com)

Juan José Mouriño Mosquera
Pontifícia Universidade Católica do Rio Grande do Sul- PUCRS
(juan.mosquera@pucrs.br)

Claus Dieter Stobäus
Pontifícia Universidade Católica do Rio Grande do Sul- PUCRS
(stobaus@pucrs.br)

ABSTRACT

Joining in Higher Education brings with it a range of new life learnings of the young academic, in any university course. Often the students are surprised positively when faced with different realities than they had previously lived, due to lack of experience. The research aimed to accompany the training process of Physical Education academics, and is characterized as a quantitative, of a cross-sectional survey, in which 100 academics of the Federal University of Pampa- UNIPAMPA, in Uruguai- Rio Grande do Sul- Brazil, answered the Assessment of Initial Motivation and Pedagogical Support Questionnaire (which examines factors of admission in the higher course frequented and factors of choice of the teaching profession), attending different semesters of their course. The most relevant results were: high Initial Motivation Assessment and Pedagogical Support with a mean of 26.16 points (SD = 5.36); Educational Training Model evidencing valorization of this process, average 58.85 points (SD = 7.73); Professional Results pointing to a positive perspective regarding the professional future, average 29.28 points (SD = 3.65); good Support in the Internship with an average of 49.69 points (SD = 8.75). We could contrast the results with other previous studies, this being considered smaller. It is necessary construct experiences in more realistic university spaces, provoke learning at higher and positive levels of well-being, through support for constructive practical and theoretical experiences, insertion in richer experiences in inner and outside school environments, participation in study groups and, mainly, by a better continuous professional appreciation of the Physical Education.

Keywords: Education, Physical Education, Motivation, Pedagogical Support, Well-being.

JEL Classification: I20, I23, I29, I31

1. INTRODUCTION

Taking as a starting point the (trans)formation of the student in the teacher, we can observe that the general formation is devalued, considering that the important thing is, on the one hand, the specific formation in terms of the learning of the contents that the teacher must teach to its Students and, on the other hand, the professional experience to learn strategies that allow the teacher to conduct more effectively the process of teaching content.

Throughout the course, students are required to have greater autonomy to participate in curricular and extracurricular activities, such as lectures, courses, congresses and others.

As people perceive themselves with satisfactory resources to deal with stressful factors, coupled with feelings of pleasure and joy, there are so-called “protective factors,” which are basically personal health skills and abilities. Among the components of well-being are satisfaction with life and the balance of positive and negative affects, including the notion of cognitive evolution, quality of life, and affective relationships.

It is known that college students are vulnerable to a wide range of threats to their well-being. We believe that in the initial formation of the Physical Education teacher, it is important to allow cognitive conflicts so that the academic is led to reflect on the reality in which he will be inserted and, from it, to enable him to solve the problems that he will face since his formation To their practice in the labor market.

These theoretical approaches confirm our intention to investigate the context in which the teacher is inserted in pedagogical training in undergraduate courses in Physical Education, reflecting on his personal and professional side aiming to constitute references that enable new actions that promote well-being in teaching.

The debate about malaise and well-being has been passing through the time and the educational models instituted in our training schools. From this point of view, we can say that several studies on this theme, which are under development, emphasize the search for structures that contribute to the improvement in the quality of life of educational professionals.

This shows the need for studies that reveal the process faced by teachers, academics, from their formation to their actual performance in educational environments, traditional or not.

In short, as previously explained, the study seeks to deepen knowledge of the personal and professional trajectory of the student who becomes a teacher and their relationship with aspects of teacher well-being. Thus, I initially delimit the research problem for this study:

How does the process of training of Physical Education students Initial Motivation and Pedagogical Support in the construction of the good and malaise student?

2. CHARACTERIZATION OF THE STUDY

The research process should be guided by the methodology that best evidences the object under study, clarifying the central issue ventilated and allowing a precise analysis of the information collected (Minayo, 2001), in order to create a gear that guarantees a good scientific identity (Santos, 2000).

This part of the research was developed is characterized as a quantitative, cross-sectional exploratory-descriptive research, offering support for research during the undergraduate course in Physical Education plus one semester of the beginning of the professional career of those involved, raising quantitative data through information sheets and standardized questionnaires. Data analysis was performed using the statistical software SPSS, version 17.0. There is also a complementary qualitative part.

This study was successfully submitted to the Scientific Committee of PUCRS (protocol no. 192/2014), which it considered necessary to send to the Ethics Committee. Upon approval, the project is also registered in the Brazilian Platform, according to resolution 466/12, which received approval, opinion no. 808.522.

3. FIELD OF STUDY

For the research, the Federal University of Pampa, in the city of Uruguai-RS, was chosen for its ease of access and greater availability in scheduling with academics and being in the researcher's residence city.

4. POPULATION AND SAMPLE

All the academics enrolled in the undergraduate degree in Physical Education of the Federal University of Pampa, Uruguai-RS campus, were invited, which totaled 147 students to participate in the study.

The initial sample was delimited in 100 academics from different semesters who accepted to participate in the study.

5. DISCUSSION AND RESULTS

In order to evaluate this variable, we used the Initial Motivation and Pedagogical Support Questionnaire, by Jesus (1996), which is characterized by evaluating the initial motivation for the profession teacher. In terms of the motivational orientation for this profession, the author posed two questions: the first concerning the factors of entrance in the attended upper course and the second to the factors of choice of the teaching profession.

For the first question are presented six alternatives, two that show a greater initial motivation for this profession and four that express a lower initial motivation. For the author, the initial motivation for the teaching profession is all the greater since the attended upper course was, from the outset, seen as a means to concretize the project of joining this profession.

For the second question, seven alternatives are presented, four that show a greater initial motivation for the teaching profession and three that show less motivation. According to the author, the initial motivation is all the greater as intrinsic factors are the basis of the choice of this professional activity.

The items are presented in a 5-point Likert format (from 1 = none to 5 = many) and added in the sense of the highest initial motivation for the teaching profession.

When dealing with subjects such as the motivation of the Physical Education professional and its academic update are not so simple, because it is a very complex and difficult subject to study, due to its different approaches and theories that deal with the subject.

The motivation for an activity depends on the meaning each person attributes to it. It is important to take into account the existence of individual and cultural differences between people when talking about the subject (Vernon, 1973; Murray 1978; Davidoff, 1983).

In this way, we will treat it in a more comprehensive way, not only looking at an aspect but seeking the perspective of a being with a potential for realization. Thus, motivating people to develop activities is one of the basic problems in any process of teaching and learning motor, in the contexts of Physical Education (Weinberg and Gould, 2001).

In our study with Physical Education students, we obtained an overall mean of 26.16 points with a standard deviation of 5.36 points. This result falls short compared to the studies of Jesus (1996) and Sampaio (2014).

Table 1 - Average of the Initial Motivation of students of Physical Education of UNIPAMPA, according to the Sex and the Semester

		average	default error	value – p
Sex	female	26,421A	0,774	0,25
	male	25,080A	0,746	
Semester	second	27,152A	0,875	0,017
	fourth	27,292A	1,043	
	sixth	22,637B	1,227	
	eighth	25,919AB	1,222	

Source: Baez (2016)

Averages followed by the same letter do not differ statistically from each other, at the significance level of 5%, according to the LSD (Adjustment for multiple comparisons: Least Significant Difference equivalent to no adjustments) test.

In relation to the initial motivation for teaching practice, Jesus (1996) reports a study by Huberman (1989) with 160 Swiss teachers, in which 9% of the answers translated passive motivations (lack of better professional alternatives), 28% translated motivations Materials (going to the profession as a means of subsistence) and 63% translated active motivations (joining the teaching profession as the desired choice, being the contact with young people the main factor).

The motivation for the teaching profession is, therefore, one of the main factors of orientation of the professional project of the teacher, constituting the process of initial formation, one of the fundamental stages for the development of this project.

The study developed by Jesus (1996) revealed that the initial motivation has a direct and significant influence on the professional project. What can be observed with these results is that the initial motivation of the Physical Education academics of Unipampa, falls short of the studies developed here with this particular population, situated in a phase of constant doubts and diverse professional options.

The issues of regulation of Physical Education as a profession and areas, rather than health or education, have been generating some discussions. Nowadays, physical activity is gradually being valued with society as a factor of health and well-being, through sports, dance, gymnastics, recreation and also activities with a softer focus such as alternative body practices. This fact expands the range of professional activity, not restricted only to elementary and middle schools, creating, thus, a new dynamics in the labor market.

Therefore, we can affirm that in Unipampa's Physical Education academics, the initial motivation for the teaching profession suffers a decrease in the comparison between the initial semesters of the course. This may be due to experiences and experiences on the part of the academic during the course, because the more advanced the semester in which these academics meet, the greater their prospects of insertion in the labor market.

Silva and Carneiro (2006) suggest the need for a greater number of initiatives that orient students in high school to a more informed choice of career in higher education.

Analysis of the results of the instrument that evaluates the Educational Formation Model, for the evaluation of the model of educational formation, as it was perceived by the trainees, Jesus (1996) formulated a measure, consisting of eleven items that intend to translate a relational model of formation, Taking into account the assumptions that several authors have presented to characterize this model, differentiating it from the normative model of formation.

The items are preceded by the phrase "teachers in educational subjects, considered as a whole [...]" and evaluated in a 7-point format (from 1 = totally disagree to 7 = strongly agree).

At this point we consider the training actions to be relevant, especially during the course, according to the perception of the learners, indicating the valorization of pedagogical strategies that the teacher can use. According to Moraes (1996), to innovate, to act pedagogically on new bases involves a profound change of mentality, which is difficult, especially for those who work in the educational field. Therefore, it is important to emphasize that the educational models available are of fundamental importance for academic development in a gradual and complete way.

In our study it was evidenced a valorization of this process, since it obtained an average of 58.85 points (SD = 7.73), being well superior to the study of Jesus (1996), although it is smaller than the average observed in the study of Sampaio (2014) it is important to highlight the licensee to assimilate the new knowledge, it requires time to be able to compare, to establish the connections, to understand the differences and to integrate the knowledge.

Thus, we can affirm that, as in the study of Sampaio (2014: 90):

There was success in the actions that allowed the trainees to reflect on the possible attitudes to adopt in situations of disinterest, indiscipline and school failure as students; On the presumption that the teacher has his personal style; In describing potentially effective alternatives to dealing with problematic situations in the classroom that the teacher can use.

Considering that one learns throughout life, learning becomes one's own life. And personal decisions influence not only the individual but also the life of all mankind. That is why education is strategic. The question was: what is the purpose of education?

The objective, according to Lück (2000), is to contribute to the full realization of the human being, in which he is able to

integrate the dimensions of the “T” and the “world”, seeing in his daily problems, in a complexity of global problems solve, results for them solving them locally. It also aims to help in the renewal of society by producing new knowledge, seeking answers to solve the problems faced by various human groups.

Table 2 - Average of the Educational Training Model of Physical Education students of UNIPAMPA, according to Sex and the Semester

		average	default error	value – p
Sex	female	58,347A	1,125	0,949
	male	58,246A	1,084	
Semester	second	61,944A	1,272	0,029
	fourth	57,490B	1,516	
	sixth	57,038B	1,784	
	eighth	56,714B	1,631	

Source: Baez (2016)

Averages followed by the same letter do not differ statistically from each other, at the significance level of 5%, according to the LSD (Adjustment for multiple comparisons: Least Significant Difference equivalent to no adjustments) test.

According to data on the vocational training model, we again observed that the best means are found in the initial semesters, but it is worth noting that the general results of this variable are above the average of other studies already mentioned. What is worth mentioning is the importance of teacher trainers in this phase of academic life, because through the actions implemented by these professionals will facilitate (or not) how academics will face the obstacles of the teaching profession.

Analyzes of the results of the instrument that evaluates the Professional Results, for the evaluation of the previous professional results, in situations experienced in their early stage of the career, according to the author's questionnaire we made an adaptation, replacing the terms beginning of the career by academic stage, without The need to adapt to other issues.

It was formulated by Jesus (1996) a scale consisting of eight professional goals located within the scope of the relationship with students in the teaching-learning process, and the learner indicate the degree of success perceived in each of them, through a balance of professional experiences In their academic stage, on a 5-point scale (from 1 = unsuccessful to 5 = successful).

The training of the graduate in Physical Education, according to the National Curricular Guidelines, must be conceived, planned, operationalized and evaluated aiming at the acquisition and the development of specific skills and abilities that contemplate the perspective of health promotion in the different spheres of action of these professionals.

According to the National Council of Education (2004), the Physical Education guidelines propose the formation of a professional profile aimed at understanding the social context of individuals and communities in order to intervene professionally with their academic specialty and with the expansion of knowledge, adopt healthy habits.

Every curricular proposal aims at providing a complete and adequate training to the demands placed on the profession. However, due to the dedication and commitment of those who assign themselves the task of constructing higher education curricula, there are always elements that escape perception.

Based on these statements it is desired that the professional in Physical Education has a huge range of skills and abilities to develop their activities.

The overall results of UNIPAMPA'S Physical Education academics point to a positive perspective regarding the professional future, since despite the overall results 29.28 points (SD = 3.65), still below the 32,03 average of the Sampaio study (2014), is a little more than that of Jesus' (1996) studies, 26.93, which points to a formation that allows us to envisage a promising professional future for future professionals.

Table 3 - Average of the Professional Results of students of Physical Education of the UNIPAMPA, according to the Sex and the Semester

		average	default error	value – p
Sex	female	29,284 ^a	0,556	0813
	male	29,101 ^a	0,536	
Semester	second	29,505 ^a	0,629	0,526
	fourth	28,760 ^a	0,749	
	Sixth	28,487 ^a	0,882	
	eighth	30,017 ^a	0,806	

Source: Baez (2016)

Averages followed by the same letter do not differ statistically from each other, at the significance level of 5%, according to the LSD (Adjustment for multiple comparisons: Least Significant Difference equivalent to no adjustments) test. Here we show a concern with the future professional and the ability to reflect on one's own career because this reflection can facilitate the entry and / or permanence of the professional in the labor market. These results are showing trainers that only groundbreaking information and knowledge about the area and its target audience are no longer seen as the fundamental factors of professional development. Therefore, a permanent discussion with the reality is necessary in search of new alternatives for overcoming the teaching practice.

In order to evaluate the support provided by the traineeship supervisor (s), according to the trainee's perception, Jesus (1996) elaborated a scale consisting of twelve items, Of them a pedagogical implication deriving from the cognitivist theories of motivation that can be fulfilled by the instructor of the pedagogical stage in the cognitive-motivational support that it provides to the trainee.

The items are preceded by the sentence - The orientation that was given to me during my pedagogical stage led me to ... And evaluated according to a Likert scale of 7 points (from 1 = totally disagree to 7 = totally agree).

In the global division by semester the results presented better values in the second and fourth semesters with 52 points (DP = 8.20) and 50.32 points (DP = 7.28) respectively, but in more advanced semesters such as the sixth and eighth semesters The scores were even lower with 45.72 points (SD = 9.56) in the sixth semester and 48.55 (SD = 9.67) in the eighth semester. Semesters that already count on the supervised internship discipline.

Table 4 - Average Academic Support of students of Physical Education of UNIPAMPA, according to Sex and the Semester

		average	default error	value – p
Sex	female	47,977A	1,286	0,253
	male	50,031A	1,239	
Semester	second	52,041A	1,454	0,075
	fourth	50,003A	1,732	
	sixth	45,613A	2,040	
	eighth	48,359A	1,865	

Source: Baez (2016)

Averages followed by the same letter do not differ statistically from each other, at the significance level of 5%, according to the LSD (Adjustment for multiple comparisons: Least Significant Difference equivalent to no adjustments) test.

According to Tardif (2002), supervised internship is one of the most important stages in the academic life of undergraduate students and, following the requirements of the National Education Guidelines and Bases Law, from 2006 onwards it constitutes a proposal for Supervised internship with the objective of providing the student with the observation, research, planning, execution and evaluation of different pedagogical activities; An approximation of academic theory with classroom practice.

Thus, when analyzing the results of Physical Education students, the general results are 49.69 points (SD = 8.75), which represents a score well below the studies of Jesus (1996) and Sampaio (2014).

For Pimenta (2002), the internship is the central axis in teacher training, because it is through this that the professional knows the aspects indispensable for the formation of the construction of the identity and the day-to-day knowledge.

According to Pimenta (2002), the supervised internship becomes essential in the teacher training process, since it provides conditions for future educators, specifically for undergraduate students, a close relationship with the environment that involves the daily life of a teacher and, from this experience, academics will begin to understand themselves as future teachers, for the first time facing the challenge of living, speaking and listening, with languages and knowledge that are different from their environment, more accessible to the child.

At this point it becomes necessary to explain why, since UNIPAMPA'S Education course is characterized as a new course, it has a curriculum that, in front of many undergraduate courses in Physical Education, can be considered innovative because it allows the insertion of the academic In the school since the first semester through the Curricular Pedagogical Practices that seeks through the various disciplines developed in the academic semester to provide the real practice, ie, the accomplishment of the activities developed in the academic environment in the school environment where effectively the future professional will perform their teaching practice .

Thus, the supervised stage gives the licensee the mastery of theoretical and practical instruments essential to the performance of his duties. The purpose of this exercise is to benefit from the experience and promote the development, in the professional field, of the theoretical and practical knowledge acquired during the course in the higher education institutions, as well as, to promote, through various educational spaces, the expansion of the universe Cultural background of academics, future teachers.

6. CONCLUSIONS

Using as basis the question of research in which we seek to identify the graduates in Physical Education in the process of formation, with regard to indicators of well-being, we identified that in physical education academics the structuring of well-

being seems to constitute At the beginning of its formation process in which this academic, is structuring ways to overcome the challenges imposed by the initial training period.

We emphasize that for the construction of well-being it is necessary to construct positive university experiences and for academics in the process of formation this can be done through the valuation of practical and theoretical experiences, being they, through the insertion in the school environment, Participation in study groups and mainly for the professional appreciation of the chosen area of work.

REFERENCES

- Davidoff L.(1983). *Introdução à psicologia* [Introduction to Psychology]. McGraw-Hill do Brasil. São Paulo.
- Huberman M. (1989). The professional life cycle of teachers. *Teacher College Records*, 1(1):31-57. <http://hub.mspnet.org/index.cfm/9327>
- Jesus S.N.de. (1996). *A motivação para a profissão docente. Contributo para a clarificação de situações de mal-estar docente e para a fundamentação de estratégias de formação de professores* (The motivation for the teaching profession. Contribution to the clarification of situations of teacher malaise and to the foundation of teacher training strategies). Aveiro. Estante Editora.
- Lück H. (2000). *Pedagogia Interdisciplinar: fundamentos teórico-metodológicos* (Interdisciplinary Pedagogy: theoretical-methodological foundations). 8ª edição, Vozes. Petrópolis.
- Minayo M.C.S. (2001). *Pesquisa social: teoria, método e criatividade* (Social research: theory, method and creativity). 18ª edição, Vozes. Petrópolis.
- Moraes M.C. (1996). *O paradigma educacional emergente: implicações na formação do professor e nas práticas pedagógicas* (The emerging educational paradigm: implications for teacher education and pedagogical practices). Em aberto, 70(16):1-13 <http://rbep.inep.gov.br/index.php/emaberto/article/view/2081/2050>
- Murray E.J. (1978). *Motivação e Emoção* (Motivation and emotions). 4ª edição, Zahar. Rio de Janeiro.
- Pimenta S.G. (2002). *O estágio na formação de professores* [The internship in teacher training]. 5ª edição, Cortez. São Paulo.
- Sampaio A. A. (2014). *Vivências de docentes e de seus licenciandos no final de formação e passagem para o mundo do trabalho: mal/ bem-estar docente/ discente, autoimagem e autoestima* (Experiences of teachers and their graduates in the final education and transition to the world of work: teacher/student malaise/well-being, self-image and self-esteem). Tese (Doutorado em Educação) - Faculdade de Educação da PUCRS.
- Santos B.S.dos, Antunes D.D, Mosquera J.J.M. e Stobäus, C. D. (2016). Teachers' Motivation Related to Teaching and Learning Processes. *Creative Education*, 7: 2011-2020. <http://dx.doi.org/10.4236/ce.2016.715202>
- Silva A. P. S. e Carneiro A. B. (2006). *Perfil de ingressantes e razões de escolha pelo curso superior de educação física* [Profile of new entrants and reasons for choosing for higher education in physical education]. Motriz, 12(2):9-21.
- Tardif M. (2002). *Saberes docentes e formação inicial* [Teaching skills and initial training]. Vozes. Petrópolis.
- Vernon, M.D. (1973). *Motivação Humana: a força interna que emerge, regula e sustenta as nossas ações* (Human Motivation: the internal force that emerges, regulates and sustains our actions). Vozes, Petrópolis.
- Weinberg R.S. e Gould D. (2001). *Fundamentos da Psicologia do esporte e do exercício* (Fundamentals of Sport and Exercise Psychology). Artmed. Porto Alegre.

PARALLEL SESSION VI

CONSUMER BEHAVIOUR OF BABIES MOTHERS. REPERCUSSIONS IN THE PSYCOPHYSICAL SEPARATION

A. M. García

Dpto. Economics and Business Administration, University of Málaga
(mdgarcia@uma.es)

A. M. Casado

Dpto. Economics and Business Administration, University of Málaga
(acasado@uma.es)

ABSTRACT

The influence of the consumption of products for babies in the psychic and physical distancing between the mother and the baby is obvious after the analysis of this research. We study the relationship between the consumption of baby products (0-3 years) and the physical and psychological separation between both. It seems to be that there is a contradiction between the products offered and scientific knowledge of the matter brings over of the physical and psychological benefits for babies.

The research started from numerous interviews with people associated with motherhood. After these interviews, a survey was developing in 1115 mothers of babies 0-3 years.

Regarding the results, it notes that, as regards products for the sleep as well as with regard to breastfeeding, ride, travel, security, toys, furniture and accessories; they are the most used those dissociate the mother of the baby, encouraging the child to sleep without physical contact, don't take the chest, stroll separated from the mother, etc.

The conclusions, while not "politically correct" for marketing environment are a revealing importance to begin to consider new products that promote other types of mental and physical relationship between mother and baby, products that promote world more intelligent, friendly and close.

Keywords: Consumerism, Consumer Behaviour, Ethics of Marketing, Consumer Psychology.

JEL Classification: I12, I20, M31

1. BACKGROUND

The baby products industry has undergone a boom in recent years, although still difficult rating figures, secreted by groups, is billing the sector. Even being products with quotas of sale rather than representative, their promotional strategies for the buyer-based merchandising, promotional marketing in health centres and hospitals, journals and few insertions in television advertising; increasing the presence in electronic journals. This "commercial effort" causes that, together with the dynamic Western manners, an expectant mother, without having been almost exposed to advertising impacts, until the baby is born because there will be bought very likely: the basket (pacifier, bottle, nasal aspirator, wipes, diapers, dishes, bibs, rattles, creams, shampoo, gel, etc), plus multiple products such as: furniture room, cart, Moses, bath toys seat car, clothes, crib, blankets, sheets, park or garden, magazines and videos and so on depending on the volume of relations of the mother. These acquisitions are made regardless of the analysis by the mother of the need for the purchase of products; i.e. in this case, is in breach of the purchase decision process since there is a need for actual purchase, and may that it did not exist depending on the method you decide to raise your baby. But this is often not an approach that European or American mothers are made globally.

Analyzing the segment of products aimed at infants 0 to 3 years are not investigations of this industry that would address it in a comprehensive way, and even, it is difficult to access data, since many of these products are within the Group of "products" that encompasses a segment more large. It can find figures of specific elements, such as the one done by the consulting firm TNS Wordpanel (Consumer, 2007), which concludes that increased spending on infants of 0 to 3 years, focuses on clothes (48%), diapers (19%) and power (20%). According to the study, the lower is the older child is made disbursement. Spanish families invested in 2002 about 511 euros per year in children aged zero to three months; 467 euros, in 3 to 6 months; 411 euros, from 6 to 12 months, 390 euros, in 12 to 18 months; 305 euros, at from 18 to 24, and 222 euros, in the 24 to 36 months, says the report, although the figures seem to us with an important focus down. By items, up to three months increased spending occurs in the textile sector (55.6%), diapers (19.2%) and food (13%), figures which stood at 44.6%, 19.2% and 25.2% from three months to six. In the case of 6-12 months, 39% of the disbursement is for clothes, 30% for food and 21% for diapers.

On the other hand, children 12 to 18 months consumed mostly clothes (44.3%), but also food (23.6%) and diapers (23.5%). These figures become 46.7%, 17.2% and 27.1% for 18-24 months; and 61.1%, 12.5% and 18.3%, in the case of 24-36 months. Bearing in mind that this study considers that the expenditure is lower in other products of the sector, and taking into account a product possessing a significant number of parents (55' 7% it is used fairly or very often), the intercom sound, has a price average of 114 euros, seems to be that spending that is carried out in the maintenance of the

babies is considerable. With respect to other sectors not many data, we find is interesting to study in United States (Hirsh-Pasek and Michnick, 2005) on the category of educational toy for babies, which constituted a business of billion of dollars of benefits. This study is relevant because this sector (chips and pedagogical books for babies) are currently in expansion promoted by Governments and curricula, and what started in United States expands to Europe (although these methods undermine the creativity of children). This type of product, type Baby Einstein (Lodish, 2007), is expanding its market share in Spain developing new lines of videos and toys educational and at the same time contribute to creating a new generation of parents focused on children who think that so-called enrichment activities can push their young directly into the path of the fast learning explicitly and implicitly success.

There are different companies in the sector that promote educational products and entertainment services for babies and sets for babies of-less-in-three-years, such as The Baby Prodigy ("dedicated to contribute to the growth of smart and happy children) and Brainy Baby ("learning for life"). Various television as the Teletubbies or Little Einsteins products also work in this line. However, as this educational business of babies became a lucrative sector of 20,000 million dollars annually, some groups defending the rights of the child warned parents that they seriously thought about the products and the hidden message behind the campaigns aimed at infants and children. In 2006, *Campaign for a Commercial-Free Childhood* interposed a complaint to the *Federal Trade Commission* against Baby Einstein Company by false and misleading marketing. The American Academy of Pediatrics (American Academy of Pediatrics), joins the demand by pointing out that evidence showing that these videos will help to physical or intellectual development of infants and children (but opposite) as shown by several studies there is no. In addition, (MEAD, 2007), a report by *Education Sector*, argues that the majority of so-called educational toys for infants and children in fact are not. This report demonstrates why adults can't get that newborn babies are smarter or have more success by simply putting them to music of Beethoven or playing with blocks inspired by Einstein.

There is plenty of literature that collapse theories pro consumption based on early learning (Hirsh-Pasek and Michnick, 2005) or Thomas (2007). Also arises if products and marketing campaigns aimed at the purchase of products for babies under three years of age could indeed end up doing damage to infants and children, which younger history have become consumers.

As a group, parents are definitely vulnerable to strategies of marketing (Lodish and Small, 2007). Parents are vulnerable because they have always wanted the best for their children, according to Small (o. c.) exists a great temporal distance between the use of the products "for development" and the feedback obtained from them. Products for infants and young children allegedly get results in the future, such as a higher intelligence, better socialization, which some consider that it helps when it comes to enter the best universities or jobs of greater prestige. In any case, most of the people buying these products because they are the ones on the market. Never has been evidence showing that these toys, programs and educational products provide some educational benefit for young children, rather on the contrary (Zimmerman, Christakis and Meltzoff, 2007). The truth is that, today, to be competitive in the business of toys for babies, manufactured products must promote learning or at least hold that they encourage it. This new market of babies between 0 and 3 years old has become the first segment of the entire life cycle marketing.

Thus, while in this multi-billion dollar sector of products in development "intellectual", below may result in various misfortunes in their training and neuro linguistic skills, in others all damages in the physical and mental babies health is not less serious by providing them substitutes chemicals in breast milk (Aguayo, 2004; American Academy of Pediatric, 2005; UNICEF, 2007; Koletzko *et al.*, 2000; UNICEF-IRC, 2006; UNICEF, 2007; VV. AA, 2004), since breastfeeding promotes a balanced weight of the future child and adult (Hediger *et al.*, 2001; Dietz, 2001); breastfeeding is important in preventing postnatal transmission of HIV, since is associated with a lower rate of mortality at seven months, these results demonstrate the risk of providing artificial feeding formula to infants in sub-Saharan Africa, and the need for studies of alternative strategies: (Coutsoudis *et al.*, 2001; UNICEF program Directive CF/PD/PRO/2002-003, 2004; De Wagt and Clask, 2004; Liff *et al.*, 2005; Doherty *et al.*, 2006; Thior, 2006). There is a significant positive association between duration of breastfeeding and intelligence in the adult (Mortensen *et al.*, 2002; Kramer *et al.*, 2008). Breastfeeding does not cause deaths by poisoning in drinking water (required for milk dispensing of formula) which kills two million children every year (UNICEF, 2007), also has problems of massive intoxication such as those that occurred in China (Jano, 2008a), who have achieved figures close to 100,000 (taking into account the "freezing" of data by the Chinese authorities in these matters). In addition, according to Hernandez and Aguayo (2005): feeding with substitutes increases the risk of sudden infant death (Alm *et al.*, 2002), post-neonatal during the first year of life (in developed countries) (Chen and Rogan, 2004) and infant mortality in children under 3 years (Alm, 2002).

Infants fed with artificial formulas have more infectious diseases (primarily gastroenteritis, respiratory infections, and infections of urine (Temboury *et al.*, 1991; Lopez-Alarcon, 1997; Cushing *et al.*, 1998; Kramer *et al.*, 2001), these are more severe (Dewey *et al.*, 1995; Wang and Wu, 1996; Scariati, 1997; Baker and Henderson, 1988; Wilson *et al.*, 1998; Wright *et al.*, 1998; Raisler, Alexander and O'campo, 1999), and generate more hospitalizations (Heinig, 2002; Cesar *et al.*, 1999; Oddy *et al.*, 2003; Bachrach, Schwarz and Bachrach, 2003; Albernaz *et al.*, 2003; Olivares and Buñuel, 2007), etc.

Another sector that has a significant amount of sales is the associated with the products associated with sleep: cribs, intercoms, rags and dolls of attachment, furniture of rooms, textile ad hoc, pacifier cords, etc. Behavioral problems that can cause baby night insulation and others that basically affect physical health are referred to in the scientific literature (Byard and Cohle, 2004; Jackson and Newton, 1989; Jove, 2006; McKenna *et al.*, 1990; Pantley, 2002; Parmeggiani and Velluti, 2005; Sears, 1985; Stores, 2001).

Associated with these sectors, develop other not less important as strollers, chairs, baskets or masicosis that cause an at least physical estrangement between mother and son, with the implications that this entails (Montagu, 2004).

As said Bolton and Alba (2006) it is not reasonable to expect that consumers take into account all the evidence in regard

to products and educational demands. Are left with the idea that something must of true, and... who doesn't want the best for your baby? It's media intuitions.

It is relevant to apparently, this trade sector, in general, it seems that it is more conducive to their business success, that the target population (mothers or carers of infants 0 to 3 years) behave in certain form in the relationship with babies. This type of relationship would not encourage a climate of love and harmony with that baby. Certainly we are concerned that you may be favoring, directly or indirectly, a type of communication or relationship by this sector, forms of *push* or shaped *pull*. All these ideas were the germ of our research, and we believe that its conclusions may be a priority value already not only for the marketing environment, but for the whole society.

2. OBJECTIVES

Our research seeks to understand in a broad sense the consumption of products for babies zero to three years. It seems that there is a contradiction between the products that are offered on the market and the scientific knowledge of the matter about the physical and psychological benefits, that is, human, for babies. We have a complex investigation, relevant, that may collide with strongly preconceived ideas and that, in short, means a confrontation with the *establishment* with portfolio of sector guidelines and, above all, with our own consciousness not only as mothers and fathers, who want a better world to their children, taking into account that this world will be the children that will give them the world. In addition, as people with a conscious responsibility to humanity. The basic objective of the first phase of our research, which is that raised in this paper, is the analysis of consumption of products for babies zero to three years by their mothers, while occasionally products may act as separators physically mother or, if, on the contrary, they foster the human union with the creature that we understand psychic and biologically mother due to their immaturity is dependent that seems obvious and evident by the scientific literature, for the effective and efficient development in terms of overall health of the baby.

3. STUDY DESIGN

Research departed from numerous interviews with people associated with motherhood and, subsequently, it was a pretest for mothers and fathers was also evaluated by specialists in the subject. In the pretest were obtained data that advised to take as it shows only to women, since 98% of the time were mothers who made purchases and, in addition, with regard to the time spent with the babies, mothers working outside the home or not, spent far more time with the baby, as well investigations of the INE (2009) had ratified it that obtained the following dedication of the time in minutes:

Table 1. Relationship of time share of fathers and mothers with their babies

	PADRES		MADRES	
	Ocupados	No ocupados	Ocupadas	No ocupadas
Primario básico	28,89	39,35	80,12	100,75
Primario de calidad	16,87	22,03	17,40	19,61
Primario total	45,76	61,38	97,52	120,37
Secundario	11,21	14,24	20,46	26,87
Total	56,96	75,62	117,98	147,24
N.º de observaciones	1.926	143	1.081	1.002

Source: IE, 2009

Therefore, develops the next sheet in table 2.

Table 2. Field work sheet

Universe:	Mothers of infants aged 0-3 years
Geographical scope:	Malaga
Design of the questionnaire:	Own research
Sample size:	1115 mothers of infants 0 to 3 years
Sampling error:	±3%
Trust level:	95' 5% ($\sigma = 2$ sigma)
Sample design:	Simple random sampling with a proportional affixation in the 10 districts of Malaga.
Date of fieldwork:	15 to 30 May 2016

Source: Own elaboration

The design of the field work was carried out in two lines:

Pollsters 120 surveys conducted in each of the following districts: No. 1 district: Málaga - Centro. District No. 2: Málaga - East. District No. 3: Garden City. District No. 4: Bailén - Miraflores. District No. 5: Palm - Palmilla. District No. 6: Cruz de Humilladero. District No. 7: Carretera de Cádiz. District No. 8: Churriana. District No. 9: bells. District No. 10: port of la Torre.

Medical centres in which there was a section of Pediatrics, children's parks, walks, etc., where also *on-site* to the questionnaire answered were made in the street, with approaches to children's centres, nurseries.

1200 questionnaires were distributed, the valid were taken randomly 1115 to adjust to the classical sample sizes. There was only problem in conducting the surveys by reluctance of mothers. The questionnaire, that Yes, having 195 items it was fairly tired of filling up, so the motivation is working for mother and who understand the importance that would do a thorough completion. Finally, we highlight that they work with groups of products for two reasons:

- a) with a view to a possible future segmentation with interest for marketers.
- b) to group them with respect to our demand of information.

4. RESULTS

The questionnaire is valued the level of use of products grouped by sectors. Asked to bring if you did not know him, or if he had not used it ever; After establishing a scale from 1, that the product has been used up to four times, up to the last position, 5, indicating a continued use of at least three months. The percentage results to our questionnaire are as follows:

- In regards to products for the “dream” which split the mother of the baby are those who favor the child to sleep without physical contact. BabySleep system so that it is a product with sound sleep facilitators is practically unknown by mothers (65%) Although a 11.7% has used it to level 5. The sleeping bags, are surprisingly almost unknown (72.3%), useful so that the child can sleep in mother bed. Rag or the attachment doll are used instead of the physical contact of the mother, are fairly or very used, 49 and 25% respectively. Medication or plants that induce sleep, used much or rather by 9.3%, it is a very separator element.
- Regarding the “hygiene”, cloth diapers, therefore detergent for diapers, eco disposable nappies, reusable swim diapers and learning just used, and it can be said that they are not known: 95’ 8%, 93’ 7%, 67%, 71’ 4% and 79% ‘ 5 respectively. We should appreciate that, currently, a mother who uses cloth diapers hard will give it to care for someone else, since it would be quite “cumbersome” for that person. The used are those of cellulose, especially Dodots (73’ 3%), Huggies (28.3%) and other brand (48’ 3%), that we understand that they are with dealers brand diapers. Cellulose of swim diapers are almost unknown (59’ 7%) and very used a 15’ 7%, which by common sense would be the percentage of children under 3 years old who come regularly to the pool.
- In “suction, breastfeeding and feeding”, firstly to analyse the data on breastfeeding clips (68’ 4%) which is more or less equivalent to the percentage of women who have chest six months (69’ 6%). Breastfeeding clothes (shirt, jersey...) is perhaps a term that we should specify more, because passes from 46% who acknowledges not knowing what it is to a 31’ 9 which says have used very frequently (may be that the consumer cover appropriate though non-specific clothing). Breast pump a 28 it ‘ 6% used, what looks like a high rate (exhaust, in some ways is more unifying than separator, because that is often used when the mother is not or the baby is premature, but with the intention of maintaining lactation). Nursing pad, unknown by a 76.2% and very used by 11.6%, this product interferes with physical contact, since the mother wearing it, to have the free arms, lee or does something else, “takes time”, “isolating” baby. Discs of lactation, but in very common use in three to six months that gradually becomes unnecessary, so it should be about the relationship of data with the first lactation, and responded effectively, 5 a 60’ 4% and four 6’ 7%, bone, 67.1 versus 69’ 6. Liners, a separator used to level 5 and 4 by 22.5%. Isn’t an equally optimistic of the pacifier, used much by a 75’ 2%, which would be the data of children who use pacifiers, while a 10’ 1 never use it; knowing that the pacifier (such as teats) are drawbacks for breastfeeding (Righard and Alade, 1977); (Who-UNICEF, 1989) among other important problems. Dummy baby packs, should be a fact associated with the pacifier and is certainly used by 63.6% and pretty much; coinciding with the previous data. Infusions digestive, used by a 48’ 3% of mothers. Relaxing infusions, is administered to a 24’ 1% of children in the qualitative interviews mothers claimed that frequently administered at dinner, instead of water; Obviously it is an absolutely separator product. Water glucosidic, this fact must be considered that it is not a product administered in the long run, find here people who have answered with a 5 (15%) is amazing for us, the sum of the rest is 49%, that is, almost a half of the babies are given this product. Bottle (for milk) is used much or rather by a prominent 87’ 4%, seems a little daunting, although we think that although a more than six-month-old baby can drink from a Cup is given milk in bottle for comfort reasons. Bottle (for cereals), used with a 71’ 7%. Bottle anti colic, widely used in a 38’ 3% of the population, that don’t know is if it is as a preventive or restorative; crossing it with the data of digestive infusions (48’ 3%) seems consistent. Baby bottle sterilizer, widely used by a 67’ 4%; a fact that does not block much if means that the bottle is sterilized when the baby is very small, unless it is being administered to your baby breastfeeding and “formula” of cow at the same time. Isothermal bag for bottles, with a 35’ 4%; Another fact complex if there is a mixed breastfeeding. Heat baby bottles, with a 38% ‘ 1. Drinker, frequently used by 45%. Milk adapted (1), here is where we appreciate the relevant data that, although you breast-feed, or state that breastfeeding up to six months, they have used much or rather on a daily basis by a 72’ 1%, a milk taken from birth until the third or fourth month and some sixth month, that is, have given “little help” that according to experts (C.L.M.A.E.P., 2004) does not promote breastfeeding. Follow-on milk

(2) (to use from the sixth month until approximately) used by a 81' 2% of the population, it seems that complement is used to mix with cereals, are evidence of new mothers still breastfeeding offered substitute formula to complete the daily intake of milk. Although this is in accordance with the advice of spaces for women (www.enfemenino.com, 2008) supported by prestigious companies such as "El Corte Inglés, Ikea, Chevrolet, Central Lechera Asturiana and other" claiming before the issue of the incorporation of women to work when the baby is 4 months: "If you really want to get back to work, not you can continue giving you breastfeed your child It is clear that you can't be in two places at the same time. Therefore, while you are at work they will have to give a bottle to the child. Anyway do not worry because your son with 4 months of breastfeeding is sufficiently immunized", uncertain data from the scientific perspective (Aguayo, 2001, and others). Continued milk (3) (from the year up to three years approximately), used by a 56' 9%. Milk of growth (from 1 to 3 years), is different from the previous one because it is already prepared liquid as if it were a milk for adults, used it a 64' 6%. Entering in the cereals sector first of all tackle the gluten-free cereal Babyfood, employed starting from the 4th month, is widely used by the 82' 1% of mothers. Porridge of grains, from the 6th month, is fairly or very used by 81%, according to the previous data. Organic cereals babyfood, unknown by 81%, does not seem to be a product of success only used by 9% of the population. Cereals babyfood (Tetrabrik) prepared, used by 21%. Yogurts for babies, some specialists say that they are "ideal" to replace the maternal intake, it is very or fairly used by 69.3%. Baby food salty not ecological, say use the 30' 8% and not know them the 44' 7%, a slightly strange. Baby food sweet not ecological, us strange also that it claims to not know it the 40' 5%, there may have been a problem in the understanding of the question, and use it often on 32' 5%. Salted baby eco, unknown by 68' 6%, data, this Yes, that find us it credible, they claim to use it 15' 9% of mothers. Finally, sweet baby organic, also unknown to the 67' 1% of mothers, are used by the 17' 2%.

- In the segment of "ride, journey", products that make this physically together baby to adult, such as Backpack Sling, although unknown by 38.4% of the population claim to use it the 32' 6% of the population, a fact that find us something for observation data. Such products contribute to the link (Bowlby, 1995). Baby Sling, indeed, is unknown or never used by the 85' 8% of the population, maternal, and used by a 7' 6% of mothers. The shoulder sling is unknown by a 84' 2% and says have used quite 7%; We consider that the purchase of cloth and shoulder strap, not being exactly the same products (the cloth is for longer and more comfortable rides to hold the baby in the back) but with the same philosophy, can be bought by the same population. Car seat, is an element that we consider basic and priority in any type of relationship, widely used or enough for a 97' 0% of the population, we estimate that the rest has no car; Although the observation shows sometimes mothers with baby in arms. Stroller, is fairly or very worn by 96% of the population, if we return to the cloth and carrier data (7% approx.) make us see that the cart is used while having this other transportation system. Street/stroller carrycot, this element is used up to four to six months at most, and the use is a 88 ' 2%.
- In the products that we have encompassed within 'security', highlight first intercom sound - interphone, which claims to be quite or very used to the 55' 7% of the population. Sound intercom e image , low to 15% ' 1. Intercom monitoring respiratory movements, a 6' 7%. All these products are, physical separators of the baby. Crying Analyzer is a product which, although often it works as a gift, only used by the 2' 6% of the population, although the 94'3 don't know it. This product seems to reveal a fairly serious lack of understanding between the mother and the son, and the need for a machine interpreter.
- In the Group of products related to "health", the data obtained are the following (quite or very used): digital pacifier thermometer, 9' 3%. Drops clean ears, 14' 2%. Humidifier, 26' 9%. Cream for buttocks, 89%. Shampoo specific for baby, 94' 8%. Specific gel for baby, 96' 5%. Lotion or body oil for baby, 93' 1%. Nasal aspirator, 68' 2%. Cleaning wipes, 97' 3%. Milton solution or similar (disinfectant objects), 43' 9%. Amukina or similar (disinfecting fruit and vegetables), 11' 1%. Thermometer ear or forehead, 41' 6%. Thermometer of mercury or digital, 72% ' 7.
- In "toys" have highlighted the following products: wooden toys, 47' 8%. Soft toy that emits the sound of the heart of the mother, a 9' 4%. Toy to set pieces (circle, square...), 72' 5%. Toys lego type, 61' 1%. Toys that emit music or sounds when pressing buttons, 88' 7%. Piano, 59%. Electric swing, 16' 9%. Ball, 85' 5%. Doll, 61.3%. Sheets reading, 54' 1%. Rattles, 73' 3%. Tricycle, 69' 6%. Wit toys, 60' 4%. Mobile for the cradle, 53' 8%. Blanket gym, 66.1%. Adapted books of learning, a 75' 6%. Tales, a 81' 8%.
- In 'furniture and accessories' highlight: vertical bath, 39' 8%. Traditional bath, 83%. Thermometer for the bathroom, 54' 1%. Mat for the bath, 53' 4%. Garden - playground, 55' 5%. Cot, 93' 5%. Travel cot, 62' 4%. Guardrail for bed, 69' 5%. Hammock, 61' 1%. Chair for the bath, 33' 9%. Table changer, 70'8%. Night lamp, 42%. Learning urinal, 51'8%. Diaper container, 20%. Trona, 74.3%. High Chair table, 29' 8%. Baby cutlery, 75'3%. Babypappa (for purées kitchen robot), 10'9%. Steam cooking for babies 9' 7%.
- In the segment "others" have included diverse products, obtained the following data regarding the population that had used much or rather the following products: organic clothing, 3' 9%. Music of prenatal stimulation, 23'1%. Instructional videos (baby Einstein, baby Shakespeare...), 31'4%. Videos of mental stimulation (brainy baby...), 12'6%. Films for babies or only children's channels, 66'5%. Journals of babies 61'6%. Parenting books, 43' 2%, find us an optimistic answer also by mothers who seems to read one or two books having read many books; in interviews of approximation drew us attention that some mothers who already had a previous child did not need any book that addresses ageing.
- Regarding the formation by reading selected a group of books that had been mentioned more in the pretests: "Sleep children" by *Estivill and Béjar*, 43'6%, this free is totally separator, and shocking is the fact that half of the population

is subject to its influence. “Sleeping without tears” by Rosa Jove, 2’9%, unifier (from 2006). “Kiss me a lot” by Carlos González, 5’7%, unifying. “Kids come without instructions” by Montserrat Jimenez, 9%, this book is separating tendency and it can influence only point it 9% the fact that the first edition was in 2006. My child do not eat me by Carlos González, 4’8%, unifier and the Continuum concept by Jean Liedloff, 0’8%, unifier.

- The last part of the questionnaire was directed to take the socio-demographic data, to know if being the only child could affect buying patterns (46’8 girls and 50’4 children, 2’ 5% as twins or twins/as and 0’ 2% triplets as.) Being the 44’1% only sons, the 41’ 4% had 1 brother, 11’4 two, the 2’ 2% three and 1% more than three). The average age of the baby is 24.1 months. The age of the mother ranges between 18 and 50 years, being the most common group of 30 to 35 years, comprising 49% of the sample. Works out a 71’6% and an average 6.63 hours. The type of work performed is: entrepreneur (10’3%), Directive (6%), liberal professional (10’ 8%), officer (or contracted with the Administration) (13’ 6%), middle management (14’ 3%), workers or qualified employee (24’ 9%), working or employed without qualifying (20’ 2%). The level of studies of the population sampled is divided into the following strata: primary (17’7%), media (38’5%), University of 3 years (22’ 3%), University of 5 years (19’ 3%) and Dr. (1’ 8%). With regard to the demand for information of how long mother devotes a day exclusively to his son (not doing something else while the child is present) results have come out, we understand optimistic by the mother, since thorough investigations only this particular give very different data. The sample gives an average of 7.96 hours a day. Our population was breast-feeding her baby 10’ 9%, a 83 had breastfed him ‘ 7%, of which 31% had not moved from the third month, and the 69’ 6% moved from the sixth, being already 95% in twelve months. Given that 70% of the surveys come from mothers of children who were in day care, get us that the 30’ 9% is cared for child care and a family member, the 50’ 3% only nursery, 6’ 9% a family member and a 11’ 7% only the mother or her partner; It must be taken into account in the results that interviewing all kinds of baby ages, some have no age to be admitted in any nursery and others are still small and grandmothers are caring for them or similar. The average hours that babies spend in the nursery is 6.10 hours. Finally, stating that the 97’2% of the sample lived with his partner and a 2’ 8% were single-parent units.

With respect to our demands for information, we analyze the means of consumption products separators and unifiers, obtaining the results shown in table 3 and 4.

Table 3. Average values of spacer products

Descriptive statistics	N	Media	Desv. Tip.
P69. BabySleep (facilitating sleep sounds) system.	955	1.06	1,757
P71. Cloth or plush attachment (to embrace him while sleeping).	1086	2,79	2,155
P72. Medication or relaxing type plants.	1035	78	1.456
P73. “Inseparable” snowman.	1039	1.52	1,995
P85. Breast pump.	1082	2.32	2,038
P86. Breastfeeding cushion.	1034	88	1,735
P88. Liners.	1047	1.43	2,017
P89. Pacifier.	1107	4.00	1,720
P90. Portachupetes.	1084	3.48	2,006
P91. Digestive teas.	1090	2.97	2,013
P92. Infusions relaxing.	1057	1.56	2,024
P93. Water glucosidic.	1048	1.35	1,828
P94. Bottle (for milk).	1105	4.43	1,420
P95. Bottle (for cereals).	1069	3.70	2,058
P96. Anticolicos bottle.	1044	2.12	2,304
P97. Bottle sterilizer.	1078	3.59	2,028
P98. Isothermal bag for bottles.	1056	2.03	2,231
P99. It’s warmer.	1071	2.27	2,227
P101. Milk adapted (1).	1069	3.72	2,004
P102. (2) follow-on milk.	1081	4.18	1,675
P103. (3) follow-on milk.	1015	2.98	2,315
P104. Milk of growth (from 1 to 3 years).	1062	3.34	2,211
P105. Gluten-free cereal babyfood.	1092	4.23	1,578
P118. Stroller.	1108	4.85	690
P119. Street/stroller carrycot.	1107	4.56	1,185
P120. Audio intercom - interphone.	1080	3.00	2,261
P121. Intercom’s sound and image.	1029	82	1.768
P122. Intercom monitoring respiratory movements.	1000	38	1,255
P123. Crying Analyzer.	995	18	828
P133. Milton solution or similar (disinfectant objects).	1060	2,49	2,287
P134. Amukina or similar (disinfecting fruit and vegetables).	1014	76	1,576

P138. Soft toy that emits the sound of the mother's heart.	1041	61	1,470
P150. Moving the cot.	1063	2.89	2,246
P151. Blanket gym.	1083	3.55	1,972
P158. Garden - playground.	1066	3.04	2,214
P159. Wedge.	1108	4.74	959
P160. Travel cot.	1083	3.43	2,054
P162. Hammock.	1069	3.31	2,125
P163. Chair for the bath.	1037	1.88	2,266
P165. Night lamp.	1075	2.35	2,309
P166. Potty learning.	1062	2.84	2,264
P168. High Chair.	1090	3.84	1,938
P169. High Chair table.	1052	1.65	2,215
P175. Instructional videos (baby Einstein, baby Shakespeare...).	1044	1.82	2,190
P177. Films foods or only children's channels.	1084	3.57	1,973
Valid n (according to list)	642		

Source: Own elaboration

Table 4. Average values of unifying products

Descriptive statistics	N	Media	Desv. Tip.
P70. Sleeping bags.	1029	86	1,653
P74. Cloth diapers.	1019	08	462
P75. Detergent for diapers.	999	17	770
P83. Nursing bras.	1105	3.92	1,797
P84. Breastfeeding clothes (shirt, jersey...).	1063	2.13	2,240
P87. Records of lactation.	1090	3.61	1,952
P114. Backpack Carrier.	1080	2.07	2,101
P115. Baby carrier.	987	47	1,318
P116. Shoulder Sling.	982	54	1,416
P130. Baby body oil or cream.	1114	4.76	840
P140. Toys lego type.	1051	3.27	2,072
P153. Tales.	1103	4.27	1,444
P161. Guardrail for bed.	1080	3.53	2,182
Valid n (according to list)	833		

Source: Own elaboration

By the data in Figure 5 you can see the difference in the use of spacer products of unifiers.

Table 5. Differences between unifying products and spacers

Descriptive statistics				
Go to sleep kid		N	Aver.	Typ. Dev.
Average consumption of products separating mothers who have read FALL ASLEEP CHILD				
YES	P71. Attachment Cloth or Cloth	481	<u>2,98</u>	2,196
	P72. Relaxing medication or plants.	461	<u>,83</u>	1,522
	P73. Doll “inseparable”.	460	<u>1,62</u>	2,036
	P86. Breastfeeding cushion.	459	<u>,99</u>	1,836
	P89. Pacifier.	486	<u>4,04</u>	1,692
	P90. Door hooks.	479	<u>3,51</u>	1,985
	P91. Digestive infusions.	480	2,94	2,040
	P92. Relaxing infusions.	467	<u>1,62</u>	2,031
	P94. Bottle (for milk).	485	<u>4,47</u>	1,364
	P95. Bottle (for cereals).	476	<u>3,78</u>	2,041
	P96. Anti-alcohol bottle.	462	1,95	2,301
	P97. Baby bottle sterilizer.	478	<u>3,71</u>	1,968
	P98. Isothermal bottle for baby bottles.	470	<u>2,09</u>	2,275
	P99. Bottle warmers.	474	<u>2,47</u>	2,250
	P101. Milk adapted (1).	472	3,68	2,062
	P102. Continuity milk (2).	482	<u>4,32</u>	1,549
	P103. Continuity milk (3).	454	<u>3,00</u>	2,314
	P104. Growth milk (1 to 3 years).	474	3,30	2,242
	P105. Gluten-free cereal scone.	481	<u>4,31</u>	1,479
	P118. Stroller	485	<u>4,89</u>	,590
	P119. Street / stroller.	485	<u>4,58</u>	1,123
	P120. Sound intercom - intercom.	480	<u>3,23</u>	2,193
	P121. Intercom of sound and image.	458	<u>,85</u>	1,814
	P122. Intercom monitoring respiratory movements.	448	<u>,39</u>	1,278
	P150. Mobile for the crib.	472	<u>3,17</u>	2,149
	P151. Manta gym.	478	<u>3,78</u>	1,807
	P158. Garden - playground.	472	<u>3,23</u>	2,108
	P159. Cradle.	482	<u>4,76</u>	,907
	P160. Travel cot.	474	<u>3,72</u>	1,872
	P162. Hamaquita.	473	<u>3,49</u>	2,067
	P168. Highchair.	482	<u>3,94</u>	1,861
	P175. Didactic videos (baby Einstein, baby Shakespeare ...).	469	<u>2,25</u>	2,282
	P176. Videos of mental stimulation (brainy baby ...).	442	<u>,94</u>	1,787
	P177. Movies parabebes or channels exclusively for children.	478	<u>3,80</u>	1,824
	N valid (according to list)	303		

Go to sleep kid		N	Aver.	Typ. Dev.
Average consumption of products separating mothers who have not read "FALL ASLEEP CHILD"				
NO	P71. Attachment Cloth or Cloth	604	2,64	2,110
	P72. Relaxing medication or plants.	573	,75	1,402
	P73. Doll "inseparable".	578	1,44	1,960
	P86. Breastfeeding cushion.	574	,80	1,648
	P89. Pacifier.	620	3,97	1,743
	P90. Door hooks.	604	3,46	2,022
	P91. Digestive infusions.	609	2,99	1,992
	P92. Relaxing infusions.	589	1,51	2,020
	P94. Bottle (for milk).	619	4,41	1,464
	P95. Bottle (for cereals).	592	3,63	2,071
	P96. Anti-alcohol bottle.	581	2,25	2,301
	P97. Baby bottle sterilizer.	599	3,50	2,069
	P98. Isothermal bottle for baby bottles.	585	1,98	2,196
	P99. Bottle warmers.	596	2,11	2,197
	P101. Milk adapted (1).	596	3,76	1,959
	P102. Continuity milk (2).	598	4,06	1,764
	P103. Continuity milk (3).	560	2,96	2,317
	P104. Growth milk (1 to 3 years).	587	3,37	2,188
	P105. Gluten-free cereal scone.	610	4,16	1,650
	P118. Stroller	622	4,83	,758
	P119. Street / stroller.	621	4,54	1,233
	P120. Sound intercom - intercom.	599	2,82	2,298
	P121. Intercom of sound and image.	570	,80	1,732
	P122. Intercom monitoring respiratory movements.	551	,38	1,238
	P150. Mobile for the crib.	590	2,67	2,297
	P151. Manta gym.	604	3,36	2,076
	P158. Garden - playground.	593	2,88	2,285
	P159. Cradle.	625	4,73	,981
	P160. Travel cot.	608	3,20	2,161
	P162. Hamaquita.	595	3,17	2,161
	P168. Highchair.	607	3,77	1,993
	P175. Didactic videos (baby Einstein, baby Shakespeare ...).	574	1,47	2,049
	P176. Videos of mental stimulation (brainy baby ...).	547	,70	1,536
	P177. Movies parabebes or channels exclusively for children.	605	3,39	2,063
	N valid (according to list)	338		

Source: Own elaboration

You can be seen in the results that mothers who read "FALL ASLEEP CHILD" used in larger share separators products.

5. CONCLUSIONS

The products most consumed by babies from zero to three years are those who distance them physically from their mothers, with physical and mental implications that this entails (works cited in theoretical framework).

This fact can become mother desire for more independence, comfort, etc., or Western fashions of the importance that the baby is independent, self-sufficient and autonomous, to be possible since it was born, with the generation of violence it entails (Miller, 2001; Barudy and Dantagnan, 2005; Andreoli, 2006).

Mothers who read “sleep children” buy more separator products to those who have not read it.

It should be in a qualitative way to investigate the causes that provoke the mother wants to distance himself from the baby and the degree of awareness that this has its behaviour, so whether it is or not free of it.

Products “to develop the mind of the baby” follows in Spain the Anglo-Saxon current foster the growth of this sector.

REFERENCES

- Aguayo, J. (2004). La lactancia materna. Ed. Universidad, Secretariado de Publicaciones, Sevilla.
- Albernaz, E. P., Menezes, A.M., César, J.A., Victora, C.G., Barros, F.C. and Halpern, R. (2003). Fatores de risco associados à hospitalização por bronquiolite aguda no período pós-neonatal, *Ver. Saúde Pública*. 37(4): 485-493.
- Alm, B., Wennergren, A. B., Norvenius, S. G., Skjaerven, R.; Lagercrantz, H., Helweg-Larsen, K. *et al.* (2002). Breast feeding and the sudden infant death syndrome in Scandinavia. *Arch Dis Child*. 86(6): 400-402.
- American Academy of Pediatric (2005). American Academy of Pediatrics new mother's guide to breastfeeding. Ed. Bantam Books, Nueva York, EE.UU.
- Andreoli, V. (2006). Carta a un adolescente. Ed. RBA, Barcelona.
- Bachrach, V. R., Schwarz, E. and Bachrach, L. R. (2003). Breastfeeding and the risk of hospitalization for respiratory disease in infancy: A meta-analysis. *Arch Pediatr Adolesc Med*. 157: 237-243.
- Baker, D., Taylor, H. and Henderson, J. (1998). Inequality in infant morbidity: Causes and consequences in England in the 1990s. ALSPAC Study Team. Avon Longitudinal Study of Pregnancy and Childhood. *Journal Epidemiology and Community Health*. 52: 451-458.
- Barudy, J. and Dantagnan, M. (2005). Los buenos tratos a la infancia. Parentalidad, apego y resiliencia”. Ed. Gedisa, Barcelona.
- Bowlby, J. (1995). Vínculos afectivos: formación, desarrollo y pérdida. Ed. Morata, Madrid.
- Byard, R. W. and Cohle, S. D. (2004). Sudden death in infancy. Childhood and adolescence. Ed. Cambridge University Press, Cambridge, GBR.
- C.L.M.A.E.P. (Comisión de Lactancia Materna de la Asociación Española de Pediatría) (2004). Lactancia materna. Guía para profesionales. Monografías de la A. E. P., nº 5. Ed. Ergon, Majadahonda (Madrid).
- Cesar, J. A.; Victoria, C. G.; Barros, F. C., Santos, I. S. and Flores, J. A. (1999). Impact of breast feeding on admission for pneumonia during postneonatal period in Brazil: Nested case-control study. *BMJ*. 318: 1316-1320.
- Chen, A. and Rogan, W. J. (2004). Breastfeeding and the risk of postneonatal death in the United States. *Pediatrics*. 113(5): 435-439.
- Coutsoudis, A., Pillay, K., Kuhn, L., Spooner, E., Tsai, W. Y. and Coovadia A. H. M. (2001). Method of feeding and transmission of HIV-1 from mothers to children by 15 months of age: prospective cohort study from Durban, South Africa. *AIDS*. 15(3): 379-387.
- Cushing, A.H., Samet, J.M., Lambert, W.E., Skipper, B.J., Hunt, W.C., Young, S. A., *et al.* (1998). Breastfeeding reduces risk of respiratory illness in infants. *American Journal of Epidemiology*. 147(9): 863-870.
- De Wagt, A. and Clark, D. (2004). UNICEF's Support to Free Formula for Infants of HIV-infected Mothers in Africa: A review of UNICEF experience. Ed. LINKAGES Art and Science of Breastfeeding Presentation Series, Washington, D.C., EE.UU.
- Dewey, K. G., Heinig, M. J. and Nommsen-Rivers, L.A. (1995). Differences in morbidity between breast-fed and formula-fed infants. *The Journal of Pediatrics*. 126(5): 696-702.
- Dietz, W. H. (2001). Breastfeeding may help prevent childhood overweight. *JAMA*. 285(19): 2506-2507.
- Doherty, T. *et al.* (2006). Effect of the HIV epidemic on infant feeding in South Africa: When they see me coming with the tins they laugh at me. *Bulletin of the World Health Organization*. 84(2): 90-96.
- Estivill, E. and De Béjar, S. (2004). “Duérmete, niño”. Ed. Plaza & Janés, Barcelona.
- UNICEF (2007). Estado mundial de la infancia 2008. Ed. División de Comunicaciones, UNICEF, Nueva York, NY, EE.UU.
- Giménez, M. (2006). Los niños vienen sin manual de instrucciones. Ed. Santillana, Madrid.
- González, C. (2005). Bésame mucho. Ed. Temas de Hoy, Madrid.
- González, C. (2006). Mi niño no me come. Ed. Temas de Hoy, Madrid.
- Gregory, S. (2007). Buy, buy baby: how consumer culture manipulates parents and harms young minds. Ed. Houghton Mifflin Company, New York.

- Hediger, M. L., Overpeck, M. D., Kuczmarski, R. J. and Ruan, W. J. (2001). Association Between Infant Breastfeeding and Overweight in Young Children. *JAMA*. 285: 2453-2460.
- Heinig, M. J. (2002). Host defense benefits of breastfeeding for the infant: Effect of breastfeeding duration and exclusivity. *Pediatric Clinics of North America*. 48: 105-123.
- Hernández, M. T. and AGUAYO, J. (2005). La lactancia materna. Cómo promover y apoyar la lactancia materna en la práctica pediátrica. Recomendaciones del Comité de Lactancia de la AEP. *An Pediatr*. 63(4): 340-356.
- Hirsh-Pasek, K. and Michnick, R. (2005). Einstein nunca memorizó, aprendió jugando. Ed. Mr, Madrid.
- Jackson, D. and Newton, T. (1989). Three in a bed. Ed. Bloomsbury, Londres, GBR.
- Jové Montanyola, R. (2006). Dormir sin lágrimas. Ed. La esfera de los libros, Madrid.
- Koletzko, B., Michaelsen, K. F. and Hernell, O. (2000). Short and long term effects of breast feeding on child health. Ed. Kluwer Academic Publishers, Norwell, MA, EE.UU.
- Kramer, M. S., Aboud, F., Mironova, E., Vanilovich, I.; Platt, R. W., Matush, L., Igumnov, S., Fombonne, E.; Bogdanovich, N., Ducruet, T., Collet, J. P., Chalmers, B., Hodnett, E., Davidovsky, S., Skugarevsky, O., Trofimovich, O., Kozlova, L. and Shapiro, S. (2008). Breastfeeding and child cognitive development. New evidence from a large randomized trial, *Arch Gen Psychiatry*. 65(5): 578-584.
- Kramer, M. S., Chalmers, B., Hodnett, E. D., Sevkovskaya, Z., Dzиковich, I., Sahpiro, S., Collet, J. P., Vanilovich, I., Mezen, I. *et al.* (2001). Promotion of Breastfeeding Intervention Trial (PROBIT): A randomized trial in the Republic of Belarus. *Journal of American Medical Association (JAMA)*. 285(4): 413-420.
- Liedloff, J. (2003). El concepto de Continuum. Ed. Ob Stare, S/C de Tenerife.
- Liff, P.J. *et al.* (2005). Early exclusive breastfeeding (EBF) reduces the risk of postnatal HIV-1 transmission and increases HIV-free survival. *AIDS*. 19(7): 699-708.
- Lodish, L. M. (2007) ¿Pueden los bebés ser programados para el éxito?. www.theslogan.com/es_content, 14 de agosto, Universidad de Pensilvania.
- López-Alarcón, M.; Villalpando, S. and Fajardo, A. (1997). Breast-feeding lowers the frequency and duration of acute respiratory infection and diarrhea in infants under six months of age. *The Journal of Nutrition*. 127(3): 436-443.
- Mckenna, J. J., Mosko, S., Dungy, C. and Mcaninch, J. (1990). Sleep and arousal patterns of co-sleeping human mother/infant pairs: a preliminary physiological study with implications for the study of sudden infant death syndrome (SIDS). *Am J Phys Anthropol*. 83: 331-347.
- Miller, A. (2001). Por tu propio bien: raíces de la violencia en la educación del niño. Ed. Tusquets, Barcelona.
- Montagu, A. (2004). El tacto. Ed. Paidós, Barcelona.
- Mortensen, E. L., Michaelsen, K. F., Sanders, S. A. and Reinisch, J. M. (2002). The Association Between Duration of Breastfeeding and Adult Intelligence. *JAMA*. 287: 2365-2371.
- Oddy, W. H., Sly, P. D., De Klerk, N. H., Landau, L. I., Kendall, G. E., Holt, P. G. *Et al.* (2003),. Breast feeding and respiratory morbidity in infancy: A birth cohort study. *Archives of Disease in Childhood*. 88: 224-228.
- Olivares, M. and Buñuel, J. C. (2007). La lactancia materna reduce el riesgo de ingreso hospitalario por gastroenteritis e infección respiratoria de vías bajas en países desarrollados. *Evid Pediatr*. 3: 68.
- OMS/UNICEF (1989). Protección, Promoción y Apoyo a la Lactancia Materna. La función especial de los servicios de maternidad. Ginebra.
- Pantley, E. (2002). Felices sueños. Ed. McGraw-Hill, Madrid.
- Parmeggiani, P. L. and Velluti, R. A. (2005). Physiologic nature of sleep. Ed. Imperial College Press, London, GBR.
- Raisler, J., Alexander, C. and O'Campo, P. (1999). Breast-feeding and infant illness: A dose-response relationship?. *American Journal of Public Health*. 89(1): 25-30.
- Reyes, H., Pérez-Cuevas, R., Salmerón, J., Tomé, P.; Guiscafre, H. and Gutiérrez, G. (1997). Infant mortality due to acute respiratory infections: The influence of primary care processes. *Health Policy and Planning*. 12: 214-223.
- Righard, L. and Alade, M. O. (1997). Breastfeeding and use of pacifiers. *Birth*. 24: 16-20.
- Scariati, P. D., Grummer-Strawn, L. M. and Fein, S. B. (1997). A longitudinal analysis of infant morbidity and the extent of breastfeeding in the United States. *Pediatrics*. 99(6): e5 (doi:10.1542/peds.99.6.e5).
- Sears, W. (1985). Nighttime parenting. Ed. La Leche League International, Schaumburg, IL, EE.UU.
- Stores, G. (2001). A clinical guide to sleep disorders in children and adolescents. Ed. Cambridge University Press, Cambridge, GBR.

- Temboury, M. C., Polanco, I., Otero, A., Tomás, M., Ruiz, F. and Marcos, M. A. (1991). Influencia de la lactancia materna en la morbilidad y en la utilización de servicios sanitarios del lactante. *Medifam. Revista de Medicina Familiar y Comunitaria*. 1(1): 16-20.
- Thior, I., Lockman, S., Smeaton, L. M., Shapiro, R. L., Wester, C., Heymann, S. J., Gilbert, P. B., Stevens, L., Peter, T., Kim, S., Van Widenfelt, E., Moffat, C., Ndase, P., Arimi, P., Kebaabetwe, P., Mazonde, P., Makhema, J., McIntosh, K., Novitsky, V., Lee, T., Marlink, R.; Lagakos, S. and Essex, M. (2006). *Breastfeeding Plus Infant Zidovudine Prophylaxis for 6 Months vs Formula Feeding Plus Infant Zidovudine for 1 Month to Reduce Mother-to-Child HIV Transmission in Botswana: A Randomized Trial: The Mashi Study*. *JAMA*. 16(296): 794-805.
- UNICEF (2007). Estado mundial de la infancia de UNICEF 2008. Ed. Fondo de las Naciones Unidas para la Infancia (UNICEF), Nueva Cork, EEUU.
- UNICEF Programme Directive, CF/PD/PRO/2002-003, (2002). Infant Feeding and Mother-to-Child Transmission of HIV Technical Guidance Note.
- UNICEF-IRC (2006). 1990-2005. Celebrating the innocent declaration on the protection, promotion and support of breastfeeding. Ed. United Nations Children's Fund (UNICEF), Florencia, Italia.
- VV. AA. (2004). Lactancia materna: guía para profesionales. Monografías de la Asociación Española de Pediatría, 5.
- Wang, Y. S. and Wu, S. Y. (1996). The effect of exclusive breastfeeding on development and incidence of infection in infants. *Journal of Human Lactation*. 12(1): 27-30.
- WHO/UNICEF (2004). HIV and Infant Feeding: Guidelines for Decision-Makers. Ed. WHO, Geneva, Switzerland.
- Wilson, A. C., Forsyth, J. S., Greene, S. A., Irvine, L., Hau, C. and Howie, P. W. (1998). Relation of infant diet to childhood health: Seven year follow up of cohort of children in Dundee infant feeding study. *BMJ*. 316: 21-25.
- Wright, A. L., Bauer, M., Naylor, A.; Sutcliffe, E. and Clark, L. (1998). Increasing breastfeeding rates to reduce infant illness at the community level. *Pediatrics*. 101(5): 837-844.
- Consumer (2007). www.consumer.es/web/es/economia_domestica/2003/08/08/64294.php.
- www.jano.es (2008a). Los niños afectados por la leche adulterada en China son más de 93.000. Ed. 9 de octubre.
- Zimmerman, F. J., Christakis, D. A., and Meltzoff, A. N. (2007). Associations between media viewing and language development in children under age 2 years. *The Journal of Pediatrics*, Article in Press. (Talk of the Nation, 15, agosto, 2007). September 12, 2007 from University of Florida.

EDUCATION TODAY: $12 + 5 < 4$ – LESSONS OF EDUCATIONAL REFORMS IN PORTUGAL AND BEYOND

Igor Khmelinskii

Faculty of Science and Technology, Department of Chemistry and Pharmacy; CIQA, University of Algarve
(ikhmelin@ualg.pt)

Custódia Fonseca

Faculty of Science and Technology, Department of Chemistry and Pharmacy, University of Algarve
(cfonseca@ualg.pt)

Peter Stallings

Faculty of Science and Technology, Department of Electronic Engineering and Informatics, University of Algarve
(pjotr@ualg.pt)

ABSTRACT

Since the adoption of the '*Lei de Bases...*' of 1984, the quality of education in Portugal is declining, undermined by 'critical, creative and independent thinking', implemented by neglecting memorization as a learning tool, as supposedly students should understand things without knowing them. As a consequence, vast majority of students can't retain any abstract knowledge. They prepare from scratch for their tests and forget everything afterwards. The students never acquire essential primary-school skills such as capacity to do mental calculations, hence the title of this report, comparing contemporary school + university education to pre-1984 primary school of 4 years.

The quality of education is further degraded by 'evaluation' of teachers at school and university, judged by academic success and degree of satisfaction of their students. With the students objectively incapable to learn, understand or remember, the teachers have a dilemma of either letting such students pass without retained knowledge, skills and competences, or else have their own 'evaluation' suffer. As the generations change, students who were 'passed' become teachers themselves, still with no retained knowledge and thus no moral authority to fail their own students. Thus, the level of requirements monotonously degrades, with the educational fraud perpetuated in the new generations.

Keywords: Higher Education, Primary Education, Memory Development, Creative Thinking.

JEL Classification: I21, I23

1. INTRODUCTION: PORTUGUESE SCHOOL REFORMED

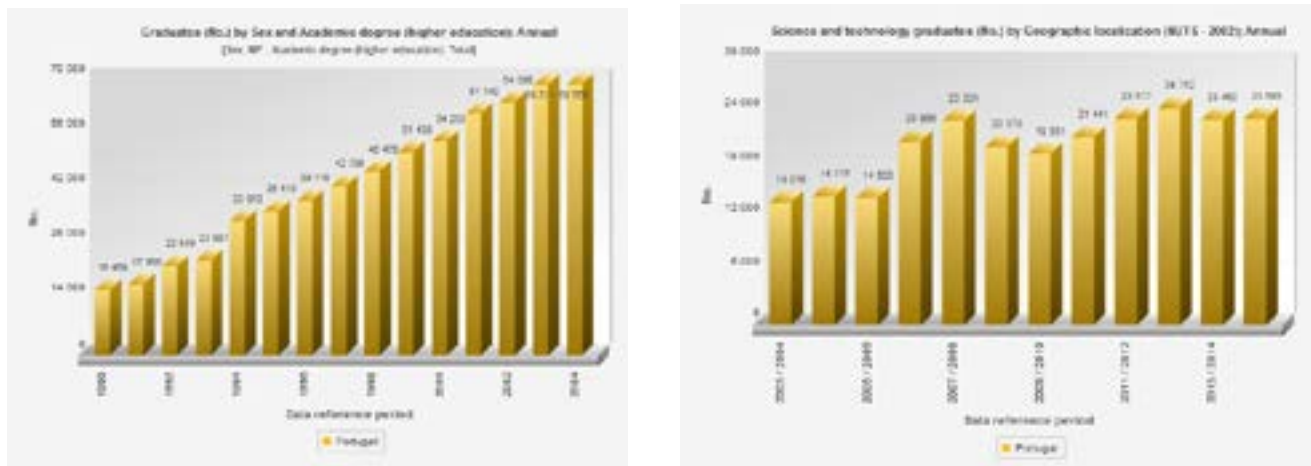
The concept of learning-by-doing schools was introduced in Portugal in the mid '80s, following the US lead along with other European countries¹. In Portugal it was introduced following the adoption of the *Lei de Bases* in 1984, with the objective of introducing universal secondary education and expanding higher education (*Lei de Bases*, 1984; Fig. 1 shows the rapid expansion of the higher education over the last 25 years). This concept emphasises the development of critical, creative and independent thinking of the students, starting already in the first year of primary school, in stark contrast with the previously used model of formal school, which gave a lot of attention to memory and memorization. I. K. studied in the Soviet school system from 1964 till 1974, where his education was also largely based on memorization. Coming to Portugal in 1993, he still found students who were preparing to retake their final exams in Mathematics according to the pre-reform curriculum, and needed to know the formulas of trigonometry, logarithms etc., same as the students in the Soviet school.

Officially, the learning-by-doing school does not require knowing anything by heart. Instead, the student should understand how the respective formulas and results may be obtained, and what their consequences are². This approach is strictly followed from the first year of the primary school; for example, it is unnecessary to know the multiplication table by heart, as a result, only very few students do. Similarly, no poems are learned by heart, while they do study the poetry of Camões in the secondary school. Some time ago a TV program interviewed students at the entrance of the Instituto Superior Técnico (IST) in Lisbon, one of the pre-eminent schools of engineering in the country. One student, when asked the result of multiplication of six by seven, replied: "I'm not a mathematician". Note that this competence had been routinely acquired in the primary school, whereas now it is not required even at a university.

¹ The primary source of information for this paper was educational observation by I. K. while teaching General and Physical Chemistry at the University of the Algarve for more than 20 years, and of his four children going through this same system, from the primary school through the higher education and to defending PhD theses (two at the time of writing).

² The reality is very different from the theory: the method of work used by many students includes learning by heart the entire book chapters without understanding a single thing, replying to the questions by locating, in the paragraphs of what they memorized, the words that appear in the test paper, and forgetting everything after walking out of the exam room: "I already studied this, and don't need to know it any more!" One of the private students of I. K. used these techniques to routinely obtain grades of around 13 (satisfactory, on the scale of 0 to 20) in Chemistry and Physics (9th year of school), which shows that the school tests do not validate the achievement of the study objectives, because passing such tests does not require any retained knowledge.

Figure 1. Expansion of higher education in Portugal over the last quarter century; left panel: annual number of graduates of all degrees and both sexes, right panel: annual number of graduates in science and technology courses



Source: Instituto Nacional de Estatística, 2017, <https://www.ine.pt/>

Naturally, with an access to a calculator, the students will be able to do the calculations even without knowing the multiplication table. However, being unable to make approximate mental calculations, they can't evaluate the validity of the results obtained and detect errors that would be clearly evident otherwise. Another group of difficulties comes from not knowing the basic rules of mathematics, such as priority of multiplication and division with respect to addition and subtraction – which were not learned by heart – therefore, calculating an expression on the calculator, they are unable to correctly introduce the implicit parentheses. For example, in an expression like this:

$$\frac{85.34 - 32.67}{44.15 + 321}$$

in order to avoid errors in the calculator usage, the students copy the intermediate results to their notes, and then key them in again, before doing another operation. The re-entering of numbers increases the (already large) probability of error and makes it difficult to check the results. Rounding off is apparently also very difficult, as the students don't recall the rules of significant digits and decimal places, using doubtful recipes instead, like always rounding off to the hundredths. Frequently no rounding whatsoever is done and the result of the calculation is just copied entirely. Rounding-off to the hundredths used by higher-education graduates working at the National Institute of Statistics sometimes produces largely meaningless results by discarding the information contained in the digits that were rounded off (Instituto Nacional de Estatística, 2017; look for data represented by decimal fractions).

Identical phenomena are observed in the majority of other EU countries, followed by Russia and other FSU countries that also adopted the concept of the learning-by-doing school, with emphasis on the development of critical thinking³. The first and very obvious symptom is the students being unable to recall any formulas, and unable to choose between one of possible expressions in the rare cases they are able to recall something, for not remembering the measurement units of the quantities involved.

2. THE SYMPTOMS OF DECAY: NO RETAINED KNOWLEDGE

Here we describe the most the most serious problems generated by the learning-by-doing school that is depriving students of any retained abstract knowledge.

2.1 Memorizing by heart and permanent memory

The failure to know the multiplication table by heart, apart from disabling approximate mental calculations, has even more serious consequences. This is because our long-term memory works as an associative database, that is, elements of information, when memorized, get associated to others, according to the relations apparent at the moment when we get to know them⁴. Therefore, in order to form the knowledge base in a specific subject area like mathematics, first of all we need to learn by heart some information related to mathematics. A piece of information that we have just been in contact with will be transferred from our short-term memory to our long-term memory, *provided* that within a short time span (a few days) we shall encounter it repeatedly, and preferentially in varied circumstances, multiplying the number of useful associations. However, if we have no knowledge of mathematics in our permanent memory, the new elements we are memorizing will

³The experience of I. K. in the international educational projects indicates that not requiring the multiplication table to be known by heart is an excellent indicator of a learning-by-doing (degraded) system of education. The majority of European countries fall into this category, in addition to all of the FSU countries. Russia in particular entered this category around the year 2000.

⁴Those who have ever learned a poem or a song by heart know that after reciting the first line, the second one immediately comes up, etc. This is an example of associative memorization. All of the long-term memorization is associative.

get associated to something irrelevant for mathematics – such as the personality of the teacher, the latest football game, etc. Obviously the memorization without any references to other knowledge in mathematics will not advance the student in any useful way – given that the associations do not belong to this study area, the students will not be able to recall much knowledge of mathematics when need arises, apart from a vague notion that they should have heard something about the subject. The missing associations are provided to such students by different hints – those embedded into the test, formulas from the list of formulas, results of calculations, cheat sheets, copying from a colleague, etc. However, none of these hints exist out of the classroom, leaving the graduates helpless in real-life situations, without any retained knowledge that might be applicable to their current situation or problems either directly or as a starting point for reasoning⁵.

2.2 Diagnosis of the Portuguese educational system: the empty-head syndrome

Recently the PMAT project, organised by the Portuguese Society of Mathematics (SPM), has evaluated whether the preparation acquired by students at the secondary school is sufficient to study mathematics at the university (Pires, 2012). Thus, a diagnostic test was given to 1398 first-year students of two leading national technical universities, who passed the Mathematics A (the most advanced curriculum in Mathematics) exam at school and were to study 2 disciplines in Mathematics during the first semester of their studies, Analysis I and Linear algebra. The average higher-education entrance grade of these students was 15.7 on the scale of 0 a 20, which is a very good (although not an excellent) grade. They had to answer 30 multiple-choice questions on the scholar curriculum in Mathematics, choosing one unique correct answer from three suggested possibilities. The students were not allowed to use calculators or any other auxiliary material. The exact same test was administered two times, before the start and after the end of the first semester. The researchers found a strong correlation between the academic achievement at the secondary school and at the university: those students who had their entrance average over 15, passed both disciplines in Mathematics in their first semester, while those with the average below 13 failed one or both. However, the average grade for the first diagnostic test was 0 on the scale of 0 a 20 – on average the students gave 10 correct answers out of 30. Choosing from three possible answers, 10 hits out of 30 are scored by random choice, requiring no knowledge whatsoever. The best student in this group of 1398 got the grade of 12 on the scale of 0 to 20 (22 correct answers). The zero average of the group is explained by the (positive) knowledge of the best students being compensated by the negative knowledge of the remainder, who chose wrong answers more frequently than a completely random choice would imply. The average grade for the second test was 2 points on the 0 to 20 scale (12 correct answers), while the best student got 16 points this time (26 correct answers). The students improved their results only as regards functions and derivatives, studied during the first semester in Analysis I. Some of the students were also interviewed (the best 20% and the worst 20%), and asked to compare the two tests – quite surprisingly, none of them perceived that they were asked to do the same test twice, having completely forgotten everything about it in 5 months. Repeating the same test in a couple more months, we would surely discover that the short-term memory of the students has completely purged itself, with the results returning to the starting point of zero average knowledge. In fact, we should expect very similar results in all disciplines of the scholar curriculum, as the teaching methods are uniformly based on the identical refusal to develop and use memorization in the educational process.

The absence of specific knowledge memorized by heart, in either mathematics or any other study area, results in the vast majority of students being unable to form knowledge bases in their respective memories in any single discipline of the scholar curriculum, which manifests itself as the empty-head syndrome. Having some hints, these students frequently manage to recall the information they need – the hints providing the associations that the student missed. Naturally their teachers try to build sufficient hints into the tests and exams, so that they can give good grades and approve a significant proportion of students, independently of their real level of knowledge, because the teachers' performance is evaluated based on the academic success of their students (see below).

Figure 2. Year transition rates in the Portuguese secondary school; note the marked growth starting from the academic year 2005/2006, since the new curricula were introduced



Source: Instituto Nacional de Estatística, 2017, <https://www.inec.pt/>

⁵ The usual counter-argument is that though people may not know something, they are still able to find it in the information networks. This argument works in the context of scholar group assignments and essays, when the students know the topic and can find other similar essays on the internet and adapt those to their necessities. Here knowing the topic equals knowing all the answers – but the answers are known only to the most frequent questions. The real-life problems confronting a person may not have pre-packed answers, while the right questions would have to be formulated first anyway; thus, our graduates will be unable to find answers, lacking the retained information that could help in their reasoning. Therefore, the learning-by-doing school is bound to fail its main objective of independent thinking: apart from being totally dependent when possible, thinking of students/graduates is completely impossible in the most important non-standard cases. Such persons will have to turn to the irrationality of religion as their last resource – no thinking required and all answers available, even to questions yet unknown.

We should recall that during almost a decade the average grades for the national exams in Mathematics and Sciences were around 7-8 points (Júri Nacional, 2005⁶), while the average grades as evaluated by current control in these disciplines were around 12 points⁷.

The difference may be explained by the students predominantly using their short-term memory, being unable as they are to use their long-term (permanent) memory. This short-term memory can accommodate a limited amount of information and for a short time only, hardly exceeding several days. Thus, the short-term memory is more efficiently used in the current control, usually done by tests – a reduced amount of information can be memorized in 2 or 3 days that students typically use to get ready for a test. On the other hand, the amount of information is much larger when students prepare for a final exam, whereas short intervals between exams do not allow a proportionally larger period of time for preparation, resulting in a lower preparation quality. Also, by the end of a prolonged study period, the temporary memory starts losing the information acquired in the beginning. Therefore, necessarily and inevitably, the exam grades must be lower.

In practice, the ministry of education, under cross-fire by all of the stake-holders, adjusted the difficulty and grading criteria of the exams by introducing new school curricula starting from the academic year 2005/2006 (FENPROF, 2006). This had a short-term effect of increasing the approval rates, as the students prepared under the previous (more stringent) criteria were evaluated by the new, more lax criteria, so that the average exam grades increased by 5 points, coinciding for some years with the average of the current control grades and increasing the number of students that passed to next year of studies or graduated (see Fig. 2). Thus, the universities were opening their doors to the students whose level of competences and knowledge is so low that previously they were squarely rejected as inapt⁸. Several years later, the student preparation levels have relaxed back towards the new lower requirements, with the difference going back to about 3 points in Mathematics and Portuguese and up to 5 points in Sciences, though with higher averages (Juri Nacional, 2009⁶).

2.3 Memorization and abstract thinking

An international independent commission that recently evaluated the Portuguese system of higher education noted a general and recurrent complaint of the university professors: the students are unable to think creatively and logically (Blättler *et al.*, 2013). Thus, the learning-by-doing school paradigm has failed its principal declared objective and its reason for existence, used as the pretext for the destruction of the formal school – the independent, creative and critical thinking is not being cultivated in students. This directly results from the absence of knowledge specific to the respective disciplines of the scholar curriculum, retained by students permanently and in a form allowing its recovery and usage. Namely, abstract thinking requires memorized definitions, theories, formulas, dates and other elements that form the foundations of the knowledge base in any specific study area. Missing these elements in their permanent memory, the students are incapable of abstract thinking in the respective area – as each of these has its own set of notions and ideas, its specific language, which we must learn by heart before we can even dream of abstract thinking. The same effect is notable in language studies of either the mother tongue or a foreign language: enlarging their active vocabulary, the students gradually obtain the capacity to discuss problems of ever growing depth and complexity. However, apart from the vocabulary, we also need the capacity of abstract thinking and the knowledge of logics⁹. In the existing school system, the vast majority of students is deprived of these capacities, and has neither conditions nor motivation for their development. The latter is the consequence of the faulty study habits and evaluation methods that do not require or test the retained knowledge, with the students needing the short-term memory only. This is the least-resistance approach, taking only 2 or 3 days to prepare for a test or an exam – while precluding acquisition of permanent knowledge – something that students never needed to pass a discipline in the first place. Thus, the students prepare for the exams using their short-term memory, then pass – using every available hint, starting from those deliberately introduced by their teachers into the test papers, to copying and cheating in every possible way and without the least of scruples¹⁰, and next forget everything they just learned as fast as they can.

2.4 Critical thinking in primary school

All attempts of the learning-by-doing school to develop and use critical, creative and independent thinking in primary schools will necessarily fail, because such capacities do not exist in children of that age, at the neuropsychological level¹¹. They arise from biologic necessity at puberty, when suddenly adolescents start having their very own ideas about everything, irritating both their parents and teachers. Still the primary school children are very well able to imitate the critical thinking capacity, using their inherent ability to perceive and interpret any and all clues, transmitted unconsciously or otherwise in many different forms by their teachers, who are also interested in obtaining good results of student evaluation. Thus, any evidence of critical thinking by primary-school students is generated, on one hand, by students cheating (even unconsciously), and on the other hand – by the self-hypnosis of their teachers, whereas the time used in tasks for its development – is time uselessly wasted, harming other components of the study curriculum. Indeed, instead of critical thinking we are promoting

⁶ The exams are graded using the more detailed 0 to 200 point scale, while the 0 to 20 scale is normally used in secondary school and university education in Portugal.

⁷ Regarding the national exams in Portuguese Language and Mathematics A (the highest-difficulty version), the approval rates are now usually around 50%, which seems to be socially acceptable. Before 2005 the exams required more retained knowledge, with only 10% approval rates, which generated social protest and stimulated the Ministry of Education to revise the standards down.

⁸ Being sufficiently insistent, such weak students eventually graduate, still with no retained knowledge, as they can't be failed indefinitely for reasons already mentioned, although never acquiring any knowledge.

⁹ Contrary to the ancient Rome, today the knowledge of logics is not considered a necessary competence of an educated person – the only place logics is ever mentioned is the discipline of Mathematics A, with some calculations in formal logics, completely disconnected from reasoning. Is this the progress of humanity?

¹⁰ The students have learned to leave their morality outside the classroom in the exercises of critical thinking in the primary school – v. infra. The teachers have to be immoral as well, approving students who know nothing for keeping their own job. Apparently the theory of religious morals taught to everyone does not stand up to the realities of the education system.

¹¹ Sufficient proof is given by the ease of religious indoctrination of children, as compared to adults, and the consequent desire of all churches to work with children starting from the youngest age possible.

exactly the opposite, rewarding servility and desire to please the superiors, and subverting student morality on the way without noticing¹⁰.

2.5 Memorisation as survival necessity

During millennia, and in the absence of writing, the most important knowledge had been transmitted from generation to generation by oral tradition, which naturally requires long-term memorization. However, the presence of memorized knowledge may still be the decisive factor between life and death, even in the modern civilized world with all the current development of informatics and telecommunications. Just recall the experiences of the British schoolgirl Tilly Smith and of the indigenous tribes of the Andaman and Nikobar islands, persons whose knowledge had saved their lives during the Indonesian tsunami of 2004¹² (Wikipedia, 2004). At the same time, entire crowds of the learning-by-doing school graduates armed with ‘critical thinking’ and internet-capable smartphones were unable to perceive that there are no second chances in the real life, and had been washed away into the open sea ... Obviously one can’t learn to survive tsunamis by doing.

2.6 Global or visual method of teaching to read

The capacity to study is inevitably determined by the capacities to read and complement one’s active vocabulary. These get blocked when the primary-school teachers focus on the global method of teaching to read. This method requires the students recognizing entire words by their graphics, without identifying letters or syllables. This method may be successfully used to memorize the alphabet, associating pictures to the first letters of the words that identify the depicted objects. However, if the teacher tries to use this method beyond the alphabet, the students are left with a very limited vocabulary, never exceeding several hundreds of words, and unable to enlarge it, as they can’t read any unknown words or look them up in a dictionary. Such students, reading an unknown text, are only reading the known words, trying to extract some meaning out of them. Frequently, the very existence of a problem with reading is discovered by the end of the primary school, implying a complete waste of four years of schooling (and of the life of the student), accompanied by a complete loss of motivation for academic success and of interest in studies¹³.

2.7 What may be done to develop permanent memorization?

We should stimulate the students to learn by heart the multiplication table, the definitions, the formulas, the poems, the geographic names and the historic dates, and all of the other elements that were traditionally learned by heart at school. We should not simplify the tests and exams to the point when the student who learned by heart an entire chapter, without understanding a thing, can get a passing grade by using the hints contained in the test and the auxiliary material. We should stimulate the students to write lecture notes by hand in the classroom, and additionally work with these notes and the textbooks, both before and after the new material is presented in the class, etc. The objective of all this work is to create the foundations of the knowledge bases, which will allow to create associations between new knowledge and the respective specific area of knowledge (and/or its adjacent areas), and as a consequence – develop the students’ abstract thinking abilities. An added value of hand-written lecture notes is that by ordering the information on paper we also organize it in our head, helping in its assimilation, retention, perception and usage.

3. SECONDARY FACTORS CONDITIONING THE HIGHER EDUCATION QUALITY

Here we describe the mechanisms whereby the educational fraud of learning-by-doing is sustained at school and in higher education, compelling academics to approve students with no retained knowledge.

3.1 Teacher perception and performance assessment

Contemporary education is perceived as part of the economy, and therefore has to produce profits and be economically efficient (Stallinga *et al.*, 2017). Keeping students at school (or university) to repeat the study years is economically wasteful, producing losses. Thus, the contemporary European knowledge-based economy, under the pretext of ensuring high quality of education and apparently oblivious of the fact that good grades are being obtained with zero retained knowledge, has created a Quality Assessment mechanism in higher education, and teacher performance evaluation at school, such as those existing in Portugal (Netprof, 2009; Pinto *et al.*, 2005). The assessment requirements may sometimes take grotesque forms, for instance in one of Russian universities professors are effectively required to produce between 12 and 20 publications each year, in pursuit of better university ranking (Criteria, 2016; Informer, 2017). The assessment criteria at the University of the Algarve (UALg) require publication of at least 5 to 8 papers in 3 years for an excellent grade in research, dependent on the position. The assessment of educational activities includes the Teacher Perception reports provided by the students each semester as part of the Quality Assessment (QA) process. Similarly, British higher education uses the National Student Survey (NSS) as a tool to rank the national universities, with one of the objectives to provide additional public financing to the better-ranked universities. This has produced well-justified apprehension of administrative usage of the survey results

¹² In effect, Tilly Smith saved the lives of over 100 people living in the same hotel as her family.

¹³ One of the I. K.’s sons started his experience in the Portuguese system of education at the 4th year of primary school. As it happened, this son – who already knew Latin alphabet, as he started learning English in Russia in the previous year, and was reading fluently in Russian – turned out to be the only student able to read, although naturally without understanding a word of it. Meanwhile, the rest of the students understood everything but could not read anything at all after the 3 years they have spent at the primary school. And the teacher was still unhappy with him, saying that he “did not want...” to answer the questions she asked about what he read, “...just for being stubborn”.

against teachers, and of the weak universities becoming still weaker, while the strong universities becoming stronger. In a few years, the universities have learned to play the game of the NSS, by making the students understand that good evaluation they give to the university may improve their own professional prospects, and employing other psychological tricks like pre-surveys used as a means to divert the eventual negative opinions away from the “real” questionnaire (Agrawal *et al.*, 2014). As a result, all of the British universities appear very similar to each other in the student appreciation as evaluated by NSS. All of these factors recently led both students and teachers to call for a boycott of the NSS (NUS, 2017; UCU, 2017).

Both the QA procedures and the teacher performance assessment create pressure to increase student grades. “A focus on (student) satisfaction can lead to an intellectual race to the bottom as lecturers are put under pressure to cut reading lists and shorten assessments. If students do not like reading whole books, then perhaps extracts will do. If they find essay-writing difficult, then lecturers should guide them step-by-step through what to write and how, rather than leaving them to work it out for themselves. If students do not like exams, then maybe a poster would suffice.” (Williams, 2015). We do observe these same tendencies in our own work place. Indeed, those of our colleagues who choose the easy way of letting pass at least half of their students (while admitting that these students are completely unprepared, have incorrect learning habits and are unable to learn), are evaluated as excellent teachers, while those who try to make the students demonstrate some retained knowledge are urged to improve their approval rates by lowering the learning targets and making it easier to the student. The same tendencies were confirmed in a recent survey in UK, where half of the academics reported they were under pressure to give more generous grades to their students (Ratcliffe and Shaw, 2015).

3.2 Learning outcomes and student evaluation

According to the Bologna ideas, we should define the learning outcomes, including knowledge, skills and competences for each course and discipline, and ensure that these are in fact acquired by the students. As we already found here, average students are unable to acquire any retained knowledge, therefore we may only evaluate their skills and competences. Some of the skills are specific to the disciplines studied and the course attended, whereas the competences are by definition transversal, most of them common for any course. Thus, student evaluation done by poster/presentation evaluates only the competences, having nothing to do with the specific discipline that is being graded. Even the evaluation by exam includes a large proportion of competences, including those of meaninglessly memorising huge amounts of material (as explained, unable to use their long-term memory, students have to rely on their short-term memory), of picking up the leads and hints provided by the professor in the test, and of course copying and cheating to the largest extent possible. Thus the system of education rewards reprehensible behaviour, instead of cultivating high moral standards¹⁰. As we already noted, lip service to the religious morality is unable to stop the moral auto-corruption dictated by the imperative to get a passing grade.

3.3 Conceptual complexity and prestige of disciplines

Traditionally, the higher-ranked academics prefer to teach the more specialized disciplines of the advanced years of the course, as these typically have lower student numbers, with the student profile also shifted towards stronger students as some of the weaker ones already quit their studies by then. Frequently, there are no existing textbooks or training exercises for such advanced disciplines, therefore the tests are built by compiling questions from a previously known list, or else such disciplines are evaluated by presentations or essays, none of which can test the retained knowledge. The students are perfectly capable to fill their short-term memory with answers to a couple of hundred questions, and reproduce the answers in the classroom. This does not require any retained knowledge or understanding or being capable to relate the knowledge to the specific issue.

However, the largest facilitator of the advanced disciplines is the lower conceptual complexity accompanied by the same number of ECTS credits and amount of student work. To compare the conceptual complexity of an advanced discipline with that of a first-year introductory discipline, let's look at the discipline of Photochemistry and compare it to General Chemistry. Photochemistry is concerned with the behaviour of the excited states, and imports the concepts of general chemistry and quantum chemistry, then expanding on organic and inorganic reactions taking place in the excited states caused by absorption of photons, with not many concepts of its own not appearing elsewhere.¹⁴ On the other hand, lectures on General Chemistry (Atkins *et al.*, 2017) apart from being twice as large, contain the fundamental concepts of at least half a dozen more specialized disciplines, such as thermodynamics, chemical kinetics and organic chemistry, all requiring retained knowledge for understanding and application. It is easy to see that a discipline of general chemistry, due to its conceptual complexity, requires considerably more student work than a discipline of photochemistry, although they may have the same number of ECTS credits in the course curriculum.

However – the day only has 24 hours – the students are physically unable to achieve the learning outcomes in the fundamental disciplines of the first year to the same extent as they can for the more advanced disciplines of the following years. Naturally they express their lack of satisfaction in their teacher perception, blaming their professor for the lack of academic success generated by the ambitions of his superiors. Meanwhile the higher-ranked academics enjoy high student satisfaction rates, thereby confirming their intellectual supremacy and high teaching skills, while generating direct incentive for extensive facilitation in the fundamental disciplines, leaving students without the essential retained knowledge. Meanwhile, any specialized knowledge contained in the advanced disciplines is more prone to change, due to continuing development, and has lower probability of practical application, as the graduate may get to work in an adjacent area that does not require this specialized knowledge. Thus it is a lose-lose situation for the students – they can learn comparatively well what is irrelevant for them, and learn only very superficially what is relevant for their professional activity and life-long learning.

¹⁴ This does not mean we can't produce a large textbook on Photochemistry (Balzani *et al.*, 2014), as the number of pages may be increased by repeating the material of other areas of physics and chemistry, and introducing a lot of specific photochemical properties of different classes of compounds, which brings in a lot of specific facts, accompanied by very few generalizing theories and concepts that require retained knowledge for understanding and application.

4. CONCLUSIONS: WHAT CAN WE DO TO IMPROVE?

We need to restore the exercises for memory development and memorization, as the obligatory component of the curricula of every discipline at every level of studies, starting at the primary school and ending with universities, enabling formation of the knowledge bases of the respective study areas in the students' memory. We should exclude the exercises for the development of critical independent thinking from the primary school curricula, introducing them gradually and much later, when the respective capacities become enabled by the development of the central nervous system that accompanies growth and development of children and adolescents. The systems of education of the EU and FSU countries, in their presently existing form, produce entire generations of illiterate, innumerate and ignorant young people, incapable of abstract thinking and intellectual self-advancement. The only exception is the extremely small number of students¹⁵ who either have better memorization capacities, or are being adequately motivated and stimulated by their parents or teachers – these students are always able to achieve excellent academic results, independently of any vicissitudes of the educational reforms. Changes will also be welcome by the academics, who in the current educational environment are subject to bullying by their superiors and colleagues (Shaw and Ratcliffe, 2014), with ensuing problems in mental health due to excess workload and stress at the workplace (Shaw, 2014).

ACKNOWLEDGEMENTS

The paper was prepared with partial support of the project QUADRIGA, 517123-TEMPUS-1-2011-1-DE-TEMPUS-SMHES, financed by the EU, to I.K., who also thanks Prof. S. Chernyshenko (University of Koblenz-Landau) for encouragement.

REFERENCES

- Agrawal, A., Buckley-Irvine, N. and Clewlow, E. (2014). Is the national student survey fit for the purpose? *The Guardian*, 2014, <https://www.theguardian.com/higher-education-network/blog/2014/aug/12/do-we-still-need-national-student-survey-university>, accessed in March 30, 2017.
- Atkins, P., Jones, L., Laverman, L. (2016). Chemical Principles: The Quest for Insight, Macmillan learning, 1200 pp., ISBN-13: 978-1-4641-2467-9, <http://www.macmillanlearning.com/Catalog/product/chemicalprinciples-seventhedition-atkins/tableofcontents#tab>, accessed in March 30, 2017.
- Balzani, V., Ceroni, P., Juris, A. (2014). Photochemistry and Photophysics: Concepts, Research, Applications, Wiley, ISBN: 978-3-527-33479-7, 504 pp. <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-3527334793.html>, accessed in March 30, 2017.
- Blättler A., Rapp J.-M., Solà C., Davies H., Teixeira P. (2013). Portuguese Higher Education - A view from the outside, (Independent expert report sponsored by CRUP and EUA), 52 pp, see p. 35; Description: http://www.eua.be/news/13-02-21/New_report_Portuguese_Higher_Education_-_A_view_from_the_outside.aspx, short URL: <http://goo.gl/CCa6sY>, text: http://www.eua.be/Libraries/publication/CRUP_final_pdf.pdf?sfvrsn=0, accessed in March 30, 2017.
- Criteria for ranking of employees at Krym Federal University. (2016). <http://cfuv.ru/wp-content/uploads/2016/10/1231.pdf> (in Russian), accessed in March 30, 2017; considering the table on pp. 19-22, note that the targets were set at 200 to 500 points in function of the academic position.
- Fazackerley, A. (2016). Universities and NUS plan boycott of flagship teaching rankings, *The Guardian*, <https://www.theguardian.com/education/2016/nov/22/universities-nus-boycott-teaching-excellence-framework-tuition-fees>, accessed in March 30, 2017.
- FENPROF. (2006). ME: política e práticas - balanço do ano lectivo 2005/2006. (on the new curricula for Portuguese school), <http://www.fenprof.pt/?aba=27&mid=115&cat=95&doc=1630>, Accessed in March 30, 2017.
- Informer. (2017). Is the rector of the Crimean university paid for doing nothing? (in Russian), *InFormer*, the Crimean online journal, <http://ruinformer.com/page/ne-zrja-li-rektor-krymskogo-universiteta-est-svoj-hlebr>, accessed in March 30, 2017.
- Instituto Nacional de Estatística. (2017). <https://www.ine.pt/>, accessed in March 30, 2017.
- Juri Nacional de Exames. (2005). Exames nacionais dos ensinos básico e secundário, Relatório final, see p. 76, Quadro 10, CIF-CE (difference between the current evaluation and evaluation by exam in the 12th grade final exams) for 2004 and 2005; the most difficult disciplines include Geology, German, Mathematics, English, Descriptive Geometry A, Biology and Physics. http://dge.mec.pt/sites/default/files/JNE/2005_relatorioanual.pdf, accessed in March 30, 2017.
- Juri Nacional de Exames. (2009). Exames nacionais do ensino básico e secundário, Relatório final, see p. 88, Quadro 1, CE-CIF (difference between the evaluation by final exam in the 11th and 12th grade and current evaluation) for 2009; the most difficult disciplines still include Descriptive Geometry, Physics and Chemistry, (newly) Latin A, Biology and

¹⁵ In 2013 only 5.3% of all students who took the Portuguese national exam in Mathematics A got "excellent" grades (over 17 points on the 0 to 20 scale). Accounting for the school abandonment rates, which previously reached 45% (going down, primarily due to downgrading of the evaluation criteria), we conclude that only 2.9% of the youngsters obtain some retained knowledge in mathematics during their studies at school (Juri Nacional, 2013). Note we are only counting the excellent students as we already know that good students have no retained knowledge in mathematics (Pires, 2012).

- Geology, German, Mathematics A, Mathematics B, (newly) Portuguese, and Mathematics applied to social sciences. http://dge.mec.pt/sites/default/files/JNE/2009_relatorioanual.pdf, accessed in March 30, 2017.
- Juri Nacional de Exames. (2013). “Exames nacionais do ensino básico e secundário, Relatório final”, 2013, see the histogram on p. 66. http://dge.mec.pt/sites/default/files/JNE/2013_relatorioanual.pdf, accessed in March 30, 2017.
- Lei de Bases do Sistema Educativo. (1984). https://pt.wikipedia.org/wiki/Lei_de_Bases_do_Sistema_Educativo, accessed in March 30, 2017.
- Netprof. (2009). Avaliação do desempenho, http://www.netprof.pt/netprof/servlet/getDocumento?TemaID=NPL0144&id_versao=18624, accessed in March 30, 2017
- NUS. (2017). Boycott NSS, <https://www.nus.org.uk/en/take-action/education/boycott-the-national-student-survey/>, accessed in March 30, 2017.
- Pinto, J. P., Oliveira, E. R. (2005). Métodos de Avaliação do Desempenho dos Docentes Universitários, <http://www.snesup.pt/htmls/EEZyulpyyyzMMnYSpK.shtml>, accessed in March 30, 2017.
- Pires M. (2012). Does school prepare students to the university? Presentation at the TEMPUS/DEQUE EU project conference at University of the Algarve, Faro, Portugal in Feb. 2012.
- See also: Afonso, M. J. (2013). Curriculum Vitae, 21 pp, references therein on the results of the PMAT project, http://www.psicologia.ulisboa.pt/docentesmodule/docente_cv/id/77/, short URL: <http://goo.gl/kTfeMD>, accessed in November 10, 2014.
- Ratcliffe R. and Shaw C. (2015) Academics under pressure to bump up student grades, Guardian survey shows, *The Guardian*, <https://www.theguardian.com/higher-education-network/2015/may/18/academics-under-pressure-to-bump-up-student-grades-guardian-survey-shows>, accessed in March 30, 2017.
- Shaw C. (2014). Overworked and isolated - work pressure fuels mental illness in academia, *The Guardian*, <https://www.theguardian.com/higher-education-network/blog/2014/may/08/work-pressure-fuels-academic-mental-illness-guardian-study-health>, accessed in March 30, 2017.
- Shaw C. and Ratcliffe R. (2014). Struggle for top research grades fuels bullying among university staff, *The Guardian*, <https://www.theguardian.com/higher-education-network/2014/dec/16/research-excellence-framework-bullying-university-staff>, accessed in March 30, 2017.
- Stallinga P., Fonseca C.S.C., Khmelinskii I. (2017). Knowledge-based economy, 2017, II International Congress “Interdisciplinarity in Social and Human Sciences”, 11th - 12th May 2017, University of the Algarve, Faro, Portugal, submitted to the *Journal of Spatial and Organizational Dynamics*.
- UCU. (2017). Support the NSS boycott, <https://www.ucu.org.uk/boycott-the-nss>, accessed in March 30, 2017.
- Wikipedia. (2004) Tilly Smith, https://en.wikipedia.org/wiki/Tilly_Smith, accessed in March 30, 2017.
- Williams J. (2015). The National Student Survey should be abolished before it does any more harm, *The Guardian*, <https://www.theguardian.com/higher-education-network/2015/aug/13/the-national-student-survey-should-be-abolished-before-it-does-any-more-harm>, accessed in March 30, 2017.

KNOWLEDGE-BASED ECONOMY

Peter Stallinga

Faculty of Science and Technology, Department of Electronic Engineering and Informatics, University of Algarve
(pjotr@ualg.pt)

Custódia S. C. Fonseca

Faculty of Science and Technology, Department of Chemistry and Pharmacy, University of Algarve
(cfonseca@ualg.pt)

Igor Khmelinskiic

Faculty of Science and Technology, Department of Chemistry and Pharmacy, and CIQA, University of Algarve
(ikhmelin@ualg.pt)

ABSTRACT

The European Union is resorting to long-term multi-annual political and economical plans. The current set of plans, “Horizons 2020”, also involves restructuring the educational system, as in the Bologna system. The idea behind it is that education should help industry to win the competitive battle with other major economical blocks. The idea is best described by the adage of the European Union of developing a so-called “knowledge-based economy”.

It implies that education is a form of investment. We should educate people – the society should spend effort on educating people – in order for society to make profit on it. Contrasting this is the idea of education as a consumption good. In the latter, people study to become knowledgeable, since knowledge makes a person happy.

We discuss here the dissident view why an educational system that is for investment-only will at the end not bear fruit and will destroy science, creativity and eventually any form of competitiveness in the economy. It will lead to moral as well as financial bankruptcy.

Keywords: Education, Science, Politics, Economy.

JEL Classification: O38

1. INTRODUCTION

The European Union, in resemblance to the former Soviet Union, is trying an experiment. Just like the Soviet Experiment, it is trying to centralize all power and decision making in a select group of people. To avoid populism, this body of lawmakers and managers is kept out of sight and reach of the population. Quietly improving society at a distance. The idea, by big names such as initiators Churchill, is sold as a perfect way to avoid wars; the First and Second World Wars blamed on nationalism, the way to avoid them is shun any form of national sovereignty. As an example, to remove national identity, mixing of European (and non-European people) is stimulated through visiting programs (Erasmus visits in the academic world). Borders for people are removed. We are supposed to think as ‘Europeans’ and not ‘Portuguese’, or ‘Dutch’, etc. Once again, the similarity with the former Soviet Union is striking.

Yet, not many people are misled by this officially promoted ‘open’ agenda. Many by now understand the hidden corporate agenda. Especially the ones that studied the history of the European Union a little: The European Union is an evolution of the European Economical Community which, in turn, was an evolution of the European Coal and Steel Community (formed just after the Second World War) with the underlying goal to facilitate the corporate activity, based on the idea “what is good for industry is good for the people”. Thus spoke the industry. The avoidance of war was only a subterfuge for increased corporate power, basically to put the corporations in control of Europe. Interestingly, it was the exact same structure of the Germans that was defeated moments before. It took the joined effort of the rest of the world to defeat it. Apparently, if such a tiny country can nearly outdo the rest of the world, it was a way of organizing society that makes it winning. They must have thought, let’s make it our pan-European structure. (Even today we praise German industry). Note that the biggest world power at the time, the United States, entered the European war theater only when German fascism was losing (after the lost Battle of Britain and, especially, the lost battles of Stalingrad and Kursk), not when it was winning (up to, say, 1942). In hindsight, it must have been the threat of the alternative to fascism (communism) that made them decide to enter the war theater and make of Europe a US-fascist protectorate. Some curious facts then start making sense, such as the fact that the Nazi army and regime were helped by American capital. The ties between the two countries was much larger than history books are telling us.

With the ties between the victors and the defeated strong, the differences in power structure between modern-day Europe and war-time Nazi-Germany have not become very big indeed. Throw in the soviet-style centralized political structure and a new star is born. Immediately at a standoff with the real enemy of fascism, (soviet) communism.

We can see this from their very same open-agenda European mission statement. The absurd mission statement that must

be distracting us from the hidden agenda. To start with, if it is all about avoiding war, why is the European Union ever more on the lookout for war with its neighbors, especially (and ultimately) with Russia? Ukraine, Yugoslavia, Libya, Iraq, Syria. Etc. What is more, the main idea is supposed to be to avoid war; apparently, if we take this statement as literal, it does not matter what exact form of government we'd have, which is apparently of secondary importance. We can then even have German Nazi-style fascism, or any other form of government, as long as we do not have war.

Well, fascism we got. (The hidden agenda). We can call it corporate fascism, a form of government in which industry and politics bundle their forces – the Italian word for bundle is ‘fascio’ – with in corporate fascism the corporations (industry) leading. US-style fascism that beat German-style (national-pride-based) fascism. If we won the war, then why do we still have the same political structure, moreover, centralized around the exact same country that was vanquished? Nobody will deny the central role of Germany in European politics. At best Germany is the entry-point puppet-state of Washington.

“Hold your horses”, we hear you say. “This goes too far!”. Well, maybe it is strong name-calling, but – what’s in a name? – the truth had better be said if we are going to analyze our society correctly. Whatever you may call it, and whether you like it or not, it is a fact that industry is in control of law-making in Europe (Balanyá *et al.*, 1999). It has been estimated that the European Round Table of Industrialists (ERT; 50 large companies of Europe (ERTa, 2017)) and lobbyist in general write a whopping 75% of all European laws, up to and including the treaties of Maastricht and Lisbon, which were only rubber stamped by politicians without them ever having actually read them, *let alone* having written parts (Moser and Lietaert, 2012). Most members of the European Parliament (MEPs) are, in fact, working simultaneously for large companies. When you have only corporation representatives in government, it is not strange that government, as a whole, thinks like the corporations and does things in their interest. The European Commission itself does not see this blending, nor the severe lobbying, as a problem, but is only concerned about the public image. As the European Union itself writes, “... most political scientist and policy-makers recognise that public and private interests have a legitimate and important role to play in the policy process. Nowhere is this truer than in the European public policy process where some 15,000 Commission and European Parliamentary officials face some 20,000 lobbyists on a daily basis. It is therefore not surprising that a significant resource dependency between officials and lobbyists based on regulatory needs, expertises, information and reputation has emerged. For this reason it is important that as we formalised and improved the EU lobbying codes of conduct we do not damage the information exchanges and credibility of the policy process.” (Directorate General Internal Policies of the Union, 2007).

There, the word is out. The European government is a machine that represents the industry; the system resembles (corporate) fascism. Industry, in turn, is an abstract entity that has no morality in itself, but has as only objective profit. Even if you may think that companies can also have morality – some companies even allude to this, see for example the stance of the ERT on Global Warming (ERTb 2017)(of which more later) – companies with morality are rapidly weeded out in an economy that is fiercely competitive, a ferocity we would like to see and encourage. Moral companies undeniably make less profit than immoral ones and survivability in economy boils down to profitability; at best the companies want to seem moral. In view of this Darwinistic observation, we can readily comprehend that in our current economical environment all companies have a lack of morality. The lobbying and law-making in Brussels is yet another form of profit optimization; where laws are made to keep industry in check and put morality back into business by making immorality unprofitable, business tries to remove these morality-inspired profit-limiting bounds, just so to increase profit. Whatever you may think – whatever the propaganda they pour out over us – industry is not there to make Europe a better place. A substantial part of the owners of industry, if not most of it, actually resides outside Europe and couldn’t care less about the state of Europe or its citizens, the same you do not care much about the welfare of Sri Lanka, to name but an example, where your pension fund is heavily investing to guarantee your good life after retiring. You sure hope that is what your pension fund is doing, defending your interests and not those of the Sri Lankians. The same with the owners of European business; they defend the interests of their owners and not your interests, also in Brussels. Don’t be naïve.

We can thus summarize the economy and our entire post-war Americo-European society as “based on the sole paradigm of profitability”. The entities that work on this paradigm, corporations or industry in a free-market economy, in order to increase their profit have bought governments (with a centralized form of government the most efficient way of doing it, because it avoids having to have lobbyists in each and every nucleus of local or regional government). On the one hand, it was done to remove any profit barriers, a simple economical optimization. On the other hand, it imposed onto government, and society in general through the bought governments, the moral philosophy – ethics – of profitability. The two results going hand in hand. (Profitable) free-market activity seen as the Utopian goal for each and every element in society. We will analyze the second point (of the ethics) in a moment. But a small digression has to be made about the economical aspects of profit. This digression is actually worked out in detail in the book *Money: In gold we trust by one of us* (PS).

Profit we define as financial gain in an economical activity. Money is invested and at the end of a cycle money is received. By definition, profit means that more money came out than was put in. A positive return-on-investment (ROI). All very well. It is now thought that the task of government (that is, the joined corporations) is to organize the society/economy in such a way that the total profit is optimized. Even better, it should be organized in such a way that risk of loss is minimized – all having profit – in order to have unbridled investment and a production maximization, something that is the underlying open agenda; if companies invest a lot, more is produced and we will have more welfare.

The problem with this is that it is not possible that all make profit. If money is limited, the economy is a so-called zero-sum game; the profit of one is the loss of another. If some economical agents in the economy – those corporations that are mostly represented in Brussels, as in the ERT, etc. – make guaranteed profit, all the others combined make guaranteed loss! Thus, all the others will go bankrupt as long as the corporations do not relinquish power in Brussels, something that is not likely to happen. Once all others are bankrupt and have stopped their economical activity, who will take up the role of the losers in the zero-sum game in order for the corporations to continue having guaranteed profit?! Even tax exemptions for the big corporations, such as the one of Apple in Ireland, will not save the system, it will actually aggravate it. We could let the

state run into debt to save the corporations and economy. However, this just delays the inevitable, since the maximum debt is limited (90% of gross domestic product, as argued by Reinhart and Rogoff (2010)); if money does not increase its speed of circulation, GDP is limited and state debt is limited. The economy is thus doomed from the start.

The only way out of it is constantly printing fresh money, something that was made possible by abandoning the gold standard, the convertibility of money into the limited-resource gold, in the monetary system of Bretton Woods. It made money effectively infinite and the economy could be turned into a positive-sum game. Well, a silly question immediately arises: why would I do my best to work for a living, to earn money, something that is virtually infinite?

Moreover, we still remain with a system where laws are written to guarantee profit to the Brussels-represented corporations. They basically do not have to do any competitive activity – profit is guaranteed after all – other than lobbying. Lobbying itself has become the economical activity. The lobbying must moreover grow forever because the money borrowed has (theoretically) to be paid back and this can only be done if the economy is growing; Money will only be lent if tomorrow there is more of it than today since interest has to be paid as well. This means that the rest of the economical agents (like the small bakers on the corner of the street. Those lobbyistless entities that actually produce something else than lobbying) will not make profit anyway, or at least their activity will be stopped by lack of financing. Since it is not a level-playing-field, with corporations always pulling the longest straw, the entities that actually produce will stop activity and the economy will turn itself 100% virtual. Made possible by virtual money. We reach a mathematical singularity, with the average cost of real physically-tangible products being zero divided by zero. It is basically a system in which the Central Bank is printing money, the corporations getting hold of it and through dividends placing it on accounts of their owners in Panama and on the Cayman Islands. If ever any 1% of the wealthy 1% of society should decide to actually spend the ‘earned’ money that they have stored in fiscal paradises, inflation would be infinite since too little is physically produced to pin the money to something. The ‘rich’ can never enjoy their wealth. Everything is virtual. Yet, since real economy is kilowatts, and real property is kilojoules, the scheme of printing money is a mere tool of transferring real property (infrastructures) to an ever-smaller number of people.

2. KNOWLEDGE-BASED ECONOMY OR ECONOMY-BASED KNOWLEDGE?

In a society where financial profit is the sole philosophical morality – the ‘ethics’ – we can also expect that these same ethics will be applied to knowledge (science and education). Indeed, the corporations dash government have designed a soviet-style long-term plan for the economy in which knowledge plays a pivotal role. They call it a ‘knowledge-based society’. If we have an intellectual advantage over our competitors, we can sell them products (with profit) and thus sustain our economy. We said in the introduction that the profit-driven economy is itself unsustainable. But what about the idea to incentivate knowledge through the paradigm of profitability? Does that work? Will we get more knowledge through this paradigm? And will we get better education through it? Let’s analyze it in more detail.

We can distinguish between the knowledge itself and the transference of knowledge, the latter normally called ‘education’. Where schools are solely busy with education, and research centers solely busy with acquiring knowledge, universities have a special role in that they are both centers of acquisition of knowledge and dissemination of knowledge. Universities are both research centers and schools. We can call them simply ‘knowledge centers’. This contrasts them with technical high-schools, which are only institutes of knowledge dissemination, albeit on a high level. Well, these concepts have faded over the years, mostly because of the idea of profitability. Universities and technical high-schools eating into each other’s markets once financing of these institutions came ever less from primary sources, i.e. government, and ever more from secondary and ternary sources (tuition fees, project grants and donations). Institutions were basically demanded to be profitable. Universities became more like technical high-schools, educating people for industry, and technical high-schools became more like universities, doing more research. Probably because ‘university’ sounds sexier, all institutions are now called like that; technical high-schools have disappeared.

The concept of profitability has led to extreme excesses in which, for example, the University of Harvard has its major source of income in market investment (Piketty, 2014). Donations are put in lucrative investment schemes instead of teaching or research.

A university educating people for working in industry is fully a university taking over the role of a technical high-school. Instead, a university should educate people because people are happier when they are wise. And happiness be the goal, not profitability. Compare this to the function of a hospital. A hospital does not (only) cure people of malfunctioning so that they can go back to work and be more productive, i.e. the profit reason (curing people being profitable), but instead to cure people because being healthy makes people happy and happiness is the primary goal in society, or should be. Whatever we may think, profitability at the end is only a means to the real goal, happiness.

Related to the difference in function between a university and a technical high-school is the distinction between science on the one hand, and technology or engineering on the other hand. Science is the acquisition of knowledge per se, without any intended benefit for society, financially-profitable or other. That while the task of technology is to take any knowledge and to design useful products and the task of engineering is to actually make them somehow. Science is per definition not profitable. Or, as the icon of science, Albert Einstein, once said “Those that think that science is to make society a better place are utterly wrong”. In recent times, Nobel Prizes are given, not for scientific innovation, but to people addressing problems with socio-economic impact. (Compare the Nobel Prize of Crutzen for addressing the hole in the ozone layer to the one given nearly a century earlier to his compatriot Kamerlingh Onnes for discovering superconductivity; things have changed indeed. Politics has entered science). The European Union through its granting system, implementing the plan that everything should be profitable, wants to bet on science as being profitable as well. That means turning science into

technology just like universities were turned into technical high-schools.

One way to do this is through patents and copyrights. A knowledge-based economy is a patent-based economy as the European Union writes itself: “Europe requires strong industrial property rights to protect its innovations and remain competitive in the global knowledge-based economy” (Commission of the European Communities, 2008). So, now universities are required to produce copyrights and patents. It is no longer about the (beauty of) knowledge. It is about money, a positive ROI of society. Well, this is strange. The people that actually paid for the research leading up to the knowledge and patents through their taxation and funding of universities are not the ones that actually benefit from the patents. Their return-on-investment is zero. All benefit goes to the companies. If, on the other hand, the research is paid for by companies, why does the research have to be executed in universities and not in their own laboratories? This does not make sense. It is just a scheme for companies to be freeloaders – getting things for free – a scheme approved by the governments that were giving lip service to the companies, as we had already established above. A scheme that will moreover go wrong because an unlimited, infinite profit-scheme is not possible in a physically limited planet, as shown above and in the book *Money: In gold we trust*.

Science and knowledge have thus become an investment scheme. Science an industry (of which more later on). The same reasoning applies when seen from the point of view of the students. Students attending a university do this to acquire knowledge. Knowledge makes wise and wisdom equals happiness. It thus therefore does not matter if the acquired knowledge has some use or not, just as art is not meaningful other than being beautiful. As the ancient Greeks said, eternal bliss befalls those who can do philosophy. It is the ultimate state of happiness. Yet, students in the 21st century cannot hope to reach this lofty state; their goals must be more down-to-earth and work for the idea of profit.

It is understandable that, from the point of view of a profit-oriented society, citizens are investment objects, or at least vehicles of financial speculation, and it is to be expected that in such a society the projected productivity of citizens is converted into financial derivative products, thus making society speculate on its own citizens. For example, a state can more-easily get its government budget (deficit) financed if there is an outlook on an increased productivity of its workers. Education has thus become a financial vehicle for market speculation on the state as a whole. Prone to all its problems of margin calls, short selling, and whatnot.

Note that speculation, by definition, means that the value of a product is expressed in terms of the time-derivative of the value of that product. In a simplified equation,

$$p = \alpha \frac{dp}{dt} ,$$

with p the value, t time and α a proportionality factor. The solution to this differential equation is exponential growth,

$$p(t) = e^{t/\alpha} ,$$

a growth that was indeed needed, as argued above. Speculation is the (only) way to go in a profit-driven society. Yet, the moment the system saturates for some reason – and saturate it will in a non-infinite physical world – the exact same equation shows that it plummets instantaneously. Growth is exponential but slow, collapse is immediate. Speculative systems are doomed to fail. There is no such thing as a ‘sustainable economy’ when the economy is based on speculation and growth.

From the point of view of the student it is even stranger. Attending a course at the university is to be considered a (personal) investment as well, and has to have a positive return-on-investment along life. As if life itself is an investment project, and one’s goal can only be to make profit. We see here the difference between a course at the university as a consumption product vs. a course as an investment product. While argued above, an investment can only be a means to a goal of happiness, the means has now become the goal with the original goal – happiness – completely removed from sight. Everything in life, including life itself, has become an investment project. Moreover, speculation is also here important. A person’s self worth is expressed in terms of tomorrow’s worth. You are only worth anything if you are making yourself more valuable all the time. Never can there be any sort of saturation, since saturation brings collapse, as shown above. Lifelong learning is now the way to go. Always investing and never reaping. Every activity from cradle to grave an investment, even if we can see that, without any shred of doubt, this infinite investment scheme is doomed to fail for sheer limitations of a person’s life span.

This brings us to the point that the system in fact is indeed collapsing. A general positive ROI on all investments is not possible in a zero-sum game; the average ROI must be zero. The corporations are designing the rules of the game and make sure they are not the ones drawing the shortest straw; their ROI is guaranteed. Students, by not being organized and not represented in any government, draw the shortest straw and have thus a nearly guaranteed negative ROI. On average, a course costs more than it will return in a lifetime when the economy is saturating, as it is doing now. After the dot-com bubble that collapsed (ca. 2000) and the subsequent housing bubble that collapsed (ca. 2008), a threat hung in the air that it would take the entire financial sector down (ca. 2010). This was avoided by those financial corporations ordering the states to bail them out, which caused the state financing to collapse. Now is the turn for the citizens to collapse. Corporations (including corporate-styled universities) and financial institutions have guaranteed positive ROI. The state is not allowed to have a large negative ROI (hence also the need for the universities to have positive ROI and be corporate-styled). That

puts the entire burden of maintaining the system alive on the citizens, for example the academic students. They must have a guaranteed negative return on investment. That while the entire paradigm of society, up to and including that one for individuals, was to invest, to even make profit on knowledge. To see knowledge as a commodity that can be used in a profit-based society. Actually, the acquisition of knowledge is what makes the biggest loss in this society. We reach the following dialectical conclusion:

Knowledge in a knowledge-based economy is what makes loss in a society based on the paradigm of profit.

3. SCIENCE AS A COMMODITY

Science and knowledge have thus become an industry. The European Union seeing scientific research as something that can be ‘managed’ somehow. If you have a hammer as a tool, you see all problems as nails, so the EU now manages science in its typical top-down technocratic way. Scientists have to hand in project proposals – the same way proposals for building bridges and other infrastructures are resolved – in which they have to specify what will be the outcome of their research; ‘milestones’ and ‘deliverables’ (as if acquisition of knowledge can be predicted; why would you do research if you already know the answer?!). Everything seen as manageable production of a commodity. And this commodity has to make profit. This is what you get if you have a single (corporate) viewpoint in government.

Let’s take a step back and look at the difference between science and technology. Science starts from the premise that we do not know things – it starts with the assumption of our ignorance – while technology starts from the premise that we are wise. Cashing in on science is thus rather awkward. It is not possible, or at least unpredictable, since we do not know what to cash in on. We do know the knowns, but we do not know the unknowns; we do not even know what unknowns we do not know. It is stabbing in the dark and hoping we’ll find a glorkl, whatever that may be. That is science compared to technology. If things are unpredictable, they are highly shunned as investment objects.

Let’s state this more clearly. In a bottom-up organization of the world, science is discovering truths for the beauty of it, without financial objectives or other benefits for society. Technology is then looking at this acquired knowledge and see how they can be made useful to mankind. Engineering is making products and profit. That last one is highly predictable and production and profit can be managed. A profitable society thus wants as much engineering and as little science as possible. That is, unless science can be engineered as well. That means, basically, turning science into a predictable commodity. Truths should be engineered. That way science can be turned into an industry, something that is highly desirable in a profit-driven society. The only science that can survive in a highly-competitive profit-driven knowledge-based economy is all knowledge that can be engineered, doctored and constructed. Welcome to the 21st century! We use a top-down approach to our society. We start with an outcome and work our way down to the desired ‘truth’.

Let’s give some examples. First the case of cholesterol. Astra Zeneca discovered a chemical, ‘statins’ that had an effect on people, namely lowering the cholesterol in the blood. This is the potentially profitable sellable end product, and Astra Zeneca had the patent to it. Their marketing department was set to work to find an ‘illness’, which was soon found. High cholesterol could be statistically linked to cardiovascular diseases. A scientific myth was born. Cholesterol was labeled a problem, even though cholesterol is nearly as ubiquitous as water in our body, since it is needed for the double-layered lipid cell walls.

The entire research structure violates all scientific rules. The most essential is that it went out of its way trying to prove a specific model (namely “cholesterol causes illnesses”), instead of disproving it as the scientific method warrants. Moreover, research should exclude all other hypotheses before it can assume one model as being correct (for the moment). As the prime rule of statistics tells us, “Correlation is not causation!”. The fact that cholesterol is correlated to cardiovascular diseases does not mean that cholesterol is responsible for these diseases. It might be quite to the contrary, the only weapon our body has in fighting cardiovascular diseases being upping cholesterol levels. By giving statins we deprive the body of these weapons. Something similar happened to iron in the body and infections: Low iron levels in the blood correlated very well to infections. Doctors, in an attempt to help the body to fight infections, prescribed dietary iron supplements. Yet, an infected body is eliminating iron exactly for the reason of killing bacteria in a battle of survival, because these bacteria need iron even more than we do. Supplying iron tips the balance of the battle in favor of the bacteria.

Likewise, high cholesterol might not be the cause, but the result of illness. Statins that lower cholesterol might actually aggravate the problem. Fortunately, statins have no effect on cardiovascular diseases. In 2010 Scientific America wrote that there existed no reliable research whatsoever about the benefit of statins. The only research that existed was from Astra Zeneca itself:

“Direct evidence for the benefit of statins as primary prevention – that is, for preventing heart attacks in people who do not yet have heart disease – comes largely from one clinical trial published in 2008 in the New England Journal of Medicine. The trial called JUPITER and funded by AstraZeneca, ... found that rosuvastatin reduced the risk of cardiovascular events by 44 percent” (Wenner Moyer, 2010).

More recent studies found that statins have proven no effect on women and no effect can be proven on men (Brogan, 2014).

It seems that something is going wrong, but it isn’t. It is all because of a top-down structure that starts with the paradigm of profit. In such an environment everything is running smoothly. Profit is made indeed. A lot. The global market for statins is estimated to be \$29 billion (Mercola, 2012).

What we think is going wrong here is that we find it immoral that profit is made on our health, or lack of it. That we are forced to buy products that are not beneficial to our health. Such a moral – ethic – analysis, however, has no place in a society that is organized around the sole paradigm of profitability. If a product can be sold on basis of sloppy science, then this sloppy science is, in fact, a pearl of engineering in a knowledge-based economy. The (scientific) truth, in this case, was doctored. (No pun intended).

It started all with the wrong assumption that science should be useful, and, moreover, since ‘usefulness’ in a money-oriented society is expressed in financial terms, that it should be profitable. It easily boils down to this: “The truth is the one that makes most money”. The idea that cholesterol is bad for your health can propagate in society because profit can be made on the idea, and it substitutes ideas that do not result in profit. It can easily survive in society. Richard Dawkins calls such idea-genes ‘memes’ and describes how memes survive in a social environment (in analogy to genes in a biological environment) through survival-of-the-fittest selection rules (Dawkins, 1976). The cholesterol-problem is a winning meme because it is a profitable meme in a profit-driven society.

Now, as a small side note, some of the problems in modern society can be ascribed to a change of vector of the propagation of the memes. Where main stream media (MSM) are a good vector for the propagation of profitable memes, since main-stream media work on a for-profit basis as well, and the entire system is geared towards profitability with the MSM actually being owned by for-profit entities that thus have a stake in the propagation of memes, social media (SM) follow different rules; profitability is not an issue there. This change of vector of propagation of memes causes changes of the memes propagating. MSM now accusing SM of spreading ‘fake news’, and vice versa. There seems to be a revolution going on, especially caused by the change in the area of information circulation. Some, if not all, of the things being said here might all be canceled, if the change in vector causes a change in paradigm of society. For the moment we have a top-down (fascistic) structure of profitable science and education.

Before we continue, so what is the alternative then? How does it work in bottom-up? How does pure science work? Alan Chalmers asked this question in his book *What is this thing called science?* (Chalmers, 1976). He summarizes the basic principles of the famous Scientific Method of philosopher Karl Popper. Apart from the observation by Einstein that science is not intended to be useful, this method has these basic ingredients:

- 1) **Subject:** Study the natural, real world. For instance, mathematics is not science because it studies a virtual, imaginary world.
- 2) **Data collection:** Acquisition, reduction, induction: Gather data, organize data, reduce data, look for correlations and patterns. A classical example is Linnaeus who spent his entire life gathering information about species in flora and fauna, labeling and indexing them.
- 3) **Hypothesis:** On basis of all data form a hypothesis that can explain the data. Darwin that formed a model based on the data of Linnaeus.
- 4) **Isolation:** All alternative explanations for the data have to have been rejected. In case more than one model exist for the data, the simplest one is the correct one, according to Ockham’s Razor.
- 5) **Falsification:** Try to find reasons why the model is wrong. Do not try to find proof for the model, because that is what is called ‘affirming the consequent’. Bad: If P then Q, so look for Q. Good: If P then not R, and look for R. “In other words, we are trying to do our best to show we are wrong” (Feynman). A hypothesis that cannot ever be rejected is not science! Next time you see somebody entering a (pseudo)scientific discussion, ask this person, “What would it take – what piece of new data could I bring – for you to admit you are wrong?”. If no such data may exist, the entire hypothesis is silly and the science is a hoax. That is why some call the greatest scientific discovery of the 21st century the Hoax Boson. Science it isn’t. Billions spent on trying to prove a theory correct. At this very moment the same scheme is used for gravitational waves.
- 6) **Experiment:** The model should come with a prediction. Data that do not exist yet but that can be obtained through a new experiment. Einstein showed that Newtonian mechanics failed by predicting that the rays of light are bending around the Sun, later observed at a solar eclipse. On the other hand, a model that can only explain the past and has no possible way to refute it, for instance by a new experiment, is not scientific. It is mere retrodiction, or is plane silly (As Murphy’s Law, “Everything that can go wrong will go wrong”. It is silly because it cannot be tested; The test will fail, as it is governed by Murphy’s Law itself). Moreover, a rejected model cannot retroactively be modified to include the new data. Such a Bayesian, ever-adjusting, method leads nowhere. We can also immediately see that because there’d exist two models that explain the data until the last data point. And that is violating rule #4 above.
- 7) **Replication:** If the scientist has done all (s)he could do to tear down the hypothesis but failed, other scientists have to be informed. This is done by supplying all information needed to reproduce the thought train of the scientist. All data, all analysis methods, and all reasoning that led up to the conclusion by the scientist. Also, the scientist should inform the colleagues about everything that is still not well understood, where the model is on weak ground. When this is not fully followed, the scientist is a fraud and can be put in court, as was for instance done to Thomas Mann by Steve McIntyre when the former’s Hockey Stick climate data proved to be fake and Mann refused to give the data and the method leading up to the Hockey Stick.

Note that nowhere in this method does it say that science should be useful or profitable. A truth is a truth, if it is useful or not. Science in 2017 is dead! Instead, in 2017, we start with a desirable outcome of research – let’s no longer call it science. It starts with a meme can can be made into profit when it is backed up with research. Yet, anybody that does not follow the above scientific method is not a scientist. And anybody that claims to be a scientist and does not follow the scientific method is a fraud. Since money is made with this fraud, it can even be called a swindle. Many modern-day scientists are swindlers selling snake oil. Unfortunately, the designation ‘scientist’ is not protected and anybody can call him- or herself a scientist

without any legal repercussions. Educational industry actually gives a PhD (philosophical degree) to each and any person that finishes one of its lucrative courses, without these people ever having been lectured the concept of ‘science’, or philosophy in general. As far as we know, no European post-Bologna PhD program contains any ECTSs (European credit transfer system) in philosophy, let all one science.

4. THE GLOBAL WARMING MYTH: THE ULTIMATE SCIENTIFIC FRAUD

In 2017, a meme survives if profit can be made on it, otherwise it will slowly disappear from the thought-gene pool. Memes are nearly randomly created constantly, like random mutations of genes; the strongest survive. Yet, some get support from the beginning. This brings us to the mother-of-all-scientific-frauds, the Anthropogenic Global Warming. It brings us back to the political point we introduced at the introduction. A centralized government also wants to define the correct way of looking at things. In fact, the idea of ‘political correctness’ was part of Stalin’s doctrine in the Soviet Union. If people are forced to agree on things, conflict would be avoided, so they must have thought.

In the West, through the League of Nations and later United Nations, the idea of a pan-global government took shape. The so-called new world order (NWO), a designation often used by conspiracy thinkers, but no conspiracy exists, just as much as ‘capitalism’ or ‘socialism’ is a conspiracy; it is just an ideology, a new way of organizing the world, without there being specific people behind it or benefiting from it. This NWO government uses similar techniques of political correctness to join people. The idea took shape that, in the absence of an external enemy in the coming pan-globally governed society, an internal enemy was needed. It was deemed a good idea, a political correct idea, to take mankind itself as the enemy of mankind. The biggest think-tank of that era, the Club of Rome, actually wrote that (later) in their work *The first global revolution*:

“In searching for a new enemy to unite us, we came up with the idea that pollution, the threat of global warming, water shortages, famine and the like, would fit the bill. In their totality and their interactions these phenomena do constitute a common threat which must be confronted by everyone together. ... All these dangers are caused by human intervention in natural processes, and it is only through changed attitudes and behaviour that they can be overcome. The real enemy then is humanity itself.” (King and Schneider, 1991).

Or

“We’ve got to ride this global warming issue. Even if the theory of global warming is wrong, we will be doing the right thing in terms of economic and environmental policy”. (Timothy Wirth, President of the UN Foundation).

The meme of Anthropogenic Global Warming had a benefit, a political profit. It also has economical profit, but of that later. The need for top-down truth-engineering existed. Politics started meddling in science.

A United Nations think tank was created together with – for some strange reason; after all, climate is not weather – the World Meteorological Organization, and baptized the Intergovernmental Panel on Climate Change (IPCC). This is a political body, as the name implies, and has no scientific aspirations, other than engineering the proof for man-made climate change. They set out with the idea of carbon dioxide as a greenhouse effect that was presented by Roger Revelle in his groundbreaking article in Scientific American (Revelle, 1982). Later it was also propagated by his acolyte Albert Arnold Gore Jr., who even got a Nobel Prize of Peace helping to execute the NWO government program.

The IPCC set to work and doctored the proof of man-made climate change on a regular basis, with a rate of about one report every five to ten years. The doctoring they do not even hide in their reports, as the IPCC work-flow in the table below testifies. The endeavor starts with the outline of the conclusions. Experts are then contracted to substantiate these conclusions and writers hired to put it in beautiful phrases:

Table 1: IPCC work flow diagram identifying various tasks (source: climate.uu-uno.org)

Step	Task
1	IPCC approves outline
2	Governments, organisations nominate experts
3	Bureaux select Authors
4	Authors prepare 1st-order DRAFT(*)
5	Expert Review(*)
6	Authors prepare 2nd-order DRAFT(*)
7	Expert and Government Review(*)
8	Authors prepare FINAL DRAFT(*)
9	Final distribution and Government Review of SPM
10	WG/IPCC accepts/approves Report and SPM

(*) Peer reviewed and internationally available scientific technical and socio-economic literature, manuscripts made available for IPCC review and selected non-peer reviewed literature produced by other relevant institutions including industry

This structure is nearly an exact replica of the one used in the former Soviet Union for denying the theories of Darwin, a failed scientific structure we now call Lysenkoism.

“Lysenkoism was a political campaign against genetics and science-based agriculture conducted by Trofim Lysenko, his followers and Soviet authorities. Lysenko served as the director of the Soviet Union's Lenin All-Union Academy of Agricultural Sciences. Lysenkoism began in the late 1920s and formally ended in 1964. The term Lysenkoism can also be used metaphorically to describe the manipulation or distortion of the scientific process as a way to reach a predetermined conclusion as dictated by an ideological bias, often related to social or political objectives.” (Lysenkoism, 2017).

In Lysenkoism, opposing scientists were silenced by blocking their career, eliminating these voices from the (politically correct) debate, just as the European Union is doing currently with climate-skeptic scientists in Europe by just removing any funding to them. It is as good as impossible to have a project approved that is critical towards the idea of AGW, whereas pro-AGW projects get bucket loads of funding. A person's stance on the Global Warming issue is a career maker/breaker. One of us, PS, is a example for that. Projects about organic electronics (efficient light sources) and solar panels, photovoltaics in general, are easily granted, the project about the analysis of Global Warming models (MoCCA) never gets any funding.

The governments thus have a clear program to propagate the AGW meme. Most of them are fully aware of the lie of the ideas, but for a politician something (the ‘open agenda’) being true or not is not so important as much as the final goal (the ‘hidden agenda’) is. If a lie is needed to improve society, then that's what has to be used. A so-called ‘convenient lie’. They therefore hired propaganda agencies to see how the lie could best be sold. An example is the Institute for Public Policy Research (IPPR). In their report, Warm Words. How are we telling the climate story and can we tell it better? they write,

“Ultimately, positive climate behaviours need to be approached in the same way as marketers approach acts of buying and consuming. This is the relevant context for climate change communications in the UK today – not the increasingly residual models of public service or campaigning communications. It amounts to treating climate-friendly activity as a brand that can be sold. This is, we believe, the route to mass behaviour change.” (Ereaut and Segnit, 2007).

The idea of programming in masses people's behavior through selective information feeding is also called ‘propaganda’. ‘Behavior change’ is equal to ‘brainwashing’ with the choice of wording depending on the point of view (government vs. citizen). To see to what a dangerous point the propaganda/lie has become, take this phrase from the same work:

“To help address the chaotic nature of the climate change discourse in the UK today, interested agencies now need to treat the argument as having been won, at least for popular communications. This means simply behaving as if climate change exists and is real, and that individual actions are effective. The ‘facts’ need to be treated as being so taken-for-granted that they need not be spoken.” (Ereaut and Segnit, 2007).

Indeed, the ‘truth’ should never be used as an argument. Lest people find out it is a lie.

Then, having shown that it is in the interest of governments to propagate the meme of AGW, and having shown that in a fascist society industry has linked up – ‘bundled’ – with government and is actually in control, we have to show that the meme of AGW is favorable for industry, that it gives them profit. There are many conspiracy theories going about (social media and main stream media alike) that, especially, oil-industry is paying scientists to deny the AGW ideas. This is easily shown to be incorrect. What is more, industry is in fact a large supporter of the AGW ideas. Including oil industry. As shown above, the European Round Table of Industrialists (ERT) are the ones that are in control in the European Union and are writing its laws. This ERT includes several oil companies:

Royal Dutch Shell (The Netherlands)

Eni (Italy)

TOTAL (France)

BP (United Kingdom)

This ERT comes with strong support of the Global Warming ideas, as can easily be seen on their internet page (ERTb, 2017). Worth noting is also the documentary movie Climate of Concern by Royal Dutch Shell (1991) where they raise serious concerns about the impact of burning fossil fuels on the climate. Shell now heavily invests in ‘green’ energies. (Take for instance their construction of a windmill park in front of the coast of Zeeland, enough to supply energy to one million households). So much for a conspiracy! It can easily be understood. An oil company does not have the paradigm of selling petrol; it merely has, like any other company, the paradigm of making profit, and up to now it was best done with selling refined petroleum products, but they are readily convinced to switch their business if opportunity knocks. As a comparison, on the same member list of the ERT is also Philips. It started as a light-bulb factory in Eindhoven, but rapidly evolved over the years into a multinational corporation making televisions, micro-electronica, consumer electronics, and recently they moved their core business to medical equipment. The capital is flexible and applies its resources to where profit can be made,

it does not have to be making the same product all the time. The ERT indeed sees the Global Warming threat as a business opportunity. Nothing less than “Growth, competitiveness and climate policy can be mutually reinforcing”.

If you have a hammer as a tool you see all problems as nails, so the problem of Global Warming is solved with ... you guessed it ... more industry (sic). Bankers, financial institutions in general, joined in to get part of the spoils, and designed and applied their financial expertise to attack the ‘problem’. Cap-‘n-trade of CO2 emission certificates are an example of such financial structures, standing at several hundred billion dollars. As New York Times wrote:

“Carbon will be the world’s biggest commodity market, and it could become the world’s biggest market over all,” said Mr. Redshaw, the head of environmental markets at Barclays Capital.” (Kanter, 2007).

If you are interested in making a buck on the gullibility of people, take a look at the Green Chip Stocks pages (Green Chip Stocks, 2017). The same pyramid scheme of speculation invented by them and that nearly took down the entire financial structure in 2008 – and the global economy with it – is now used to suck every last penny out of the gullible sheople.

In a situation where everybody benefits from false knowledge, it is not surprising that this false knowledge propagates in society. Politicians benefit. Industry benefits. Media benefit. ‘Scientists’ benefit. There is nobody that makes a loss in this profit-driven society. (We have been racking our brains and cannot come up with any way to make money with the opposite of the AGW meme, making money on the knowledge we have that AGW is false in this knowledge-based economy. If any of our readers know a way how to take money from the gullible, please contact one of us. For sure it is not “investing in oil [companies]”). Profit for everybody. Well, that is, except for the citizens. They see their spendable income come down through tax and forced consumption. They see their nature around them being destroyed by photo-voltaic and eolic parks. They generally suffer from the greatest insult that one can be submitted to: to be lied to and the liars getting away with it.

“A racket is a service that is fraudulently offered to solve a problem, such as for a problem that does not exist, that will not be put into effect, or that would not otherwise exist if the racket did not exist. Conducting a racket is racketeering. Particularly, the potential problem may be caused by the same party that offers to solve it, although that fact may be concealed, with the specific intent to engender continual patronage for this party. The most common example of a racket is the “protection racket.” The racket itself promises to protect the target business or person from dangerous individuals in the neighborhood; then either collects their money or causes the damages to the business until the owner pays. The racket exists as both the problem and its solution and is used as a method of extortion.” (Wikipedia: racket)

One may sure hope that the change of information propagation structure, from profit-driven main-stream media to free social media, will result in a change of paradigm in society, where truth (science) is again surviving somehow, other than the naive hope that truth-finding research is commensurate with trying to achieve financial goals only.

The funny thing is that most citizens actually like to be lied to; it makes them feel good. In what is called Pascal’s Wager, even if they are agnostic, they feel that they have nothing to lose by believing in the AGW meme, and everything to lose if they do not believe in it (Stallinga and Khmelinskii, 2016). In fact, they can win more if they become fervent advocates. They, in fact, demand from politicians to be lied to even more. Most people demand the dismantling of science, as it is slowing down progress in finding a solution to the problem. It is then logical that less-informed people are more fanatic about the subject. That makes the meme virtually immortal. To say it once again in a biological analogy: There are no antibodies to this viral meme. And not even facts (reality) will make people change their minds, facts will just be ignored through cognitive dissonance.

5. CONCLUSIONS

We have shown here how knowledge in a knowledge-based economy leads to financial loss in a profit-driven society. Both for the individual who invests in knowledge acquisition (a.k.a. ‘learning’) as well as society as a whole. If knowledge is sought on basis of trying to make a profit, instead any meme will be propagating, not only truths, but also falsehoods, as we have seen in the case of the AGW meme. This dialectical inversion, where profit-optimization leads to financial loss might have come unexpected for some, but should rather have been expected. A knowledge-based economy will go bankrupt, and all knowledge acquired in this economical system will be rather pointless, for being incorrect. The Brussels-centralized control of science, where politics dictates the outcome of research, has created a neo-Lysenkoism that is all but scientific.

ACKNOWLEDGMENTS

The authors declare not to have any conflicts of interests. This research was paid by no grant. It received no funding whatsoever, apart from our salaries at the university where we work. Nor are we members of any climate committees (political or other) or are we linked to companies or NGOs, financially or otherwise. We are not members of any political party or movement. This is an independent work that does not necessarily represent the opinion of our university or of our government.

REFERENCES

- Balanyá, B, Doherty, A, Hoedeman, O, Ma'anit A and Wesselius, E. (1999). *Europe Inc. Regional and Global Restructuring and the Rise of Corporate Power*. Pluto Press, In association with Corporate Europe Observatory. ISBN: 0-7453-1496-1
- Brogan, K. (2013). "Statins for Women? Not for My Patients". The Huffington Post, 20 Nov. 2013. http://www.huffingtonpost.com/kelly-brogan-md/women-statins_b_4283650.html
- Chalmers, A. F. (1976). *What is this thing called science?* Queensland University Press and Open University Press.
- Commission of the European Communities. (2008). "An Industrial Property Rights Strategy for Europe" Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee, COM(2008) 465/3
- Dawkins, R. (1976). *The Selfish Gene*. Oxford University Press.
- Directorate General Internal Policies of the Union. (2007). "Lobbying in the European Union. Briefing paper." Directorate-General Internal Policies Policy Department C Citizens Rights and Constitutional Affairs.
- Ereaut, G and Segnit, N. (2006). *Warm words. How are we telling the climate story and can we tell it better?*. Institute for Public Policy Research.
- ERTa. (2017). For a list of members of ERT, follow this link: <http://www.ert.eu/members>, visited March 2017.
- ERTb. (2017). For the stance of the ERT on Global Warming, follow this link: <http://www.ert.eu/focus-area/energy-and-climate-change>, visited March 2017.
- Green Chip Stocks. (2017). <http://www.greenchipstocks.com/report/carbon-trading-the-worlds-next-biggest-market/107> visited March 2017.
- Kanter, J. (2007). "In London's Financial World, Carbon Trading Is the New Big Thing". New York Times, 6 July 2007. (<http://www.nytimes.com/2007/07/06/business/worldbusiness/06carbon.html>).
- King, A. and Schneider, B. (1991). *The first global revolution. A report by the council of the club of Rome*. p.75. Pantheon Books.
- Lysenkoism, Wikipedia. <https://en.wikipedia.org/wiki/Lysenkoism> visited March 2017.
- Mercola. (2012). "\$29 Billion Reasons to Lie About Cholesterol", 1 Feb. 2012. <http://articles.mercola.com/sites/articles/archive/2012/02/01/29-billion-reasons-to-lie-about-cholesterol.aspx>
- Moser, F. and Lietaert, M. (2012). *The Brussels Business*, movie (2012).
- Piketty, T. (2014). *Capital in the twenty-first century*. Belknap Press.
- Reinhart, C. M. and Rogoff, K. S. (2010). Growth in a Time of Debt. American Economic Review: Papers & Proceedings 100, 573-578. doi: 0.1257/aer.100.2.573
- Revelle, R. (1982). Carbon Dioxide and World Climate, *Scientific American*, Aug. 1982, p. 35.
- Stallinga, P. and Khmelinskii, I. (2016). The Perception of Anthropogenic Global Warming Modeled by Game Theory Decision Tables. *European Scientific Journal* 12, pp. 1857-7881. doi: 10.19044/esj.2016.v12n29p427
- Wenner Moyer, M. (2010). Static over Statins: Should Young People without Cholesterol Problems Take Statins? *Scientific American*, April 2010, p. 13.

HOTEL RATING PROCEDURE AND WELLBEING. ADAPTING CRITERIA TO PROMOTE ENERGY EFFICIENCY

Armando Pinto
Laboratório Nacional de Engenharia Civil
(apinto@lnec.pt)

Mariana Alves
UNL – Faculdade de Ciências Sociais e Humanas
(marianamartinsalves@hotmail.com)

Paulo Machado
Laboratório Nacional de Engenharia Civil
(pmachado@lnec.pt)

António Silva Santos
Laboratório Nacional de Engenharia Civil
(ajsantos@lnec.pt)

RESUMO

As unidades hoteleiras, independentemente da sua classificação e tipologia, são importantes equipamentos para providenciar a acomodação dos seus hóspedes, para além de constituírem veículos de divulgação cultural (dos países onde se encontram) e de promoverem estados de bem-estar e de conforto. Em países nos quais a indústria do turismo tem um peso muito elevado no PIB, como é o caso de Portugal, esses objetivos de valorização cultural e de promoção de bem-estar e conforto são determinantes para o próprio desempenho da economia como um todo, e a uma escala regional e local podem mesmo ser decisivos para as respetivas comunidades.

Nas fases de planeamento e *design* de construção, reabilitação ou adaptação de um edifício de hotelaria, existem requisitos funcionais, arquitetónicos, técnicos e decisões gestionárias que irão comprometer o ciclo de vida de custos do edifício e da sua prestação enquanto unidade hoteleira, se essas decisões não forem as mais adequadas.

O Sector da Hotelaria tem vindo a utilizar um sistema de classificação por estrelas para diferenciar a qualidade providenciada pelas diferentes unidades hoteleiras, o qual envolve parâmetros tais como: Características das instalações e serviços; Serviço de Receção; Serviço de limpeza e lavandaria; Serviço de F&B; Outros serviços.

Os autores apresentam um exercício de análise comparativa entre os parâmetros formais (regulamentares) de classificação e os fatores que os hóspedes valorizam (valorização auto-revelada através do Booking.com®) durante a sua estadia. Esta análise também pretende relacionar as soluções de eficiência energética adotadas com os níveis de conforto experimentados.

Considerando o peso da fatia energética nos custos de exploração (a 2ª maior) de um hotel, e tendo presente a orientação política para uma melhoria de 69% na eficiência energética, é exigível a necessidade de uma transformação paradigmática dos objetivos, sem prejudicar a qualidade do serviço, a par de uma avaliação feita pelos hóspedes.

1. INTRODUÇÃO

Os empreendimentos turísticos são infraestruturas com múltiplos propósitos, que se destinam a prestar serviços de alojamento, mediante remuneração, mas também disponibilizam um conjunto de estruturas, equipamentos e serviços complementares destinados a proporcionar bem-estar aos seus utilizadores (clientes).

Enquanto equipamentos privados de utilização pública, estes empreendimentos assumem um valor acrescido em termos urbanísticos e podem, salvaguardados requisitos importantes no que respeita ao seu *design*, valorizar o ambiente construído em que se integram, constituindo referências imagéticas significativas em muitos contextos paisagísticos (não exclusivamente urbanos).

Culturalmente, o turismo é um veículo de promoção da identidade dos povos e pode dar relevante contributo para a paz e para o intercâmbio entre povos que, sem o pretexto da viagem, jamais se conheceriam. Mesmo considerando que uma quota-parte das deslocações e estadias, quer dos residentes, quer mesmo dos estrangeiros, não são justificadas pelo 'lazer, recreio ou férias' mas por outros motivos¹, o facto é que numa deslocação para fora do nosso *habitat*, a condição de experiência interculturalista não deixa de estar presente, pese embora com intensidades e alcances possivelmente distintos.

Economicamente, e em qualquer das escalas consideradas (local, regional ou nacional), a existência de empreendimentos turísticos promove o desempenho da atividade económica, quer pela criação de emprego, algum do qual bastante qualificado, gerando proveitos para as empresas, estimulando, direta ou indiretamente, outros sectores da economia (restauração, transportes, agricultura, recreação, lazer e cultura, entre muitos).

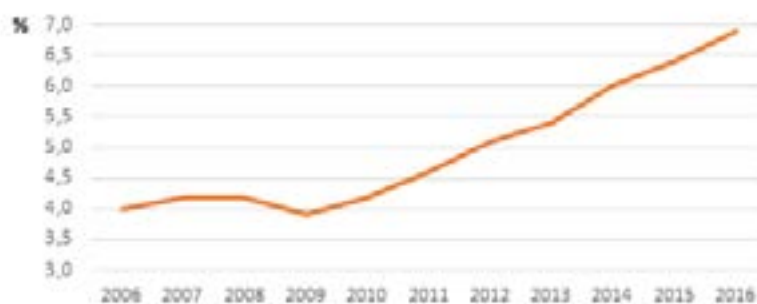
A riqueza gerada pelo sector do turismo destaca-se progressivamente no contexto do PIB (Figura 1) e reflete-se crescentemente no próprio Sector (cfr. Figuras 2 e 3). As exportações² do Sector (bens e serviços turísticos) representavam em 2006 aproximadamente 4% do PIB (em valores correntes aproximadamente 6,7 mil milhões €) e em 2016 estima-se que tenham ficado próximo dos 7% (em valores correntes cerca de 12 mil milhões €), correspondendo a uma variação de 73% em apenas 10 anos. Este crescimento é por de mais contrastante com a evolução do PIB nacional, cuja evolução tem

¹ A estatística do turismo tipifica outras situações, a saber: 'Visita a familiares ou amigos'; 'Profissionais ou negócios'; 'Saúde'; 'Religião'; 'Outros motivos'.

² A exportação de bens e serviços consiste nas transações de bens e serviços (vendas, trocas diretas e ofertas) de residentes para não residentes. A exportação de bens verifica-se quando há transferências de propriedade económica de bens entre residentes e não residentes (quer se verifiquem ou não os correspondentes movimentos físicos de bens através das fronteiras). A exportação de serviços abrange todos os serviços prestados por residentes a não residentes. (metainformação – Sistema Europeu de Contas).

sido quase anémica, quando não recessiva, e de entre os Sectores da economia portuguesa com vocação exportadora não se encontram outros com tão sólida progressão (exceto em segmentos de serviços emergentes).

Figura 1 - Turismo em % do PIB

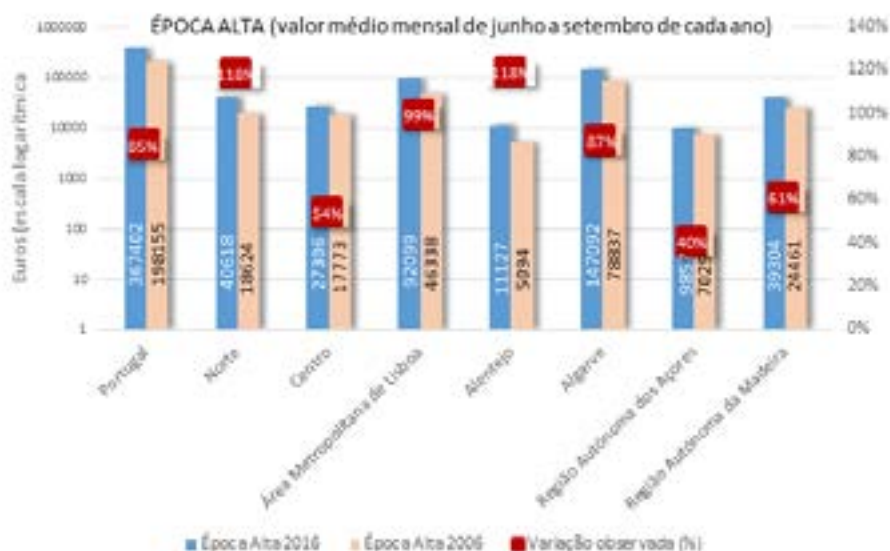


Fonte: INE (vários anos). Estatísticas do Turismo. Gráfico dos autores

Observando pela ótica dos proveitos totais dos estabelecimentos hoteleiros (preços correntes)³, que em termos anuais ascenderam a 2,62 mil milhões € em 2015, e esmiuçando por Época (alta | baixa) e por Região do país (Figuras 2 e 3), verifica-se que na Época Alta os valores médios mensais (nacionais) cresceram 85% entre 2006 e 2016 (ou seja, ainda acima da variação observada no contributo para o PIB), destacando-se o desempenho das Regiões Norte e do Alentejo, ambas com registos de variação relativa acima da duplicação de proveitos (118%). Todavia, em termos nominais, o Algarve foi a Região com um volume de proveitos mais significativos (média mensal acima dos 147 milhões € em 2016, contra 79 milhões € em 2006), logo seguida da Área Metropolitana de Lisboa (92 milhões de € e 46 milhões €, respetivamente em 2016 e 2006).

Já em relação à Época Baixa, os valores médios mensais (nacionais) cresceram 55% em igual período (2006 e 2016), destacando-se as Regiões do Norte e da Área Metropolitana de Lisboa com variações muito elevadas (87% e 69%), evidenciando um desagravamento do índice de sazonalidade que muito vinha penalizando o sector do Turismo em Portugal. Em termos nominais, e comparativamente com a Época Alta, na Época Baixa é a Região de Lisboa a gerar maior volume de proveitos (64 milhões € em 2016 contra 38 milhões € em 2006), seguida da Região do Algarve, mas a considerável distância de Lisboa.

Figura 2 - Proveitos totais (€) dos estabelecimentos hoteleiros por Região (NUT II) e variação observada (%) entre 2006 e 2016 – ÉPOCA ALTA

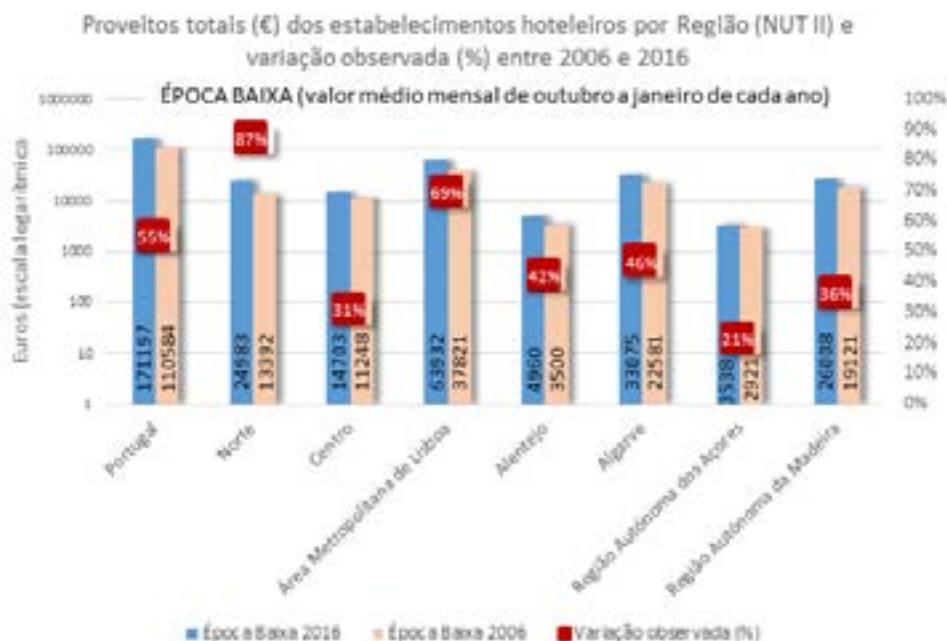


Fonte: INE (vários anos). Estatísticas do Turismo. Gráfico dos autores

Estes dados de exploração revelam para o último decénio um forte crescimento do Sector, diversificação de receitas numa ótica regional e sazonal, por certo resultante do aumento da oferta e da procura, mesmo tendo ocorrido uma gravíssima crise económica mundial, cujas consequências ainda não terminaram, e tendo aparecido ou perpetuado fatores adversos (aumento da insegurança internacional, aumento do preço da energia, congestionamento progressivo das vias de transporte de passageiros, sobretudo aéreo, sinais preocupantes em termos ambientais) que têm impacto no Sector.

³ Compreende todos os proveitos resultantes da atividade do estabelecimento hoteleiro. Inclui os proveitos de aposento, os proveitos de restauração e outros proveitos decorrentes da própria atividade (ex.: aluguer de salas, lavandaria, tabacaria, telefone, etc.) (cfr. metainformação – INE, Estatísticas do Turismo).

Figura 3 - Proveitos totais (€) dos estabelecimentos hoteleiros por Região (NUT II) e variação observada (%) entre 2006 e 2016 – ÉPOCA BAIXA



Fonte: INE (vários anos). Estatísticas do Turismo. Gráfico dos autores

Normativamente, o Sector tem beneficiado de um conjunto de atualizações de natureza exigencial (muito ligadas às componentes ambiental, energética e urbanística), nomeadamente através da publicação do regime jurídico da instalação, exploração e funcionamento dos empreendimentos turísticos em 2008, alterado em 2009 e já mais recentemente, em 2014. Este regime – como qualquer outro sistema de regras formais – tem intuitos disciplinadores (regulamentares) que procuram, no essencial, salvaguardar o nível de qualidade da oferta nacional. O sistema de classificação dos empreendimentos turísticos, cerne da presente discussão, pretende ser a materialização desse intuito disciplinador em busca de uma **qualidade** que é entendida, nos termos do Plano Estratégico Nacional do Turismo (2017-2027), simplificada, como Estratégia Turismo 2027 (Turismo de Portugal I.P., 2017), como um valor axial de toda a atividade turística, e particularmente como uma orientação estratégica para cada um dos vetores da sustentabilidade (económica, social e ambiental) dessa mesma atividade (Ministério da Economia, 2017). Este é, agora, o domínio da política pública. Exemplificando, nas metas de **sustentabilidade ambiental** pode ler-se que se pretende “assegurar que mais de 90% das empresas do turismo adotam medidas de utilização eficiente de energia e da água e desenvolvem ações de gestão ambiental dos resíduos” (p. 7), numa clara alusão à melhoria do desempenho ambiental, qualificando a pegada ecológica do Sector. De igual modo, nas Linhas de Atuação é claramente definido como objetivo o desenvolvimento de “sistemas de incentivos e linhas de financiamento para reforçar a competitividade e a internacionalização das empresas do turismo, nomeadamente no que respeita à regualificação e inovação da oferta turística – alojamento, restauração, animação e serviços turísticos – privilegiando-se, entre outros elementos, a diferenciação, a orientação para a procura, o turismo acessível, a eficiência energética, a certificação ambiental, a adoção de normas de qualidade internacionais e resposta a novas dinâmicas de oferta e procura” (p. 56).

Em que medida o incremento da qualidade pode ser uma matéria num fórum sobre interdisciplinaridade? Reforçando o nosso argumento em texto anterior (Machado *et al.*, 2016), e tendo sempre presente o conceito de *sistema sociotécnico* – pelo qual se entende a inter-relação recíproca entre a ação humana e a tecnologia – a qualidade vem a ser função de uma efetividade prática (interdisciplinar convergente) com alcance ético-político e valor estratégico para a sociedade. Como refere (Pombo, 2004), “é urgente compreender também que as novas análises produzidas por essa investigação interdisciplinar têm de ser postas ao serviço da transformação da vida colectiva, social e individual” (p. 65).

Figura 4 - Esquematização da prática interdisciplinar convergente centrada na produção da qualidade



A qualidade, neste entendimento, não é mais um argumento em favor do Sector da atividade turística, da sua diferenciação perante outros sectores da economia, ou da sua promoção distintiva (estatuto social e reconhecimento público); passa a desígnio no quadro de mudanças societárias (proporcionadas por transformações científicas e tecnológicas) e ganha valor instrumental. Todavia, ele não é unidimensional, i.e. redutível a uma só visão disciplinar.

De entre essas mudanças societárias podemos sinalizar a centralidade do que pensamos ser o bem-estar na nossa sociedade, e o modo como o medimos⁴. O bem-estar (psicológico ou subjetivo) proporcionado pela atividade turística é inequivocamente relevante e quase se confunde o turismo com a produção e satisfação das necessidades de bem-estar dos turistas. Outra equivalência semântica imprecisa, mas ainda assim frequente, é a de bem-estar e conforto. Ora, o conforto é uma componente integrante do bem-estar. A definição técnica de conforto térmico - “o estado de espírito que expressa satisfação relativamente ao ambiente térmico” (ISO 7730, 2005) é, em si mesma, elucidativa desse emaranhado de influências e processos com os quais se pretende gerar conforto. Parâmetros psicossociológicos como a expectativa relativamente a um dado ambiente térmico, o tempo de exposição, a perceção de controlo (sobre as condições de temperatura e humidade do alojamento onde se encontra), são variáveis que ajudam a elucidar a variabilidade que a sensação de conforto pode assumir entre um conjunto de pessoas, mesmo que estas estejam sujeitas às mesmas condições físicas (temperatura, humidade, velocidade do ar) (Matias, 2010). Idêntica problematização poderia ser avançada para o conforto acústico, conforto visual e qualidade do ar. Para entender o significado de conforto, o capital social e cultural de um sujeito pode ser decisivo para incrementar a sua capacidade discriminativa e assim fazer julgamentos diferenciados, acionando informação que possui por via desses mesmos capitais.

Qualidade, bem-estar, conforto, são constructos (construções mentais) que proporcionam um trabalho interdisciplinar muito intensivo, diversificado, envolvendo as ciências da construção, as ciências sociais e humanas, e cujos resultados podem ser da maior relevância para a indústria do turismo. É tão dogmático e irrealista – numa sociedade que tem puxado ao limite os desafios dos sistemas sociotécnicos – pensar-se que um empreendimento turístico pode cumprir a sua missão com os recursos limitados ao perímetro das ciências da construção; como é irrealista pensar-se que pode funcionar apenas com uma gestão profissionalizada e uma liderança forte, descurando a tecnologia ou as ciências da construção; ou, em ambos os casos, descurando a avaliação subjetiva dos hóspedes, que exige conhecimentos específicos de inquirição sociológica e de estatística aplicada.

Ao bem-estar e aos serviços proporcionados pelos hotéis estão normalmente associados consumos de energia e de água, o que aumenta os custos de exploração dos mesmos, bem como os pode tornar mais vulneráveis face às alterações climáticas. Efetivamente, a vulnerabilidade às alterações climáticas é afetada por parâmetros físicos e por condições operacionais. Entre os parâmetros físicos identificam-se: dimensão do edifício, arquitetura, qualidade térmica da envolvente, clima, idade, características dos sistemas e instalações, condições de manutenção, condições de operação, vetores energéticos e respetivos custos. Na operação, destacam-se: o tipo de serviços proporcionados (cozinha, lavandaria, piscina, salas de conferência, lojas), de utilização do hotel (flutuação da taxa de ocupação, preferências dos clientes, perfis de utilização e set-points), práticas de limpeza e de gestão de energia.

Nos hotéis existem requisitos operacionais para a zona de clientes (quartos, circulações públicas, lobby, restaurante, piscina, SPA, etc) e para as zonas de serviços (lavandaria, cozinha, vestiários, etc). Os principais consumos de energia devem-se a (HES, 2011):

- Aquecimento e arrefecimento de quartos,
- Iluminação,
- Água quente sanitária,
- Preparação de refeições,
- Aquecimento de piscinas,
- Lavandaria.

Quando se procuram estabelecer indicadores de desempenho energético dos hotéis, tem-se tipicamente em conta os seguintes fatores (W. Chan, 2012; HES, 2011):

- Classificação do hotel,
- Nível de conforto proporcionado (condições ambientais interiores),
- Área útil de pavimento ou número de quartos, ou camas,
- Número de graus dias de aquecimento e de arrefecimento,
- PAX, número de dormidas (ocupação),
- Presença de cozinha e cover (refeições quentes) fornecidas,
- Presença de lavandaria e produção (kg),
- Piscinas aquecidas,
- Existência de regras da marca,
- Consciência ambiental da empresa (direção e staff) e dos clientes.

Face aos estudos anteriores infere-se a existência de uma relação entre a qualidade do hotel avaliada pela sua classificação, o bem-estar dos turistas e os consumos energéticos dos hotéis, efetuando-se neste artigo uma reflexão interdisciplinar desses três aspetos, com base nos nove casos de estudo de hotéis de 4 e 5 estrelas do projeto AdaPT AC:T (AdaPT AC:T, 2016). Para esse efeito foi seguida a seguinte metodologia:

- Identificação dos requisitos aplicáveis à classificação de hotéis de 4 e 5 estrelas;
- Identificação da perceção de bem-estar da estadia manifestada pelos hóspedes;

⁴ Sobre esta mesma discussão, cfr. Machado *et al.* 2016.

- Reflexão sobre metodologia para articular bem-estar percebido, classificação do hotel e medidas de eficiência energética.

Para realizar essa reflexão foram utilizados os nove hotéis caso de estudo do projeto AdaPT AC:T (AdaPT AC:T, 2016). Como resultado desta reflexão pretende-se contribuir para uma discussão da valorização de alguns aspetos da classificação de hotéis de 4 e 5 estrelas, que são edifícios com elevados consumos específicos de energia e de água (A. Pinto, Bernardino, Santos, Santo, 2016). São nossos objetivos neste exercício:

- Criar uma matriz que articule bem-estar e uso eficiente de recursos, garantindo ao sector uma maior sustentabilidade e prevenindo situações de indisponibilidade de serviços devido ao uso excessivo de energia;
- Promover uma melhor articulação entre a metodologia de classificação e o bem-estar percebido durante a estadia.

2. REQUISITOS APLICÁVEIS À CLASSIFICAÇÃO DE HOTÉIS DE 4 E 5 ESTRELAS

O regime jurídico da instalação, exploração e funcionamento dos empreendimentos turísticos (Decreto-Lei n.º 39/2008, n.d.) e posteriores alterações estabelece as regras para os seguintes tipos de empreendimentos turísticos:

- a) Estabelecimentos hoteleiros (hotéis, hotéis-apartamentos (aparthotéis), pousadas);
- b) Aldeamentos turísticos;
- c) Apartamentos turísticos;
- d) Conjuntos turísticos (resorts);
- e) Empreendimentos de turismo de habitação;
- f) Empreendimentos de turismo no espaço rural;
- g) Parques de campismo e de caravanismo;
- h) Empreendimentos de turismo da natureza.

O regime jurídico estabelece um sistema de classificação obrigatório, que atende aos requisitos físicos das instalações, mas também à qualidade dos serviços prestados. A classificação dos estabelecimentos hoteleiros, aldeamentos e apartamentos turísticos encontra-se regulada pela (Portaria n.º 327/2008, n.d.) e posteriores alterações, e depende da qualidade do serviço e das instalações de acordo com requisitos específicos que incluem:

1. Instalações
 - 1.1 Acessos
 - 1.2 Zonas comuns
 - 1.3 Zonas de serviço
 - 1.4 Unidades de alojamento
 - 1.5 Áreas das unidades de alojamento
 - 1.6 Estacionamento
2. Equipamento/Mobiliário
 - 2.1 Equipamento do quarto
 - 2.2 Equipamento e acessórios sanitários
 - 2.3 Sistemas de vídeo e áudio
 - 2.4 Comunicações eletrónicas
 - 2.5 Equipamento suplementar
3. Serviço
 - 3.1 Serviço de limpeza e arrumação das UA
 - 3.2 Serviço de alimentação e bebidas
 - 3.3 Serviço de pequeno-almoço
 - 3.4 Serviço de receção e acolhimento
 - 3.5 Serviço de lavandaria e engomadoria
 - 3.6 Outros serviços
4. Lazer e negócios (equipamentos e instalações)
5. Qualidade e sustentabilidade

Compete ao Turismo de Portugal I.P. classificar os seguintes empreendimentos turísticos:

- Estabelecimentos Hoteleiros
- Aldeamentos Turísticos
- Apartamentos Turísticos
- Conjuntos Turísticos
- Hotéis rurais

No caso dos parques de campismo e de caravanismo, dos empreendimentos de turismo de habitação, dos empreendimentos de turismo no espaço rural, com exceção dos hotéis rurais, a classificação é fixada pela câmara municipal, juntamente com a autorização de utilização para fins turísticos quando tenha sido realizada a vistoria nos termos do Regime Jurídico da Urbanização e Edificação, caso em que não há lugar a vistoria de classificação. Está prevista também a isenção de classificação.

A classificação dos empreendimentos turísticos é efetuada com base na satisfação de requisitos obrigatórios e na pontuação obtida em requisitos opcionais de acordo com o definido na (Portaria n.º 327/2008, n.d.), salvaguardando-se que todos os empreendimentos devem apresentar adequadas condições de higiene e limpeza, conservação e funcionamento das instalações e equipamentos, água corrente quente e fria. Para os hotéis de 4 estrelas é requerido um mínimo de 210 pontos e de 218 pontos para hotéis de 5 estrelas, devendo 20% desses pontos ser obtidos na categoria de qualidade e sustentabilidade. No sistema de classificação encontram-se disponíveis cerca de 1090 pontos, que se distribuem da forma indicada na Figura 5; ou seja, cerca de 20% dos pontos encontram-se distribuídos por cada uma das principais categorias, sendo que o alojamento e seus equipamentos é particularmente valorizado (21%). Na Europa existem vários países que seguem a estrutura de classificação HotelStars (HOTREC, 2015), que difere do sistema Português, desde logo, por não ser lei e pelos requisitos.

Na Figura 6 encontra-se representada a distribuição de empreendimentos hoteleiros em Portugal, com as classes 4 estrelas, 5 estrelas e de 3 ou menos estrelas, constatando-se uma maior concentração de hotéis de 4 e 5 estrelas nas zonas de Lisboa, Algarve, Porto, Madeira e litoral norte. O parque de empreendimentos hoteleiros tem um crescimento recente muito acentuado (Figura 7), cerca de metade é posterior a 2002, contudo poucos dispõem de certificação energética ou ambiental de carácter voluntário (Figura 8), configurando um desafio para alcançar as metas das estratégias nacionais de eficiência energética e energias renováveis (PNAEE e PNAER - (Resolução do Conselho de Ministros n.º 20/2013, n.d.)), de adaptação às alterações climáticas (ENAC - (Resolução do Conselho de Ministros n.º 24/2010, n.d.)) e da Estratégia Turismo 2027 (Turismo de Portugal I.P., 2017). Em relação às amenidades, é de salientar a grande proporção de hotéis com piscina exterior e interior e só com piscina exterior (Figura 9). Pela importância do clima nas necessidades energéticas dos hotéis, na Figura 10 representa-se a distribuição dos hotéis pelas zonas climáticas do País.

Figura 5 – Estrutura dos requisitos para a classificação de hotéis

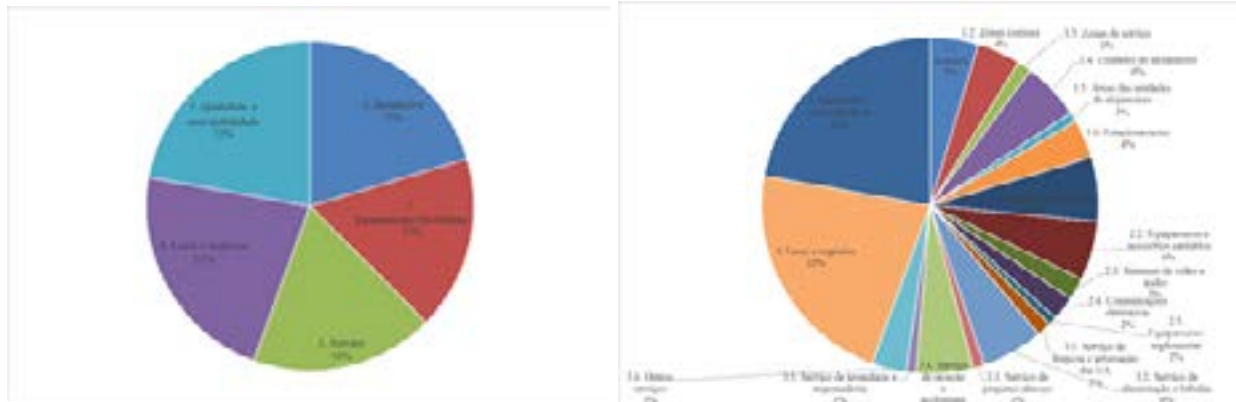


Figura 6 – Distribuição dos empreendimentos hoteleiros em Portugal (dados obtidos com base em informação do Turismo de Portugal, não publicada, 2015)



Figura 7 – Evolução do número de empreendimentos hoteleiros e de dormidas



Figura 8 – Hotéis de 4 e 5 estrelas com certificação energética ou ambiental voluntária (dados obtidos com base em informação do Turismo de Portugal, não publicada, 2015)

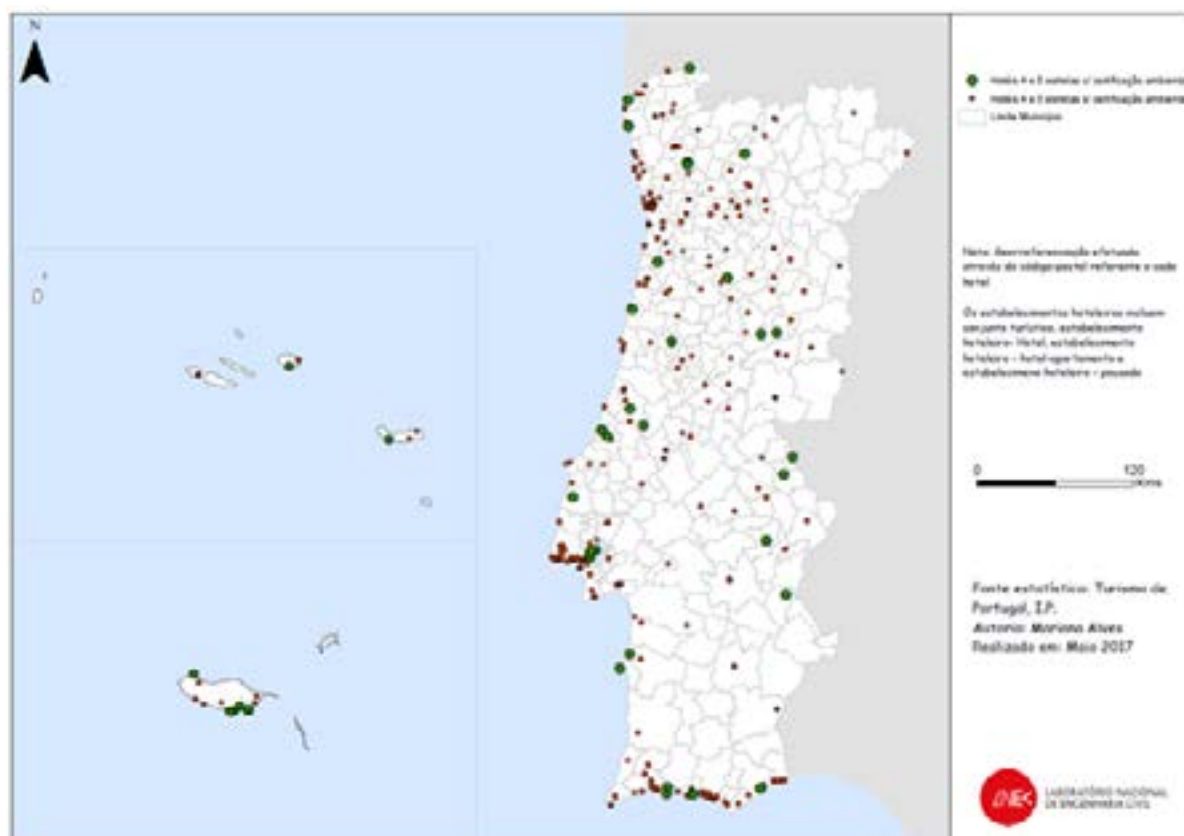
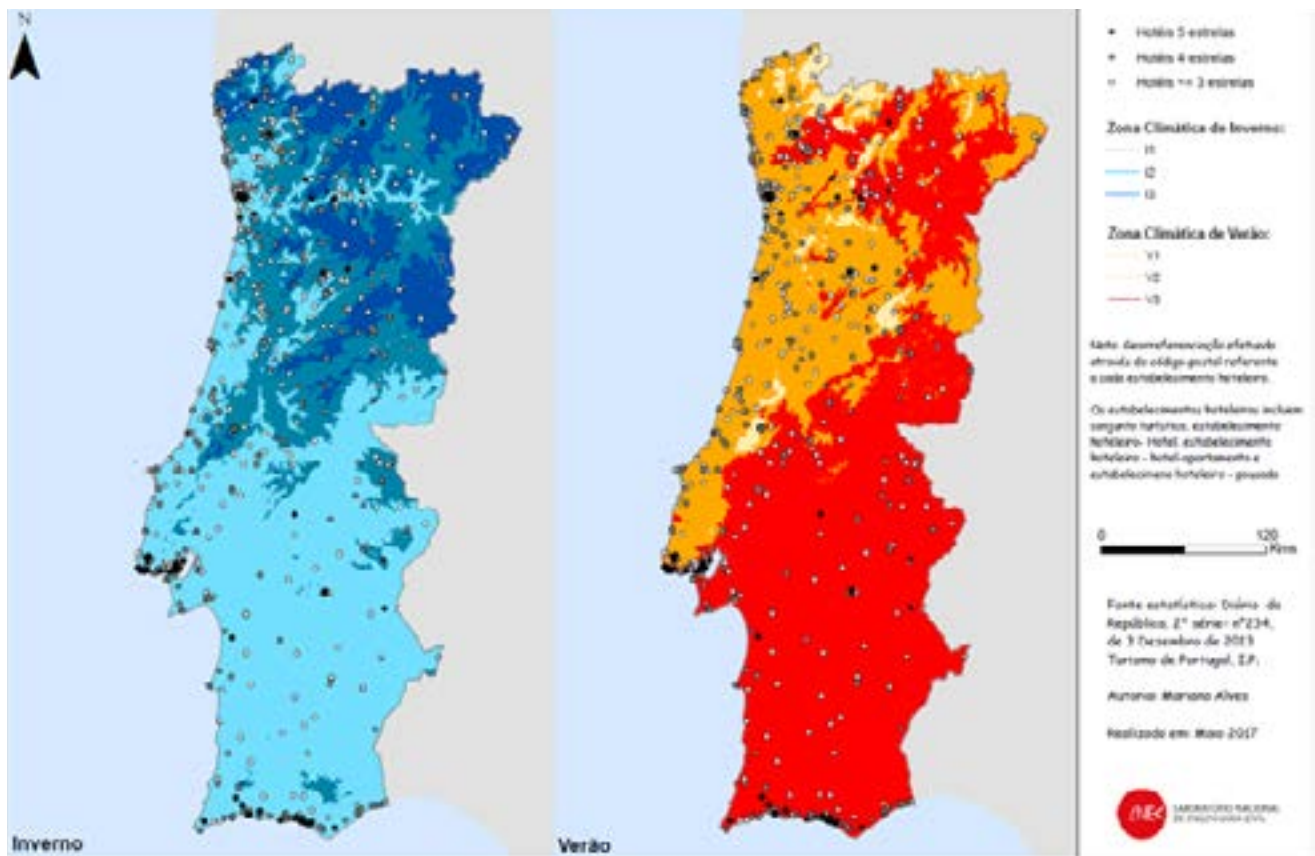


Figura 9 – Hotéis de 4 e 5 estrelas com piscina (dados obtidos com base em informação do Turismo de Portugal, não publicada, 2015)



Figura 10 – Distribuição dos hotéis pelas diferentes zonas climáticas de Portugal continental (dados obtidos com base em informação do Turismo de Portugal, não publicada, 2015)



3. RELAÇÃO ENTRE BEM-ESTAR PERCECIONADO E REQUISITOS DA CLASSIFICAÇÃO DE HOTEIS DE 4 E 5 ESTRELAS

A avaliação do bem-estar e a experiência da estadia é algo subjetivo e pessoal, que envolve múltiplas dimensões desde o conforto térmico proporcionado, as amenidades e equipamentos disponíveis, a qualidade do serviço, o *staff* e as expectativas. Para controlo de qualidade do serviço das unidades hoteleiras usualmente é solicitado aos hóspedes o preenchimento de um questionário no momento do *checkout*. Contudo os resultados desse questionário é informação que não é do domínio público, e tão-pouco se conhece a metodologia de suporte (que poderá variar imenso de hotel para hotel). Neste estudo, como *proxy* para avaliação do bem-estar percecionado, a informação tratada foi recolhida na plataforma Booking.com, na qual os hóspedes são convidados a deixar comentários positivos e negativos após a sua experiência de alojamento. A plataforma utiliza uma escala de satisfação, de tipo Likert. Considera-se que estes comentários, acabam por incorporar uma apreciação mais distanciada da experiência de alojamento, do que aquela decorrente das respostas efetuadas no momento do *checkout*.

Para esse efeito foram utilizados os nove hotéis caso de estudo do projeto AdaPT AC:T (AdaPT AC:T, 2016), que são hotéis de 4 e 5 estrelas, quatro unidades situadas em Lisboa e cinco unidades situadas no Algarve. Foram recolhidos os comentários registados entre 2013 e 2015. Na análise das opiniões dos hóspedes registadas na plataforma Booking.com®, sobre a sua estadia no hotel (Machado, Rebelo, Saraiva, Pinto, 2016) as opiniões positivas ou negativas foram agrupadas nas seguintes categorias:

- Alojamento
- Equipamentos e serviços orientados para S&BE
- Alimentação
- *Wifi*
- Outros
- Manutenção (portas, torneiras, canalizações,...)
- Localização
- *Staff*
- *Housekeeping*
- Preços dos quartos, refeições e outros serviços
- Energia (AC)
- Espaços exteriores
- Entretenimento e equipamentos de recreação
- Água
- Lavandaria
- Serviços de transporte
- Estacionamento
- Segurança

A apreciação geral da experiência e classificação Booking.com é bastante elevada nas nove unidades, tendo um valor médio de 8.30 (Machado *et al.*, 2016), bem como os resultados da avaliação de conforto (Armando Pinto, Machado, Matias, Saraiva, Silva Santos, 2016). Na Figura 11 representa-se a importância relativa de cada uma dessas 18 categorias nos comentários positivos e nos comentários negativos expressos pelos hóspedes das nove unidades hoteleiras e que resultaram em mais de 5000 referências (3244 positivas e 1830 negativas). Desses dados regista-se o impacto positivo dos aspetos relacionados com o alojamento (18%), alimentação (14%), localização (15%), *staff* (17%) e espaços exteriores (9%). Pelo lado negativo, existe uma distribuição maior pelas 18 categorias, sendo de realçar a componente alojamento (22%), equipamentos e serviços S&BE (11%) e alimentação (9%). Nos aspetos relacionados com a energia e o ar condicionado não existe uma grande prevalência de opiniões (2% positivas / 4% negativas). Contudo, efetuando uma análise detalhada do aspeto conforto e energia (Pinto, Machado *et al.*, 2016) é possível evidenciar que alguns desses problemas estão relacionados com insuficiente iluminação nos quartos (12%) e cerca de 4% com problemas de quarto quente/frio (Figura 12).

Para avaliar a relação entre o bem-estar percecionado pelos hóspedes e a metodologia de classificação dos hotéis (Portaria n.º 327/2008, n.d.) os 197 requisitos da classificação da categoria dos hotéis foram alocados a cada uma das 18 categorias adotadas para analisar os comentários positivos e negativos dos hóspedes registados na plataforma Booking.com. Os resultados da importância relativa do método de classificação dos hotéis, vertida nessas 18 categorias, encontra-se representada na Figura 11 com um quadrado verde. Dessa figura é de salientar:

- A concordância entre a ponderação da classificação dos hotéis para a categoria alojamento face às opiniões positivas e negativas manifestadas.
- As componentes *staff* e localização, apresentam um impacto na classificação dos hotéis de 6%, que fica aquém dos aspetos positivos manifestados pelos hóspedes, suscitando o juízo de que deveriam ter maior ponderação na classificação dos hotéis para valorizar e incentivar a criar condições de satisfação dos hóspedes.
- Os espaços exteriores, a alimentação são outros aspetos valorizados positivamente pelos hóspedes (9% | 14%), que não tem correspondência direta com a importância atribuída na classificação (3% | 8%).
- A categoria *housekeeping* apresenta uma ponderação de 2% na classificação dos hotéis, apresentando uma prevalência superior nas referências positivas e negativas expressas pelos hóspedes (4% | 6%), dado o impacto diário na comodidade e limpeza das unidades de alojamento.
- A categoria entretenimento apresenta uma ponderação elevada na classificação dos hotéis (15%); contudo, não tem um impacto tão relevante na apreciação positiva ou negativa efetuada pelos hóspedes (4%).

- A categoria energia revelou-se menos relevante nas opiniões expressas pelos hóspedes (1% positivos, 4% negativos) face aos 10% previstos na classificação dos hotéis, o que se considera estar relacionado com o facto de nos nove hotéis estudados se registarem condições interiores de conforto satisfatórias e os problemas no ar condicionado serem diminutos, não existindo referências dos hóspedes quanto à incorporação de energias renováveis em alguns deles ou de outras medidas de eficiência energética que os hotéis analisados dispõem.

Em síntese, apesar da independência metodológica da avaliação do bem-estar na estadia no hotel utilizada neste estudo, com base nas opiniões positivas e negativas expressas por ## hóspedes na plataforma Booking.com e a metodologia de classificação dos hotéis, considera-se existir potencial de alinhamento entre as ponderações das 18 categorias de bem-estar e as ponderações da classificação dos hotéis, nomeadamente alterando:

- Localização, de 6% para 10%;
- *Staff*, de 6% para 10%;
- *Housekeeping*, de 1% para 5%;
- Espaços exteriores, de 2% para 6%;
- Entretenimento e equipamentos de recreação, de 15% para 5%.

Com estes ajustamentos nas ponderações, melhora-se a relação entre a classificação dos empreendimentos e a percepção de bem-estar manifestada (R^2 passa de 0.18 para 0.91, Figura 13).

No que ao uso eficiente de recursos diz respeito, nota-se que os hóspedes são pouco explícitos na identificação e manifestação de uma opinião positiva ou negativa quanto ao uso eficiente de energia, energia renováveis ou uso eficiente de água, apesar desta amostra de nove hotéis ter sistemas desse tipo (Armando Pinto, Silva Santos, Machado, Espírito Santo, 2016). Nesse sentido, na seção seguinte efetua-se uma análise dos aspetos de classificação dos hotéis que poderiam incorporar a valorização da utilização de sistemas de maior eficiência energética e de energia renováveis, dado existirem nos hotéis diversos equipamentos (por exemplo TV, Hi-fi, minibar) que não são diretamente abrangidos pela regulamentação de eficiência energética de edifícios (Decreto-Lei n.º 118/2013, n.d.).

Figura 11 – Comentários positivos e negativos booking.com de nove hotéis e ponderação das categorias da classificação dos hotéis

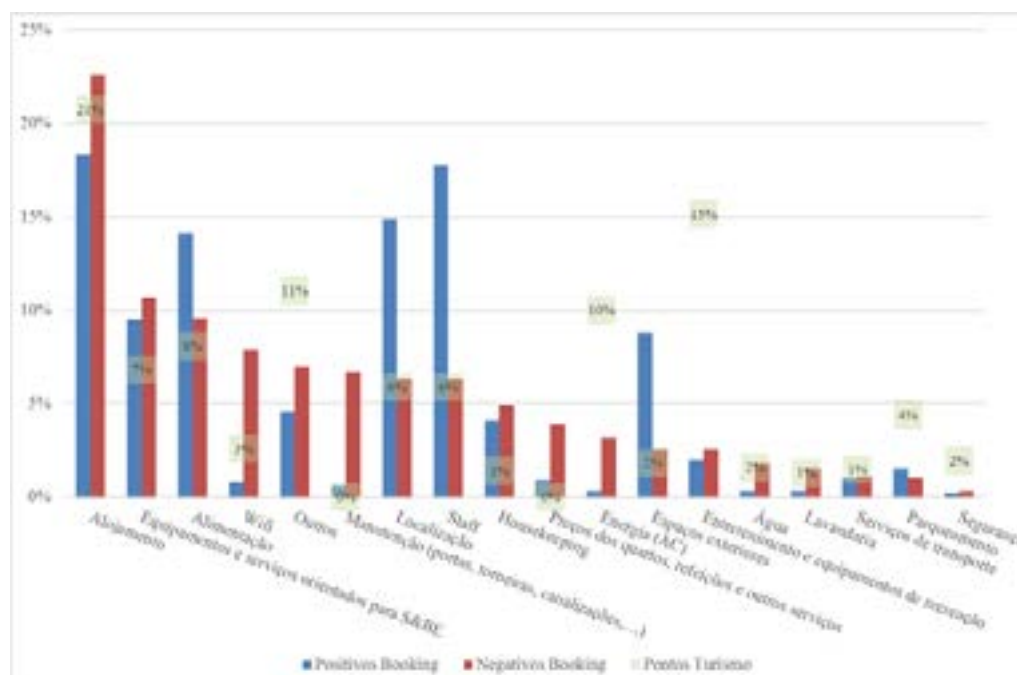
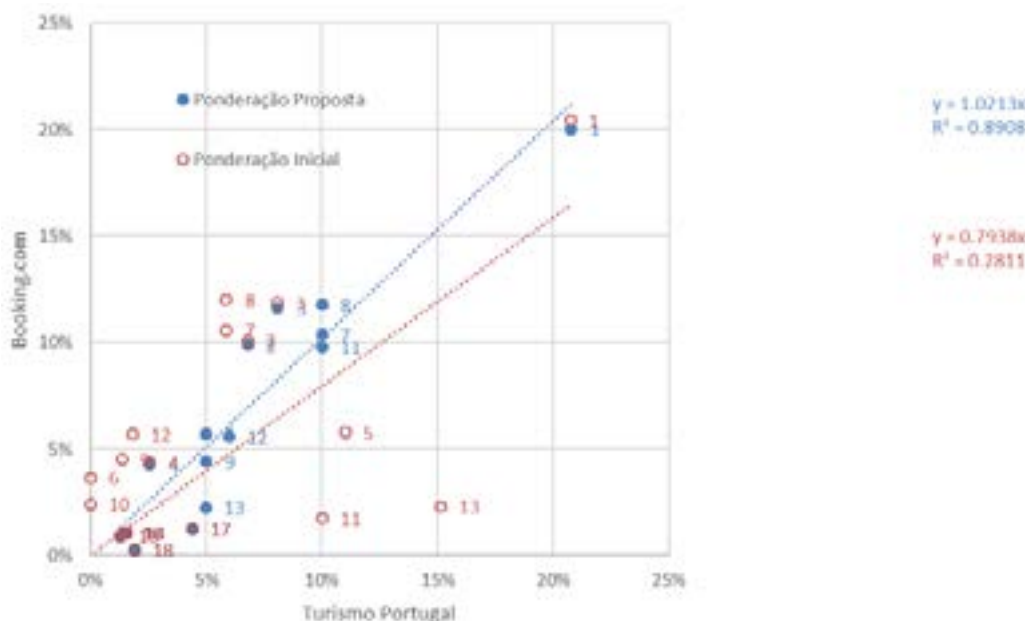


Figura 12 – Detalhe da análise relacionada com os aspetos de conforto



Figura 13 – Relação entre as ponderações das 18 categorias de avaliação de bem-estar e a classificação dos hotéis de 4 e 5 estrelas



4. CLASSIFICAÇÃO DE HOTEIS DE 4 E 5 ESTRELAS E OS ASPETOS DE EFICIÊNCIA ENERGÉTICA

Na classificação da categoria dos hotéis, os aspetos de uso da energia estão indicados em 9 requisitos (Quadro 1), tendo uma valorização de cerca de 10% nos pontos disponíveis para a classificação dos hotéis. Os primeiros cinco requisitos estão relacionados com a climatização das zonas comuns e de alojamento, enquanto os restantes 4 requisitos valorizam a certificação energética voluntária e a eficiência energética é valorizada no requisito n.º 189, até 15 pontos. Na classificação dos hotéis existe a intenção de valorizar apenas as medidas implementadas para além das exigências regulamentares (por exemplo, do sistema de certificação energética dos edifícios (Decreto-Lei n.º 118/2013, n.d.)).

No âmbito dos sistemas voluntários de certificação energética e ambiental, há que referir o sistema europeu (EMAS, 2016) e o rótulo ecológico europeu para o alojamento (Ecolabel Alojamento, 2009).

No sistema EMAS, para reduzir ao mínimo o consumo de energia nas estruturas de alojamento são valorizados:

- Sistemas de controlo e de gestão da energia;
- Melhoria da envolvente do edifício;
- Otimização dos sistemas de aquecimento, ventilação e climatização (AVAC);
- Aplicações eficientes de bombas de calor e de aquecimento/arrefecimento geotérmico;
- Iluminação e equipamento elétrico eficientes;
- Fontes de energia renováveis.

No rótulo ecológico europeu as preocupações são semelhantes às do sistema EMAS, que em Portugal na sua maioria se encontram vertidas na avaliação da eficiência energética de edifícios (Decreto-Lei n.º 118/2013, n.d.). Na certificação energética de edifícios de comércio e serviços, na qual se incluem os hotéis, existem limites para a componente regulada do índice de eficiência energética (IEE), que avalia a eficiência em relação a: aquecimento, arrefecimento, ventilação, bombagem, água quente sanitária, iluminação e elevadores. Além da avaliação da eficiência do edifício, para as novas instalações existem também requisitos mínimos de eficiência ou conceção para:

- Sistemas de monitorização, controlo e gestão de energia;
- Qualidade térmica da envolvente opaca e envidraçada;
- Rendimentos dos sistemas produtores de calor e de frio e unidades de ventilação;
- Rendimento e controlo dos sistemas de iluminação artificial;
- Incorporação de energia renováveis;
- Eficiência de elevadores e escadas.

Quanto aos restantes equipamentos, cujos desempenhos e consumos se integram na componente não regulada (IEE) do sistema de certificação energética de edifício, não se aplicam requisitos no âmbito do SCE. A esses equipamentos, que podem ter um contributo importante no consumo de energia do hotel (Armando Pinto, Silva Santos *et al.*, 2016), aplicam-se os requisitos de eficiência decorrentes da Diretiva de Conceção Ecológica 2009/25/CE (Eco Design) e da Diretiva de Etiquetagem Energética 2010/30/UE, por exemplo: eletrodomésticos, TV, frio, informática, etc. Nesse sentido, de forma a incorporar a dimensão na regulada da eficiência energética dos edifícios na classificação dos hotéis e na melhoria da qualidade dos serviços, como estratégia de mitigação e de adaptação às alterações climáticas, é importante discutir a evolução do sistema de classificação dos hotéis nos aspetos, não só funcionais, mas também de eficiência energética, por exemplo:

- Requisitos sobre elevadores (requisitos n.º 3, 4 e 12): requerer elevadores e que esses sejam da classe B de acordo com a norma VDI 4707 (RECS-E, 2013);
- Requisito de fechaduras eletrónicas (requisito n.º 21): requerer fechaduras eletrónicas e também que estas promovam o corte de energia elétrica ao quarto, com exceção do minibar;
- Requisito minibar, TV, Hi-fi, consolas, café, chá, PC (requisitos n.º 39, 71, 72, 76, 77, 102 e 152): requer esses equipamentos e que estes sejam de elevada eficiência energética, nomeadamente da classe A de eficiência de acordo com a Diretiva de Etiquetagem Energética 2010/30/EU;
- Requisito de uso de água quente (requisitos n.º 19 e 61): não valorizar a existência de banheira, pois pode proporcionar um desperdício de água quente, devendo ser privilegiada a solução do tipo duche; bem como valorizar a utilização de dispositivos eficientes para as torneiras, autoclismo e chuveiros (EMAS, 2016; Armando Pinto, Espírito Santo, Rogeiro, Martins, 2016).

Quadro 1 – Requisitos de eficiência energética na classificação de hotéis

n.º Requisito	Requisito	Pontos
10	Climatização das áreas comuns com sistemas de climatização ativos ou passivos que garantam o conforto térmico	10
11	Climatização dos corredores de utentes com sistemas de climatização ativos ou passivos que garantam o conforto térmico	10
16	Climatização das UA com sistemas de climatização ativos ou passivos que garantam o conforto térmico	---
17	50% das UA com sistemas de climatização que garantam o conforto térmico de intensidade regulável pelo cliente em cada ciclo	10
18	100% das UA com sistemas de climatização que garantam o conforto térmico de intensidade regulável pelo cliente em cada ciclo	13
189	Sistemas que promovam o consumo eficiente de energia, incluindo a utilização de energias renováveis ou equivalente, quando não obrigatórios por lei	3 pts por cada sistema - máx. 15 pts
190	Sistemas que promovam a qualidade do ar interior e o conforto térmico e acústico, quando não obrigatórios por lei	3 pts por cada sistema - máx. 15 pts
196	Certificação energética ou ambiental por norma nacional ou europeia, quando não obrigatória por lei	30
197	Certificação, prémio ou selo de qualidade atribuído por uma entidade reconhecida nacional, estrangeira ou internacional	3 pts por cada - máx. de 6 pts

Com as propostas deste estudo, considera-se que o método de avaliação da categoria dos hotéis complementa as exigências regulamentares e conduz a hotéis mais adaptados e preparados para os desafios da sustentabilidade, sem um acréscimo de complexidade no seu processo de classificação ou de custos. Por outro lado, os outros aspetos mais específicos de eficiência de equipamentos e a incorporação de energias renováveis são avaliados em contexto da certificação energética de edifícios, ou no âmbito de sistemas voluntários de certificação ambiental.

5. CONCLUSÕES

O bem-estar dos hóspedes nos hotéis de 4 e 5 estrelas foi estudado com base nas opiniões recolhidas na plataforma Booking.com, sendo possível avaliar opiniões positivas e negativas sobre a estadia em 18 categorias e estabelecer a prevalência de aspetos positivos ou negativos em cada uma dessas categorias.

Foi efetuada uma análise do método de classificação dos hotéis de 4 e 5 estrelas e foi estabelecida uma relação entre cada um dos 197 requisitos dessa classificação e as categorias de avaliação de bem-estar da estadia, bem como foi avaliada a ponderação de cada uma dessas 18 categorias no número de pontos de classificação dos hotéis. Foi possível constatar que existem cerca de seis categorias onde se regista uma diferença relevante entre a categoria de perceção de bem-estar e a classificação de hotéis, não existindo uma relação estatisticamente forte entre o método de classificação dos hotéis e a sensação de bem-estar ($R^2=0.28$). Por outro lado, efetuando ajustamento à ponderação do sistema de classificação dos hotéis nessas seis categorias é possível ter uma relação estatisticamente robusta ($R^2=0.89$) entre a perceção de bem-estar e a classificação dos hotéis. Considera-se que este ajustamento no sistema de classificação pode contribuir para criar uma classificação mais relacionada com o bem-estar e com a procura turística, criando uma métrica que permita potenciar ainda mais os aspetos positivos e minimizar os aspetos reportados como negativos, contribuindo para um turismo de maior qualidade e satisfação dos clientes.

Deste estudo, infere-se que os aspetos de energia não são percecionados pelos clientes, nem são adequadamente valorizados e identificados na sua opinião sobre a estadia. Contudo, o facto dos custos energéticos serem o 2º custo de exploração dos hotéis, associado às obrigações nacionais em relação à redução das emissões de CO₂, de incorporação de energias renováveis e de eficiência energética, conduzem a que esta seja uma categoria que deve ser valorizada na classificação dos hotéis, pois hotéis de elevada eficiência energética são o garante de um serviço de qualidade com baixos custos de exploração e não existirá a tentação para desligar equipamentos.

Em Portugal, o sistema de certificação energética de edifícios (que se aplica ao projeto de edifícios novos, bem como a edifícios existentes), abrange a generalidade dos aspetos referidos nos guias de excelência ambiental do Sector, pelo que a nossa proposta sugere uma avaliação da categoria dos hotéis que estenda a exigência da existência de alguns equipamentos à verificação da existência desses equipamentos com elevada eficiência energética. Outros aspetos específicos do conforto e da eficiência energética, que requerem uma análise mais detalhada, foram considerados no método AdaPT AC:T (Armando Pinto, Espírito Santo *et al.*, 2016) e são avaliados na aplicação *Hotel Adaptation Tracker*. Contudo, a sua inclusão na matriz de classificação dos hotéis pode ser complexa, podendo esse ou outros métodos ser incorporados na categoria do requisito n.º 196.

REFERENCIAS

- AdaPT AC:T. (2016). *Projeto AdaPT AC:T - Método para integração da adaptação às Alterações Climáticas no Setor do Turismo*. Lisboa: LNEC e IPMA. Retrieved from <http://adapt-act.lnec.pt/>
- Decreto-Lei n.º 118/2013. *Sistema de Certificação Energética dos Edifícios (SCE)*.
- Decreto-Lei n.º 39/2008. *Regime jurídico da instalação, exploração e funcionamento dos empreendimentos turísticos*. INCM. Decreto Lei n.º 39/2008.
- Ecolabel Alojamento. *Critérios para a atribuição do rótulo ecológico comunitário a serviços de alojamento turístico*, Pub. L. No. DECISÃO DA COMISSÃO de 9 de Julho de 2009 (2009). Jornal Oficial da União Europeia.
- EMAS. *Documento de referência sobre melhores práticas de gestão ambiental, indicadores de desempenho ambiental setorial e indicadores de excelência para o setor do turismo, nos termos do Regulamento (CE) n.º 1221/2009, relativo à participação voluntária de orga* (2016). Jornal Oficial da União Europeia.
- HOTREC. (2015). *Hotelstars*. Retrieved from <https://www.hotelstars.eu/>
- ISO 7730. (2005). *Ergonomics of the thermal environment -- Analytical determination and interpretation of thermal comfort using calculation of the PMV and PPD indices and local thermal comfort criteria*. Geneve: ISO.
- Machado, P.;Rebelo, M.;Saraiva, R.;Pinto, A. (2016). Adaptation to climate change and well-being safeguard – A conceptual and empirical interdisciplinary approach. In *Interdisciplinarity in Social and Human Sciences, International Congress* (p. 25). Faro.
- Pinto, A.;Bernardino, M.;Santos, A. S.;Santo, F. E. (2016). Climate change impact assessment in hotels: methodology and adaptation strategies for high quality hotels. *WIT Transactions on The Built Environment*, 161, 33–44. <http://doi.org/10.2495/ARC160041>
- Pinto, A.;Espírito Santo, F.;Rogeiro, J.;Martins, R. (2016). *AdaPT AC:T - Método integrado AdaPT AC:T de avaliação da vulnerabilidade às Alterações Climáticas de Hotéis*. Lisboa. Retrieved from http://adapt-act.lnec.pt/pdfs/task7/Relatorio_Metodo.pdf
- Pinto, A.;Machado, P.;Matias, L.;Saraiva, R.;Silva Santos, A. (2016). Thermal comfort in hotels: relation between customers' opinions and empirical data gathered in 2015 summer. In *Interdisciplinarity in Social and Human Sciences, International Congress*. Faro.

- Pinto, A.;Silva Santos, A.;Machado, P.;Espírito Santo, F. (2016). *AdaPT AC:T - Caracterização dos hoteis do projecto AdaPT AC:T*. Lisboa. Retrieved from [http://adapt-act.lnec.pt/pdfs/task2/Relatorio Caracterizacao generica_final.pdf](http://adapt-act.lnec.pt/pdfs/task2/Relatorio%20Caracterizacao%20generica_final.pdf)
- Pombo, O. (2004). *Interdisciplinaridade: ambições e limites*. Lisboa: Relógio D'Água.
- Portaria n.º 327/2008. (n.d.). *Sistema de classificação de estabelecimentos hoteleiros, de aldeamentos turísticos e de apartamentos turísticos*. INCM. Portaria n. 327/2088. Alterada e republicada pela portaria n.º 43/2015.
- RECS-E. (2013). *Regulamento de desempenho energético dos edifícios de comércio e serviços (RECS) - Requisitos de conceção para edifícios novos e intervenções*. Lisboa: INCM. Portaria n.º 349D-2013, alterada pela Portaria n.º 17-A/2016.
- Resolução do Conselho de Ministros n.º 20/2013. *Plano Nacional de Ação para a Eficiência Energética (PNAEE) e Plano Nacional de Ação para as Energias Renováveis (PNAER)*.
- Resolução do Conselho de Ministros n.º 24/2010. *Estratégia Nacional de Adaptação às Alterações Climáticas (ENAAAC)*.
- Turismo de Portugal I.P. (2017). *Estratégia Turismo 2027*. Lisboa. Retrieved from http://estrategia.turismodeportugal.pt/sites/default/files/Estrategia_Turismo_2027_TdP.pdf

THE OLYMPIC GAZE

Maria Alice de Faria Nogueira
Universidade Estácio de Sá (UNESA), Brasil
(prof.maria.alice@gmail.com)

ABSTRACT

This paper introduces a research project named *The Olympic Gaze*, which focuses on how cities are globally presented as “brands” through hosting the Olympic Games. The research was inspired by the opening ceremony of the Rio 2016 Olympic Games, that, according the O Globo report, have quite surprisingly countered the negative expectations of the media by “showcasing a great image of the host country and the host city”. Acknowledged as the least expensive ceremony in the history of the games, Rio 2016’s opening spectacle has shown the world a “touristic gaze” (Urry, 2001) that differs from the one tourism industry and global media actors were used to (Nogueira; Di Cola, 2016). In a time when the so-called Olympic legacy is being questioned as the financial and social costs of the bid have increased substantially, thus becoming a “hard *political act* to manage” (Goldblatt, 2016), this investigation draws on an interdisciplinary perspective to analyze and discuss to what extent the legacy of the Games, besides infrastructure works, does also concern the creation, development, and display of a new local image through which the sociopolitical and economical transformation of the host city is globally accomplished.

Keywords: Rio 2016, Jogos Olímpicos, Olhar do Turista, The Olympic Gaze.

JEL Classification: M30, Z32

1. INTRODUCTION

“It’s hard to believe that Rio de Janeiro hosted the Summer Olympics just six months ago. Today, the Olympic Village has turned into a ghost town, and many of the venues have fallen into disrepair”¹.

The above quote begins the *Business Insider* online article published in February, 13th, 2017, about the venues of the Olympic Games held in August, 2016, in Rio de Janeiro, Brazil. It shows images of the Maracanã stadium, recently renovated for the 2014 FIFA World Cup, where the opening and closing ceremonies of the Olympic Games took place. However, due to unpaid electricity bills owed by the state government, the stadium lawn has dried out, alongside removed or destroyed seats in the bleachers, among other problems such as dirt and neglect. The online text concludes by claiming that the sports complexes which host the Games, and are considered as social and sport legacies for the host cities by the International Olympic Committee (IOC), eventually end up in ruins. For *Business Insider*, these are the conditions left behind locally, despite the promise of the organizers that “the billions of dollars spent on the two-week spectacle” will benefit the host city and generate positive effects in the long-run.

However, in February, 26th, 2017, two weeks after the photos of the Olympic facilities came out, the O Globo newspaper has published an article entitled “Carnival taps into the groove of many accents” (“Um carnaval com a ginga de muitos sotaques”²), in which it was argued that the 2017 carnival in Rio de Janeiro has attracted 1.1 million tourists, the largest number since 2009. Also according to the newspaper, the data from Empresa de Turismo da Cidade do Rio de Janeiro S.A (Riotur), the city tourism office, show an estimate of R\$ 3 billion spent by tourists – R\$ 500 million more than in 2016. In tune with the data provided by Riotur, the Brazilian Hotel Industry Association (Associação Brasileira da Indústria Hoteleira – ABIH) registered an occupancy rate of 90%, despite offering 18,000 more beds than in 2016, due to the Olympic Games. For Alfredo Lopes, president of the association, the Games have influenced the rise, especially concerning national tourists, arguing that “the crisis has helped us because people did not travel abroad. And the national market was impacted by the information on the Olympic Games”.

In this sense, despite all the disputes between the government and the local population over the advantages and/or disadvantages of hosting the Games, the image of Rio de Janeiro as the “Olympic City” seems to have been commercially successful if we consider the city as touristic destination, regardless of the fact that, six months later, the million of dollars invested in the sports legacy are falling apart before one’s eyes.

Drawing on the Rio 2016 case, this research project aims at analyzing the Olympic Games legacy not only in terms of the social and economical dimensions, but also of marketing and communication by discussing the whole commercial effort taken by the government toward the creation, development, and implementation of a local touristic image here named as “The Olympic Gaze”, through which the host city is improved in sociopolitical and economical terms in global scale. To

¹ Available: <http://www.businessinsider.com/rio-olympic-venues-are-abandoned-just-6-months-after-games-2017-2>. Accessed in 3/1/2017.

² Available: <http://oglobodigital.oglobo.globo.com/epaper/viewer.aspx>. Accessed in 3/1/2017.

accomplish this objective, the research adopts an interdisciplinary perspective combining authors from the Social Sciences and Humanities, hence emphasizing History, Sociology, Tourism, Mobilities, Advertisement, and Marketing studies to verify the hypothesis that, in principle, the image of the city as a “brand” transforms the host of the Games in an “Olympic City”, with all the attributes that, according to the IOC, only the Olympic Games can offer: social development through sports, improvements in urban infrastructure and mobility, economic investments, sustainability, and expansion of the tourism industry. In this sense, this research seeks to understand at what extent do the legacy of Games – besides infrastructure works – is also concerned with the image of the city and, consequently, with increasing its participation in the global tourism and investments circuit.

But how is this image created historically? Under which political conditions, that is, of power and resistance, between governments, the IOC, the private initiative, and the local population? Based on what social and economic gains or losses for the city and its inhabitants? And, particularly, as we are interested in a new “touristic gaze” (Urry, 2001) created from hosting the Olympic Games, based in what communication and marketing strategies is this “touristic gaze” developed? At what extent does it sustain itself commercially? In a time when the so-called Olympic legacy is being questioned as the financial and social costs of the bid have increased substantially, thus becoming a “hard *political act* to manage” (Goldblatt, 2016), the questions above guide this research project which, in a first moment, uses the 2008 Beijing Olympics and Rio 2016 as objects of analysis.

The selection of Beijing and Rio de Janeiro was based on the fact that, with the exception of London 2012, all the Summer Olympics of the 21st century were hosted by cities of the “Global South”³, that, as described by Goldblatt (2016, p. 391), can be understood not only as localities beneath the equator, but also as cities situated in emerging or developing countries, as in the cases of Brazil and China, both members of *BRICS*, an acronym for Brazil, Russia, India, China, and South Africa.

The methodological approach applied here draws on the “hermeneutics of depth” (Thompson, 2000), which emphasizes that, in order to be analyzed, symbolic forms must be interpreted in articulation with the socio-historical contexts in which they are produced, transmitted, and received. Therefore, drawing on this methodological framework, the analysis focuses on three stages: before, during, and after the Games, in which communication and marketing actions with global reach take place in order to create, develop, and implement an Olympic gaze towards the city.

It is important to note that, at the time this paper was written, the ongoing research was developing the first stage of the hermeneutic methodology, that is, the socio-historical analysis. As it will be further explained later, this first stage comprises the review of conventional secondary sources, such as textbooks, newspaper articles (in print, electronic or digital form), and national and/or international theses and dissertations on the history of the Olympic Games and its impact (social, economical, political, touristic, and commercial) over the host cities. This literature review will provide the theoretical framework for the historic mapping of the scenery, as well as the ground for the further analysis of the communication actions of the Games, that is the object of the research.

In the following pages, this paper presents the structure of the project, which was divided into three sections featuring the theoretical framework and the preliminary literature review; the hermeneutic methodology, the sources and research objects; and, lastly, the final considerations, which are not intended as a comprehensive approach to the issue, but rather as the starting point of a project designed for a post-doctoral research.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

In 2015, before the upcoming mega-event, several cultural activities were organized in anticipation for the Olympic Games and also to celebrate *Rio de Janeiro's 450th* birthday. Between November, 2015 and March, 2016, the cariocas – the residents of Rio de Janeiro – could visit the exhibition “Rio de Janeiro as destination: travel posters from 1910-1970”⁴ (Rio de Janeiro como destino: cartazes de viagens, 1910-1970), organized by the National Historical Museum (Museu Histórico Nacional – MHN). It comprised a set of 40 posters from maritime and aerial transportation companies that are part of the collection of the Berardo Museum, Lisbon, Portugal⁵. According to the exhibition guide, the posters “make it possible to cover sixty years in the history of transatlantic traveling, through qualified publications which reflect an age of progress and modernism” (2015, p. 4).

A large number of posters show illustrations of the development of Rio de Janeiro as touristic destination, a “symbol of exoticism and curiosity for the new world”, as described in the guide, thus, a Marvelous City that, through the passage of time as illustrated in the posters, metamorphs into a “modern city with tropical tastes”, the ultimate icon of Brazil and Latin America. According to the exhibition curators, Márcio Roiter and Paulo Kauss, being the latter also the museum director, the posters display “breathtaking” natural landscapes in dialogue with avant-garde architecture and the carioca’s spontaneous hospitality, local characteristics that originated the “Marvelous City” ideal that still prevails in the global touristic imaginary. In this sense, it is possible to argue that advertising and the media were significant communicational supports through which the image of the city was created and developed globally as the place it was (and still is) perceived by tourists. Hence, according to the curators, the advertising posters from the advertising posters from maritime and aerial transportation companies “prove that the product of advertising is able to outlive its original use, transforming itself into historic document. Witnesses of history, these documents transform from fleeting artifacts of consumption to artistically and commercially valuable prints” (2015, p. 5) which have disseminated representations of the “marvelous” Rio de Janeiro in international scale.

³ Besides Beijing (China), in 2008, and Rio de Janeiro (Brazil), in 2016, The Summer Olympics also were held in Sidney (Australia), in 2000, and Athens (Greece), in 2004.

⁴ Available: <http://www.museuhistoriconacional.com.br/mh-2015-009.htm>. Accessed in 4/5/2017.

⁵ Available: <http://en.museuberardo.pt/>. Accessed in 4/5/2017.

The visit to the exhibition has elicited the basic question of the research: after ten years of major infrastructure works to host mega-events such as the Pan-American Games (2007), the World Military Games (2011), the FIFA Confederations Cup (2013), the FIFA World Cup (2014), and the Olympic Games (2016), to name only the sports events, where had been that Marvelous City, “blessed by God and naturally beautiful”, shown in the Berardo Collection’s posters?

Since 2009, when Rio de Janeiro’s bid to host the 2016 Games was approved by the IOC members, the city worldwide known as the “marvelous” one gradually became an “Olympic City”. As it happened with Rio, all the cities selected to host the Games undergo this mandatory period of intensive transformation in both its infrastructure and image in order to become, however temporarily, the mythical *Olympia* (Rubio, 2008b). The example of Rio de Janeiro is closer to the author due to her local origin. Nevertheless, it is important to stress that Beijing, the other analyzed city for this study, also experienced severe structural transformations, but not without heavy political, social, and economic costs for the population and the local government (Goldblatt, 2016; Boykoff, 2016; DaCosta, 2008; Preuss, 2004, 2007, 2008, 2013, among others).

Here, the question implies that a transformation of such magnitude – considering all the IOC’s requirements regarding infrastructure works, especially for urban mobility; the improvement of the hotel chain, ports and airports; construction of new sports facilities; removal of communities to build the Olympic Village; and the implementation of improvements in local security, telecommunication, basic sanitation, and electricity supply services (Bessa; Alvarez, 2014, p. 55) - does not occur without tension between poles of power and resistance, involving all the actors of the process, namely governments, the IOC, civil society, the media, sponsors, and real estate companies, as noted by Preuss (2008, p. 35), which support the implementation of the Olympic Games in any locality.

The following section on the methodological framework of the research addresses the network formed around the implementation of the Olympics and its actors. For now, it is important to emphasize the fact that the creation of an “Olympic City” also involves a marketing and communication plan that elevates a given locality to a distinguished status in detriment of other touristic destinations, as the imaginary of the “Marvelous City”, in the case of Rio de Janeiro, was partially constructed by the media and advertising, that is, by communication actions both in local and global scales. On this aspect, according to Bessa and Alvarez (2014, p. 60), the image of the cities, promoted by touristic marketing, is the dynamic result involving “the assimilation of information, which can be either true or not and is produced by different sources, made of the combination between historical facts and news, myths, beliefs, national characters, stereotypes, local cultural production, and touristic promotion”. As marketing, this work considers the application of the classic concept of marketing variables, or the 4Ps – Product, Price, Place, and Promotion⁶ – in the dimension of the cities, through a practice denominated by Kotler, Gertne, Haider, Rein (2005) as Marketing Places or City Marketing, in Bessa and Alvarez terms (2014).

Here the research applies the concept of Olympic Gaze to reflect on the *modus operandi* of this transformation and to what extent does this repositioning of the locality as a touristic destination is fundamentally interwoven with communication actions, without which the marketing actions would be non-effective toward the global tourism market. “The improvement of the image of a given locality is not enough to ensure its attractiveness. It takes a solid investment in infrastructure”, observe Bessa and Alvarez (2014, p. 55). The marketing variables do not work in isolation and any product only becomes known in the market – especially globally, as in this case – upon intensive communication efforts. Here, I return to the idea of image formation of the place to be perceived by tourists through advertising and the media as one of the strongest characteristics of what the sociologist John Urry calls the tourist gaze (2001), a central concept in the tourism studies literature within which this research is grounded.

According to Urry and Larsen (2011, p. 14), historically, the tourist gaze was developed around 1840 through the unique and peculiar combination between the increase in public transportation and the will to travel, and, mainly, the technical development of photography and the conditions of its mass reproduction. In this sense, the touristic gaze has already emerged in relation with new technologies and the media, particularly photography, through which images are mediatized – or “kodakized”, in Urry’s terms (2001) – hence granting visibility to the places upon their circulation. Illustrations, photos, postal cards, travel leaflets, advertisement pieces, and posters, as the ones from the Berardo Collection, all became means to disseminate and circulate the images of the places and construct, directly or not, the contemplative touristic gaze. All this advertising made places attractive enough to be visited. In this sense, the media performed a didactic role in the construction of the image of each place as tourist and travel destination. Yet, as the authors argue, “the *pure* and innocent eye is a myth” (2011, p. 2). Thus, this gaze is not only developed technically, but as something related to the then existing culture and social practices within a historical context – and by different groups with their own social characteristics, such as gender, class, race, and age – which, alongside the development of media and transportation, has become determinant in its constitution as (a form of) gaze.

Since the tourist gaze is socially systematized by the media within a historical and cultural background context, it is necessary to adopt the historical perspective, both towards the city and the Games. To understand the construction of a place as a touristic destination, authors from the field of Tourism and Mobility Studies, like the above mentioned Urry (1995, 2001) and Urry and Larsen (2011), such as MacCannell (1976), Feiffer (1985), and Knupp (2015), among others. This notion of touristic destination will be considered in relation to the transfiguration of the locality into Olympic City, drawing on the works of Jules Boykoff (2016) and David Goldblatt (2016) on the economic and political history of the Games. From a critical perspective toward the IOC position on host cities and its relationship with local governments, organizing committees, sponsors, communities, and civil society at large, both authors contextualize the way the Games changed from a “grandiose and salutary task: the reinvention of the Olympic games”, as notes Goldblatt (*idem*, p. 4) to the “quintessential example of celebration capitalism”, as described by Boykoff (*idem*, p. 156), from the first Olympics of the Modern Age to Rio 2016.

⁶ C.f.: Kotler; Armstrong (2015); Kotler; Keller (2013); Kartajaya; Setiawan; Kotler (2010); Levitt (1981); Zeithaml; Bitner; Gremler (2011); Lovelock; Wright (2003); Dias; Cassar (2005), among others.

Regarding the construction of an Olympic Gaze rooted in the lure of tourism, marketing, and mega-events, this paper resorts to Helger Preuss (1998, 2004, 2007a, 2007b, 2008), Katia Rubio (2008, 2009), and Katia Rubio and Roberto M. Mesquita (2011), who consider the use of mega-events under a more favorable light, if it is possible to say so, to change or minimally the position of a given city as touristic destination in global scale.

For the purpose of this work, mega-events are understood here as emblematic events that, once successfully funded and accomplished, “are one way that cities can *create an image* internationally and attract internal investment with the aim of promoting long-term growth”, argue Robertson and Guerrier (2003). In contrast, Bessa and Alvarez (2014, p. 19) consider the relevance of mega-events in the process of global acknowledgment of a city, but they view the situation from a critical standpoint, arguing that mega-events are the “ultimate symbol of the expansion of digital capitalism and the most celebrated strategy for transforming touristic landscapes”, whose purpose is the material transformation of a given place. For the authors, the idea is to “(re)(con)figure” the landscapes, hence ascribing a new character to the city, what is enabled through the “adoption of measures of exception and marketing strategies” (idem, p. 47). Consequently, the Olympics, the World Cup, and international exhibitions, among other major events, have been disputed as strategic opportunities to promote cities and attract both tourists and businesses, since, in general, mega-events demand the re-urbanization of the locality, as well as previous investments that, in Robertson and Guerrier terms, lead to the improvement in the local quality of life, that is, they leave legacies that are appropriated by the population. The concept of the Games’ “legacy” is crucial for this research, and alongside the notion of tourist gaze, it structures the issue of the construction of the city image through marketing actions, as in the case of the Olympic Gaze, which, in terms of local tourism, also becomes part of the legacy left by the Games, indisputably one of the most important ones, as in the example mentioned earlier.

Robert K. Barney (*apud* DaCosta, 2008, p. 125) defines “legacy” as “something received from the past that has present value and, definitely, future value”. In agreement with this notion, in its annual report of 2003, the IOC states that the sports, social, cultural, and economical legacy of the Games is the priority criterion for the selection of the Olympic host cities. “Olympic legacy is understood as the direct or indirect heritage in the form of facilities, culture, information, education, or resources generated through the Olympic Games”, as observed by Rubio and Mesquita (2011, p. 60), and: “in the IOC view, the legacy plan became the crown jewel for any bidding city because it understands that the high costs of preparation must produce social returns”.

As one of IOC major requirements for bidding cities, the question of the infrastructural legacy is a central point of the discussion proposed by this research because, during the pre-event period, it becomes a strong pole of tension between the cooperation network actors who support the implementation of the Games in any given city. The origin of this question precedes the successful bidding campaign, going back as early as the application stage. One of the materials submitted to the IOC, and used as a piece of advertising, is a video that associates the city’s existing features with the changes and the planned urbanistic, landscaping, and architectural interventions to transform the place into the next Olympia. The plans presented in the video are designed and “pitched” to the committee without the effective participation of the civil society that is directly involved in all the urban renovation works.

Due to its significance in the candidature process and as an essential marketing and communication piece that strongly contributes to the construction of what is denominated here as the Olympic gaze, the candidate’s video is the first piece to be analyzed – as it will be further described in the methodology section. For now, it is important to explain that who produces the video, and, thus, selects what will be shown and sets the agenda of the discourse, are the spheres of power involved in the process. In this sense, upon the IOC requirements, the narrative of the video is conceived according to a tourism marketing plan designed by the government, whose basic premise is the strategic cooperation of public-private partnerships, as mentioned by Bessa and Alvarez (2014).

Public-private partnerships are an attempt at fundraising to support the necessary urban renovation works to create an Olympic city. According to Bessa and Alvarez, the lack of local perspective during the negotiations between government and private initiative is one of the causes of tension among the actors – in this case, more directly, the IOC, the government, private initiative, the media, and the civil society, for “in many situations, the city eventually assumes a business character, an economic agent that follows rules dictated by the market, losing its territorial dimension of local democratic exercise” (2014, p. 63).

In fact, the history of the Olympic Games is rich in examples of how the influence of the IOC’s presence and requirements over decisions on the infrastructure of the Games and the question of the legacy eventually render the local economy and the government finances unfeasible in the decades following the Games. For instance, in 1976, Montreal hosted the most expensive Olympics so far and it took three decades to account for debts around US\$ 1.5 billion (Boykoff, 2016, p. 124). On the other hand, Montreal’s story led the next host cities, such as Los Angeles, in 1984, and especially Barcelona, in 1992, to adopt planning models that put marketing activities ahead of strategic decisions in respect to fundraising and hosting mega-events aimed at boosting the city’s prestige as a touristic destination. According to Boykoff (2016, p. 136), what is currently known as the “Barcelona Model” was the turning point in terms of the reflection on the Olympic Games as articulated with the remodeling of cities, urban planning, tourism marketing actions, and public-private partnerships that account for the economic feasibility of the mega-event without emptying the public coffers and, indirectly, the citizen’s pockets.

The Barcelona Model was used in Beijing (2008) and in Rio de Janeiro (2016), however not successfully as in Barcelona in both cases due to the social, political, and economic context each candidacy was submitted to and selected by the IOC. This context is the base of the whole investigation and it will be analyzed drawing on the *Depth Hermeneutics* (Thompson, 2000), a methodological approach that will be detailed in the third section of this paper. In order to outline a time-line, Barcelona 1992 will be the starting point of the current reflection on the legacy of the locality image as an Olympic City. In historical perspective, this research addresses the creation, development, implementation, and reception of the Olympic Gaze from the Barcelona Olympics on, specifically when the city decides to bid for the Games.

However, concerning the city and its residents, it is important to note that, from 1992 to the present date, the commercialization of the Games has reached such a high-cost level, which is not merely financial or economic, but also political and social, that a certain reluctance from big cities to bid for the Olympics hangs in the horizon. On this aspect, Christopher Gaffney (2015, 2016) forcefully questions the idea that mega-events legacies are positive ones, once they are conceived and planned in detriment of the population's expectations and what the city actually demands in terms of infrastructure, urban mobility, and housing works. As argued in the introduction of this paper, in the case of Rio de Janeiro, the facilities built or renovated to host the Games were falling apart six months after the mega-event. And it was also the case in Beijing, where, "1.5 million people were displaced from their homes to make way for the Olympics", as notes Boykoff (2016, p. 171), not to mention that the facilities built are underused and often empty, such as the Bird's Nest stadium, built in a country where there are no relevant soccer teams nor championships⁷. In line with Boykoff and Gaffney, Goldblatt (2016, p. 438) argues that "the citizens of potential host cities in North America and Europe were less sanguine about escalating costs and dubious benefits of hosting the games, and their skepticism has made an Olympic bid an increasingly hard political act to manage".

In this sense, according to the author, "it has been a decisive shift in geography of not just the Olympics, but all global mega-events and world sporting championships, towards the rising powers of the global south" (2016, p. 391). For Goldblatt, this shift towards the south, not only meaning countries below the equator, but mainly the ones identified as economically distant from the global north, was caused by four reasons: 1) after two decades of economic growth – "breakneck industrialization and booming commodities prices" – countries from the global south are able to afford mega-events; 2) the lure of new and opening sport-markets has made sponsors and governing bodies keen to send their brands and events there; 3) the idea that the games could serve as a marker of national economic development and global connectedness gained considerable ground in global south countries; and last but not least, 4) the fact that global south countries "found it much easier to work the established networks of corruption in the allocation of hosting rights by many sporting federations, while facing little or no criticism at home".

This shift towards the south is the reason why Beijing 2008 and Rio 2016 were selected as the objects of the current research. Drawing from Goldblatt, the social-historic, economic, and political sceneries – including corruption contexts – are a fundamental part of this study and will guide the analysis of the imagetic and touristic construction of the Olympic cities, as proposed by the concept of the Olympic Gaze.

3. METHODOLOGICAL FRAMEWORK

As mentioned in the introduction of this paper, the methodological reference used in the research project is the *Depth Hermeneutics* (DH) as developed by J.B. Thompson in his book "*Ideology and Modern Culture: Critical Social Theory in the Era of Mass Communication*" (2000). According to the author, "This framework highlights the fact that the object of analysis is a *meaningful symbolic construction* which calls for interpretation. Hence we must give a central role to the process of interpretation, for only in this way can we *do justice to the distinctive character* of the object domain".

I have already applied depth hermeneutics in previous studies during the doctoral research process and it proved to be especially interesting when the object of analysis are symbolic forms such as advertising, public relations, and journalistic pieces, which are the objects of the current investigation. As described by Thompson (2000), symbolic forms should be understood as "meaningful *actions, objects* and expressions of various kinds - in relation to the historically specific and socially structured contexts and processes within which, and by means of which, they are produced, transmitted and received". Consequently, in order to be interpreted, they must be analyzed under the light of their social-historical contexts since they relate, in their discourse, to the culture and the society of their time.

In this sense, Depth Hermeneutics presupposes that the interpretation of a symbolic form requires a "dive" into the historical context so the researcher, in the words of the author, can search more accurately for the meaning of cultural products within the "logic" of their own time. On this aspect, Thompson notes that it was Gadamer (2006) who has drawn attention to the fact that the idea of understanding is based in a "fusion of historical horizons" that helps the researcher to reflect on the ways the social-historical world is created by individuals who speak and act, and whose discourses and actions can be understood and interpreted by others.

It is important to explain that Thompson considers DH as an especially important method for the development of a critical theory of modern societies. To accomplish this task, the author integrates the concept of ideology with a theoretical framework focused not only in the nature of symbolic forms, but also in the characteristics of the social contexts where these forms circulate and are received. In this sense, Thompson considers that the organization and reproduction of power and domination are amplified by the "mediation" of modern culture, and, so, for this reason, symbolic forms should be studied within a specific social-historical context. Therefore, DH is "the *critical analysis of ideology [that]* can be pursued concretely, as part of an interpretative approach to the study of contextualized symbolic forms" (Thompson, 2000, p. 426).

The question of ideology is very important for several reasons, but in the case of the study on the hosting of the Games, it proves to be even more present because the bidding, the selection, and the implementation processes of the Games as experienced by a given city are thoroughly pervaded by acts of power and resistance which either places all the actors involved side by side or against each other. "To say the Olympics transcend politics is to *conjure fantasy*", states Boykoff (2016, p. 2).

This research will consider the following actors as participants in the network of cooperation, but also power and resistance:

⁷ Available: <https://www.theguardian.com/sport/blog/2015/aug/22/birds-nest-empty-monument-china-magnificence>. Accessed in: 4/15/2017.

- Federal and municipal governments in particular, with their ministries and offices responsible for the bidding and the accomplishment of the Games with all the infrastructure works and the remodeling of the city. Such works constitute the urban-marketing planning for the Games and are the base for what I call the local Olympic Gaze. Such planning is tailored to meet the IOC requirements in respect to Olympic facilities and equipments, as well as urban infrastructures for mobility and hotels accommodation.
- The International Olympic Committee (IOC) itself is the most important actor involved in the network. Since its foundation in 1894, under the coordination of Pierre de Coubertin, the IOC's principle is to view the host city of the Games as the mythical *Olympia* which, even temporarily, "will be ruled under the aegis of Olympism" (Rubio, 2008, p. 152). This apolitical positioning, in the narrow perspective of the committee, actually presents itself as a powerful tool of intervention in the organic life of the host city and, according to Bessa and Alvarez (2014), only tends to increase the existing inequalities and exclusion.
- In this case, civil society plays an important part during the process. Represented by several non-governmental organizations and associations, civil society defends the population's right to the city transformed into an "Olympic" one. Preuss (2008) argues that the local population is one of the "winning" groups of interest due to the fact that it dwells in the city selected to host the Games, considering the investments in its transformation due to the Olympics. In contrast, Gaffney (2016, p. 35) asks who is actually benefited by this transformation, hence paving the way for further discussion on the rights to the city and the legacy of the Games.
- On this matter, having closely covered the whole process, the print, electronic, and digital media, both nationally and internationally, also became an important actor, due to its role as public opinion maker. In this way, depending on the press coverage, whose discourse can assume tones of compliance or denunciation in relation to governmental and/or IOC practices, the local population obtains information, however mediated, on the bidding process. In this sense, the press plays a fundamental role in the construction of the Olympic Gaze and, for this reason, during the years between the bidding process and the Olympics itself, it is the constant target of the government and the IOC Public Relations and publicity activities. Still, according to Preuss (2008, p. 19), the media – especially television – is also part of the group of interest considered by the author as the "winner". Preuss includes television networks as winners in reference to the advertising revenue from broadcasting the Games, a profitable enterprise not only for the IOC at first, but also for the local TV networks.
- On this aspect, the next actors involved in the process are the Olympic Games local sponsors⁸ and suppliers. Generally, the IOC relies on global sponsors, such as *Coca-Cola*, *Visa*, *McDonald's*, and *Samsung*, among others, but the local organizing committee seeks potential commercial partners among local brands in order to accomplish specific communication and marketing actions in the city. This is a relevant part of the construction of the Olympic Gaze, one that directly impacts the local population, as well as introduces the image of the city for a global audience.

Besides the actors above mentioned, there is yet another member of the cooperation network comprising the institutions involved in the organization of the Games:

- Real Estate agencies and contractors. Historically, at least since the Los Angeles Olympics of 1932, which, according to Goldblatt (2016, p. 157), has innovated by creating the first Olympic Village, and, more recently, the Barcelona Olympics of 1992, in a more organized and market oriented fashion, real state agencies and contractors have introduced themselves as an active segment and a strong "business partner" of municipalities over the entire process of transformation of cities into Olympic cities. As observed by Bessa and Alvarez (2014, p. 63), behind the removal of dwellers from certain neighborhoods and communities in order to build infrastructure for the Games, what the authors call "social cleansing" or "social sanitation", lies the strong presence of the public-private partnership between the municipal government and the real estate market, that, in principle, eventually benefits from the valorization of the evicted area.

Considering the six main actors of this network, I return to the question of Depth Hermeneutics as methodology. According to Thompson, DH is divided into three different stages, which can be developed simultaneously, without hindering the analysis of the results, but as "thematically distinct dimensions of a *complex interpretative process*" (Thompson, 2000, p. 365).

Firstly, there is the social-historical analysis stage, in which the spatial-temporal conditions, the social structure, and the technical means through which the relationship between the actors participating in the network is constructed. The context studied in this stage grounds the outline of a historical perspective that will support the formal analysis of the advertising, public relations, and journalism pieces which are the object of the current investigation. The authors and concepts discussed at this stage have been mentioned earlier in the literature review section, but it is interesting to note that the whole theoretical repertoire reviewed during this first stage of research aimed at deepening the understanding of the historical circumstances within which the symbolic forms were created, disseminated, and receipted.

Following the study of the social-historical circumstances, the *formal analysis* of the symbolical forms is performed. Aiming at understanding and explaining the mechanisms of the construction of meaning both *within* and *of* the text, the research focuses on the "reading" of the selected pieces as objects of study upon which the analysis of discourse will be conducted from the viewpoint of discursive semiotics.

Stemming from the French semiotics of A. J. Greimas, according to Gomes and Mancini (n.d.), discursive semiotics "can improve an in-depth reflection on media texts, notably journalistic and advertising texts", due to its comprehensive

⁸ The sponsors of The Olympics are Coca-Cola, Visa, McDonald's, Samsung, Omega, Dow, P&G, GE, Panasonic, Athos e Bridgestone. Available: <http://exame.abril.com.br/marketing/rio-2016-nao-patrocinadores-proibidos-de-usar-17-palavras/>. Accessed in: 3/27/2017.

notion of “text” itself, including not only verbal texts (literature, newspaper and magazine articles), but also visual (paintings, sculptures, photos) and musical ones (songs and advertising jingles). “There are also those which are constructed through a mix of these different textual types, as in the case of cinema, music clips, and advertising texts, for instance [...] and this enables us to propose an analysis of advertising and media texts in their totality”, argue the authors (n.d., p. 1).

Such a definition of text is in line with Fontanille, for whom discourse analysis is an instance in which “production, that is, enunciation, cannot be dissociated from its product, the enunciate” (2008, p. 86). For this reason, according to the author, it is interesting to focus on the moment of production of symbolic or meaningful forms, since this could be the only manner through which discourse organizes the experiences and their representations to become more easily understood and shared by the public. However, for Fontanille, “this perspective has its implications, for discourse inscribes itself both in its natural unfolding in time and the time of the productions of which it is a provisional sample” (2008, p. 86 *apud* Nogueira, 2015).

And it is exactly in the combination between the time of production, the time of reception, and the time of the analysis, in this fusion of historical horizons, in Gadamer’s terms (1999), between the researcher’s moment and the time when the communication piece was created and receipted that the interpretation and understanding of the discourse takes place, hence referring to the third stage of Depth Hermeneutics: *interpretation* and *reinterpretation*. At this stage, the objective is to answer the questions guiding this investigation: how the Olympic Gaze is created? Under which social, political, and economic conditions? What are the gains and losses for the city and the local population? What dynamics of power, tension, and resistance between the actors of the cooperation network that supports the hosting of the Olympics are marked by advertising and media discourses? The communication pieces selected as the object of research are representative of the three stages of any event – before, during, and after – as in the case of the Olympic Games, namely as follows:

1º.) the pre-Games period of the bidding, when the local government provides the IOC with audiovisual material⁹ on the place and its potential as host city. As mentioned earlier, this promotional video about the city is the first advertising piece in the construction of the Olympic Gaze. The piece is part of a governmental strategy of “entrepreneurial” city management, as noted by Harvey (1996, *apud* Bessa, Alvarez, 2014, p. 20), whose narrative stands between what the city is – iconic architecture, nature, spaces for the construction and growth of the locality, and the people’s hospitality, among other aspects more related to the culture of the country – and the potential of the city to become an Olympic City: clean, sustainable, safe, mobile, technological, fun, happy and ready to welcome the IOC, the Olympic family and tourists from the whole world.

2º.) the opening of the Games, whose communication and marketing piece to be considered is the Opening Ceremony itself. According to Goldblatt (2016, p. 337), in Barcelona the opening ceremony turned from “something close to a school sports day” into “an avant-garde dance, post-modern circus, visual arts and experimental show”. Held at night for the first time, the spectacle was intended for broadcasting purposes and told the histories of Barcelona, Catalonia, and Spain for the entire world, thus inaugurating the idea of using this moment as a fundamental part of the Olympic Gaze, globally disseminating the image of the city through the Olympic Games. The same happened in Beijing 2008¹¹ and Rio 2016¹², where the opening ceremonies showed, within the social-historical, economical, and political context of that time, the new market and touristic positioning of each country and each city in global scale.

3º.) the post-Games period, during which an evaluation of the media coverage is performed and whose limit is the next event of great tourism appeal to attract visitors to the city and/or country. In the case of Beijing, the Chinese New Year, that, in 2009, was celebrated on January, 26th, five months after the Games, will be used as the touristic post-Games mark; and, in the case of Rio de Janeiro, Carnival, that in 2017 was celebrated on February 25th-28th, six months after the Games, always considering the social-historical moment within which the three communication pieces and their formats (video, event, and media) were circulated and/or published.

By considering these three pieces and the moment when they were created, distributed, and receipted, it will be possible to understand the construction of the Olympic Gaze and its implications for the host city in touristic terms.

4. FINAL CONSIDERATIONS

Based on the analyzed material so far, the question of the Olympic legacy is of ultimate relevance to all the spheres (governmental, private initiative, and civil society) and actors involved in the cooperation network – local government, IOC, civil society, the media, sponsors, and real estate market partners, among others – that supports the organization of the Olympic Games in a given locality.

The way the city is planned to become an Olympic city, the *modus operandi* of this architectural, financial, and entrepreneurial transformation, as well as the one commanding these actions, are the aspects shown to be fundamental in power and resistance relations which characterize the object itself. Therefore, these are crucial points concerning the question the research intends to answer: under the perspective of the host city, to what extent is the image legacy, the earlier mentioned Olympic Gaze, determinant toward the social-political and economic improvement of the host city in global scale?

The economic objective of converting the locality into Olympic City, that is partly “concealed” in the discursive narrative of both the government and the IOC, who emit a large part of the communication actions of the process, eventually

⁹ Available: https://youtu.be/OHRu_i6TANQ Accessed in: 4/19/2017.

¹⁰ Available: <https://youtu.be/AGY7MpC7x-4>. Accessed in: 4/19/2017.

¹¹ Available: <https://www.youtube.com/watch?v=cEJg6SX-UZM> Accessed in: 4/19/2017.

¹² Available: https://www.youtube.com/watch?v=N_qXm9HY9Rob Accessed in: 4/19/2017.

becomes the most important one and its purpose is to legitimize and reinforce the image of the city as touristic destination and marketplace, despite activism and resistance against the Olympic Games.

In this sense, one among other likely hypothesis is to estimate to what extent does the Olympic Gaze becomes the protagonist of the actions proposed by the cooperation network, instead of the infrastructural legacy, for instance. As mentioned, historically, the mobility, sustainability, safety, sanitation, urban planning, and other legacies are not usually enjoyed by the local population after the Games because, according to the authors, they were not planned for this purpose. Rather, planning does not take the pressing needs of the population into account, but the conditions required by the IOC for the Olympics. Consequently, the Olympic image takes the lead in decision making processes which relegate the most pressing needs of the city not only as an expression of a place to live, but of a territory of sociability, to the background.

However, as notes Preuss (2008), each individual case is distinct, since their social-historical contexts are different, and so deserve to be studied within their own political, economic, and cultural conditions. The creation and circulation of an Olympic Gaze do not occur without questionings and resistance that, by themselves, also end up as part of this imagetic whole of the place. By analyzing the implementation process of the image legacy through the three actions, formats, and suggested media, the objective of the research is to understand, in historical perspective, the construction of the Olympic Gaze in the cities of Beijing and Rio de Janeiro, in order to deepen the understanding on the conception of future *Olympias*.

REFERENCES

- Bessa, A; Alvarez, L. (2014). *A construção do turismo: megaeventos e outras estratégias de venda das cidades*. Editora com Arte. Belo Horizonte. ISBN: 978 85 7654 174 5.
- Boykoff, J. (2016). *Power Games. A political history of the Olympics*. Verso. London. ISBN-13: 978 1 78478 072 2.
- Dias, R; Cassar, M. (2005). *Fundamentos do Marketing Turístico*. Pearson, Prentice Hall. São Paulo. ISBN: 857 605 021 8
- Dacosta, L. (2008). Exemplos históricos dos Jogos Olímpicos de Beijing, 2008 e a busca de um modelo de avaliação e de gestão de legados de megaeventos esportivos. In Rubio, K. (eds.) *Megaeventos esportivos, legado e responsabilidade social*. Casa do Psicólogo. São Paulo. ISBN: 978 85 7396 588 9
- Feifer, M. (1985). *Going places*. Macmillan, London. ISBN: 978 033 334 631 0
- Fontanille, J. (2008). *Semiótica do Discurso*. Contexto. São Paulo. ISBN: 978 85 7244 375 3
- Gadamer, H-G. (1999). *Verdade e método: traços fundamentais de uma hermenêutica filosófica*. Editora Vozes. Petrópolis, RJ. ISBN: 85 326 1787 5
- _____; Fruchon, P. (2006). *O problema da consciência histórica*. 3tr Edition. Editora FGV. Rio de Janeiro. (eds.) ISBN: 85 225 0246 3
- Gaffney, C.T. (2014). *The Mega-event city as neo-liberal laboratory*. Accessed in 15th of March, on the website Academia.edu: https://www.academia.edu/3085574/The_mega-event_city_as_neo-liberal_laboratory_the_case_of_Rio_de_Janeiro.
- _____. (2015). *Gentrifications in pre-Olympic Rio de Janeiro*. Accessed in 15th of March, on the website Academia.edu: https://www.academia.edu/19337104/Gentrifications_in_pre-Olympic_Rio_de_Janeiro
- _____. (2016). *Transforming Rio - for the benefit of whom?*. Accessed in 15th of March, on the website Academia.edu: https://www.academia.edu/26009728/Transforming_Rio_-_for_the_benefit_of_whom
- Goldblatt, D. (2016). *The Games. A global history of the Olympics*. W.W. Norton & Company. New York. ISBN: 978 039 329 2770
- Gomes, R.; Mancini, R. (n.d.). *Textos Midiáticos: uma introdução à semiótica discursiva*. Accessed in 12th of April, on the website <https://sites.google.com/site/profadrareginasouzagomes/pos-graduacao-1/aspetualizacao-no-discurso>
- Harvey, D. (1996). Do gerenciamento ao empresariamento: a transformação da administração urbana no capitalismo tardio. *Espaço e Debates*. nº 39. p. 48-64.
- Knupp, M.E.C.G. (2015). *Fundamentos do Turismo*. Intersaberes. Curitiba. ISBN: 978 85 443 0313 9
- Kotler, P; Gertner, D.; Rein, I. Haider, D; (2005). *Marketing de Lugares: como conquistar crescimento de longo prazo na America Latina e Caribe*. Pearson, Prentice Hall. São Paulo. ISBN: 978 85 7605 063 3
- _____; Haider, D.H.; Rein, I. (1994). *Marketing público: como atrair investimentos, empresas e turismo para cidades, regiões, estados e países*. Markron Books. São Paulo. ISBN: 978 85 7054 043 4
- _____; Armstrong, G. (2015). *Princípios de Marketing*. 15th edition, Pearson, Prentice Hall. São Paulo. ISBN: 978 85 4300 447 1
- _____; Keller, K.L. (2004). *Administração de Marketing*. 12th edition, Pearson, Prentice Hall. São Paulo. ISBN: 978 85 7605 001 8
- _____: Kartajaya, H.; Setiawan, I. (2010). *Marketing 3.0: as forças que estão definindo o marketing centrado no ser humano*. Editora Campus. Rio de Janeiro. ISBN: 978 85 3523 869 3
- Levitt, T. (1981) Marketing intangible product and product intangibles. *The Cornell HAR Quarterly*, ago.: 37-44.

- Lovelock, C; Wright, L. (2003). *Serviços, marketing e gestão*. Editora Saraiva. São Paulo. ISBN: 85 02 03278 X
- MacCannell, D. (1999). *The tourist: a new theory of the leisure class*. University of California Press. Los Angeles. ISBN: 978 0 520 21892 5
- Nogueira, M.A. de F. (2015) *Mobilidade em potência e discurso publicitário na sociedade contemporânea globalizada: Brasil, 1982-2014*. Ph. D. Thesis. Centro de Pesquisa e Documentação de História Contemporânea do Brasil (CPDOC), Fundação Getúlio Vargas, Rio de Janeiro, Brazil. 357p.
- _____; Di Cola, F.; (2016). *Rio de Janeiro: from Marvelous City to Olympic City. A hundred years of changes in the tourist gaze of the city*. Accessed in 15th of April 2017, on the website Academia.edu: https://www.academia.edu/29854994/Rio_de_Janeiro_from_Marvelous_City_to_Olympic_City_A_hundred_years_of_changes_in_the_tourist_gaze_of_the_city
- Preuss, H. (2004). *The economics of staging the Olympics. A comparison of the Games 1972-2008*. Cheltenham, Glos: Edward Elgar. ISBN: 978 1 84542 722 1
- _____. (2007). Signaling Growth. China's major benefit from staging the Olympics in Beijing 2008. *Harvard Asia Pacific Review*, 9(1), p. 41-45.
- _____. (2008). Aspectos sociais dos megaeventos esportivos. In RUBIO, K. (eds.) *Megaeventos esportivos, legado e responsabilidade social*. Casa do Psicólogo. São Paulo. ISBN: 978 85 7396 588 9
- _____. (2013). The Olympic Games: the winners and losers. In B.Houlihan (eds). *Sport & Society: a student introduction*. Sage Publications. London. ISBN: 978 141 292 136 7
- Rubio, K. (2008). *Megaeventos esportivos, legado e responsabilidade social*. Casa do Psicólogo. São Paulo. (eds.) ISBN: 978 85 7396 588 9
- _____. (2008b). Jogos Olímpicos, política e cultura. Qual o legado de Berlim, 1936? In Rubio, K. (eds.) *Megaeventos esportivos, legado e responsabilidade social*. Casa do Psicólogo. São Paulo. ISBN: 978 85 7396 588 9.
- _____; Mesquita, R.M. de. (2001). Olympic studies and olympism in the Brazilian and the international scenario. EDIPUCRS. Porto Alegre. ISBN: 978 85 397 0116 2
- Tambucci, P.L. (2008) Jogos Olímpicos: uma marca de apelo turístico. In RUBIO, K. (eds.) *Megaeventos esportivos, legado e responsabilidade social*. Casa do Psicólogo. São Paulo. ISBN: 978 85 7396 588 9
- Thompson, J.B. (2000). *Ideologia e cultura moderna: uma teoria social da mídia*. Editora Vozes. Petrópolis, RJ. ISBN: 85 326 1484 1
- Urry, J. (1995). *Consuming places*. Routledge. London. ISBN: 0 415 11310 5
- _____. (2001). *O olhar do turista: lazer e viagens nas sociedades contemporâneas*. Studio Nobel: SESC. São Paulo. ISBN: 85 85445 53 X
- _____. Larsen, J. (2011). *The Tourist Gaze 3.0*. Sage Publications Ltd. London. ISBN: 9781 84920 376 0
- Zeithaml, V.A.; Bitner, M.J.; Gremler, D.D. (2011), *Marketing de Serviços: a empresa com foco no cliente*. Bookman Companhia Editora. Porto Alegre. ISBN: 978 0 07 338093 3

Exhibition Guide

Rio de Janeiro como destino - Cartazes de viagem, 1910-1970, Coleção Berardo. Museu Histórico Nacional. Rio de Janeiro. 64p.

AUDIOVISUAL REFERENCES

- Rio 2016 Olympics bid video. Accessed in 14th of April 2017. <https://youtu.be/AGY7MpC7x-4>
- Beijing 2008 Olympics bid video. Accessed in 14th of April 2017, https://youtu.be/OHRu_i6TANQ
- Rio 2016 Opening Ceremony. Accessed in 14th of April 2017. https://www.youtube.com/watch?v=N_qXm9HY9Rob
- Beijing 2008 Opening Ceremony. Accessed in 14th of April 2017. <https://www.youtube.com/watch?v=cEJg6SX-UZM>

DIGITAL REFERENCES

- <http://www.businessinsider.com/rio-olympic-venues-are-abandoned-just-6-months-after-games-2017-2>. Accessed 1st of March 2017.
- <http://oglobodigital.oglobo.globo.com/epaper/viewer.aspx>. Accessed 1st of March 2017.
- <http://www.museuhistoriconacional.com.br/mh-2015-009.htm>. Accessed in 5th of April 2017.
- <http://en.museuberardo.pt/>. Accessed in 5th of April 2017.

<https://www.theguardian.com/sport/blog/2015/aug/22/birds-nest-empty-monument-china-magnificence>. Accessed in 15th of April 2017.

<http://exame.abril.com.br/marketing/rio-2016-nao-patrocinadores-proibidos-de-usar-17-palavras/>. Accessed in 27th of April 2017.

SERVICE CULTURE AS A KEY DETERMINANT IN SERVICES MARKETING

João Freixo Pereira

CIEO - Research Centre for Spatial and Organizational Dynamics, University of Algarve;

Universidade Aberta

(pereirajp.consulting@gmail.com)

ABSTRACT

As both a single and augmented product offering, services have become, in recent times, a predominant activity in today's modern economies. Due to the intangible nature found in most services, the physical features upon which differentiation can be perceived, and customer behaviour influenced, tend to be rare or non-existent. Service differentiation is in its essence very attitudinal and "people" related. It relies to a great extent on the type of relationship that is established, and the way the provider interacts with the customer during the service-delivery process.

Culture is often found to be responsible for shaping people's attitudes and beliefs. It is integrative in nature, in the sense of bringing people together towards a common purpose. Based on exploratory research involving a literature search, the aim of this work was twofold: (a) to put into perspective the importance and determining role of culture in a service marketing context; (b) to encourage the acceptance and development of a service culture among service organizations.

Of particular relevance drawn from the findings of the research, is the idea that the development of a strong service culture is critical to the marketing of services and the success of organizations operating in this sector.

Keywords: Service Culture, Services, Services Marketing.

JEL Classification: M31

1. INTRODUCTION

Services are at the root of the tertiarization of the economy and are becoming increasingly less peripheral in relation to goods (Gummeson, 1994). As both single and augmented product offering, they are at the core of a growing industry in which the paradigm of market supply has shifted from goods to intangible products.

In spite of the continuous technology infusion in the service development and delivery process, services are still a "people-intensive" industry, which is both attitudinal and relational. Since most services depend on personal contact and interaction, it is the nature of these interactions that strongly influence the customer's perception of service quality (Hartline and Ferrel, 1996).

Our assertion of culture based on a systematic review of the literature is that it reflects the development of jointly constructed understanding of experienced communal adversities or problems, together with values, principles and behavior that lead to adaptive response and group integration. This adaptive and integrative nature of culture seems to be present in all its various forms, and is of vital importance for building social construction and collective identity. In this sense, culture is a means by which an individual is accepted as a natural member, or part of, a specific group, and a common way of perceiving and tackling a communally experienced problem or adversity.

Organisational culture is one of the many forms of cultural manifestation, expressed in the thoughts, intentions, actions and interpretations of the members of an organisation (Hallet, 2003). Surfacing from the need to commit the members of an organization, culture should be developed within this context to support continuous improvement and the way employees perform their tasks, allowing them in return to become more conscious of the importance of issues such as quality (Ojo, 2009). An issue that is clearly of high relevance in the service industry.

The relation between culture and organisational performance is evidenced in the literature. Peters and Waterman (1987) argue that companies that reach a level of excellence tend to present strong cultures. In fact, several studies have corroborated the influence of culture on behaviors and attitudes of individuals within the organisation (Hofstede, 1980; Ralston *et al.*, 2008). Therefore, it is imperative for management to acknowledge the importance of culture within an organisational context, and to communicate it across the organisation so that its members may assimilate it and, consequently, identify themselves with the concomitant underlying values, norms and artefacts.

Far from being merely the product of joint learning and group experience, organisational culture is equally understood by some theorists as what the organisation is (Smircich, 1983). This comprehension of culture within an organisational context, implies, simultaneously, that an organisation, besides having a specific culture, is itself one.

Culture is known to be of fundamental importance in service marketing, and is often found to be responsible for shaping people's attitudes and beliefs towards a common purpose. Service marketing is customer and service oriented, relying on an attitude and behaviour based on a specific culture that places the client in the centre of the organization.

Drawing on the main findings in the literature, this paper seeks to showcase the importance and determining role of culture in a service marketing context. It puts into perspective how culture can shape and direct behaviour, and serve as

a guide for meeting customer expectation during service delivery. While highlighting the determining role of culture, the paper also intends to encourage the acceptance and development of a true service culture among service organizations.

2. DEFINITIONS

2.1 Service

Services are not physical objects, yet in many circumstances they depend on these objects for their performance. The physical infrastructure and technical equipment that an Internet provider places at our disposal is not a service, but the right to use this infrastructure and equipment to access the Internet to our benefit in exchange for a certain fee is a service. Described as a complex phenomenon (Grönroos, 2007), the term service has been subject to much debate in the literature in search of a common definition and understanding. Judd (1964) is said to have paved the road for the contemporary approach to the definition and delineation of services. He introduced into the debate of service definition “illustrative definitions”, “definitions by listing” and himself recommended the return to definition “by exclusion (from products).

Services have been defined differently according to different authors. Most definitions have conceptually gravitated around two ideas that have been central to the definition of services. One of these ideas is that services have no physical form, and as such tend to be perceived as acts, deeds, performance or processes. The other is that services are subject to a type of market transaction in which the main objective is other than the transfer of ownership of a physical good.

Rathmell refers to services as a “deed, a performance, an effort” (1966: 88). According to Blois (1974) a service is an activity offered for sale that yields benefit and satisfaction without leading to physical exchange in the form of goods. Claude and Horne (1992) consider services to be intangible and abstract, unlike goods that are by nature tangible and concrete. Zeithaml *et al.* (1985) claim that intangibility is the fundamental difference attributed to services that is universally cited by scholars. These authors have identified four distinct characteristics in a service: intangibility, heterogeneity, inseparability, and perishability. These characteristics have also helped to support the argument that services are different in nature from goods. Recognizing that any definition is inherently restrictive, Payne (1993) defines a service as an activity which has some element of intangibility associated with it, which involves some interaction with customers or with property in their possession, and does not result in a transfer of ownership. By introducing the idea that services are activities that involve interaction and non-transferable ownership of the acquired good, the author extends the concept and understanding of services. This perspective of services also seems to be consistent with the widespread view that a service is consumed and not owned.

Kotler (1997; Kotler *et al.*, 2016) reinforces the ownership argument by referring to a service as any activity or benefit offered that is essentially intangible in nature and does not result in the ownership of anything. Intangibility and ownership as a key characteristic of services raises a fundamental issue in services marketing. This issue which poses equally a marketing challenge is how to differentiate and perpetuate the sales of something that is physically unavailable?

Lovelock contends that “it is not always obvious what the service is and what it does for the customer because services are ephemeral” (1983: 12). According to Lovelock (1983), by identifying the target of the service and then examining how it is modified or changed by receipt of the service act, one can then develop a better understanding of the nature of the service product and the benefits that it offers. Grönroos refers to a service as a complicated phenomenon and defines it “as a process consisting of a series of more or less intangible activities that normally, but not necessarily always, take place in interactions between the customer and service employees and/or, physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems” (2007: 52). The implication of the author’s definition to the understanding of services is twofold. First, by referring to services as activities that are more or less intangible it seems to reduce the importance of intangibility as a key defining characteristic of services. In fact, Grönroos (2007) mentions three basic, and more or less generic, characteristics of services: (i) processes consisting of activities or a series of activities, (ii) the fact that they can be produced and consumed simultaneously, (iii) the customer participates as a co-producer in the service production process, at least to some extent. Second, the definition introduces the idea that a service is not an object of transaction, but rather a process aimed at providing solutions.

The idea that services involve interaction between provider and client in the form of solutions for specific problems, is of importance to the understanding of services. The fact that provider-customer interactions in a service context are very much attitudinal and behavioural, may serve as an explanation and supporting argument for the importance of culture, particularly since it is known to influence the attitudes and behaviours of individuals to perform in a certain manner.

The dichotomy tangible vs intangible seems to be inadequate for defining services (Grove *et al.*, 2003; Fisk *et al.*, 2008). This characteristic-based definition of services has also been refuted by authors like Wright (1995), Lovelock, Gummesson (2004) and Vargo and Lusch (2004a), who do not view these general characteristics (i.e. intangibility, perishability, heterogeneity) as being sufficient to differentiate services from goods. According to Moeller (2010), the limitation of the characteristic based definition can be explained by the change in focus of service marketing and the enormous advances in the development of information and communication technologies.

Supposedly, these defining characteristics would have been more consensual in a service marketing context in which the focus was predominantly on the “people” factor rather than technology. Apparently, as a result of a strong increase of technology in services, the theoretical construction around the characteristics of services has proven to be insufficient, and eventually has succumbed in favour of other ideas (Beaven and Scotti, 1990; Grove *et al.*, 2003). In spite of the controversy around the adequateness of these four service defining characteristics, Moeller advocates that it is not the “characteristics that are unsuitable, but their point of reference: services as a single entity” (2010: 360), and as a result proposes two alternative solutions: (i) find and establish new characteristic(s) and abandon the four established ones; (ii) take a more trenchant look at these characteristics so that a framework is developed to identify situations in which they are applicable.

Presenting a different conceptual point of view and approach to the study and understanding of services, Edvardsson, Gustafsson and Roos (2005) argue that describing and understanding service always relates to a perspective. According to these authors the “service definitions are all at an abstract level and may be operationalized and interpreted in a number of different ways”. Therefore, these various definitions have different meanings depending on whether they are viewed as an objective way of portraying services or as a way of constructing them in terms of value-creation. These different perspectives lead to distinct approaches in the understanding of services. While in the first approach services are perceived as activities object of exchange, in the latter service is used as a perspective on value creation. Rather than viewing services as market offerings, the solution, according to Edvardsson *et al.* (2005), is to focus on defining value-creation through service, and to emphasize value-in-use as defined and experienced by customers. This approach is consistent with the author’s interpretation of definitions as attempts to construct a way of describing services with a clear focus on what the service does for the customer instead of what it is in terms of its core characteristics or product categories.

Vargo and Lusch (2004b) state that differentiating services from goods should be abandoned and instead replaced with a strategy of understanding how these two are related. These authors view service as the common denominator in exchange and not some special form of exchange.

2.2 Culture

Culture is often found to be responsible for shaping people’s attitudes and beliefs. It is integrative in nature in the sense of bringing people together towards a common purpose. Defining culture seems to be a difficult task as it relates to a multidimensional phenomenon, encompassing multiple constituents (Chiu and Hong, 2006) - material culture, subjective culture and social culture – and definitions. However, the literature is rich in definitions and theoretical approaches for the study and comprehension of culture in its various forms and dimensions. Hence, an attempt to provide herein a thorough and systematic review of the various definitions and theoretical frameworks of culture, would prove to be an arduous and time consuming effort. Instead, a brief review is presented of some of the many definitions available in the literature.

Hofstede’s points out that culture is not a characteristic of individuals and defines the concept as the “collective programming of the mind that distinguishes the members of one group or category of people from others” (1980: 43). Sharing a similar view of culture as a collective phenomenon, rather than a characteristic of an individual, Schein (1984) refers to it as a product of joint learning. In Kroeber and Kluckhohn’s work (1952) we find the idea of culture as an abstract description of trends toward uniformity in the words, acts, and artifacts of human groups. The authors identified 164 definitions of culture which they organized into various categories (i) Descriptive: broad definitions based on content; (ii) Historical: emphasis on social heritage or tradition; (iii) Normative: emphasis on rule or way, value and behaviour; Psychological: emphasis on adjustment - culture as a problem solving device - learning and habit; (iv) Structural: emphasis on the patterning or organization of culture; (v) Genetic: emphasis on culture as a product or artefact and ideas; (vi) Incomplete definitions.

Malinowski refers to culture as the “widest context of human behaviour, the integral whole consisting of implements and consumers’ goods, of constitutional charters for the various social groupings, of human ideas and crafts, beliefs and customs” (1960:5, 36). The idea of culture as human behaviour is also mentioned by Horton and Hunt who refer to this phenomenon as “everything that is socially learned and shared by the members of a society;... a system of behaviour shared by members of a society” (1984: 545)

Barnlund (1989) perceives culture as a means by which each new generation acquires the capacity to bridge the distance that separates one life from another. Culture is also viewed as the beliefs and values shared by a given society at a given time (Ralston *et al.*, 1993). Another way of viewing culture is as a social mechanism that is capable of shaping and guiding people’s thoughts and values and exerting control over their behaviour (Pizam *et al.*, 1997).

Despite the multiplicity of definitions of culture, it seems that certain aspects tend to stem as common in all these various interpretations. First, culture is understood as a social construction and a collective phenomenon. It is shared with individuals of a specific group, living within the same social environment where it was acquired, learnt and passed to the next generation or new members. Second, culture has an influence on how people live their lives and view the world and the group with whom they share their existence as human and social beings. Third, culture is integrative in nature and instrumental to the cohesion of the group, by conferring the feeling of belonging and guiding social and group behaviour. Our view of culture is that it provides meaning to social existence and is a form of self and group orientation.

2.3 Organisational culture

Organisational culture is found to be closely related to shared values and beliefs that are capable of influencing behaviour in certain activities. Schein (1984) defines organisational culture as a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. Gagliardi (1986) defines organisational culture as a coherent system of assumptions and basic values. Gibson and Hodgetts (1986) refer to organisational culture as the norms, attitudes, values, beliefs, and philosophies of an enterprise. A similar line of thought is found in Barney (1986), who conceptualises organisational culture as a complex set of values, beliefs, assumptions, and symbols that define the way in which a firm conducts its business. As defined by the author culture is something that confers orientation and determines how the organisation is to interact. Bilhim (2001) views culture in an organisational context as a system of shared ideas and meanings, by which the company assumes expressive forms and manifestations of human consciousness.

Organizational culture is also known to have an integrative and unifying effect, an idea that is reflected in Dowling (1993: 103) and who refers to it as the “glue which holds many organisations together”.

A more broader perspective of organisational culture is found in Hatch and Shultz (1997), involving all organisational members and which is originated and developed at all hierarchical levels, and founded on a broad-based history that is realised in the material aspects (or artefacts) of the organization (e.g. its name, products, buildings, logos and other symbols, including its top managers). To these authors the concept of culture within an organisational context includes material aspects central to the marketing-based concept of corporate identity. According to this perspective, culture plays a role in organisational identity formation and in the influence of organisational image. This seems to be an important aspect from both a service culture and marketing viewpoint. One may assume that a strong organisational identity and image rooted in a strong service culture shared by everyone in the organization is of extreme importance for the successful marketing of a service. Practice as well as sharing common beliefs and values towards superior service delivery and customer satisfaction, will surely grant the organization a strong image in the marketplace.

Another interesting view of particular importance to the study of culture in an organisational context is provided by Smircich (1983), who tends to see it not only as a product of one group's learning and shared experience, something it holds, but what the organisation is itself, a culture. This idea of an organisation having and being simultaneously a culture is equally of importance to the marketing of services. Our understanding is that a service organisation should combine these two elements. Having a service culture implies holding a set of core values and beliefs that guides and helps the organisation to be service driven in the process of service production and delivery. Whereas being a service culture is a form of identity that confers meaning and common understanding of what is to serve. From our perspective both views are complementary, yet perhaps while having a culture is more action driven, being one is more image driven and aspirational.

3. THE RELATION BETWEEN CULTURE AND ORGANIZATION

According to Martins and Terblanche, (2003), organisational culture forms an integral part of the general functioning of an organisation. The relation between culture and organizational structure and performance has been recurrently studied.

Closely tied to values and beliefs that people share on how to behave in certain activities, organisational culture can be a problem that businesses may need to deal with whenever these shared values are not aligned with what they need to increase their effectiveness, or may even limit the organization's ability to adapt to the changes in the environment (Simpson *et al.*, 2001). According to Peters and Waterman (1982), firms that reach levels of excellence are marked by strong cultures, and are referred to as examples of excellent management. Successful companies have probably built their success on their managerial values and beliefs embodied in their organisational cultures.

This form of culture should be developed to support continuous improvement and the way employees perform their work, allowing them to become more aware of the quality issue (Ojo, 2009). Kotter (2012) recognises the potential in organisational culture to enhance organizational performance.

A relation has also been established between organisational culture and competitive advantage. In fact, a firm's culture can provide sustained competitive advantage, and by implication become a source of sustained superior financial performance (Barney, 1986; Zheng, 2010). However, for a firm's culture to become a source of sustained competitive advantage it must meet the following three conditions (Barney, 1986, 1991): it must be valuable, rare and imperfectly imitable. Culture is also known to have significant impact on a firm's long-term economic performance (Kotter and Heskett, 1992).

Organisational culture and marketing performance seem to be related too. Deshpande and Webster (1989) point out that the success of any international marketing strategy depends not only on the extent of its conformity to customer cultural norms but also on the conformity with the values and beliefs of employees in various host countries. Of relevance to marketing, and particularly to services marketing, is the idea that customer orientation is part of an overall, but much more fundamental, corporate culture (Deshpande *et al.*, 1993).

In their study involving 388 companies, Sin and Tse (2000) found a positive relation between culture and marketing effectiveness. In their study there is evidence showing that organizational cultural values affect both directly and indirectly the performance of the company through its impact on marketing effectiveness.

According to Sorenson (2002), strong organisational cultures have a high level of commitment to the way in which they understand the marketplace and the world. The author also advocates that the key consequences of a strong corporate culture is that it increases behavioural consistency across individuals in a firm (Sorenson, 2002). This perception seems to be relevant in the case of services marketing. Clearly, service quality depends at large on the consistent behaviour of the service provider. The more heterogeneous the service is in relation to the firm's established standards and patterns of service production and delivery, perhaps greater will then be the variability of the level of service quality that is delivered.

Furthermore, organisational culture also seems to be related to creativity and innovation within the organisation. It affects the extent to which creative solutions are encouraged, supported and implemented (Martins and Terblanche, 2003). Lock and Kirkpatrick (1995) mention that a culture that supports creativity encourages innovative ways of representing problems and finding solutions, and favours innovators as models to be emulated. Service providers need to be not only effective and diligent in delivering high quality services, but equally innovative in the solutions they provide and in the way they approach their clients.

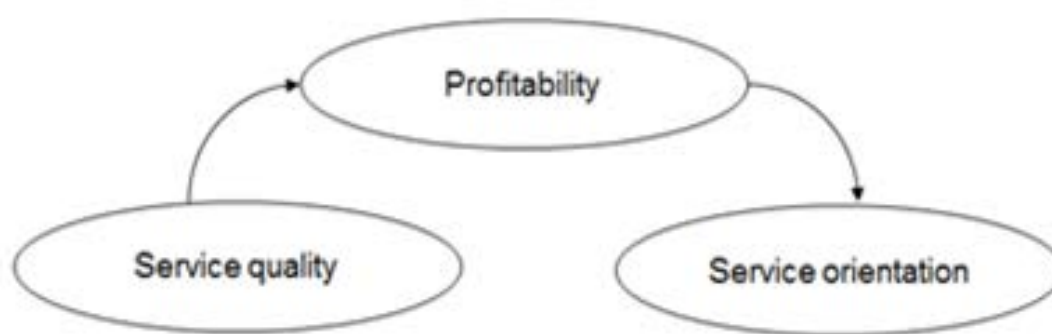
4. SERVICE CULTURE, CONCEPTUALIZATION AND ROLE IN SERVICES MARKETING

Technology has always been the key driver for the development of markets and the economy in general. With the increasing infusion of technology in economic activity, traditional market structures and paradigms have become obsolete in light of the changes that technology has introduced in consumers' lifestyles and economic behaviour. The demand and supply side of markets have become more connected and interactive, and as a result the human and relational factors have become preponderant in all market activities engaged between the two sides. The transaction is no longer per se the sole purpose of businesses and marketing activity, but rather the perpetuation of businesses through the development of strong relationships that bind the customer to the business. This is clearly evidenced in both the marketing of goods and services. Presently, customers expect better, faster, less costly and more customised services. These new customer expectations tell us what it means to sell a service today, and the role and importance between the "people factor", relationship building and culture in a service marketing context. In light of these new customer expectations and their role in the marketing of services, it is important to refer to Schneider and Bowen (1995) who argue that in order for an organisation to provide a quality service that is above the expectations of the clients, it must be able to comply with five key principles:

- The client is an integral part of the company, he should never be separated from the set of thoughts about what the business and how it is to be managed;
- Individuals should be selected, trained and rewarded in accordance to the quality of the service provided, bearing in mind that it is the customer that determines the quality according to their expectations;
- All employees should be given special attention regardless of being directly involved or not in the contact with the customer. This implies that poor service quality is something that in the client's mind is attributable to the organization and not just to the individual who renders it;
- The organization as a whole should follow the same customer orientation;
- The four previous recommendations must be properly coordinated in order to promote a genuine service culture.

This last principle leads to the key issue that is central to the purpose of this paper and the debate within it, service culture as a key determinant in services marketing. There is a general consensus in the marketing literature towards the idea that a strong service culture can contribute to the success of a company due to its association to factors such as increased productivity, higher employee retention rates and higher employee morale. Thus, a fundamental question is what is meant by service culture and how should it be conceptualised? According to Grönroos (1990) service culture is "a culture where an appreciation for good service exists, and where giving good service to internal as well as ultimate, external customers is considered by everyone a natural way of life and one of the most important values. According to the same author a service culture implies that the organization's employees are strongly service-focused. This leads to the conclusion that a service culture is intrinsically related to service-orientation, meaning that service-oriented companies tend to have a service culture. So service orientation as a service culture characteristic can be best described as shared values and attitudes that influence people in an organization so that interactions between them internally and with customers are perceived favourably (Grönroos, 2007). Consequently, an important ascertainment deriving from this key characteristic is that it can improve service quality as perceived by customers, and by doing so will also affect profitability positively (Figure 1).

Figure 1: Effects of a service orientation as perceived by Grönroos (2007)



(Source: Grönroos 2007)

The assertion that service orientation, and ultimately service culture, can lead to profitability, seems to be consistent with the idea found in the literature that culture has economic value for a firm.

The nature and characteristics of services demand a service oriented approach in their production and delivery. This is due to the fact that, unlike a normal good, the production of a service cannot be subject to the same level of standardization as in the production of the latter. Instead, the production process relies essentially on the provider-customer interaction during the service encounter, which in return is more attitudinally and behaviourally driven by a pre-existing set of values and beliefs. Besides, service encounters tend to be contextual, varying according to the situation that both parties are experiencing at the moment. Thus, a service-oriented culture will allow the employee to respond positively to unexpected situations by providing orientation towards customer expectations and the ability to adapt to the situation at hand.

The understanding of service culture as asserted by Grönroos (1990) has been discussed and accepted by scholars (Zeithaml and Bitner, 2000) as a result of the implications of this definition on the behaviour of the members of an organisation. First, it highlights the fact that a good service should not only be valued by the company but equally implicit and rooted in the behaviour of its members. Second, the complementary view that the concept should be extended to both the internal and external boundaries of the organization is of fundamental importance. For obvious reasons service culture implies providing a service of excellence to both internal and external customers. Treating the employee as a customer is a reflection of a true service culture that is consistent with the concept of internal marketing too. Therefore, the idea that employees are also internal customers (Cannon, 2002), with their own problems, wants and needs (Varoglu and Esser, 2006) is of significant relevance to the construct of service culture. Besides, by satisfying the internal needs of its employees the organization will be in a better position to meet the needs of external customers (Seibert and Lingle, 2007). Finally, the last implication is the possibility of the perception of a good service as a natural way of life for the organization, as a key attribute of its service culture, to be incorporated as a guiding principle or fundamental goal. Of equal relevance is the idea that a strong and dynamic service culture is important for market and business success (Edvardsson and Enquist, 2010). The relation between service culture, service orientation and service quality showcases the importance of this construct towards service marketing performance. As some studies have demonstrated, service orientation, coupled with the ability to provide quality services, can affect customer satisfaction and purchase intent (Bitner, 1990; Cronin and Taylor, 1992), thus service culture is of fundamental importance in service marketing management.

The importance of service culture to the marketing of services suggests that organizations should develop metrics and models for identifying and assessing this phenomenon. In fact, measuring marketing-related phenomenon and the development of measurement instruments, in response to particular questions, appears to be a documented practice in the marketing literature (Stewart, 1993). The reason for applying metrics and models for assessing culture in this particular context is based on the assumption that such practice confers the possibility for organizations to understand the intensity of their service culture and how it is perceived both internally and externally. Furthermore, this author also corroborates Schneider and Bowden's (1995) perspective regarding the need to identify the factors that can affect the development of a strong service culture. Finally, as referred by Guiso *et al.* (2013), promoting top customer service as a value facilitates its establishment as a norm inside the firm. Therefore, one may infer that an organisational culture that encompasses within its core values customer service orientation and excellence as a standard norm of conduct, will most probably be of significant relevance to service marketing performance and outcome.

5. FINAL CONSIDERATIONS

The fact that services have become a predominant economic activity at both a national and global level, should inevitably lead to the discussion on whether most organization truly share a form of culture and behavior that is consistent with the requirements and needs of the service sector. It is this author's view that a key requirement in service marketing is the need to interiorize that, by depending essentially on the interaction between provider and customer, services lack specific attitudes and behaviours that should be consistent with a type of organizational culture based on the primacy of the client. A culture that is an essential element for the competitiveness and differentiation of service companies and that looks upon the client as the center of the organization. .

Of not less importance is the lack of consensus found in the literature regarding the concept of service. The concept is important to understand this specific industry and for the strategic marketing management of services. In fact, despite the diversity of definitions found in the literature, not all prove to be consensual and satisfactory for the study and understanding of services. Nevertheless, there are certain aspects that seem common in most definitions found in the literature, based on which one may draw upon the idea that a service is not only an activity for the benefit of others but also the bedrock of the customer's buying process and a strategic element of great importance to the organization. Thus, it is this author's perception that the meaning and definition of service is of dual nature. A service is both a tradable activity/product and a perspective or orientation envisioned and pursued from a strategic viewpoint as a means to perpetuate sales and customer loyalty.

There is a general acceptance in the literature of the idea that culture in an organizational context is something strongly linked to the values and beliefs shared by the members of an organization, which provide a common orientation on how they should behave and perform in the presence of certain activities or situations. As a set of learned values and beliefs, culture has thus become of vital importance not only to increase organization efficacy, by reflecting a way and knowledge on how to solve a particular problem, but also as a means of differentiation, acquired through the distinctive way the problem is solved. Therefore, an organizational culture should be developed to support continuous improvement and the way the members of the organization perform their work, making them in return more aware of quality issues (Ojo, 2009). Cross-cultural studies in the area of Marketing have also suggested that culture is important for changing individuals' attitudes, values and preferences, demonstrating that cultural differences lead to different customer perceptions of service quality (Mattila, 1999). As an implication of this assumption, culture must be duly taken into account in services that involve a high degree of human contact and interaction. These types of services must be driven by a strong service culture that is perceived as such by all the members of the organisation. In fact, there is consensus in the literature that a company's success may be linked to a strong service culture, especially pertaining to factors such as increased productivity, higher employee retention rates, and higher morale.

Drawing on the main findings in the literature, one may conclude that an organisation has a service culture when the culture it holds is appropriate to the marketing of services and to this industry. This implies having a culture that is service

oriented, which is itself customer-centric too. Therefore, a service culture is “a culture where an appreciation for good service exists, and where giving good service to internal as well as ultimate, external customers is considered by everyone a natural way of life and one of the most important values (Grönroos, 1990, 2007). According to this perspective, service culture can be interpreted as a practice of a certain organisation that reflects the way it treats and serves its clients. In this context culture is a form of commitment that the organisation holds towards its employees and clients, along the intention to a service of quality and excellence (Voon *et al.*, 2009).

Lastly, considering that in a service encounter the encountered situations are sometimes distinct or even unexpected, it is of great interest to identify and assess the organisation's service culture as a means for its members to respond and adapt promptly. Hence, a service culture should be looked at from both the client and the provider's side. The relevance and aim of this approach from a services marketing viewpoint is twofold. First, it is implicit that in order for an organisation to determine whether such a culture exists it first needs to know how it is perceived by its members. Second, it is equally important to comprehend how the client perceives the organization, being itself a culture, that holds certain values and beliefs that are responsible for certain behaviours and attitudes than can determine the quality and level of service delivered. Finally, by combining these two perspectives, the organisation will be able to assess whether what it defines for itself as a service culture is consistent to what it practices both internally and externally.

REFERENCES

- Barney, J. (1986). Organizational culture: Can it be a source of competitive advantage? *The academy of Management Review*, 11(3): 656-665.
- Barney, J. (1991). Firms resources and sustained competitive advantage. *Journal of Management*, 17(1):99-120.
- Beaven, M. H., and Scotti, D. J. (1990). Service-oriented thinking and its implications for the marketing mix. *Journal of services marketing*, 4(4): 5-19.
- Bitner, M. J. (1990). Evaluating service encounters: the effects of physical surroundings and employee responses. *The Journal of Marketing*. 54(2): 69-82.
- Blois, K. J. (1974). The marketing of services: an approach. *European Journal of Marketing*, 8(2): 137-145.
- Chiu, C.Y. and Hong, Y.Y (2013). *Social Psychology of Culture*. Routledge. NY.
- Cannon, D. F. (2002). Expanding paradigms in providing internal service. *Managing Service Quality: An International Journal*, 12(2): 87-99.
- Cronin Jr, J. J., and Taylor, S. A. (1992). Measuring service quality: a reexamination and extension. *The Journal of Marketing*. 56(3) 55-68.
- Deshpande, R., and Webster Jr, F. E. (1989). Organizational culture and marketing: defining the research agenda. *The Journal of Marketing*. 53(1): 3-15.
- Deshpandé, R., Farley, J. U., and Webster Jr, F. E. (1993). Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis. *The Journal of Marketing*. 57(1): 23-37.
- Dowling, G. (1993). Developing your company image into a corporate asset. *Long Range Planning*, 26(2): 101-109.
- Edvardsson, B., Gustafsson, A., and Roos, I. (2005). Service portraits in service research: a critical review. *International Journal of service Industry management*, 16(1): 107-121.
- Fisk, R., Grove, S., and John, J. (2007). *Interactive Services Marketing*. Cengage Learning.
- Gagliardi, P. (1986). The creation and change of organizational cultures: A conceptual framework. *Organization Studies* 7:117-34.
- George, J. M. (2007). 9 Creativity in Organizations. *The academy of management annals*, 1(1): 439-477.
- Gibson, J. W., and Hodgetts, R. M. (1986). *Organizational communication: a managerial perspective*. Academic Press College Division.
- Grönroos, C. (1990). *Service Management and Marketing: Managing the Moments of Truth in Service Competition*. Lexington Books.
- Grönroos, C. (2007). *Service Management And Marketing: Customer Management In Service Competition*. 3rd edition, John Wiley & Sons. Chichester.
- Grove, S. J., Fisk, R. P., and John, J. (2003). The future of services marketing: forecasts from ten services experts. *Journal of services marketing*, 17(2): 107-121.
- Gummesson, E. (1994). Service management: an evaluation and the future. *International Journal of service Industry management*, 5(1): 77-96.
- Guiso, L., Sapienza, P. and Zingales, L. (2013). *The value of corporate culture*. Accessed in 29th April, 2017, on the Web site of: National Bureau of Economic Research: <http://www.nber.org/papers/w19557.pdf>
- Hallett, T. (2003). Symbolic power and organizational culture. *Sociological Theory*, 21(2): 128-149.

- Hartline, M. D., and Ferrell, O. C. (1996). The management of customer-contact service employees: an empirical investigation. *The Journal of Marketing*, 60(4):52-70.
- Hatch, M. J. and Schultz, M. (1997). Relations between organizational culture, identity and image. *European Journal of Marketing*, 31(5/6): 356-365.
- Hofstede, G. (1980). Motivation, leadership, and organization: do American theories apply abroad? *Organizational dynamics*, 9(1): 42-63.
- Horton, P. B., Cohen, B. J., and Hunt, C. L. (1984). *Sociology*. 6th edition, McGraw-Hill. NY Education.
- J. Seibert, J. L. (2007). Internal customer service: Has it improved. . *Quality Progress*, 40(3): 5.
- Judd, R. C. (1964). The case for redefining services. *Journal of marketing*, 28(1), 58-59.
- Kotler, P. (1997). *Marketing management: Analysis, planning implementation and control*. 9th edition, Prentice Hall.
- Kotler, P. and Keller, K. L. (2016). *Marketing management*. 15th edition, Pearson.
- Kotter, J.P. and Heskett, J. L. (1992). *Corporate culture and performance*. Free Press. NY.
- Lock, E. A., and A. S. Kirkpatrick. (1995). Promoting creativity in Organizations. In: C.M. Ford and D. A. Gioia (eds.), *Creative action in Organizations: Ivory Tower Visions and Real World Voices*, Sage: London.
- Lovelock, C. H. (1983). Classifying services to gain strategic marketing insights. *The Journal of Marketing*, 47(3):9-20.
- Malinowski, B. (1960). *A scientific theory of culture and other essays*. Oxford University Press. NY.
- Martin Jr, C. R., and Horne, D. A. (1992). Restructuring towards a service orientation: the strategic challenges. *International Journal of service Industry management*, 3(1): 25-38.
- Martins, E., and Terblanche, F. (2003). Building organisational culture that stimulates creativity and innovation. *European journal of innovation management*, 6(1): 64-74.
- Mattila, A. S. (1999). The role of culture in the service evaluation process. *Journal of service research*, 1(3): 250-261.
- Moeller, S. (2010). Characteristics of services—a new approach uncovers their value. *Journal of services marketing*, 24(5): 359-368.
- Ojo, O. (2009). Impact assessment of corporate culture on employee job performance. *Business Intelligence Journal*, 2(2): 388-397.
- Payne, A. (1993). *The essence of service marketing*. Prentice Hall. Hertfordshire.
- Pizam, A., Pine, R., Mok, C., and Shin, J. Y. (1997). Nationality vs industry cultures: which has a greater effect on managerial behavior? *International journal of hospitality Management*, 16(2): 127-145.
- Ralston, D. A., Holt, D. H., Terpstra, R. H., and Kai-Cheng, Y. (2008). The impact of national culture and economic ideology on managerial work values: A study of the United States, Russia, Japan, and China. *Journal of International Business Studies*, 39(1): 8-26.
- Rathmell, J. M. (1966). What is meant by services? *The Journal of Marketing*, 32-36.
- Schein, E. H. (1984). Coming to a new awareness of organizational culture. *Sloan management review*, 25(2): 3-16.
- Schneider, B., and Bowen, D. E. (1995). *Winning the Service Game*. Harvard Business School Press.
- Simpson, S., and Cacioppe, R. (2001). Unwritten ground rules: transforming organization culture to achieve key business objectives and outstanding customer service. *Leadership and Organization Development Journal*, 22(8): 394-401.
- Sin, L., and Tse, A. (2000). How does marketing effectiveness mediate the effect of organizational culture on business performance? The case of a service firm. *Journal of Services Marketing*, 14(4): 295-309.
- Smircich, L. (1983). Concepts of culture and organizational analysis. *Administrative science quarterly*, 28(3):339-358.
- Sorensen, J. (2002). The strength of corporate culture and the reliability of firm performance. *Administrative Science Quarterly*, 47: 70-91.
- Stewart, D. W. (1993). New Books in review: handbook of marketing scales, multi-Item measures for marketing and consumer behavior research. *Journal of Marketing Research*, 30(4): 525-527.
- Thomas J. Peters, R. H. W. (1987). *In Search of excellence* (2nd ed.). Lisboa: D. Quixote.
- Untereiner, W., Kroeber, A. L., Meyer, A. G., and Kluckhohn, C. K. M. (1952). *Culture, a Critical Review of Concepts and Definitions*, by A.L. Kroeber and Clyde Kluckhohn. With the Assistance of Wayne Untereiner. Appendices by Alfred G. Meyer. Mass.
- Vargo, S. L., and Lusch, R. F. (2004). The four service marketing myths: remnants of a goods-based, manufacturing model. *Journal of service research*, 6(4): 324-335.

- Varoglu, D., and Eser, Z. (2006). How service employees can be treated as internal customers in hospitality industry. *The Business Review*. 5(2): 30-35.
- Voon, B.-H., Hamali, J., and Tangkau, J. (2009). Linking service climate to organisational performance: Evidence from Sarawak. *International Journal of Business and Society*, 10(1): 18.
- Wright, L. K. (1995). *Avoiding services marketing myopia*. In Glynn, J.W. and Barnes, J.G. (Eds), *Understanding Service Management: Integrating Marketing, Organisational Behavior, Operations and Human Resource Management*, Wiley, Chichester.
- Zeithaml, V. A., Parasuraman, A., and Berry, L. L. (1985). Problems and strategies in services marketing. *The Journal of Marketing*. 49(2):33-46.
- Zeithaml, V. A., Parasuraman, A., Malhotra, A., and Institute, M. S. (2000). *A conceptual framework for understanding e-service quality: implications for future research and managerial practice*. Marketing Science Institute.
- Zheng, W., Yang, B., and McLean, G. N. (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business research*. 63(7): 763-771.

TRANSFORMAÇÕES URBANAS EM SANTOS SP BRASIL: TURISMO COMO UMA ALTERNATIVA PARA PROMOVER O BEM ESTAR

Daniela Ferreira Flores Longato
Centro Universitário Senac
(d.daniela.flores@gmail.com; daniela.fflores@sp.senac.br)

Mario Eugênio Longato
Universidade Municipal de São Caetano do Sul
(mario.longato@uscs.edu.br)

RESUMO

As vocações da cidade de Santos, localizada no estado de São Paulo no Brasil, ao longo de sua história são apresentadas neste trabalho, mais especificamente na rua XV de novembro. Sua vocação passou por portuária devido à localização, comercial (sem deixar de ter a portuária) devido ao comércio do café no país e o escoamento da produção no Porto de Santos. E por fim, com a queda do café, Santos desenvolveu a vocação industrial e veraneio.

O método utilizado foi o de Henri Lefebvre, que consiste em descrição do local estudado através de observação participativa da paisagem utilizando material iconográfico. E também o analítico-regressivo que pretende analisar a realidade do local estudado com fatos passados, a fim de reconstruir estes fatos. E por fim o histórico-genético que estuda as modificações da estrutura presente ao longo do tempo e volta ao tempo atual para analisar as modificações. Relatos da história, da economia, da formação do porto e da cidade, através de dados bibliográficos e iconográficos, deram suporte a este estudo.

Ao final é tratado o tema turismo no espaço urbano como uma das soluções para revitalização do centro de Santos e rua XV de Novembro, principalmente para trazer vida para essa região tão importante do centro da cidade de Santos. Isso traz benefícios para o morador e para o visitante que conseguem ver a história de Santos nos edifícios e ruas e devolvendo vida ao centro melhora-se a segurança possibilitando a ocupação destas áreas.

Palavras-Chave: Bem-estar, Turismo no Espaço Urbano, Cidades Inteligentes, História de Santos.

1. A FORMAÇÃO DO PORTO DE SANTOS DO BRASIL COLÔNIA AO INÍCIO DO IMPÉRIO (1500 – 1870) – VOCAÇÃO PORTUÁRIA

Pedro Álvares Cabral e seus homens buscavam explorar novas terras e, em 22 de abril de 1500, ancorando em Porto Seguro, Brasil, depararam-se com uma terra rica em pau-brasil.

Por volta de 1510, a expedição de Américo Vespúcio e André Gonçalves chega à parte sul da terra, mais especificamente onde hoje é Cananéia no estado de São Paulo. Em 1534, a parte portuguesa do Brasil é dividida em Capitanias Hereditárias, uma secular estratégia geopolítica do estado português. O que hoje se divide em Santos e São Vicente era Capitania de São Vicente que foi dada a Martim Afonso. Este determina que Brás Cubas seria o capitão do povoado do Enguaguaçu, hoje Santos.

No mapa abaixo, é possível ver na ilha de São Vicente, marcado em roxo, o núcleo inicial de Santos.

Figura 1 – Mapa de Santos em 1600



Fonte: Reproduzido da *Enciclopédia Mirador Internacional*, 1980 (página 10.218), Encyclopaedia Britannica do Brasil Publicações Ltda., São Paulo/SP apud www.novomilenio.inf.br, modificado pela autora.

A facilidade de ligações com as regiões vizinhas, sobretudo com outras áreas da baixada, quer insular, quer continental foi crucial para se estabelecer o povoado naquela região, já que havia necessidade de comunicação com povoados vizinhos. Esse conjunto de oportunidades colaborou para a formação do porto e da cidade. A foto abaixo ilustra o que era o porto e sua dificuldade de receber grandes embarcações.

Figura 2 – Porto e seus trapiches



Fonte: www.novomilenio.com.br

As mudanças mais significativas começaram a acontecer na cidade a partir do final do século XVIII, pois no planalto surge uma riqueza digna de exportação, o açúcar de cana. Mas até que o porto e sua área de influência comessem a se entrosar, não houve melhorias na paisagem urbana e portuária. No final do século XVIII, Santos desempenha papel de porto açucareiro numa cidade de aspectos coloniais, conforme mostra a figura abaixo.

Figura 3 – Imagem da cidade ainda colonial



Fonte: BARBOSA, Maria Valéria (org). Santos na formação do Brasil: 500 anos de história. Santos, Prefeitura Municipal de Santos: Secretaria Municipal de Cultura: Fundação Arquivo e Memória de Santos, 2000.

O açúcar veio marcar um novo período para o porto de Santos, o renascimento de sua primeira função, a portuária. O fato de Santos estar próximo ao planalto auxiliou nesta nova fase da cidade e do porto, pois em toda a área que a Serra do Mar corta o Brasil, de norte a sul, é na altura de São Vicente o primeiro local que a ocupação penetra o planalto. O clima mais ameno em São Paulo e o fato de estar próximo a muitas tribos indígenas sendo farto abastecedor de mão-de-obra e próximo a terras férteis fez de São Paulo um sítio de incomparável superioridade, conforme afirma Prado Jr (1998).

O período colonial termina para o Brasil em 1808, embora a separação oficial date de 14 anos depois. Em 1808, fugindo das tropas Napoleônicas, a colônia portuguesa se transfere para o Brasil. Em 1822, o Brasil torna-se independente. Há um estímulo econômico para o Brasil trazido pela liberdade comercial e refletindo no urbano por meio da construção de estradas, melhoramento dos portos e o aumento da imigração. Nos mapas a seguir será possível verificar as transformações urbanas em Santos.

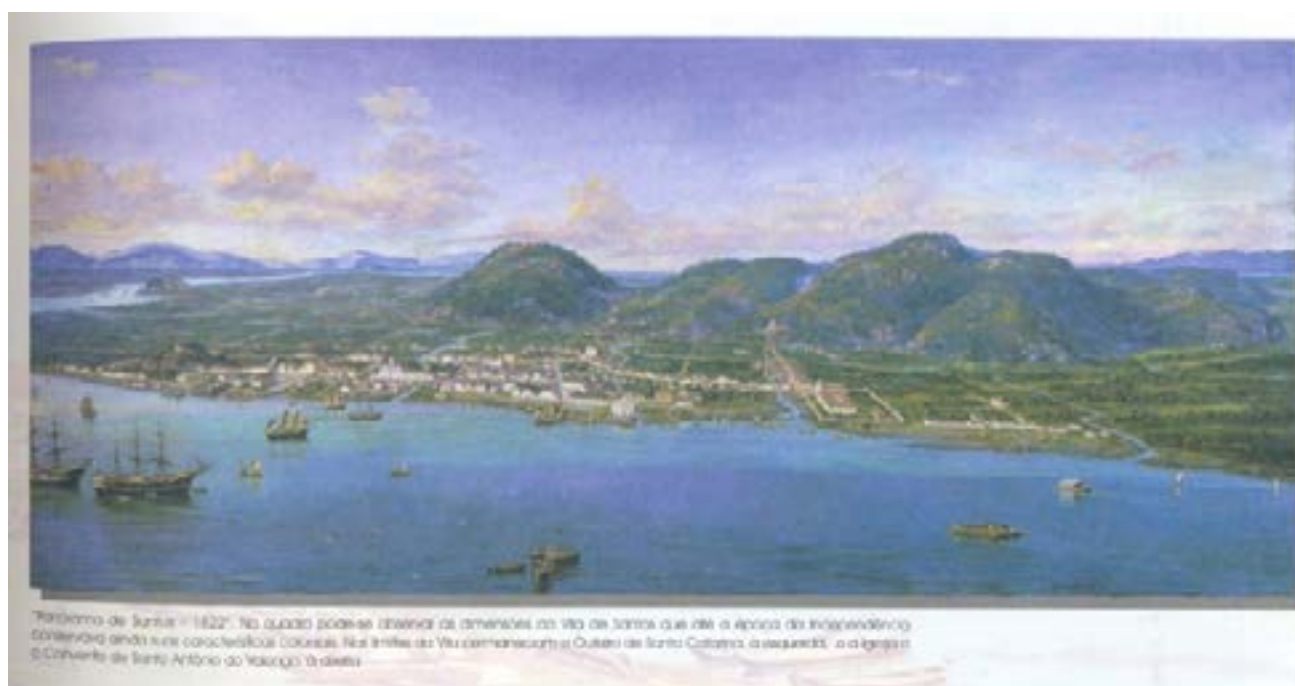
Figura 4 – Mapa de Santos em 1822



Fonte: Mapa base de 1822 redesenhado pela autora e servirá de mapa para indicação de fotos a seguir

No mapa acima há uma série de edifícios importantes na época: número 1 corresponde à Igreja de Santa Catarina, como em 1765; número 2 corresponde à Casa do Trem Bélico, como em 1765; número 3 corresponde aos Quartéis, como em 1765; o número 4 corresponde à Igreja Matriz, como em 1765; número 5 corresponde ao Hospital Militar / Santa Casa, que em 1765 era o Colégio dos Jesuítas; número 6 corresponde ao Palácio do Governo; número 7 corresponde à Alfândega. No lugar do Hospital, do Palácio do Governo e da Alfândega, em 1765, havia o Colégio dos Jesuítas e neste mesmo local hoje há a Alfândega; número 8 corresponde ao Forte da Vila, como em 1765; número 9 corresponde ao Pelourinho, como em 1765; número 10 corresponde ao Arsenal da Marinha, como em 1765; número 11 corresponde ao Convento e Igreja do Carmo, como em 1765; número 12 corresponde à Igreja da Misericórdia, como em 1765; número 13 corresponde à Igreja do Rosário, existente até hoje; número 14 corresponde à Casa de Câmara e Cadeia, no antigo Quatro Cantos onde havia a Casa das Beatas; número 15 corresponde à Igreja do Carvalho, inexistente em 1765 e demolida hoje; número 16 corresponde à Igreja da Graça, como em 1765; número 17 corresponde ao Convento de São Francisco, como em 1765; número 18 corresponde ao Mosteiro de São Bento, como em 1765; número 19 corresponde à Igreja de São Jerônimo, como em 1765; número 20 corresponde à Fonte do Itororó ainda preservada, como em 1765 e o número 21 à Fonte Duas Pedras também preservada, como em 1765. A principal mudança de 1765 até 1822 foi o início de uma organização administrativa da cidade com a ocupação do Palácio do Governo. a preocupação com a saúde dando origem ao primeiro hospital da vila e a vocação religiosa do santista demonstrada através da construção de muitas igrejas. O panorama da cidade pode ser demonstrado no mapa e foto abaixo.

Figura 5 – Panorama de Santos em 1822



Fonte: BARBOSA, Maria Valéria (org). Santos na formação do Brasil: 500 anos de história. Santos, Prefeitura Municipal de Santos: Secretaria Municipal de Cultura: Fundação Arquivo e Memória de Santos, 2000.

O desenvolvimento do interior da Província de São Paulo, devido ao açúcar inicialmente, e à cultura cafeeira, que começava a dar frutos, acarretou acentuado crescimento da produção agrícola e houve a necessidade urgente de melhorar as condições do porto para o escoamento de sua produção. Assim, em 1864, tem início a construção da estrada de ferro São Paulo Railway, a primeira ligação ferroviária entre o porto de Santos e o restante da Província, e cuja inauguração se dá em 1867. A São Paulo Railway foi de vital importância para o desenvolvimento do porto e da vila de Santos.

A insignificância da cidade e do porto e seu pouco crescimento até o momento e as mudanças promissoras, devido ao início do café, são reflexo do momento histórico e econômico do nosso país e do que o ligava com o mundo, traduzidas nas transformações do porto e da cidade de Santos.

1.1 O Porto de Santos, o centro da cidade e a rua XV de Novembro – Vocação Portuária

A rua XV de Novembro como é chamada hoje, em 1765 chamava-se rua Direita, que no traçado citadino dos portugueses ruas direitas costumavam ligar o ponto principal da vila à porta de entrada da mesma vila, geralmente ao lado oposto, atravessando assim, todo o vilarejo. Nela, situam-se as principais edificações administrativas, religiosas, militares e particulares, e ligadas a ela também ficam os principais largos da povoação. Assim, acontece em Santos: a rua inicia em Quartéis, bairro de Santos onde estava a Igreja Matriz e termina no Valongo, outro bairro onde estava o Convento Santo Antônio, como é possível verificar nas fotos abaixo.

Figura 6 – Igreja Matriz



Fonte: BARBOSA, Maria Valéria (org). Santos na formação do Brasil: 500 anos de história. Santos, Prefeitura Municipal de Santos: Secretaria Municipal de Cultura: Fundação Arquivo e Memória de Santos, 2000.

Figura 7 – Convento de Santo Antonio



Fonte: BARBOSA, Maria Valéria (org). Santos na formação do Brasil: 500 anos de história. Santos, Prefeitura Municipal de Santos: Secretaria Municipal de Cultura: Fundação Arquivo e Memória de Santos, 2000.

Inicialmente a rua estruturou-se como espaço para os rituais da fé, em que casarões, como a Casa das Beatas, a ser apresentada a seguir, alinhavam-se ao longo do percurso que durante séculos serviu de eixo condutor às procissões que partiam da Igreja Matriz e iam até o Convento de Santo Antônio, mostrados acima. Na foto abaixo, pode ser vista a rua Direita, atual rua XV de Novembro que teve outros nomes, como rua do Comércio em 1801 e rua Antonina em 1822.

Figura 8 – Antiga rua Direita vista do Convento do Carmo em direção ao Valongo



Fonte: BARBOSA, Maria Valéria (org). Santos na formação do Brasil: 500 anos de história. Santos, Prefeitura Municipal de Santos: Secretaria Municipal de Cultura: Fundação Arquivo e Memória de Santos, 2000.

A relação porto x cidade nesse período colonial, início do Império até a comercialização mais intensa do café, era praticamente doméstica. Cada um tinha seu trapiche e livre acesso à comercialização do seu excedente ou da sua produção. Não havia barreira entre o porto e a cidade; na verdade, não se sabia onde começava o porto e onde terminava a cidade, os dois se mesclavam.

2. A FORMAÇÃO DO PORTO DE SANTOS DO IMPÉRIO À REPÚBLICA - VELHA (1870 – 1930) – VOCAÇÃO COMERCIAL

A partir de meados da década de 1850, há uma nítida liderança do café sobre o açúcar na exportação santista. Há, então, o declínio da lavoura canavieira planaltina e, consequentemente, a diminuição da exportação de açúcar por Santos a ponto de, na década de 60, sumir, cedendo lugar ao algodão. São as várias culturas que fazem do porto de Santos um porto comercial. Em 1859, o engenheiro Mackenson Fox dá início à construção da primeira estrada de ferro em tráfego: a São Paulo Railway, hoje estrada de ferro Santos-Jundiaí. Com sua inauguração abre-se na província de São Paulo uma nova era para o Porto de Santos. Esse fato foi muito importante para a expansão da lavoura cafeeira paulista, a mais importante riqueza planaltina. Até então os transportes de mercadorias para o interior aconteciam através de tropas de muare (mulas), fazendo com que a cidade, a princípio, crescesse sentido planalto, que era por onde passavam os homens transportando mercadorias nas mulas.

O trecho abaixo exemplifica como o café e seu comércio aliado à ferrovia auxiliaram no desenvolvimento do litoral e do planalto.

“Em São Paulo, mais do que em qualquer outra província o fenômeno ferroviário produziu um verdadeiro colapso nos portos litorâneos, deixando Santos como monopolizador de todo o tráfego com o planalto, coisa que até hoje persiste. Mais do que nunca é este o momento da formação do verdadeiro binômio São Paulo - Santos que com o andar dos tempos foi-se firmando cada vez mais, à medida que o café dava força econômica à província de São Paulo que já no período republicano conheceria a era da industrialização.” (Araújo Filho, 1969)

A partir de meados do século XIX, o café torna-se a mercadoria mais importante na movimentação do porto e, também, a mais valiosa. A ferrovia, a demanda crescente pelo café na Europa e EUA, as facilidades na expansão da lavoura cafeeira pelo território paulista e novas terras sendo desbravadas fizeram de Santos o mais importante porto do país.

A maior parte da produção do café utilizava mão-de-obra escrava negra que, aos poucos, foi sendo substituída pela mão-de-obra do imigrante. Ao mesmo tempo melhorias eram planejadas para o porto, estradas de ferro eram construídas,

indústrias eram montadas. Parece estranho poder conciliar essas atividades; mas, enquanto não acontecia a abolição da escravidão, os conflitos de classe iam acontecendo.

Em 1870, o “caminho de ferro” (ferrovias instaladas para facilitar o transporte da carga do interior para o litoral e seu escoamento pelo porto) já operava havia três anos e os navios já eram movidos a vapor. No entanto, o porto de Santos funcionava de forma precária, como funcionou durante três séculos. Houve algumas melhorias, mas a carga e descarga ainda eram feitas por meio de trapiches, de construção trabalhosa e frequentemente desmanchados pelas marés, consistiam em atraso e freio para o crescimento, tanto de Santos quanto de toda a Província de São Paulo. O mapa abaixo mostra a Vila de Santos em 1878.

Figura 9 – Mapa de Santos em 1878



Fonte: Mapa base de 1878 redesenhado pela autora e servirá de mapa para indicação de fotos a seguir

No mapa acima podem ser identificadas algumas edificações: número 1 corresponde à Casa do Trem Bélico, presente até hoje, mas com outra utilização; número 2 corresponde ao Quartel; número 3 corresponde à Fortaleza; número 4 corresponde à ponte da Alfândega; número 5 corresponde à Alfândega, hoje no mesmo local; número 6 corresponde à Igreja Matriz, demolida; número 7 corresponde à Antiga Casa do Conselho, hoje uma praça; número 8 corresponde ao Convento do Carmo, presente até hoje; número 9 corresponde ao Arsenal da Marinha, hoje uma praça; número 10 corresponde à Capela do Carvalho, hoje área portuária; número 11 corresponde ao Consulado Americano, hoje área portuária; número 12 corresponde ao Consulado Italiano, hoje área portuária; número 13 corresponde ao Consulado Belga; número 14 corresponde ao Consulado Inglês; número 15 corresponde à estação de trem presente até hoje, mas como Secretaria de Turismo; número 16 corresponde ao Convento de Santo Antônio, presente até hoje; número 17 corresponde à Igreja da Graça; número 18 corresponde ao Consulado Alemão; número 19 corresponde ao teatro; número 20 corresponde à Igreja do Rosário, existente até hoje; número 21 corresponde à Câmara e Cadeia Nova, presente até hoje, mas com uso destinado à cultura; número 22 corresponde ao Mosteiro de São Bento, presente até hoje, mas como museu; número 23 corresponde à Santa Casa, hoje estabelecida em outro local; número 24 corresponde ao Consulado Português; número 25 corresponde ao Consulado Francês; número 26 corresponde ao Telegrapho Nacional.

Nesse período percebe-se que há um grande número de consulados em Santos, devido ao aumento das exportações do açúcar e, principalmente, à presença do café. Ainda não se tem um porto organizado e planejado, mas já se negociava a sua modernização.

Apesar de todas as dificuldades, em 1892 estavam prontos os primeiros duzentos e sessenta metros de cais, inaugurados com a atracação do navio inglês Nasmith, a 2 de fevereiro de 1892. O porto contava com linha férrea e armazéns. O fato foi comentado em todo o país – o modesto ancoradouro se tornava o primeiro porto organizado do Brasil. No ano seguinte, é construído o restante dos oitocentos e quarenta e seis metros de cais contratados inicialmente e, nesse mesmo ano, os

trilhos da Cia Docas de Santos são ligados aos de São Paulo Railway. Esta imagem é do cais da ferrovia São Paulo Railway, no bairro do Valongo, vendo-se o desembarque de mercadorias direto dos navios a vela para os vagões, em 1877 (a ferrovia entre Santos e São Paulo fora inaugurada dez anos antes, em 1867).

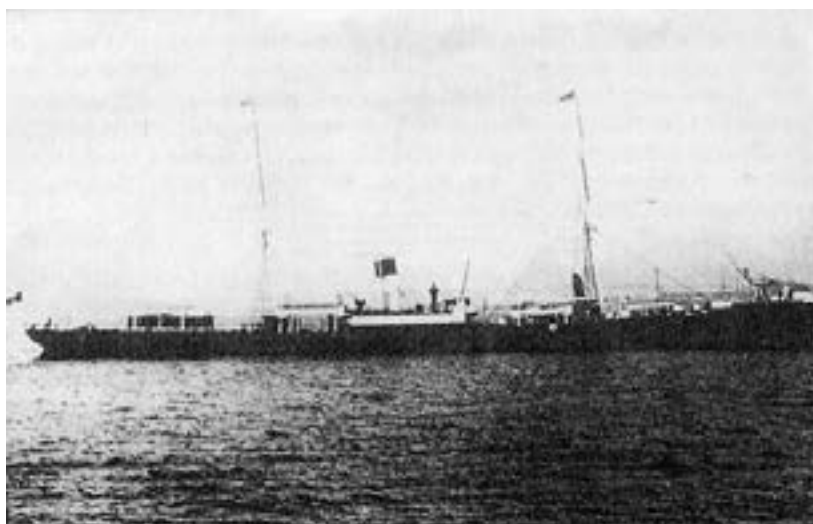
Figura 10– O trem no porto



Fonte: Foto reproduzida do livro *Cem anos de colonização italiana no ABC*, de Roberto Botacini e Maria Silene, 1ª edição, 1976, Editora Combrig, Ribeirão Pires/SP apud www.novomilenio.inf.br

Santos inaugurou oficialmente, como foi dito anteriormente, o seu porto organizado no dia 2 de fevereiro de 1892, com um trecho de duzentos e sessenta metros lineares construído no lugar dos trapiches do até então conhecido como Porto do Bispo, conforme mapa abaixo. A inauguração ocorreu com a atracação do navio a vapor *Nasmyth* (ver foto abaixo), da armadora inglesa Lamport & Holt. O navio, construído em 1880, continuou em tráfego até 1902.

Figura 11 – Nasmyth



Fonte: *O Nasmyth, em foto da época* Imagem: *Rota de Ouro e Prata*, José Carlos Rossini apud www.novomilenio.inf.br

Enfim, a construção do porto teve grande interferência na construção das paisagens modernas de Santos. De fato, foi só quando se construíram os cinco primeiros quilômetros de cais que a cidade de Santos pôde se despir das suas roupagens coloniais e transformar-se num organismo urbano pronto a poder acrescentar à função portuária, várias outras que se foram criando, à medida que um planejamento sanitário e urbanístico (Plano Saturnino de Brito em 1908) foi-lhe dando condições. Desse planejamento sanitário-urbanístico resultou imediatamente a solidificação da Praça Comercial de Santos, particularmente no que diz respeito ao alto comércio do café, ao mesmo tempo em que a expansão urbana pôde ir se efetivando por áreas dantes alagadiças e malsãs. Concomitantemente, as relações de Santos com a Capital foram se estreitando até que parte da cidade se transformasse em área de veraneio para centenas de milhares de paulistanos e mesmo frequentadores oriundos da sua própria região.

No projeto de saneamento que desenvolve para a cidade, o engenheiro Saturnino de Brito, além de tratar das questões específicas e pertinentes a sua função, elabora também várias leis e indicações de como a cidade e de seus habitantes devem se comportar diante das doenças e epidemias, e é evidente que essas normas acabam influenciando no modo de vida dos habitantes da cidade. Até que o projeto de saneamento da cidade esteja concluído e as doenças e epidemias estejam eliminadas, os

habitantes de Santos iriam estar sujeitados a qualquer lei que, no entendimento da municipalidade, contribuísse para debelar os males que afetavam a cidade e colocavam em risco a saúde ou a vida de seus habitantes.

Figura 12 – Planta Santos 1910 com projeto de Saturnino de Brito



Fonte: BARBOSA, Maria Valéria (org). Santos na formação do Brasil: 500 anos de história. Santos, Prefeitura Municipal de Santos: Secretaria Municipal de Cultura: Fundação Arquivo e Memória de Santos, 2000.

Esse plano reflete o momento vivido, o café estava no auge, novas culturas, como o algodão, eram produzidas. O algodão auxiliou na implantação da indústria têxtil que mudou a paisagem urbana, ou seja, a roupagem que a cidade se apresenta. Ideias modernas começam a surgir; renovar é o lema, fruto da necessidade de tornar a cidade “habitável”, já que epidemias ocorriam e muitas pessoas morriam. Até então, a função da cidade era portuária, somente regional. Com o açúcar e depois muito mais com o café a função da cidade muda e passa a comercial, não perdendo a portuária. A cidade passa a ser um negócio, portanto planejá-la e sanitizá-la significaria embelezá-la. O poder público aproveita a ideia de limpar a cidade e resolve “limpar” as pessoas e usam esse conceito para retirar pessoas de cortiços ou residências que eles consideravam “sujas” e as colocam para fora da zona de interesse dos investidores de café. Essas pessoas são literalmente expulsas das suas casas e não há plano para elas na cidade.

A cidade cresce, em 1913 há a especulação imobiliária, pois intervenções sanitárias, realizadas através do plano urbanístico de Saturnino de Brito, provocam a erradicação de cortiços, reforma de prédios, instalação de esgotos e banheiros, construção de jardins, ou seja, uma melhora na cidade e sua higienização. O automóvel e o cinema aparecem e intensifica-se a vida noturna com espetáculos, o que antes acontecia somente em espaços livres públicos esporadicamente. Aumenta o número de pessoas interessadas em morar em Santos e consequentemente melhora sua economia.

As duas avenidas que cortam a cidade a partir dos canais até a orla, Ana Costa e Conselheiro Nébias, já se encontravam abertas e equipadas com iluminação pública, direcionando o trajeto das redes coletoras de esgoto, além de aproximar a parte central da cidade e suas praias, que se tornavam, aos poucos, em alternativas de lazer.

Desde o início do século XX, o município de Santos ocupava uma extensão territorial reduzida na Ilha de São Vicente. Nesse período, a cidade era formada por uma grande planície verde que se estendia da praia do José Menino à Ponta da Praia. A cidade não dispunha de prédios, apenas dois edifícios na esquina da Av. Washington Luiz. Os bairros do Marapé, Campo Grande, Jabaquara, Macuco, Embaré e a Ponta da Praia eram quase totalmente descampados. A beira-mar era plena de mansões, ostentando a riqueza do café e do comércio portuário.

Entre 1920 e 1930, a cidade ainda não havia urbanizado mais do que 60% de sua área, portanto as questões relacionadas ao abastecimento público de água para consumo humano e para atividades produtivas não se faziam sentir de forma mais intensa, ao contrário do que ocorreria décadas depois. As regiões dos atuais bairros de Boqueirão, Embaré, Aparecida e Ponta da Praia estavam praticamente desertas, exceto pelo antigo Hipódromo do Jockey Clube Santista, próximo à Ponta da Praia, que teve as primeiras corridas disputadas em 27 de junho de 1919. Inclusive esse tipo de edificação mostra o público que morava ou frequentava Santos: uma população de alto poder aquisitivo ligado ao café. No mapa abaixo estão identificados o porto, o centro e a rua XV, em marrom, amarelo e vermelho, respectivamente.

Figura 13 – Planta de Santos em 1921



Fonte: Reproduzido do *Plano Diretor de Desenvolvimento Integrado - PDDI-76*, Prefeitura Municipal de Santos/Prodesan, 1976. Informação citada na *Cartilha da História de Santos*, de Olao Rodrigues, 1980 apud www.novomilenio.inf.br. Redesenhado pela autora.

A década de 20 foi caracterizada por uma euforia econômica em função dos altos preços do café, motivando reservas cambiais para produtos importados e acarretando o sensível aumento do tráfego importador. Com 200 mil metros quadrados de armazéns e pátios de estocagem, mais que o dobro da estrutura existente em 1910, o porto contava então com ampla hinterlândia (região de influência do porto), que, além do interior do Planalto Paulista, penetrava pelo Sul de Minas Gerais, Triângulo Mineiro, Sul de Goiás e do Mato Grosso e Norte Velho do Paraná. Em 1928, o movimento de cargas foi de 3.183.809 toneladas.

O equilíbrio da balança comercial não se modificaria ainda, já que o mundo entrava na grande depressão de 1929. No porto, a única obra representativa nesse período foi a construção, na ilha Barnabé, de um cais para a movimentação de inflamáveis e combustíveis e a posterior instalação de grandes tanques para depósito, isolando a cidade do perigo de um possível incêndio. O terminal da ilha Barnabé propicia a movimentação sempre crescente dos produtos de petróleo durante o decorrer da década de 30, garantindo o equilíbrio financeiro do porto mesmo quando o setor cafeeiro, antes responsável por 90 % do movimento, entra na grande crise gerada pela superprodução.

A quebra da bolsa de Nova Iorque, seguido da fase de superprodução do café, os métodos de valorização do produto que um pouco mais de uma década queimou 80 milhões de sacas de café, dificuldades advindas da Segunda Guerra, levaram muitos fazendeiros a descer no futuro do café. Muitos venderam suas propriedades, outros entregaram a credores, e os que ainda podiam reter em suas mãos, transformavam-nas ou em pastos, ou em lavouras variadas, entre as quais o algodão tomou maior vulto, por causa da indústria têxtil que começava a crescer. A partir de 1944, nos fins do segundo conflito mundial, quando os estoques de café haviam se acabado no mundo, mercê principalmente das fogueiras que o Brasil fizera com suas reservas, novas áreas de café apareceriam, no extremo oeste paulista, norte do Paraná, no noroeste capixaba e no leste mineiro. Milhões de cafeeiros plantavam extensivamente, somado ao agravante das distâncias cada vez maiores aos portos exportadores e o problema da mão-de-obra sempre cara e difícil, além do tipo de café malcuidado e sempre inferior ao mercado de consumo, marcou o término de sua história expansionista.

2.1 Edificações da rua XV de Novembro

A criação da **Bolsa Oficial de Café** tem início em 1914, por meio de lei aprovada pelo congresso Legislativo de São Paulo, cujas funções visavam a um maior controle do comércio cafeeiro no Estado. O funcionamento é autorizado pelo decreto Estadual número 2797 de 28 de abril de 1917. Instala-se inicialmente em salão alugado no centro da cidade, na parte térrea do edifício situado na esquina da rua XV de Novembro com a rua Santo Antonio (atual rua do Comércio). A sede

própria foi inaugurada em 1922 e tinha por objetivo centralizar, organizar e controlar as operações do mercado cafeeiro, na época a principal fonte de riqueza do país. A Bolsa Oficial do Café, em Santos, traduzia-se como arquitetura típica do ecletismo que caracterizou as mais importantes obras do período.

“O local escolhido era bem próximo da primeira sede, em amplo terreno junto ao porto. Com vista para as ruas Tuiuti, Frei Gaspar e XV de Novembro, o lugar da futura bolsa possuía atributos visuais e comerciais invejáveis na geografia urbana do centro de Santos. Uma das esquinas do terreno constitui o antigo Quatro Cantos, lugar tradicional da cidade, formado pelo cruzamento da rua Frei Gaspar com a rua XV de Novembro. A morfologia curva da via nesse ponto oferecia perspectiva do terreno de resultado visual incomum na região central, elemento que não ficou insensível ao projeto. A outra esquina está voltada para o porto, a cenografia, por excelência, do embarque do café”. (Caldatto Barbosa, 2004)

A Bolsa Oficial do Café de Santos conheceu seu período áureo na década de 1920, antes que a Grande Depressão Econômica Mundial atingisse também os negócios de exportação do café, provocando até decisões como a da queima do produto em grandes montes, em 1931. São dessa época do auge dos negócios cafeeiros via porto de Santos as imagens do prédio e de seu entorno, no encontro das ruas XV de Novembro e Frei Gaspar (local outrora conhecido como os Quatro Cantos).

Figura 14 – Rua XV com Bolsa do Café ao fundo



Fonte: Imagem: acervo do cartofilista Laire José Giraud apud www.novomilenio.inf.br

Nas ruas 25 de Março (hoje XV de Novembro), 24 de Maio (hoje Tuiuti) e de São Bento e Santo Antonio (hoje do Comércio), viam-se diversos sobrados com as ombreiras de alvenaria das portas dos armazéns no andar térreo. Em geral, orlavam todas as ruas casas feias, acaçapadas, vetustas e de salientes beirais. Do Valongo ao Paquetá, serviam as praias de depósito do lixo da cidade, onde longo tempo permanecia ele a descoberto, entre o lamarão e a areia, até que os rolos verdes da preamar o arrastassem para o canal. No porto, os navios ao lado uns dos outros, desfraldando bandeiras de todas as nações, permaneciam frequentemente dias a fio na tarefa de carga e descarga. Neste período, iniciava-se a ação higienizadora e para tanto foi criada uma legislação para homogeneizar as casas com o intuito de ordenar, higienizar e embelezar.

3. FORMAÇÃO DO PORTO DE SANTOS DA REPÚBLICA DESENVOLVIMENTISTA À REPÚBLICA NEO-LIBERAL (1930 – 2006) – VOCAÇÃO INDUSTRIAL E VERANEIO

Com a queda do café e o incentivo à indústria, em 1930, a indústria Petrolífera ocupa a ilha Barnabé, iniciando assim uma ocupação da margem esquerda, antes desocupada por este tipo de uso (industrial e portuário). Começou a se perceber que havia necessidade de expandir o porto além da margem direita. Houve, em 1932 uma pequena movimentação do porto, como consequência do bloqueio militar por mais de três meses a que o porto foi submetido durante a Revolução Constitucionalista de São Paulo. Em 1939 acontece a Segunda Guerra Mundial, outra grande parada no crescimento econômico. Como resultado, entre 1942 e 1943, a movimentação de mercadorias no porto cai pela metade do que foi em 1938 e 1939. Em 1944, há ainda os mesmos quatro mil, setecentos e vinte metros de cais, de 1938. Após o término da

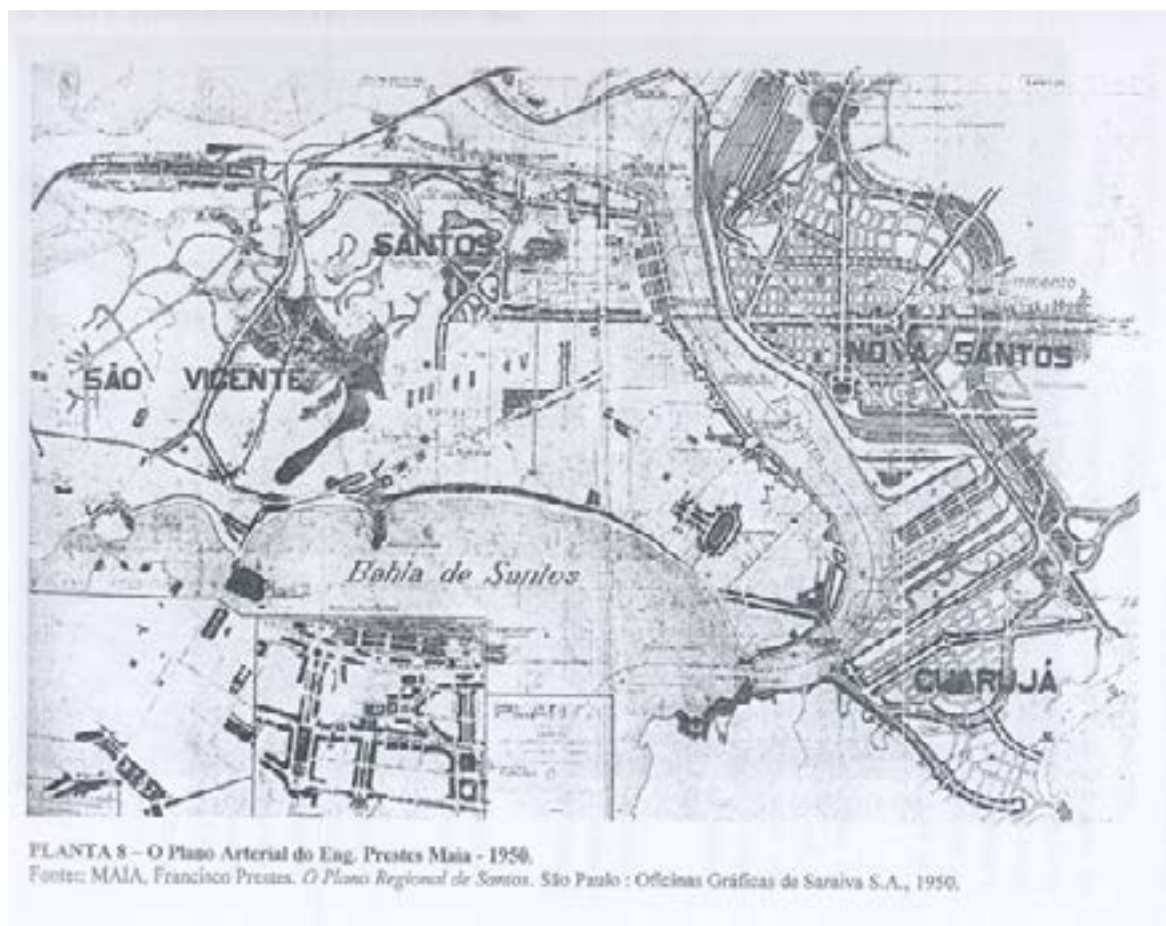
Segunda Grande Guerra, o índice de movimentação do porto volta a subir, mas o café começa a perder a hegemonia como principal produto de exportação do porto.

Em 1945, terminada a Segunda Guerra Mundial, o porto de Santos mantinha o mesmo cais que, somado ao da ilha Barnabé, totalizava 5214 m. Não cresceu em extensão de cais, mas melhorou a infraestrutura e alargou as faixas de cais. O porto possuía silos para grãos, esteiras transportadoras, seis empilhadeiras fixas, 128 guindastes, tanques de combustíveis líquidos e seis embarcações com capacidade para 2000 sacas/hora, além de rebocadores, dragas, ferry-boats, lanchas, tratores, vagões e locomotivas, segundo os arquivos da Codesp, Companhia Docas do Estado de São Paulo.

O fim da década de 40 e início de 50 é marcado pela indústria automobilística no planalto e via Anchieta provocando uma nova fase de evolução de Santos: turismo, surto imobiliário e inflação. Santos, na década de 1950, foi a porta de ouro do Brasil e estação balneária de milhares de veranistas que a ela afluíam. Nos fins de semana de menos movimento, desciam a serra nada menos de vinte a trinta mil pessoas para saborearem as delícias das ondas praianas desta majestosa cidade, que tem suas praias urbanizadas segundo os princípios modernistas em seus jardins, pérgulas e nos edifícios.

No fim da década de 40, Prestes Maia, engenheiro civil e arquiteto formado pela escola Politécnica em 1917, especializado nas áreas de legislação, transporte, sistema viário, pavimentação e estruturas, no momento governador do Estado de São Paulo, tem preocupação com a escala regional, pensa em sistema viário urbano para melhorias no trânsito em geral com objetivo de interligar Santos com sua região, gerando assim planos urbanísticos refletindo essa preocupação. Embora esses tenham ficado somente no papel, influenciaram os planos elaborados pela prefeitura nos anos seguintes e até hoje influenciam, por exemplo, a ideia de se construir uma via perimetral no porto, assunto discutido hoje e fruto do projeto do Prestes Maia. Esse plano é considerado por muitos o primeiro plano de desenvolvimento do Porto de Santos.

Figura 15 – Plano de Prestes Maia para Santos



Fonte: BARBOSA, Maria Valéria (org). Santos na formação do Brasil: 500 anos de história. Santos, Prefeitura Municipal de Santos: Secretaria Municipal de Cultura: Fundação Arquivo e Memória de Santos, 2000

Os anos 90 foram marcados por grandes mudanças no complexo portuário santista. As mudanças foram físicas e de mentalidade. Há uma injeção maciça de recursos através do Adicional à Tarifa Portuária (ATP), do Banco Nacional de Desenvolvimento Econômico e Social (BNDES), investimentos japoneses do chamado Fundo Nakasone e investimentos da própria Codesp. Esse fato trouxe ao porto obras de ampliação cômoda Terminal de Contêineres, a construção do cais Valongo-Paquetá e obras no Terminal de Fertilizantes.

Em 1992, foi escrita a Lei de Modernização dos Portos (lei 8.630/93), que foi sancionada e entrou em vigor em 26 de fevereiro de 1993, abrindo o caminho para a privatização dos serviços e para a mudança no sistema de trabalho vigente nos últimos 60 anos. Por causa da lei 8630 foi criado o Programa de Arrendamentos e Parcerias no Porto de Santos, o PROAPS, que objetivou o arrendamento das áreas e promover um planejamento preliminar quanto à vocação de cada área e sua afinidade com as cargas a serem movimentadas. Essa transição não foi pacífica, houve resistência por parte de empresários e

funcionários do porto, tanto que em 1998 o sistema preconizado pela lei 8.630 não tinha sido completamente implantado. A lei previa a passagem dos serviços portuários para a iniciativa privada, sendo que o terreno do porto pertence à União e não pode ser alienado, como preceitua a Constituição.

A maior parte da mão-de-obra operacional da administradora do porto, a Codesp, já passou da condição de empregada de uma empresa de economia mista para a de trabalhadores avulsos, com registro no Órgão Gestor de Mão-de-Obra Portuária do Porto de Santos (Ogmo/Santos), da mesma forma que os trabalhadores avulsos foram registrados nesse mesmo órgão. O OGMO tem uma direção colegiada entre trabalhadores, empresários e governo e foi criado a partir da lei 8.630 para prover o suprimento de mão-de-obra para as atividades portuárias, seguindo diretrizes fixadas pelas negociações entre os sindicatos patronais e trabalhistas, especialmente os acordos coletivos de trabalho assinados entre as partes.

Em 1998, é feito um novo plano diretor que é vigente até hoje e que prioriza ações no turismo, porto e comércio e prestação de serviços, que virá ao encontro do zoneamento e desenvolvimento do porto e do Alegre Centro, projetos que serão descritos mais abaixo.

Neste novo zoneamento, a rua XV de Novembro faz parte da zona central I, conforme pode ser visto na planta abaixo, e essa zona é a que agrega maior número de estabelecimentos comerciais e de prestadores de serviços, e o acervo de bens de interesse cultural, objeto de programa de revitalização urbana no qual se pretende incentivar a proteção do patrimônio cultural, a transferência de usos não conformes e a instalação de uso residencial. Além disso, a rua XV de Novembro faz parte de um dos Corredores de Desenvolvimento e renovação urbana, que são áreas públicas ou privadas onde se pretende incentivar maior adensamento mediante operações que envolvam permuta do potencial construtivo e adicional oneroso do coeficiente de aproveitamento.

Figura 16 – Planta de zoneamento de Santos de 1998

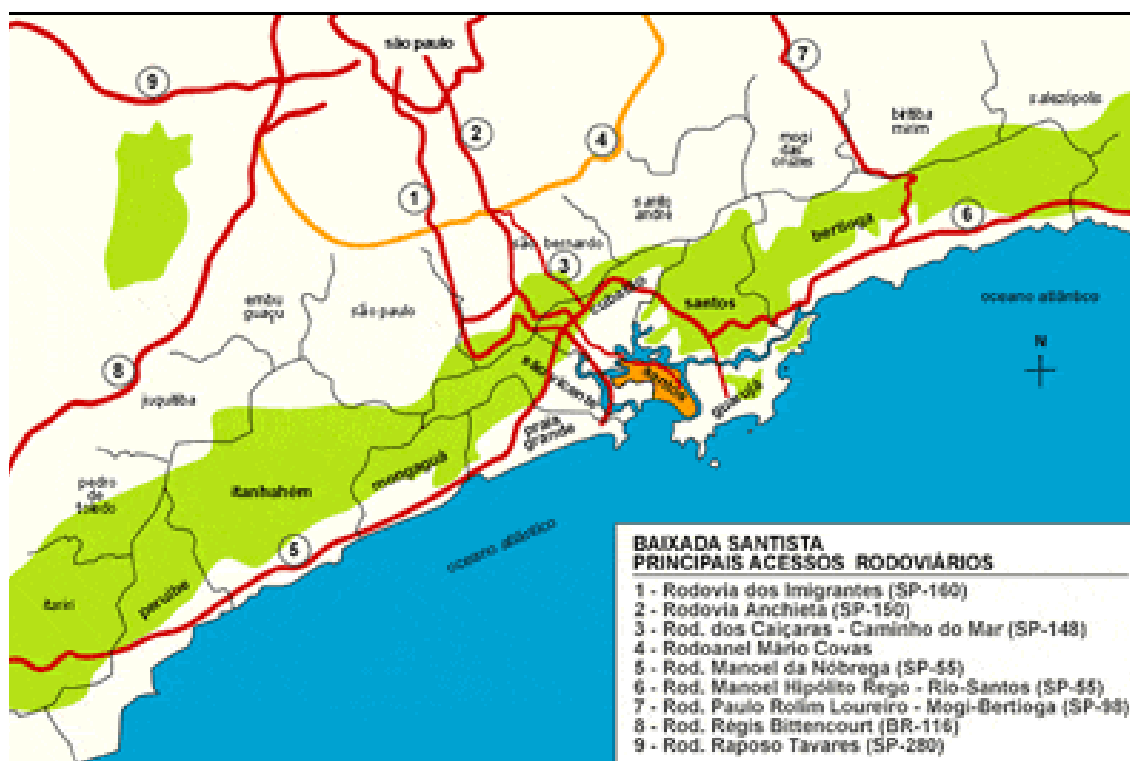


Fonte: Mapa base do Plano Diretor de 1998 redesenhado pela autora

Por causa da criação da Lei de Modernização dos Portos, lei 8.630, citada anteriormente, é elaborado pela equipe da Diretoria Comercial e de Desenvolvimento da Codesp, o Plano de Desenvolvimento e Zoneamento do Porto de Santos. Em 1997, foi feito o PDZ provisório que obrigou a Codesp a desenvolver um novo plano. Em fevereiro de 2000 a Codesp apresentou, para apreciação, o novo PDZPS ao Conselho da Autoridade Portuária CPA, que é o órgão definido pela lei 8630 que deve aprovar o plano. O zoneamento do porto por causa do arrendamento já estava praticamente feito, portanto o plano visava muito mais o desenvolvimento do Porto de Santos. Para que esse fosse aprovado, foram feitas audiências públicas envolvendo órgãos de interesse no porto e comunidade, e hoje, com o plano pronto só necessitam desenvolver mecanismos que possibilitem acompanhamento da implantação do PDZ e sua revisão periódica.

O Porto de Santos tem fácil acesso, apesar de muitos estarem truncados, em má conservação e com pouca fiscalização. Há o sistema ferroviário, rodoviário, canal de acesso marítimo, hidroviação através da Hidrovia Tietê-Paraná onde, em Perdeneiras, há transposição com a ferrovia e em Anhembi com a rodovia, além do sistema dutoviário que transporta produtos petroquímicos. Alguns desses podem ser vistos no mapa abaixo.

Figura 17 – Acessos ao Porto de Santos



Fonte: www.vivasantos.com.br

Toda a infraestrutura portuária, inclusive de transportes deve acompanhar a evolução a que o porto se propõe, modernizando-se para que o transbordo da mercadoria se faça não só com rapidez e eficácia, mas, sobretudo, com respeito ao meio ambiente. Para isso, desde 1999, a Codesp dispõe de uma superintendência de qualidade, meio ambiente e normalização. Um marco indiscutível dessa postura e respeito às normas ambientais vigentes foi a Dragagem de Manutenção, iniciada em 2005, a qual, pela primeira vez na história do país, conta com o devido Licenciamento Ambiental, o que reflete a cultura e consciência ambiental do Porto de Santos.

No PDZ foram estabelecidas diretrizes para serem cumpridas em curto prazo (dois anos), médio prazo (cinco anos) e longo prazo (dez anos). A curto prazo envolve o diagnóstico detalhado das realidades ambientais, sanitárias, patrimoniais e sociais nas áreas do porto e de influência direta deste, elaboração de planos para remediações, manejo ou melhorias destas realidades acompanhadas de cronogramas nos quais constarão as principais etapas e a conformidade à legislação ambiental.

A médio prazo, serão implantados e operacionalizados os planos citados acima. A longo prazo, serão realizadas as diretrizes que não são consideradas indispensáveis ao bom andamento da atividade portuária, mas agregam qualidade ambiental e melhorias sociais.

O Plano de Desenvolvimento e Zoneamento do Porto de Santos pretende desenvolver nas fronteiras entre porto e cidade espaços de integração, integrar nos projetos mecanismos de minimização dos impactos ao entorno mais próximo. Pretende também ampliar a participação social na tomada de decisão sobre o desenvolvimento portuário e estreitar laços entre porto, prefeitura e comunidade por meio de fóruns adequados quando no período de atualização do PDZ. Desta forma, pode-se perceber, talvez, pela primeira vez na história de Santos, que um plano é feito com a participação de todos os envolvidos com o porto e principalmente da comunidade. Isso melhora a qualidade de trabalho no porto e de vida de seus trabalhadores e moradores do entorno que esperam não sofrer mais com a movimentação de carga do porto.

As principais propostas do PDZ são a criação da avenida perimetral que é um corredor viário a circular o porto todo com a finalidade de minimizar os problemas logísticos do porto, como pode ser visto no mapa abaixo.

Figura 18 – Projeto Avenida Perimetral



Fonte: www.vivasantos.com.br

Além da Avenida Perimetral, há proposta da criação de estacionamentos para os caminhões, uma gestão do fluxo rodoviário, política permanente de dragagem de manutenção, dragagem de aprofundamento, melhoria nas ferrovias, aumento da capacidade da linha férrea na margem esquerda, desapropriações de áreas de linha férrea e favelas, remoção de favelas e invasões, parque de manobras ferroviárias na Alamoia onde hoje é o lixão, construção de mais dois berços para líquidos na Alamoia e Paquetá, reestruturação dos sistemas de abastecimento de água e esgotamento sanitário, utilização do gás natural como fonte de energia para projetos de expansão, revisão da estrutura tarifária e a criação do terminal turístico e revitalização dos armazéns I ao IV, que são os que estão na direção do centro antigo, conseqüentemente da rua XV e vão ao encontro do plano diretor e Alegria Centro, projeto que será visto adiante.

A revitalização portuária já é falada em muitos países, estes renovam suas áreas portuárias consideradas obsoletas, com o objetivo de sua revitalização ou modernização. Um projeto de revitalização deve ter como oportunidades a beleza e o valor histórico do local, considerando ainda a recuperação ambiental, o empreendimento para a região e o conhecimento tecnológico e deve possibilitar alianças e acordos que visem gerar oportunidades de uso portuário-urbano, fomentar a recuperação da atividade comercial da região, reconversão da área, fortalecer relação porto-cidade, criar pólo turístico e de áreas de desenvolvimento social, contribuir para a preservação da memória histórica, reabilitação e valorização econômica e inclusão de Santos em roteiros turísticos nacionais. A prefeitura municipal de Santos já iniciou projeto de recuperação e reciclagem de edifícios monumentos e equipamentos na região considerada, estando o projeto de revitalização portuária em sintonia com o projeto do município. Em 2003, Lula ganha as eleições e dá continuidade a reformas estruturais. Atualmente, o Porto de Santos movimentava por ano mais de 60 milhões de toneladas de cargas diversas, número inimaginável em 1892, quando operou 125 mil toneladas. Com 12 Km de cais entre as duas margens do estuário de Santos, o porto entrou em nova fase e exploração, consequência da lei 8.630/93, a privatização dos serviços e tentativa de preservação patrimonial.

4. CONSIDERAÇÕES FINAIS – TURISMO NO ESPAÇO URBANO INTELIGENTE E SUSTENTÁVEL

As cidades são produtos do turismo e segundo Jacques Wainberg que escreveu um texto no livro *Turismo Urbano* de Castrogiovanni (2001), o ambiente urbano nos ensina que a cidade deve ser vista com uma escritura, uma fala a ser interpretada pelo transeunte. Trata-se de um enigma a ser desvendado pela exploração. A percepção é estimulada pelo estranhamento causado por sua arquitetura, vias, limites, bairros, pontos nodais, marcos, avenidas, cafés e bares. É uma obra viva e seus atores móveis são seus habitantes. Há cores e odores. Hábitos e costumes. História e memória. Todo detalhe é relevante na composição do todo.

Toda cidade oferece a seu visitante uma experiência em relação ao seu ambiente. E toda cidade deseja vender a experiência da interação do visitante com a sua originalidade específica, o patrimônio propriamente dito. O passado torna o lugar mais do que um espaço, é uma experiência com o passado, com a história, mas deve ser medido, calculado e planejado, por isso o turismo é uma experiência sob controle antes de tudo e com sabor cultural em primeiro lugar. A excitação que emerge do primeiro olhar é essa disposição paisagística da cidade. O fenômeno turístico, por ser relativamente frenético e controlado no

tempo, é, em essência, fortemente visual. O turista busca, por isso mesmo, os elementos da paisagem, os espaços construídos e o movimento da vida.

As cidades turísticas têm o poder de imantação que se propaga em círculos concêntricos cada vez mais distantes. Esse poder aumenta conforme a cidade for constituída de elementos variados em microescala que provoquem os sentidos do transeunte convertendo-se em destinos de peregrinação. Se a identidade da cidade for bem constituída, ela é percebida sem ambiguidades. E esses espaços servem tanto ao morador quanto ao turista. Desta forma, o turismo é um fenômeno cultural, cruzam-se fronteiras, atingem-se os sentidos e interpõe uma caminhada à excitação.

A cidade é viva, possui sua própria identidade, apresenta um dinamismo de relações que se alteram ao ritmo de diferentes circunstâncias, portanto sempre é possível a renovação urbana, afirma Castrogiovani (2001). A cidade deve ser vista como um bem cultural, em que devem ser valorizadas as funções culturais que atendam à qualidade de vida de seus habitantes.

Segundo Boullón (2002) quando se estudou as dificuldades do homem para decifrar a paisagem natural, viu-se que ela se oferece aos olhos do observador como uma cena muito ampla, que, por sua complexidade e variedade de elementos, apresenta dificuldades para ser captada em seus detalhes. Quando é a paisagem urbana a ser estudada o caso se inverte, porque é mais fácil reconhecer uma cidade por meio de um edifício do que pelas imagens de conjunto que não o incluem.

A cidade que os turistas querem é a das ruas, praças e edifícios, e não a da representação em um papel, que só lhes serve como referência para saber em que rua está seu hotel e as distâncias aproximadas que os separam dos lugares mais importantes. A realidade urbana, interpretada como fato espacial, alcança três dimensões e chegam à quarta pelos olhos de um observador que transforma a paisagem urbana ao circular por ela.

A percepção de uma cidade não é total nem instantânea, mas se realiza no transcurso do tempo, pela soma das imagens parciais que o espaço físico transmite e que o homem registra em sucessivas vivências. É por meio dessa série de elementos formais que o homem consegue identificar e reter em sua memória, assim constrói-se a imagem da paisagem urbana. Para o habitante de uma cidade essa construção é imprescindível, pois com ela ele reconhece os lugares em que transita e se orienta.

A captação dos pontos focais de um centro turístico origina a formação de um número equivalente de imagens fortes, que ao se correlacionarem na mente dos visitantes permitem elaborar uma síntese desse espaço urbano. Ao se relacionar os pontos focais sem se levar em conta a totalidade da rede de ruas e outros milhares de edifícios sem importância, obtém-se uma nova imagem da cidade com base em sua organização focal.

Segundo Boullón (2001) ao percorrer uma cidade, o turista o faz entre pontes que atraem seu interesse e motivam sua presença obrigatória, pontos que chamaremos de áreas gravitacionais, e que se classificam em quatro tipos: estações terminais dos sistemas de transporte; zonas de concentração do empreendimento turístico e de outros serviços urbanos; atrativos turísticos urbanos e saídas para as estradas que conduzem a atrativos turísticos.

Segundo Sánchez (2003):

Uma boa infraestrutura de comunicações, no sentido amplo (rodovias, portos, aeroportos, telecomunicações) é um requisito básico para possibilitar um acesso fácil e rápido às cidades. A capacidade de se transformar em centro de cultura e de serviços pessoais de todo tipo, em centro de lazer e de esportes é um requisito complementar para fazer atrativa a qualidade de vida urbana. Na competitividade entre cidades contam também, cada vez mais, fatores como o meio ambiente e as infraestruturas educativas e culturais. Em sentido estratégico, poderíamos dizer que as cidades são como empresas que competem para atrair investimentos e residentes, vendendo em troca localizações vantajosas para a indústria, o comércio e todo tipo de serviços. (Maragall apud Benach, 1997, p. 368)

Desta forma, as cidades necessitam ser trabalhadas para que possam alcançar o mercado mundial, no sentido turístico, econômico e social. As cidades são transformadas, com a renovação urbana e conectadas aos circuitos de uma nova ordem mundial, as políticas urbanas operam e validam a mercantilização da vida social e de seus espaços. Precisa haver um consenso entre as políticas públicas para que as cidades estejam caminhando com um só objetivo.

Segundo Bienenstein (2001) apud Sánchez (2003), as parcerias entre público e privado constituem os principais pilares das novas feições e estrutura do governo urbano sintonizado na competitividade. Essas parcerias são construídas por meio de alianças e coalizões que configuram novo perfil dos governos urbanos. Esses instrumentos são voltados para a agilização da administração das cidades, visando à competitividade e otimização do aproveitamento de oportunidades de investimento e financiamento para obter várias formas de valorização e acumulação.

Uma boa cidade empreendedora necessita não só fazer boas alianças, mas também ser sustentável. As cidades necessitam ter políticas ambientais que melhorem a qualidade de vida das pessoas. É preciso haver projetos para coleta de lixo, matrizes energéticas, preservação ambiental entre outros. É necessário haver para isso também uma participação dos cidadãos, pois estes precisam participar na aceitação e aprovação dos projetos da cidade. O papel das renovações urbanas associadas à oferta cultural, museus, centros culturais, espaços de entretenimento, tem construído as principais imagens e representações da internacionalidade das urbes, vitrines dos lugares que se pretendem “mundializados”. Por trás dessas renovações urbanas que contribuem para o renascimento das cidades há uma busca da identidade do local. Como construção social, a produção da imagem da cidade está intrinsecamente ligada a representações e valores. O projeto de cidade é ação material no espaço (urbanística, cultural, econômica), junto com uma intenção de cidade, que dá conteúdo ao discurso sobre o espaço.

Santos tem criado leis e planos que têm um só objetivo, revitalizar seu centro histórico e tornar a cidade conhecida nacionalmente por sua história. Através do seu plano diretor estabelece áreas, como a zona central I onde está a rua XV de Novembro, com bens de interesse cultural, a fim de revitalizar essas áreas, protegendo seu patrimônio cultural por meio de corredores de desenvolvimento da cultura, renovando, assim, a cidade.

Ao mesmo tempo, o porto, depois de sua privatização a partir da lei 8.630/93, que visava modernizar os portos, estabelece

que nas fronteiras entre porto e cidade deve haver espaços de integração. Um exemplo é a criação da avenida perimetral que quando cruza o centro histórico passa rebaixada, possibilitando a criação de grandes boulevards. Já foi aberta licitação para ocupar os armazéns 1 ao 4 com usos voltados para o turismo, os quais poderiam ser restaurantes, áreas de compras, informações turísticas e por que não um hotel, já que nessa área existiu hotel nos momentos mais remotos da cidade.

Desde 1913 há um fluxo de turistas na cidade, sendo que esse aumentou após a construção da via Anchieta em 1950. Assim, esses projetos vêm ao encontro do projeto Alegria Centro, projeto de revitalização do centro histórico da cidade para dar força ao turismo na cidade.

Figura 19 – Calçadão da Rua XV de Novembro e seus restaurantes



Fonte: CD Santos de bem com a vida

A cidade é uma escritura que deve ser lida, restaurar esses imóveis e possibilitar que eles contêm um pouco da história da cidade é importante para o turista e para o morador, que é o ator dessa obra viva.

O visitante procura ter uma experiência com a cidade quando ele a visita. O turista busca elementos da paisagem, espaços construídos e o movimento da vida, já que é mais fácil reconhecer uma cidade pelo conjunto de obras que nela há. Assim, a cidade é um bem cultural e beneficia o cidadão dela primeiramente, melhorando sua qualidade de vida quando bem preservada. Santos necessita e merece ter um tratamento adequado de suas obras para entrar no circuito nacional e, quem sabe, internacional de cidades turísticas. Para tanto, necessita realizar melhores alianças para possibilitar o restauro das obras e incentivar os proprietários dos imóveis de interesse histórico-cultural. Desse modo, estaria se pensando não só na sustentabilidade ambiental, mas também nas social e econômica.

A sustentabilidade global é um dos grandes desafios a ser enfrentado no século XXI, sendo o desenvolvimento sustentável amplamente entendido a partir da teoria do Triple Bottom Line. Por sua vez, as cidades são o palco onde a dimensão social, econômica e ambiental se convergem com mais intensidade.

Apesar das cidades serem centros de inovação, crescimento econômico, transformação social, saúde e educação, seu crescimento traz para discussão questões sobre aquecimento global, administração de recursos, economia baseada na baixa emissão de carbono e desigualdade social. As cidades requerem soluções inovadoras em seu design, em sua governança e em sua infraestrutura de investimentos, para que possam responder essas questões de maneira apropriada (Mitchell, Casalegno, 2008 apud Rego, 2013). Assim torna-se relevante falar sobre sustentabilidade dentro do contexto urbano. A sustentabilidade deriva da percepção de que os recursos do planeta são finitos e de que o uso inadequado dos mesmos deve ser desencorajado (Leite, 2012 apud Rego, 2013).

Portanto, visando alterar das mudanças climáticas é necessária a adoção de políticas que implementem cidades sustentáveis que saibam lidar adequadamente com a economia, a sociedade e o meio ambiente (Sachs, 2008 apud Rego, 2013). A cidade sustentável, de acordo com Mark Roseland (1997) apud Rego, 2013, é o tipo mais durável de assentamento que o ser humano é capaz de construir. É a cidade capaz de propiciar um padrão de vida aceitável sem causar profundos prejuízos ao ecossistema ou aos ciclos biogeoquímicos de que ela depende. O modelo de urbanização adotado há anos pelos países, com destaque para os desenvolvidos, considera diversos recursos naturais como recursos inesgotáveis e gratuitos.

Benefícios das cidades ecologicamente inteligentes Cada vez mais é reconhecida a importância da sustentabilidade e os efeitos positivos que esta gera para a sociedade e o meio ambiente. Com isso, é importante destacar também que o desenvolvimento sustentável, aliado ao processo de urbanização das cidades, geram benefícios de diversos tipos para as pessoas. A urbanização sustentável traz, portanto, vantagens de cunho social, como a melhoria da qualidade de vida nas cidades; de cunho econômico, refletindo-se na prosperidade da economia local; e ambiental, contribuindo para a diminuição do problema de aquecimento global; entre outros (Pnuma, 2011 apud Rego, 2013).

Hoje, cidade inteligente significa cidade resiliente e sustentável, isto é, com flexibilidade e capacidade de adaptação; capaz de dar respostas rápidas e eficientes às ameaças externas, como, por exemplo, mudanças climáticas, desastres, chuvas intensas, furacões, ou, simplesmente, atender aos princípios básicos de segurança alimentar ou de qualquer outra natureza.

A inteligência da cidade inclui a identificação da vocação produtiva local, em função da cultura e de atividades econômicas

já estabelecidas, para melhor aproveitar suas potencialidades. Inclui, sobretudo, a descoberta de novas vocações, inexploradas, que poderão resultar em empregos, dinamismo econômico, investimentos públicos e privados para a melhoria das condições de vida da população.

Uma Smart City tem três focos importantes:

É sustentável: usa a tecnologia digital para reduzir custos e otimizar o consumo de recursos de modo que sua administração presente não comprometa o uso pelas gerações futuras;

É inclusiva e transparente: tem canais de comunicação diretos com os cidadãos, opera com dados abertos e permite acompanhar suas finanças;

Gera riqueza: oferece infraestrutura adequada para geração de empregos de alta qualidade, inovação, competitividade e crescimento dos negócios;

É feita para os cidadãos: usa a tecnologia digital para melhorar a qualidade de vida das pessoas e dar acesso rápido a serviços públicos mais eficientes.

Nota-se que nos quatro focos apresentados a tecnologia digital é um vetor recorrente, o que nos leva a apontar as tecnologias inerentes ao seu sucesso. Primeiramente a tecnologia nos brinda com o BigData, baseado em grandes repositórios de dados estruturados ou não. Imagina-se, por exemplo, que somente os dados coletados sobre fatores que influenciam a mobilidade urbana rendam tera Bytes de dados em curto espaço de tempo. Como dados ainda não são informações, traz-se um novo termo o *Business Intelligence*, que procura dar qualidade e importância aos dados coletados, para que governantes e dirigentes tomem as ações corretas. Porém, temos que pensar como coletar e transportar esses dados. Mais uma vez a tecnologia é um forte aliado com mecanismos robóticos e mecatrônicos de aquisição e redes velozes e com forte capilaridade ajudam nessa tarefa. Atualmente a tecnologia está madura para investirmos esforços nesse sentido, e o emprego do IoT (Internet of Things) Internet das coisas, os micro-satélites de baixa ordem, e a tão famosa rede TCP/IP (Protocolos usados na infraestrutura da Internet). Mas nem tudo está pronto, a segurança e o uso dessas informações carece de pesquisa e investimentos, pois, pessoas e organizações criminosas sempre estarão à espreita para provocar algum dano material ou econômico. Hackers e pessoas inconscientes podem gerar danos a essa arquitetura, e embora lista-se uma grande quantidade de aplicações de proteção, é comum vermos no noticiário, que uma grande empresa, ou algum governo tiveram seus dados roubados e utilizados para fins indevidos.

Santos já iniciou seu trabalho, tem a cidade toda mapeada e já possui alguns dados sobre a cidade e mobilidade à disposição de moradores, pesquisadores ou qualquer um que queira se informar sobre a cidade. Mas ainda há um longo caminho a ser percorrido.

REFERENCIAS

- Araújo Filho, José Ribeiro de (1969). *Santos, o porto do Café*. Fundação IBGE. Tese de Livre Docência FFLCH-USP.
- Barbosa, Maria Valéria (org) (2000). *Santos na formação do Brasil: 500 anos de história*. Santos, Prefeitura Municipal de Santos: Secretaria Municipal de Cultura: Fundação Arquivo e Memória de Santos.
- Boullón, Roberto (2002) *Planejamento do espaço turístico*. Bauru, Edusc.
- Caldatto Barbosa, Gino; C.B., Ney; Fernández Alves, Jaqueline (2004). *O Palácio do Café*. São Paulo, Magma Cultural e editora.
- Castrogiovanni, Antonio Carlos *et al.* (2001). *Turismo urbano*. São Paulo, Contexto.
- Rego, Jaqueline Azevedo de Amorim *et al.* (2013). Cidades Sustentáveis: Lidando com a urbanização de forma ambiental, social e economicamente sustentável. Simulação das Nações Unidas para Secundaristas. *Cidades Sustentáveis*. 545 – 573
- Sánchez, Fernanda. 2003. *A Reinvenção das Cidades*. Chapecó, Argos.
- Mapas e fotos. Disponível em <<http://www.novomilenio.inf.br>> Acesso em 16 jul 2006.
- Mapas e fotos. Disponível em <<http://www.vivasantos.com.br>> Acesso em 10 ago 2006.
- Secretaria de Turismo de Santos. Santos de bem com a vida. Santos. 2005 CD-ROM.

LITERACIA ESTATÍSTICA: A IMPORTÂNCIA DAS COMPETÊNCIAS BÁSICAS

Carla Santos

Departamento de Matemática e Ciências Físicas do
Instituto Politécnico de Beja
(carla.santos@ipbeja.pt)

Maria Varadinov

Escola Superior de Tecnologia e Gestão do Instituto
Politécnico de Portalegre
(dinov@estgp.pt)

Cristina Dias

Escola Superior de Tecnologia e Gestão do Instituto
Politécnico de Portalegre
(cpsilvadias@gmail.com)

Joaquim Baltazar Vaz

Escola Superior de Tecnologia e Gestão do Instituto
Politécnico de Portalegre
(jbaltazarvaz@gmail.com)

RESUMO

Na sociedade moderna, a percepção do mundo que nos rodeia depende, em muito, da compreensão de informação de cariz numérico. A presença, constante, de dados estatísticos nas mais diversas situações da vida pessoal, social e profissional, condiciona a cidadania informada e participativa à avaliação crítica, decodificação, compreensão e uso adequado desses dados.

A tomada de consciência de que as competências estatísticas se tornaram cruciais para os indivíduos, similarmente à capacidade de ler ou escrever, promoveu a disseminação do estudo da Estatística. Em Portugal, como em muitos outros países, os estudantes estudam Estatística desde os primeiros anos do ensino básico até ao ensino secundário, contudo, muitos destes estudantes não adquirem, durante esses anos, as competências estatísticas básicas, revelando dificuldades em aspectos tão comuns e indispensáveis como a leitura e interpretação de informação estatística expressa em tabelas e gráficos ou a compreensão das medidas estatísticas.

O presente estudo pretende analisar os factores que contribuem para as dificuldades que os estudantes do ensino superior politécnico apresentam no que se refere à interpretação de gráficos estatísticos, em particular os gráficos de barras. Com base nos dados recolhidos e na revisão da literatura, os erros, cometidos na interpretação dos gráficos, foram identificados e classificados.

Palavras-chave: Gráficos, Ensino Superior, Literacia Estatística.

JEL Classification: C10, I23

1. INTRODUÇÃO

Sendo relativamente recente o reconhecimento da imprescindibilidade das competências de cariz estatístico, vulgarmente designadas por literacia estatística, são de há muito os alertas para a crescente importância da Estatística, numa sociedade onde os dados numéricos são cada vez mais abundantes e relevantes. Talvez pela sagacidade das suas palavras, provavelmente pela sua popularidade e visibilidade, é quase obrigatório citar o escritor britânico H. G. Wells (1866, 1946) quando se discute o papel de destaque que a Estatística vem desempenhando na sociedade. Quando o autor de *A Guerra dos Mundos*, *A Máquina do Tempo* e *O Homem Invisível* referiu que “No futuro, o pensamento estatístico será tão necessário, para o exercício de uma cidadania eficiente, como saber ler e escrever”, as suas palavras pareceram um enorme exagero, o que não será de estranhar pois ainda hoje há muito quem desvalorize a importância da literacia estatística, em particular, e da numeracia, em geral, mas, de facto, em meados do século XIX, havia já quem tivesse tomado consciência de que a evolução da sociedade conduziria a uma crescente necessidade de o cidadão comum possuir competências que lhe permitam lidar, adequadamente, com a informação estatística com que se depara no seu quotidiano.

Ao longo do século XX, os alertas, sobre a importância da cultura estatística, foram subindo de tom. Para tal, muito contribuiu o desenvolvimento tecnológico e o reconhecimento da utilidade da Estatística em todas as áreas do conhecimento. Como resposta à necessidade crescente de formação estatística, de investigadores e profissionais das mais diversas áreas, o ensino da Estatística expandiu-se, em poucas décadas, à grande maioria dos cursos do ensino superior.

Aos poucos, também a vida do cidadão comum passou a contar com a presença da Estatística, de forma cada vez mais visível e frequente. Vivemos actualmente numa sociedade baseada em dados, e estes estão presentes, se não em todas, em quase todas as actividades do nosso quotidiano, pelo que as competências estatísticas são hoje, também, imprescindíveis a todos quantos desejam o exercício de uma cidadania informada e participativa. O reconhecimento da formação estatística como parte imprescindível da formação cívica dos indivíduos, culminou na necessidade de alargamento do estudo da Estatística a todos os níveis de ensino.

Foi na segunda metade do século XX que os currículos escolares portugueses, do ensino secundário, passaram a incluir o estudo da Estatística, integrado no programa da disciplina de Matemática. Acompanhando a tendência internacional de

alargamento do estudo da Estatística ao ensino básico, o tema da Estatística foi introduzido progressivamente nos currículos do 2º e 3º ciclo do ensino básico, no início dos anos noventa, e no 1º ciclo do ensino básico, em 2007.

Pretendendo fazer face à constante evolução da sociedade e à forma como essa evolução se reflecte na vida dos indivíduos, as recomendações curriculares, a nível internacional, foram enfatizando a importância do reforço da literacia estatística, não só em termos de conteúdos mas também na forma de abordagem desses conteúdos. Em Portugal, as tendências internacionais têm vindo a ser acompanhadas, ainda que se levantem dúvidas da convergência das mais recentes alterações às metas curriculares de Matemática do ensino básico (MEC, 2013) e de Matemática A do ensino secundário (MEC, 2014) com o percurso trilhado até então (p.e. Henriques & Fernandes, 2015).

Apesar de o estudo da Estatística, no ensino básico e secundário, estar consolidado há já um número considerável de anos e de os alunos terem contacto com a Estatística em diversos momentos da sua formação pré-superior, existem vários estudos, tanto em Portugal (p.e. Carvalho, 2004; Boaventura, 2003) como noutros países (p.e. delMas *et al.*, 2007; delMas & Liu, 2005; Garfield, 2003; Batanero *et al.*, 1994) que identificam consideráveis lacunas nas competências de cariz estatístico dos alunos, durante a frequência e no final dos vários níveis de ensino.

Com o estudo que serve de base a este artigo pretendemos identificar as dificuldades que estudantes, à entrada do ensino superior politécnico, apresentam no que se refere a vários conceitos básicos de Estatística e Probabilidades, pertencentes aos programas da sua formação pré-superior. Com esta avaliação diagnóstica pretendemos recolher informação que nos permita compreender os factores que concorrem para as fragilidades que os alunos demonstram, no decorrer do processo de aprendizagem dos conteúdos das U.C. da área da Estatística, e nos sirva de base para a implementação de medidas correctivas, como o ajustamento dos métodos e estratégias de ensino em função das características, percursos e necessidades dos alunos. De entre os conteúdos que foram alvo dessa avaliação diagnóstica, seleccionámos, para este artigo, apenas os aspectos relacionados com gráficos estatísticos, mais precisamente a leitura e interpretação de informação expressa em gráficos de barras.

2. A LITERACIA ESTATÍSTICA

Como consequência do intenso e acelerado desenvolvimento tecnológico que a sociedade actual vem experienciando, as competências consideradas indispensáveis à vida pessoal, social e profissional diferem, consideravelmente, das exigidas há algumas décadas, que se restringiam à capacidade de ler, escrever e calcular.

Analisando o vasto leque de competências consideradas, agora, indispensáveis para fazer face à complexidade da sociedade moderna, que D'Ambrosio (1999) sintetiza em três domínios: literacia, matemacia e tecnocracia, percebe-se claramente que a alteração registada não incide apenas na quantidade de competências exigidas, mas também, e com grande ênfase, na mudança do enfoque da posse para a capacidade de usar essas competências. Fica ainda claro, tanto na colecção de competências do triunvirato de D'Ambrosio (1999), quer nas definições de literacia, no seu sentido mais lato, propostas por Kirsch *et al.* (1993), Benavente *et al.* (1996) ou Murnane *et al.* (2012), que um dos elementos fulcrais passa pelas competências necessárias para aceder, processar e comunicar informação.

Estando fora do âmbito deste trabalho a revisão das competências que os diversos autores têm cunhado como imprescindíveis, ou das competências que estes consideram necessárias para aceder, processar e comunicar informação, no geral, iremos centrar-nos nas competências direccionadas para aceder, processar e comunicar informação numérica, em particular a informação de cariz estatístico.

Hoje, mais do que nunca, grande parte da informação surge na forma de dados estatísticos ou gráficos, incluídos em notícias e relatórios que servem de base à tomada de decisão, seja profissionalmente, seja na vida pessoal e social. Inevitavelmente, parte das competências, exigidas ao cidadão de hoje, concorrem para a compreensão de argumentos baseados em dados estatísticos, ou seja, parte das competências que compõem a “nova” literacia referem-se à literacia estatística.

São inúmeras as definições de literacia estatística presentes na literatura. Destas, destacamos quatro que, no seu conjunto, achamos mostrar claramente, não só a diversidade de competências envolvidas, como o relevo que é dado à capacidade de utilizar essas capacidades na vida quotidiana.

Para Gal (2000), a literacia estatística é “a capacidade de interpretar e avaliar criticamente a informação estatística e os argumentos baseados em dados, que surgem nos diversos meios de comunicação, e a capacidade de discutir opiniões a respeito dessa informação estatística”. Particularizando um pouco mais, Garfield (1999, *apud* Rumsey, 2002) considera que a literacia estatística inclui “a compreensão da linguagem estatística: palavras, símbolos e termos. Ser capaz de interpretar gráficos e tabelas. Ser capaz de ler e dar sentido às estatísticas nas notícias, *media*, sondagens, etc”. Com base na definição anterior e noutras de outros autores, Garfield & Ben-Zvi (2007) defendem que a literacia estatística é sinónimo de “compreensão e uso das ferramentas e linguagem básica da Estatística: sabendo o significado dos termos estatísticos básicos, compreendendo o uso de símbolos estatísticos básicos e sendo capaz de interpretar diferentes representações de dados”. Watson (1997) sugere um modelo de literacia estatística com três níveis progressivos, o primeiro dos quais envolve “a compreensão básica da terminologia estatística”, o segundo que envolve “a incorporação da linguagem e conceitos estatísticos” e o terceiro em que surge “a capacidade de questionar e rebater a fundamentação de alegações estatísticas”.

Ratificado o papel central que a Estatística desempenha na sociedade moderna (Wallman, 1993), intensificaram-se os alertas para a necessidade de a educação estatística contribuir para o, efectivo, desenvolvimento da literacia estatística (p.e. Gal & Garfield, 1997) e de os currículos escolares terem como pilar as manifestações estatísticas presentes nas dimensões pessoal, social e profissional, da vida dos alunos (Schield, 2004). Esses alertas tiveram eco na reformulação dos currículos escolares um pouco por todo o mundo, estando bem patentes nas orientações dos currículos de Matemática, dos níveis de

ensino básico e secundário portugueses, onde a literacia estatística aparece como um elemento chave (Canavarro, 2015), verificando-se a coincidência entre as competências desta e muitos dos objectivos desses programas de Matemática (MEC, 2013, 2014).

Como se percebe da análise das diversas definições de literacia estatística e da forma reiterada como surge, transversalmente, nos programas de Matemática do ensino básico e secundário, a representação de dados e a sua interpretação é considerada de enorme relevância.

3. A ESTATÍSTICA NO ENSINO SUPERIOR

No ensino superior, em Portugal, a maior parte dos cursos de formação inicial integram, no seu currículo, pelo menos uma unidade curricular de Estatística (Dias & Santos, 2014). Não obstante a necessidade de adequar os conteúdos dessas unidades curriculares às necessidades específicas de cada curso, as unidades curriculares de Estatística, dos diversos cursos e instituições do ensino superior, apresentam programas algo semelhantes, visto a maior parte das ferramentas estatísticas serem de aplicação transversal a todas as áreas.

Numa tentativa de tratar o máximo de conteúdos de nível mais avançado e integrar o uso de softwares de análise de dados, em unidades curriculares com cada vez menos horas lectivas, existe a tendência para preferir a abordagem dos conceitos base da cultura estatística, por se suporem já adquiridos nos níveis de ensino anteriores.

Como comprova a nossa experiência, de quase vinte anos de leccionação de variadas U.C. de Estatística, no ensino superior politécnico e universitário, e inúmeros estudos desenvolvidos em Portugal (p.e. Carvalho, 2004; Boaventura, 2003) e internacionalmente (p.e. delMas *et al.*, 2007; delMas & Liu, 2005; Ben-Zvi & Garfield, 2004; Garfield, 2003; Batanero *et al.*, 1994), sobre as lacunas na cultura estatística, que os alunos carregam ao longo de todo o seu percurso escolar até final do ensino secundário, os alunos atingem, frequentemente, o ensino superior sem possuírem as competências estatísticas básicas, revelando dificuldades em diversos aspectos, alguns tão triviais e indispensáveis como a interpretação de informação expressa em gráficos e tabelas, o uso e interpretação de medidas estatísticas ou a tomada de decisão com base em informação de cariz probabilístico.

Cientes de que as lacunas na literacia estatística, dos alunos do ensino superior, constituirão um enorme entrave à evolução do conhecimento e raciocínio estatístico desses alunos, e de que o ensino superior será, para a esmagadora maioria dos alunos, a última oportunidade de aquisição das competências estatísticas básicas, parece-nos de enorme importância adequar as U.C. de Estatística ao perfil dos alunos que a vão frequentar, proporcionando um reforço das bases da cultura estatística desses alunos, ao mesmo tempo que se lhes dá a conhecer um leque mais alargado e avançado de métodos estatísticos.

4. OS GRÁFICOS ESTATÍSTICOS

A capacidade de sumarizar grande volume de dados e expressar as características mais relevantes desses dados, permitindo converter informação quantitativa em informação qualitativa, tornou a Estatística uma ferramenta de trabalho imprescindível, tanto para os investigadores, como para os difusores de informação social, política, publicitária ou outra.

Na tarefa de representar dados estatísticos, de forma resumida e ordenada, facilitando a sua leitura e interpretação, um dos recursos mais utilizados são os gráficos.

Apesar de o uso corrente de gráficos, para apresentar dados estatísticos, só ter ocorrido no início no século XIX (Spence & Lewandowsky, 1990), os alicerces tinham já sido lançados no século anterior, com o valioso contributo de William Playfair (1759-1823), a quem se atribui a invenção de grande parte das representações gráficas mais em voga na actualidade, como o gráfico de barras, o sectograma (gráfico em pizza), o histograma ou o pictograma (Tufte, 1983).

Apesar do reconhecimento, por muitos, da utilidade dos gráficos de Playfair, a preferência pela representação tabular de dados, em detrimento da representação gráfica, manteve-se durante muitos anos, justificada, possivelmente, pela acrescida dificuldade técnica da elaboração dos gráficos.

Beneficiando do desenvolvimento tecnológico e do aparecimento de variados programas informáticos que auxiliam na elaboração de gráficos estatísticos, o uso destes gráficos generalizou-se.

Na sociedade actual, os gráficos estatísticos estão presentes, quotidianamente, nas mais diversas situações, tendo-se tornado elementos imprescindíveis, em relatórios científicos, na política, no desporto ou na publicidade, com a finalidade de comunicação e/ou análise (Kosslyn, 1985).

A popularidade que os gráficos granjearam, deve-se, em grande parte, à sua capacidade de transmitir grandes quantidades de informação, de forma simples, rápida e atractiva. Mas esta que é a sua maior virtude, constitui também, por distintas razões, um desafio para os consumidores de informação expressa em gráficos que, não estando cientes das potencialidades e limitações desta forma de representação de dados estatísticos, poderão reter uma ideia deturpada do conteúdo do gráfico.

Sendo inquestionável a utilidade das representações gráficas de dados estatísticos, a eficácia destes gráficos fica condicionada pela adequação do tipo de gráfico aos dados a representar e à mensagem que se pretende transmitir, assim como pela legibilidade e lógica do desenho do gráfico, que permita, ao seu consumidor, a adequada interpretação dos dados nele representados.

Não obstante a multiplicidade de formatos de gráficos disponíveis actualmente, o gráfico de barras tem-se mantido no lugar cimeiro das preferências, quando se trata de representação de dados estatísticos, beneficiando da sua simplicidade e versatilidade.

Tendo como base um sistema de coordenadas cartesianas, o gráfico de barras é, tal como o nome indica, constituído por

barras (usualmente verticais) assentes no eixo das ordenadas, onde estão representados os diferentes valores da variável em estudo (que tanto pode ser uma variável qualitativa ou quantitativa). De acordo com a escala utilizada no eixo das ordenadas, a frequência (absoluta ou relativa) de cada um dos valores da variável determina a altura das barras.

4.1 A interpretação de gráficos estatísticos

Quando se organiza, descreve e analisa um conjunto de dados estatísticos desenvolve-se um processo de *transnumeração*, pelo qual se obtém nova informação, que não estava disponível nos dados iniciais, através da mudança do sistema de representação (Arteaga *et al.*, 2011). Esta *transnumeração* é evidente na representação gráfica de um conjunto de dados, pois, através da mudança de representação, é possível resumir a informação contida nesses dados, fazer comparações ou detectar tendências, o que, com base nos dados iniciais, dificilmente seria possível.

Considerando a construção de um gráfico como a codificação de informação e sua interpretação como decodificação (Cleveland & McGill, 1984), a eficácia na assimilação do conteúdo de um gráfico está dependente da capacidade de decodificação (processamento) da informação de quem o analisa e da capacidade do gráfico em transmitir a informação (p.e. Pinker, 1990; Peebles & Cheng, 2003; Shah, Freedman, & Vekiri, 2005).

Quando bem desenhado, um gráfico constitui uma poderosa ferramenta de representação e resumo de informação quantitativa (p.e. Shah, Freedman, & Vekiri, 2005), contudo o seu carácter imediatista e simplista pode também prejudicar a compreensão do seu conteúdo.

Seja pela inadequada preparação do produtor de um gráfico ou pelo carácter obscuro das intenções com que muitos dos gráficos são desenhados, são inúmeros os aspectos que podem ser esquecidos, descuidados ou intencionalmente omitidos ou adulterados nesses gráficos (p.e. Huff, 1954) e que influenciam o significado da informação que chega ao consumidor. Para que seja possível interiorizar, eficazmente, a mensagem embebida num gráfico e ter uma visão clara das pretensões de quem construiu esse gráfico, o processo de decodificação da mensagem transmitida, por um gráfico, deve envolver as mesmas competências que assistiram à sua construção (Steen, 1999).

Decorrente da disseminação do uso de gráficos, registou-se uma crescente preocupação com a identificação dos factores que envolvem a sua compreensão, repercutida em vasta investigação sobre esta temática (p.e. Galesic & Garcia-Retamero, 2011; Arteaga *et al.*, 2011; Ratwani, Trafton & Boehm-Davis, 2008; Mautone & Mayer, 2007; Friel, Curcio & Bright, 2001; Shah, Mayer, & Hegarty, 1999; Kosslyn, 1985).

De acordo com o grau de abstracção exigido, Bertin (1967, apud Wainer, 1992), Kosslyn (1985) e Curcio (1989) propõem a classificação da compreensão de um gráfico em três níveis, resumidos na tabela seguinte.

Tabela 1: Níveis de compreensão de um gráfico

Autor	Níveis de compreensão		
	Elementar	Intermédio	Superior
Bertin (1967)	Extraí dados (Relacionar um elemento de um eixo com um elemento do outro eixo).	Extraí de tendências (Identificar relações entre subconjuntos dos dados).	Analisa a estrutura dos dados (Comparar tendências ou agrupamentos e efectuar predições).
Kosslyn (1985)	Reconhece as propriedades dos elementos constituintes do gráfico. (Nível sintático)	Avalia o significado do gráfico e interpreta a informação quantitativa e qualitativa nele contida. (Nível semântico)	Procura o objectivo do gráfico e a analisa o propósito da informação transmitida (Nível pragmático).
Curcio (1989)	Lê os dados (leitura literal da representação em causa; compreensão da escala e das unidades de medida; resposta a questões explícitas; identificação e classificação das variáveis em estudo).	Lê entre os dados (interpretação e organização da informação patente na representação; construção de diferentes representações; compreensão e aplicação das propriedades de medidas de resumo; explicação do significado de valores obtidos; comparações entre os dados e respectivas representações; recurso a conhecimentos matemáticos prévios).	Lê além dos dados (extrapolação, previsão ou inferência a partir da informação contida no gráfico; capacidade de colocar questões).

Partindo destas classificações, poder-se-á considerar que o processo de compreensão de um gráfico tem duas etapas: a leitura e a interpretação, sendo que, a primeira pode ocorrer sem a segunda, mas a segunda está intimamente ligada à primeira e dela dependente.

Como decorre das definições de literacia estatística, a tomada de consciência, plena, do conteúdo de um gráfico envolve competências associadas aos níveis mais avançados da compreensão de gráficos, sendo necessária, mas manifestamente insuficiente, a simples capacidade de extracção de dados do gráfico.

Sustentando-nos nos autores anteriores (Tabela1), distinguimos a compreensão limitada de um gráfico (presente nos primeiros níveis das classificações anteriores), sintetizada no termo “leitura”, que envolve, unicamente, a capacidade de leitura literal da informação expressa no gráfico, da compreensão efectiva do conteúdo de um gráfico, sintetizada no termo “interpretação”, que envolve a leitura crítica do gráfico, através da identificação de tendências, variabilidade e possível associação nos dados representados no gráfico e detecção de falhas no seu desenho que possam distorcer a informação

transmitida.

Vejam os que diferentes autores entendem por “interpretação de um gráfico”. Friel, Curcio, & Bright (2001) consideram a “interpretação de um gráfico” como sinónimo de capacidade de extrair significado desse gráfico, reconhecendo os elementos constituintes do gráfico e a sua adequação, avaliando a influência de cada um desses elementos na transmissão da informação, traduzindo as relações estabelecidas entre o gráfico e os dados nele representados e avaliando a pertinência e adequação do gráfico.

Para Wu (2004) a interpretação de um gráfico refere-se à capacidade de formular opiniões acerca da informação expressa no gráfico e do desenho desse gráfico.

Segundo Monteiro & Ainley (2004), a interpretação de gráficos é muito mais que um simples procedimento técnico, envolvendo um vasto leque de conhecimentos, experiências e sentimentos.

4.2 Os erros de interpretação de gráficos estatísticos

Apesar do papel, indiscutivelmente, facilitador das representações gráficas na compreensão das características de grandes volumes de dados, para muitas pessoas, o processo de leitura e interpretação de um gráfico (mesmo o mais elementar) não é simples, como se percebe pelos alertas de Arteaga *et al.* (2011) para o facto de a capacidade de leitura e interpretação não se adquirir espontaneamente, e de se configurar de difícil aquisição, mesmo através do ensino. Para esta dificuldade, Galesic & Garcia-Retamero (2011) apresentam como argumento o facto de as representações gráficas de dados serem relativamente recentes na história humana, o que não possibilitou ainda que o ser humano desenvolvesse a capacidade intuitiva de compreensão de gráficos.

Marcados pela influência da capacidade de cada indivíduo na decodificação da informação contida num gráfico e da capacidade do gráfico em transmitir a informação, surgem erros e dificuldades na leitura e interpretação do conteúdo dos gráficos, associados aos vários níveis de compreensão de um gráfico.

Embora raros estudos se debrucem exclusivamente sobre a compreensão de gráficos de barras, é possível encontrar, na literatura, vários estudos, sobre gráficos em geral, onde são identificados erros e dificuldades na leitura e interpretação de gráficos de barras.

Com base nos resultados das investigações de Pereira Mendoza & Mellor (1990), Wu (2004), Watson (1997) e Arteaga *et al.* (2011) apresentamos uma súmula dos aspectos, mais comuns, envolvidos nos erros e dificuldade associados à interpretação de gráficos de barras:

- Confusão entre o valor da variável e a frequência;
- Compreensão dos valores representados nos eixos;
- Compreensão do propósito do gráfico;
- Compreensão do contexto em que surgem os dados;
- Domínio da terminologia adequada à descrição do conteúdo do gráfico;
- Comparação das alturas das barras descurando as frequências;
- Variação da disposição dos dados (barras horizontais vs barras verticais);
- Deficiente domínio de percentagens, proporcionalidade, etc;
- Erros de cálculo.

5. METODOLOGIA

Conscientes da impossibilidade de avaliar todas as competências envolvidas na literacia estatística, presentes nos programas da disciplina de Matemática dos níveis de ensino básico e secundário, direccionámos o estudo, que deu origem a este artigo, para os conceitos e técnicas estatísticas básicos que se podem considerar como a base de trabalho da maioria das unidades curriculares de Estatística leccionadas no Ensino Superior, em Portugal, e que se supõem já abordados nos níveis de ensino anteriores.

Dos conceitos e técnicas estatísticas avaliados, seleccionámos, para análise neste artigo, apenas os aspectos relacionados com a interpretação de gráficos, em particular a leitura e interpretação da informação expressa em gráficos de barras.

Tendo presentes os aspectos que, na literatura, são identificados como influenciadores da compreensão de um gráfico de barras, e as metas estabelecidas nos programas de Matemática do ensino básico e secundário, em Portugal, referentes à construção e interpretação de gráficos estatísticos, elaborámos um questionário para a recolha de dados nesta investigação.

O questionário, respondido pelos alunos durante uma aula de 120 minutos, compreende duas partes. A primeira parte, com questões direccionadas para a caracterização pessoal do aluno e do seu contacto prévio com o estudo da Estatística, em particular, o seu reconhecimento sobre a alusão a conceitos e técnicas estatísticas como: variável estatística, amostra, população, frequência absoluta e relativa, gráfico de barras, histograma, medidas de localização e medidas de dispersão. A segunda parte, composta por tarefas, estruturadas, destinadas a avaliar diferentes aspectos relacionados com as competências da literacia estatística, das quais destacamos as duas tarefas de interpretação de gráficos de barras, que a seguir descrevemos.

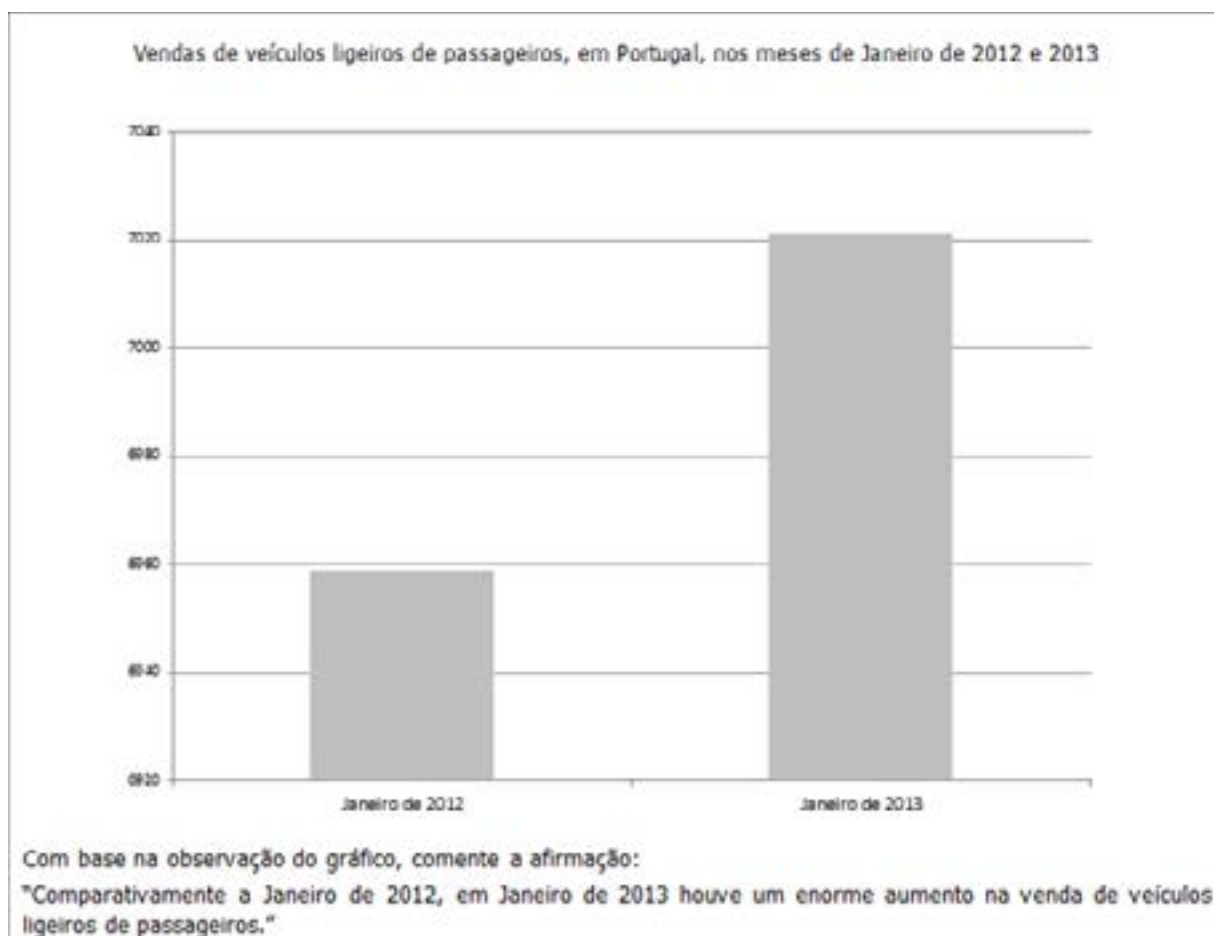
5.1 As tarefas

A tarefa A, cujo enunciado se apresenta na figura 1, consistia em observar/analisar um gráfico de barras, semelhante a muitos dos que surgem nos *media*, e comentar a afirmação que era feita.

Para a construção do gráfico de barras, desta tarefa, usámos informação disponibilizada pela Anecra, relativa às vendas de veículos ligeiros de passageiros, nos meses de Janeiro de 2012 e 2013, em Portugal. Com o objectivo de distorcer a leitura

do gráfico, se baseada apenas na comparação da altura das barras, o eixo das ordenadas foi truncado, passando a interceptar o eixo das ordenadas não em zero, mas num valor que proporcionasse a obtenção de uma barra cerca de duas vezes mais alta que a outra.

Figura 1: Enunciado da tarefa A

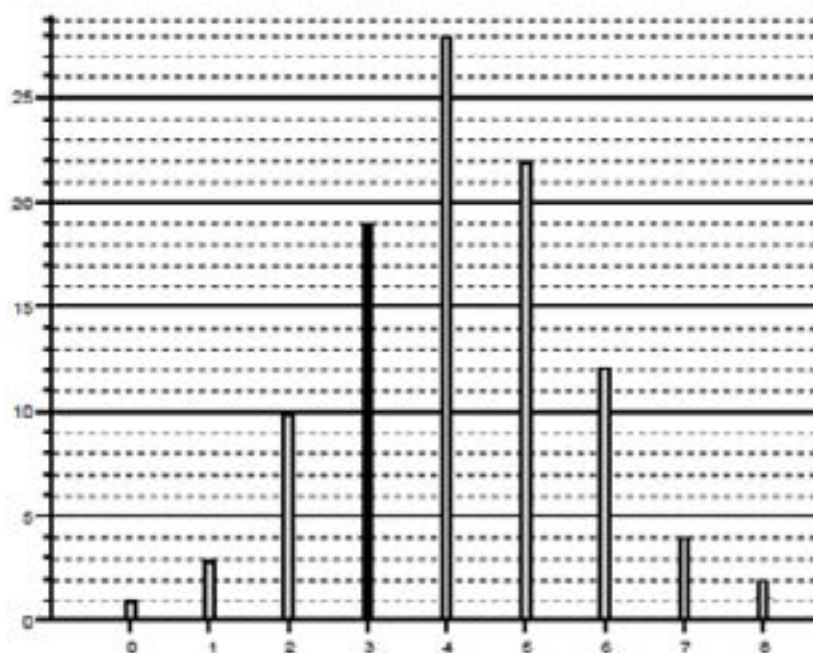


Relativamente aos níveis de compreensão de gráficos, o comentário à afirmação apresentada na tarefa compreende um grau de abstracção muito reduzido, envolvendo, predominantemente, o nível elementar de compreensão de gráficos, com a extracção/ leitura literal de dados (Berlin, 1967; Curcio, 1989), o reconhecimento das propriedades dos elementos constituintes do gráfico (Kosslyn, 1985), a compreensão da escala e das unidades de medida e a identificação e das variáveis em estudo (Curcio, 1989). Visto que, para fundamentar o comentário, seria necessário o cálculo de uma percentagem, poderemos considerar que, de alguma forma, também estava envolvido o nível intermédio de compreensão de gráficos, com o recurso a conhecimentos matemáticos prévios (Curcio, 1989). De notar que, o interesse da tarefa A se prendia, também, com a apreciação de como a manipulação do desenho do gráfico influenciava a percepção do seu conteúdo, isto é, se os alunos detectavam a alteração e como reagiam ao conflito entre a primeira impressão transmitida pelo gráfico (provocada pela alteração) e as conclusões que tirariam da análise dos valores expressos no eixo das ordenadas e calculando a diferença relativa entre os valores das vendas nos dois meses em comparação.

A tarefa B, cujo enunciado se apresenta na figura 2 (com apenas duas das cinco alíneas que compunham a tarefa), consistia em observar/ analisar um gráfico de barras, interpretar o seu conteúdo e identificar determinadas características da distribuição de frequências da variável representada.

Figura 2: Enunciado da tarefa B

Num estudo, realizado em 2016, registou-se o número diário de presenças dos utentes do serviço de Terapia Ocupacional de um hospital português. O gráfico seguinte apresenta os valores observados.



- De acordo com o contexto do problema, como interpreta a barra destacada a negro?
- Indique o mínimo, o máximo e a amplitude dos valores da variável representada no gráfico.

O gráfico de barras desta tarefa tem como base uma situação hipotética, com dados forçados que nos permitiam obter um gráfico com todas as características que pretendíamos. De destacar que o gráfico não apresenta, propositadamente, rótulos nos eixos, para avaliar de que forma esse aspecto dificulta a compreensão do contexto do gráfico, em particular a identificação da variável e população (amostra) em estudo.

Relativamente aos níveis de compreensão de gráficos, a tarefa B envolve não só o nível elementar com a extracção/ leitura literal de dados (Berlin, 1967; Curcio, 1989), o reconhecimento das propriedades dos elementos constituintes do gráfico (Kosslyn, 1985) e a compreensão da escala e das unidades de medida e a identificação e das variáveis em estudo, mas também o nível intermédio, com a avaliação do significado do gráfico e interpretação da informação quantitativa e qualitativa nele contida (Kosslyn, 1985) e a compreensão e aplicação das propriedades de medidas de resumo (Curcio, 1989).

5.2 Participantes

Neste estudo participaram 27 alunos do ensino superior politécnico que frequentaram uma unidade curricular de Estatística, pertencente ao 1º ano do seu curso. Destes, 93% (25 alunos) são do sexo feminino. Todos já tinham estudado Estatística, antes da frequência desta unidade curricular, e já tinham estudado/ ouvido falar em variável estatística, amostra, população, frequência absoluta e relativa, gráfico de barras, histograma, medidas de localização e medidas de dispersão.

6. RESULTADOS

Os registos escritos produzidos pelos alunos foram analisados e as respostas foram classificadas de acordo com a sua correcção e os tipos de erros cometidos.

Tarefa A

Entre os comentários dos 27 alunos, registaram-se 6 com respostas correctas, 10 com respostas parcialmente correctas e 11 com respostas incorrectas.

Consideraram-se parcialmente correctas as resposta que, apesar de apresentarem argumentos válidos, relativamente à discordância com a expressão “enorme aumento”, não fundamentavam a argumentação com o valor da percentagem a que correspondia o aumento verificado nas vendas de automóveis de 2012 para 2013, essa sim, demonstrativa da magnitude do aumento.

Quanto aos erros cometidos nas respostas incorrectas, verificou-se que 5 alunos não souberam calcular a percentagem em questão, considerando que um aumento de, aproximadamente, 60 veículos vendidos correspondia a um aumento de 60%, 2 alunos não detectaram a alteração que tinha sido introduzida no desenho do gráfico e atentaram apenas ao facto de

uma das barras ter mais do dobro da altura da outra, negligenciando a informação presente na escala do eixo das ordenadas, 2 alunos consideraram que o aumento de vendas de 2012 para 2013 foi grande, sem apresentarem qualquer razão para tal afirmação e 2 alunos consideraram que uma diferença de, aproximadamente, 60 veículos se poderia considerar um grande aumento, por não terem reflectido sobre qual o valor relativo associado a este aumento.

Figura 3 – Resposta parcialmente correcta (aluno 6)

Em Janeiro de 2012, venderam-se aproximadamente 6960 veículos ligeiros de passageiros em Portugal. Já em Janeiro de 2013, os veículos vendidos ultrapassaram ligeiramente os 7020.
Assim, concordo ^{em parte} com a afirmação pois foram vendidos, aproximadamente mais 60 automóveis em 2013 do que em 2012. Assim, houve sim um aumento em comparação dos dois meses, no entanto, esse aumento não foi assim tão grande.

Figura 4 – Resposta incorrecta (aluno 17)

Concordo com a afirmação, pois houve um aumento de aproximadamente 60% das vendas do carro comparativamente a Janeiro de 2012 em Janeiro de 2013.
 $7020 - 60 = 6960$

Figura 5 – Resposta incorrecta (aluno 20)

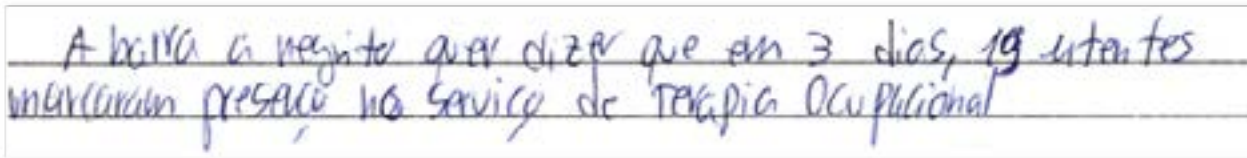
Se considerarmos que as vendas de Janeiro de 2012 é 100% em Janeiro de 2013 a percentagem de vendas aumentou mais de 200%. Daí podemos concluir que a afirmação dada coincide com os dados do gráfico.

Da classificação das respostas à tarefa A, de acordo com os níveis de compreensão de gráficos de Curcio (1989), constata-se que, apesar de a tarefa compreender um grau de abstracção muito reduzido, a grande maioria dos alunos apenas conseguiu a leitura literal dos dados, situando-se portanto no nível elementar de compreensão de gráficos, não logrando usar valores relativos para fundamentar o seu comentário à afirmação apresentada no enunciado.

Tarefa B

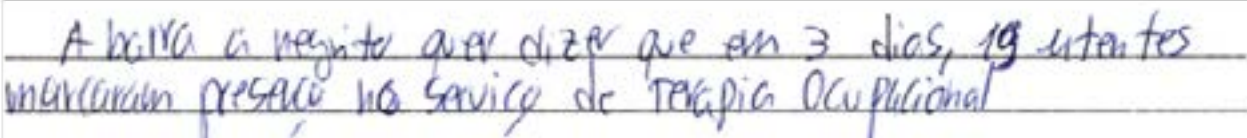
Na interpretação da barra destacada a negro (alínea a)), apenas 7 alunos apresentaram uma resposta correcta. Da análise das respostas incorrectas verificou-se que 15 alunos confundiram o valor da variável com a frequência (sendo que 6 destes, para além da confusão, demonstram também não compreender o conceito de frequência), 1 aluno, apesar de ter identificado a variável correctamente, demonstrou não compreender os valores expressos no eixo das ordenadas, 2 fundamentam as respostas apenas no valor da variável, desprezando a frequência que lhe está associada. Dos 27 alunos, 2 não responderam a esta questão.

Figura 6 – Resposta incorrecta (aluno 12)



A barra a pedido quer dizer que em 3 dias, 19 utentes marcaram presença no serviço de Terapia Ocupacional

Figura 7 – Resposta incorrecta (aluno 8)



A barra a pedido quer dizer que em 3 dias, 19 utentes marcaram presença no serviço de Terapia Ocupacional

Na alínea b), as respostas relativas ao valor mínimo da variável foram as que registaram maior número de acertos, 14. Das respostas incorrectas ao valor mínimo, 8 manifestavam confusão entre o valor da variável e a frequência, 1 apresentou o valor da amplitude e 4 apresentavam valores sem sentido face ao contexto. Quanto ao valor máximo, registaram-se 9 respostas correctas. Entre as respostas incorrectas, 9 manifestavam confusão entre o valor da variável e a frequência, 3 consideravam o máximo como o valor mais elevado apresentado na escala do eixo das ordenadas (29), 1 manifestava confusão entre o máximo e a moda e 2 apresentavam valores sem sentido face ao contexto. Dos 27 alunos, 3 não responderam a esta questão. No cálculo da amplitude da variável em estudo, registaram-se 9 respostas correctas. Das respostas incorrectas, 8 manifestavam confusão entre o valor da variável e a frequência, 1 determinou a amplitude desprezando o valor 0 da variável e 4 apresentavam valores sem sentido face ao contexto. Dos 27 alunos, 5 não responderam a esta questão.

O gráfico, desta tarefa, não apresentava rótulos nos seus eixos, estando a variável em estudo identificada apenas na parte textual do enunciado. Da análise das respostas, conclui-se que esta circunstância foi determinante para o desfecho da interpretação do gráfico, uma vez que a maioria dos alunos ou confundiu o valor da variável com a frequência ou interpretou erradamente as frequências, não descortinando o significado dos valores expressos no eixo das ordenadas. Este facto demonstra a dificuldade que os alunos apresentaram em desenvolver procedimentos que exijam um nível de abstracção mais elevado do que a simples leitura literal dos dados, não sendo bem sucedidos na compreensão da escala e da variáveis em estudo, ainda que estas práticas pertençam, também elas, ao nível elementar de compreensão de gráficos da classificação de Curcio (1989). Quanto aos aspectos que se relacionavam com o nível intermédio de compreensão de gráficos (determinação do mínimo, máximo e amplitude da variável), constata-se que, também aqui, a confusão entre os valores da variável e a frequência influenciou decisivamente os erros cometidos.

Figura 8 – Resposta incorrecta (aluno 7)



Indique o mínimo 1, o máximo 4 e 28 e a amplitude 3.

Figura 9 – Resposta incorrecta (aluno 8)



Indique o mínimo 1, o máximo 28 e a amplitude 27.

7. CONCLUSÕES

Ao nível do ensino superior, o estudo da Estatística é direccionado para a vertente instrumental desta ciência, enquanto suporte a estudos nos campos das ciências sociais, ciências da saúde, agricultura ou ambiente, entre muitos outros, com o aprofundamento dos conteúdos estudados nos níveis de ensino anteriores e a introdução de novas técnicas. No entanto, quer se pense na necessidade de capacitar os alunos para a realização e avaliação crítica de estudos estatísticos no âmbito da sua actividade profissional, quer se considere simplesmente a formação do aluno enquanto cidadão, componentes básicos da cultura estatística, como a interpretação de gráficos de barras, terão que estar, inevitavelmente, presentes.

Os resultados deste nosso estudo conduziram-nos a conclusões consonantes com as encontradas na literatura sobre este tema, comprovando que a existência de contactos com o estudo da Estatística não acarreta, por si próprio, a aquisição das competências básicas inerentes à literacia estatística.

No caso particular da compreensão de gráficos de barras, os alunos demonstraram limitações na capacidade de extracção de informação de um gráfico. Estas limitações acarretam entraves à interpretação do conteúdo do gráfico que não lhes permite ascender aos níveis superiores de compreensão de gráficos, impossibilitando a análise crítica do gráfico, através da identificação de tendências, variabilidade e possível associação nos dados representados ou da detecção de falhas no seu desenho que possam distorcer a informação transmitida.

A reflexão sobre os resultados deste estudo propicia-nos uma oportunidade de adequar os métodos e estratégias de ensino, implementados nas U.C. que leccionamos, por forma a responder apropriadamente à necessidade de formar cidadãos capazes de produzir, decodificar e usar, de forma consciente, informação estatística, na sua vida pessoal, social e profissional.

REFERÊNCIAS

- Arteaga, P., Batanero, C., Cañadas, G. & Contreras, J. M. (2011). Las tablas y gráficos estadísticos como objetos culturales, *Números*. 76: 55-67.
- Batanero, C., Godino, J. D., Vallecillos, A., Green, D. R. & Holmes, P. (1994). Errors and difficulties in understanding statistical concepts. *International Journal of Mathematics Education in Science and Technology*. 25(4): 527-547
- Benavente, A., Rosa, A., Costa, A.F & Ávila, P. (1996). *A Literacia em Portugal: resultados de uma pesquisa extensiva e monográfica*. Conselho Nacional de Educação: Fundação Calouste Gulbenkian. Lisboa, Portugal.
- Ben-Zvi, D. & Garfield, J. (2004). Statistical literacy, reasoning, and thinking: goals, definitions, and challenges. In: D. Ben-Zvi & J. Garfield (eds.) *The Challenge of Developing Statistical Literacy, Reasoning, and Thinking*. 3-16. Dordrecht: Kluwer Academic.
- Bertin, J. (1973). *Semiologie Graphique*. The Hague: Mouton-Gautier. English translation by William Berg & Howard Wainer (1983) and published as *Semiology of graphics*, Madison, WI: University of Wisconsin Press.
- Boaventura, M. G. (2003) Dificuldades de alunos do ensino secundário em conceitos estatísticos: O caso das medidas de tendência central. Dissertação de Mestrado. Universidade do Minho, Braga. 125pp
- Canavarro, A. P. (2015) Developing statistical literacy: The case of graphs with preservice teachers. In: K. Krainer & N. Vondrov'a. *Proceedings of the Ninth Congress of the European Society for Research in Mathematics Education*. 771- 772. Prague, Czech Republic.
- Carvalho, C. (2004) Um olhar da Psicologia pelas dificuldades dos alunos em conceitos estatísticos. In: J. A. Fernandes, M. V. Sousa & S. A. Ribeiro (Orgs.), *Ensino e aprendizagem de probabilidades e estatística – Actas do I Encontro de Probabilidades e Estatística na Escola*. Braga: Centro de Investigação em Educação da Universidade do Minho, 85-102.
- Cleveland, W. S. & McGill, R. (1984) Graphical perception: Theory, experimentation and application to the development of graphical methods. *Journal of the American Statistical Association*. 79 (387): 531-554.
- Curcio, F. R. (1989). *Developing graph comprehension*. Reston, VA: N.C.T.M.
- D'Ambrosio, U. (1999). *Literacy, matheracy and technocracy: a trivium for today*. *Mathematical thinking and learning*. 1 (2):131-153.
- delMas, R. & Liu, Y. (2005) Exploring students' conceptions of the standard deviation. *Statistics Education Research Journal*. 4(1): 55-82
- delMas, R., Garfield, J., Ooms, A. & Chance, B. (2007). Assessing Students' Conceptual Understanding after a First Course in Statistics, *Statistics Education Research Journal*. 6: 28-58
- Dias, C. & Santos, C. (2014) *A view on the teaching of Statistics*. Paper presented at Statistics and Mathematical Sciences Workshop. University of Beira Interior.
- Friel, S., Curcio, F. & Bright, G. (2001). Making Sense of Graphs: Critical Factors Influencing Comprehension and Instructional Implications. *Journal for Research in Mathematics Education*. 32(2): 124-158
- Gal, I. (2000). The numeracy challenge. In: I. Gal (ed.). *Adult numeracy development: theory, research, practice*. 9-31. Cresskill, NJ: Hampton Press.
- Galesic, M., & Garcia-Retamero, R. (2011) Graph literacy: A crosscultural comparison. *Medical Decision Making*, 31(3): 444-457.
- Garfield, J. (2003). Assessing statistical reasoning. *Statistics Education Research Journal*. 2: 22-38
- Garfield, J. & Ben-Zvi, D. (2007). How students learn statistics revisited: A current review of research on teaching and learning statistics. *International Statistical Review*. 75: 372-396.
- Gal, I. & Garfield, J. (1997). Curricular goals and assessment challenges in statistics education. In: I. Gal and J. Garfield (eds.) *The Assessment Challenge in Statistics Education*. 1- 13. Amsterdam: IOS Press and the International Statistical Institute.

- Henriques, A. & Fernandes, J. (2015). O ensino da Estatística nas recentes orientações curriculares. In: A. Borralho, E. Barbosa, I. Vale, H., Jacinto, J. Carvalho e Silva & J. Latas (Orgs.). *Atas do ProfMat 2015: Matemática, currículo e desenvolvimento curricular*. 48-67
- Huff, D. (1954) *How to Lie with Statistics*. Norton, New York. W. W. Norton and Company
- Kirsch, I., A. Jungeblut, L. Jenkins e A. Kolstad (1993). *Adult Literacy in America: a First Look at the Results of the National Adult Literacy Survey*, Washington, National Center for Education Statistics
- Kosslyn, S.M. (1985). Graphics and Human Information Processing: A review of five books. *Journal of the American Statistical Association*. 80(391): 499-512.
- MEC (2013) *Programa de matemática para o ensino básico*. Lisboa: MEC.
- MEC (2014) *Programa e Metas Curriculares Matemática A*. Lisboa: MEC.
- Mautone, P. & Mayer, R. (2007). Cognitive aids for guiding graph comprehension. *Journal of Educational Psychology*. 99: 640–652.
- Monteiro, C. & Ainley, J. (2007) Investigating the interpretation of media graphs among student teachers. *International Electronic Journal of Mathematics Education*. 2(3): 188-207.
- Murnane, R.J., Sawhill, I., & Snow, C. (2012). Literacy Challenges for the Twenty-First Century: Introducing the Issue. In: R.J. Murnane, I. Sawhill, & C. Snow (Eds.) *The Future of Children*. 22(2). Princeton: Princeton University and the Brookings Institution
- Peebles, D. & Cheng, P. (2003) Modeling the effect of task and graphical representation on response latency in a graph reading task. *Human Factors*. 45: 28-46.
- Pereira-Mendoza, L. & Mellor, J. (1990) Student's concepts of bar graph: Some preliminary findings. In: D. Vere-Jones (Ed.). *Proceedings of the Third International Conference on Teaching Statistics* Voorburg: International Statistical Institute.
- Pinker, S. (1990). A theory of graph comprehension. In: R. Freedle (Ed.) *Artificial intelligence and the future of testing*. 73-126. Hillsdale, NJ: Erlbaum
- Ratwani, R., Trafton, J. & Boehm-Davis, D. (2008). Thinking graphically: Connecting vision and cognition during graph comprehension. *Journal of Experimental Psychology: Applied*. 14: 36–49.
- Rumsey, D. J. (2002) Statistical literacy as a goal for introductory statistics courses. *Journal of Statistics Education* 10(3). Accessed in 30th of April 2017, on the Web site <https://ww2.amstat.org/publications/jse/v10n3/rumsey2.html>
- Shah, P., Mayer, R. E. & Hegarty, M. (1999) Graphs as aids to knowledge construction: Signaling techniques for guiding the process of graph comprehension. *Journal of Educational Psychology* 91(4): 690–702
- Shah, P., Freedman, E. G. & Vekiri, I. (2005). The comprehension of quantitative information in graphical displays. In: P. Shah. & A. Miyake (eds.). *The Cambridge handbook of visuospatial thinking*. 426-476. New York, NY: Cambridge University Press.
- Schild, Milo (2004). Statistical Literacy Curriculum Design. In: G. Burrill, M. Camden & G. Breaux (eds.) *Curricular Development in Statistics Education*. International Association of Statistical Educators Roundtable. Lund Sweden. 54-74 Accessed in 30th of April 2017, on the Web site <http://www.statlit.org/pdf/2004SchildIASE.pdf>
- Spence, I. & Lewandowsky, S. (1990). Graphical perception. In J. Fox & J. S. Long (eds.). *Modern methods of data analysis*. 13-57. Newbury Park, CA: Sage
- Steen, L. A. (1999). Numeracy: The new literacy for a data-drenched society. *Educational Leadership*. 57 (2): 8-13.
- Tufte, E.R. (1983) *The Visual Display of Quantitative Information*. Cheshire, CT: Graphics Press.
- Wu, Y. (2004) *Singapore secondary school students' understanding of statistical graphs*. Paper presented at 10th International Congress on Mathematics Education. Copenhagen, Denmark.
- Wainer, H. (1992) Understanding graphs and tables. *Educational Researcher*. 21: 14-23.
- Wallman, K. K. (1993). Enhancing statistical literacy: enriching our society. *Journal of the American Statistical Association*. 88(421): 1-8
- Watson, J. (1997). Assessing Statistical Thinking Using the Media. In: I. Gal & J. B. Garfield (eds.). *The Assessment Challenge in Statistics Education*. 107-121. Amsterdam: IOS Press and The International Statistical Institute.

VULNERABILIDADES E SOLIDARIEDADES EM CONTEXTO URBANO

Ana Maria da Costa Oliveira

Professora de Serviço Social na Universidade Católica Portuguesa, Faculdade de Ciências Humanas
(anaoliveira@fch.lisboa.ucp.pt)

RESUMO

A palavra “cidade” pode assumir pelo menos dois significados, um mais relacionado com os modos de organização comunitária e outro mais relacionado com o espaço ou território. Em latim, expressa-se *civitas* para o primeiro e *urbs* para o segundo, permanecendo no nosso vocabulário como cidade e urbano. Com efeito, quando hoje se fala de “cidade” – a polis – assume-se como um modo concreto de estar no mundo, coerente com a natureza social do homem.

A cidade foi evoluindo e torna-se em algo mais de que um espaço ou lugar com grandes transformações na sua configuração. Entendida como um campo de ação onde coexistem os progressos e retrocessos sociais e onde se conjugam diferentes processos: de urbanização (industrial, demográfica e cultural), de racionalização (científica, técnica e económica), de democratização (político e social), de secularização (ético e religiosa), entre outras, a cidade assume diferentes formas, escalas e medidas mas que, como refere Galli pode oferecer ao homem muitas possibilidades de humanização, de maneira a que se possa realizar como um ser pessoal, cultural político e social, mas também pode aumentar as suas possibilidades de desumanização (cf. Galli, 2014: 42)

É neste contexto que se aborda o tema das vulnerabilidades urbanas, considerando que as mudanças da sociedade atual alteram os perfis de vulnerabilidade tornando estas situações mais presentes e transversais a todos os grupos sociais, com impacto nos indivíduos e famílias obrigando ao reequilibrar do seu lugar no mundo e das suas expectativas face ao futuro.

Palavras-chave: Cidade, Mudança Social, Vulnerabilidades, Solidariedade.

1. VULNERABILIDADES SOCIAIS EM CONTEXTO URBANO

A sociedade atual apresenta-se como uma realidade inundada pela mudança. A contemporaneidade é um tempo e um contexto marcado pela incerteza e pelo risco ao nível da vida social, no mundo do trabalho, da proteção social, das relações familiares e sociais, entre outros domínios, implicando um ajustamento quase permanente dos indivíduos a essas mudanças. Com efeito, são muitos os fatores de ordem política, económica e ambiental, que vêm abalando os pilares onde assentava a sociedade moderna criando um desequilíbrio e vazio institucional e tendo como consequência um novo tipo de relação entre os indivíduos e a sociedade. De alguma forma, mostra-se “um lado sombrio da modernidade” (Giddens, 1995), onde se assiste a profundas transformações nos modos de vida e nos valores tradicionais, suscitando formas de interligação social à escala do globo, que alteram algumas das características mais íntimas e pessoais da existência quotidiana. Verificam-se, neste contexto, vários processos de mudança, movidos por influências políticas e económicas associadas à globalização, de que a diferenciação social é uma das facetas mais visíveis, com uma crescente desigualdade social, marginalização e um esbatimento das solidariedades sociais. Estas mudanças atingem todas as esferas da sociedade e refletem-se na fragilização das categorias que pareciam estruturá-la: as diferenças de classe, a família, a separação de papéis entre homem e mulher, o desemprego estrutural, o uso político da ciência, entre outros, indiciando um processo de construção de vulnerabilidades que atingem diferentes grupos sociais, em diferentes estádios da vida (cf. Guerra e Pinto, 2015: 169).

As vulnerabilidades urbanas não são fenómenos novos, porém tem vindo a agravar-se em consequência da instabilidade financeira e de contextos caracterizados pelo crescimento do desemprego, por predisposições individualistas que fragilizam as redes sociais e avolumam situações que têm um potencial crescente para comprometer o desenvolvimento humano.

Os contextos urbanos baseados em sociedades materialistas, colocam em destaque a relação entre o que é a integração e a desintegração, enfatizando uma lógica de diferenciação, entre os que têm acesso a um conjunto de recursos e oportunidades e os que deles são privados. Os atuais contextos urbanos possibilitam um quadro favorável a processos de crescente individualismo, precariedade e em ultima instancia de exclusão, uma vez que a impessoalidade e anonimato podem expor mais as fragilidades individuais, tornando as cidades *locus* do reforço da individualização e do isolamento (cf. Amaro, 2015: 191). A desafiliação, um conceito proposto por Robert Castel em 1995, é considerada como a ultima fase do processo de marginalização e entendido como um percurso descendente, ao longo do qual se verificam sucessivas ruturas na relação do individuo com a sociedade (cf. Castel, 1995), apresenta-se como uma das faces mais sombrias dos atuais fenómenos de pobreza (Amaro e Oliveira, 2010; Oliveira, 2010). É um processo de progressiva desintegração ao longo do qual se vão quebrando os laços que ligam o individuo aos sistemas sociais, o mercado de trabalho, a família, amigos, até uma possível exclusão total com a perda de cidadania. Esta conexão ou desconexão social é uma das facetas mais visíveis das nossas cidades e é neste sentido que podemos assumir viver em ambientes de maior ou menor vulnerabilidade social.

A vida urbana atual apresenta sinais de vulnerabilidade individual, e estrutural. A vulnerabilidade indica em geral uma situação de risco perante um determinado perigo e implica um sentido de fragilidade, de pouca capacidade defensiva perante algo ou alguém. Trata-se, por um lado, de uma categoria interacionista, isto é, ninguém é vulnerável em si mesmo, mas em relação a uma determinada pessoa ou situação. Mas, por outro lado, é uma noção que se refere a uma estrutura, uma vez que

sugere alguma dependência das características dos sujeitos ou da situação, pois alguém só pode ser vulnerável se estiver numa determinada posição e não noutra (Walgrave, 2000: 88). Argumenta-se assim que as vulnerabilidades urbanas acontecem em determinados contextos sociais e que estes podem exponenciar a fraqueza dos laços sociais bem como situações de exclusão social.

As vulnerabilidades sociais que analisaremos são situações que se realizam em determinadas circunstâncias, isto é, um grupo ou um indivíduo só é vulnerável em determinadas condições, o que remete de novo para a relação entre vulnerabilidade e contexto social.

Examinando a vulnerabilidade por um prisma de desenvolvimento humano, chama-se a atenção para o risco de deterioração futura das circunstâncias e das conquistas individuais, comunitárias e nacionais. Coloca-se especial ênfase nos fatores sistémicos e persistentes de vulnerabilidade e questiona-se os motivos que levam a que alguns indivíduos superem melhor do que outros a adversidade. Indagamos também as causas estruturais que tornam algumas pessoas mais vulneráveis do que outras. As pessoas experimentam graus variáveis de insegurança e diferentes tipos de vulnerabilidade em diferentes fases do ciclo de vida.

1.1 A vida urbana e o crescente individualismo

A emergência da ideia do indivíduo como ser emancipado e livre torna-se expressão da contemporaneidade (Amaro, 2012), assumido como um sujeito emancipado mas também como um sujeito responsável pela sua própria vida. A conceção de indivíduo nas sociedades contemporâneas ganha destaque assente na ideia do percurso individual e solitário do ser humano como ser livre e emancipado e é neste sentido que Bauman considera a apresentação dos indivíduos, como uma “marca registada da sociedade moderna” (2001: 39).

Não se está perante a apologia do ser humano enquanto pessoa, como no período do Iluminismo, mas perante um processo designado por alguns autores de “individualização”, entendido como uma fatalidade a que ninguém pode escapar (Bauman, 2001; Beck e Beck-Gernsheim, 2011). A individualização surge como uma nova faceta do individualismo, uma vez que transforma a identidade humana de “dado” em “tarefa” e encarrega os indivíduos da responsabilidade de realizar essa tarefa e das consequências (assim como dos efeitos colaterais) de sua realização (Bauman, 2001: 39-40). Não se está perante a apologia do ser humano enquanto pessoa, como no período do Iluminismo, mas perante um processo designado por alguns autores de “individualização”, entendido como uma fatalidade a que ninguém pode escapar (Bauman, 2001; Beck e Beck-Gernsheim, 2011), sendo fruto das condições sociais e uma característica estrutural de uma sociedade altamente diferenciada.

Uma das consequências do acentuar do individualismo da segunda modernidade assenta precisamente na ideia de que um processo de forte individualização contribui para um processo de desintegração da cidadania, como se as pessoas se tornassem *desindividualizantes* umas para as outras. Neste processo emergem muitos indivíduos como que “flutuando na estrutura social, sem ligações ou presos por laços muito frágeis que ameaçam quebrar” (Soulet, 2006), revelando espaços de desafiliação que cruzam os processos de enfraquecimento de relações com mecanismos de precariedade laboral, relacional, social e o perigo de desintegração da cidadania, pois como refere Tocqueville, o indivíduo torna-se o pior inimigo do cidadão, isto porque as suas preocupações preenchem o espaço público, reclamado com uma legitimidade exclusiva, colonizando o público pelo privado (Bauman, 2011: xviii).

Os atuais contextos urbanos oferecem um quadro favorável a estes processos uma vez que o anonimato, a impessoalidade parecem exponenciar o sentimento de “estranhamento do outro” (Amaro, 2015: 191). A arquitetura da cidade revela esta dimensão: prédios altos, com muitos moradores que quase não se cruzam, perdendo-se a importância do “vizinho” como alguém que partilha de um espaço comum; o império automóvel que altera a concepção de mobilidade; os espaços de consumo transformados em grandes “catedrais do nosso tempo” mas que refletem ao mesmo tempo o isolamento e tornam invisíveis muitas das situações de fragilidade social.

1.2 A solidão na vida urbana

A solidão, um dos rostos da desconexão que falávamos no ponto anterior. A “solidão sofrida” referida por Machado Pais (2015) e que fala de laços sociais ausentes. Segundo o Observatório de Luta Contra a Pobreza na Cidade de Lisboa, o concelho da Grande Lisboa continua a ter o índice mais elevado de envelhecimento, mas cada vez mais assistimos a notícias sobre as pessoas morrerem em solidão. De acordo com o último censo da população portuguesa, cerca de 60% da população idosa vive só ou em companhia de outros idosos. Alguns morrem em casa literalmente abandonados, outros em instituições sem visitas frequentes. Para muitos, os animais tornam-se grandes amigos, a televisão passa a constituir parte da “família” com quem se conversa.

O grupo dos idosos é apontados por diferentes estudos sobre a pobreza e a exclusão social, como dos mais atingidos pela pobreza em Portugal, muitos por não possuírem uma reforma mínima para sobreviver. No entanto, o isolamento é o problema mais significativo, em relação aos grupos etários mais jovens, à família, aos amigos, à sociedade. Para Bruto da Costa no prefácio ao livro “Pobreza e Exclusão Social em Portugal” (2015), a cultura vigente, o estilo de vida dominante e a organização social exclui e não inclui os idosos, uma vez que não lhes fornece os meios (financeiros, mas não só) para torná-los cidadãos com capacidade de escolher livremente o que querem viver.

Mas não são apenas os idosos que vivem este sentimento. Quantos rostos se tornam invisíveis na nossa cidade? Pessoas doentes, mas também pessoas isoladas, cujas redes sociais ficam comprometidas perante os contornos da vida, alguns deles sem abrigo, outros trabalhadores pobres mas que são rostos também da nossa cidade. A perda do sentimento de pertença é um dos fatores mais associados à solidão e muitas vezes produtor de desafiliação, provocando as rupturas sucessivas que

anteriormente referenciámos. A doença, a ruptura familiar, a morte de um elemento da rede de suporte, o desemprego, são incidentes críticos que desencadeiam o desligamento até ao isolamento social.

1.3 A vida urbana e a multiculturalidade

Os nossos espaços urbanos tornam-se progressivamente espaços de multiculturalidade, num cruzamento de pessoas com traços diferentes, idiomas diferentes, cheiros e hábitos diferentes, mas onde a convivência é por vezes difícil e onde se exercem várias formas de segregação e violência. Os contextos urbanos oferecem um quadro favorável ao desenvolvimento de diferentes nichos de desigualdade, seja do ponto de vista económico, seja do ponto dos recursos ou do ponto de vista social (cf. Costa, 2012). As periferias da cidade, ou o que alguns designam como “cidade dual”, revelam bem as assimetrias entre grupos sociais e acentuam os mais diferentes níveis de desigualdade.

Por outro lado, o medo, a insegurança, propulsiona um sentimento de defesa e incentiva ao fechamento cultural. As casas, as escolas, os bairros que se constroem são para se proteger e não para unir e integrar, tornando difícil uma perspectiva de integração cultural e de uma sociedade verdadeiramente plural. Por isso mesmo, a arquitetura das cidades tornou-se defensiva: bairros fechados, grades, muros e uma série de mecanismos que restringem o contato com o outro.

Esta é outra faceta da modernidade, por um lado um indivíduo emancipado, mas ao mesmo tempo frágil e vulnerável e o resultado é o surgimento de uma série de medos. Bauman no seu livro “Confiança e Medo na Cidade” (2006) propõe dois conceitos: i) o de “mixofobia” para designar o processo que “impede a procurar ilhas de semelhança e de igualdade no meio do mar da diversidade e da diferença” (Bauman, 2006: 40) e que conduz a comportamentos segregadores; ii) e o conceito de “mixofilia” que seria o comportamento que procura a integração e a fusão da diferença que resultaria num entendimento mútuo pela experiência compartilhada. Ainda que os contextos urbanos provoquem sentimentos contraditórios, seria importante que as estratégias urbanísticas e sociais procurassem este encontro de diferenças. O desafio é recuperar a dimensão comunitária do espaço público, como forma de aprender a arte de uma coexistência segura, pacífica e amigável.

1.4 A família e o tempo sem tempo

Sendo um lugar-comum nunca é de mais afirmar que a família é o núcleo mais importante da vida social, onde se tecem as primeiras relações e a interação com o mundo exterior. Por família consideramos as diversas formas de família e não apenas a considerada como nuclear, ainda que não nos detenhamos nas definições por não considerar este o espaço para o seu desenvolvimento.

De acordo com os dados do último Censo, realizado em 2011 existiam em Portugal 4.043.726 famílias, quase o dobro de cinco décadas antes. Em cerca de um terço destas famílias existiam crianças/adolescentes e a maioria destas famílias viviam em aglomerados populacionais com mais de 20.000 habitantes. Estes dados apresentam-se com especial relevância quando falamos em vulnerabilidades sociais e contextos urbanos.

Com efeito, nas sociedades contemporâneas surgem fenómenos preocupantes associados à mobilidade e ao mercado de trabalho que tiram o espaço e o tempo da vivência e convivência familiar. Se é preocupante o impacto que a crise económica tem no bem-estar e sustentabilidade familiar, também é preocupante o impacto que tem no seu papel de lugar de afectos. Muitos são os que vivem numa zona da cidade, mas deixam os filhos em escolas localizadas noutra área da cidade, com empregos caracterizados por uma forte pressão, sujeitam-se a horários alargados e mobilizam-se no final do dia para espaços desportivos fora da sua área residencial. A mobilidade é um traço contemporâneo que exerce influência na dinâmica e comunicação familiar, como afirma João Ferrão (2015), somos verdadeiros nómadas urbanos. Parece faltar o tempo e espaço para as famílias se tornarem “família” no sentido de se constituir como espaço privilegiado de realização da pessoa, onde se vive e se transmitem valores, onde se aprende e se estimula a solidariedade entre gerações, onde se promove e desenvolvem competências relacionais.

Um dos fenómenos mais preocupantes é o aumento do isolamento das famílias, associado a situações de desvantagem social (Cordeiro, 2015), o que se deve não apenas às questões de mobilidade, mas também a situações de desemprego ou subemprego dos membros da família, conduzindo por vezes a problemas com a habitação (devolução de casas por impossibilidade de pagamento de crédito, afastamento das origens sociais e culturais com impossibilidade de intervenção da família alargada, etc.). São muitas as vulnerabilidades sociais na dinâmica das famílias muitas vezes propulsadas pelos contextos urbanos, designadamente acontecimentos como o desemprego, o prolongamento da dependência dos filhos, a frequência das reformas antecipadas, o aumento do número de pessoas idosas na família e a dificuldade de tomar conta delas (Ribeiro, 2016), que devem ser tidos em conta no funcionamento familiar (comunicação e coesão familiar, relações intergeracionais e limites familiares) e que convidam a respostas adequadas às necessidades e vivências, com uma política de reconhecimento e valorização da vida familiar.

2. CONCLUSÃO

A seleção destes temas para a reflexão sobre as vulnerabilidades sociais, prende-se com a exigência de um olhar diferente sobre os contextos urbanos, mas este texto está longe de ser exaustivo e muito menos conclusivo sobre o tema. Como foi possível analisar, sabemos que se por um lado a cidade é produtora de sociabilidades, é também um espaço de segregação e de exclusão social, sendo possível traçar diferentes vias para futura investigação.

Os contextos urbanos são palcos privilegiados de oportunidades e ameaças, esperanças e riscos, é por isso importante aprender a “contemplar a cidade”, para criar caminhos novos, para colocar perguntas: como humanizar mais a cidade? Não há melhor cidade sem cidadania e para isso devemos procurar dar respostas no local sabendo que se traduzem em influência

global, é “*glocalmente*” que se pode produzir mudança fomentando a cidadania local e global nas diferentes dimensões da vida na cidade.

Se as nossas cidades refletem as grandes mudanças sociais e nesse sentido produzem maior vulnerabilidade social, também é verdade que podem criar condições para um cruzamento de ideias, saberes, culturas que estimulem uma maior inovação societal. Assim, torna-se especialmente relevante o reconhecimento dos processos de vulnerabilidade, para compreender como desenvolver respostas que contrariem estas trajetórias, passando-se de uma cultura centrada no “eu” para uma cultura centrada no “nós”.

BIBLIOGRAFIA

- Amaro, Inês (2012). “Do Indivíduo Moderno ao Individualismo Contemporâneo: algumas anotações reflexivas”. *Diáfanias do Mundo - Homenagem a Mário F. Lages*. Lisboa: Universidade Católica Editora: 347-356.
- (2015). “A Dimensão Relacional do Fenómeno da Pobreza Contemporânea: Desafiliação, Laço Social e Vida Urbana”. Fernando Diogo, Alexandra Castro e Pedro Perista. *Pobreza e Exclusão Social em Portugal*. Famalicão: Húmus: 183-196.
- Amaro, Maria Inês e Oliveira, Ana Maria (2010). “Desafiliação e perda, o caminho descendente da integração à exclusão”. Isabel Guerra, Alexandra Castro e (coord.). *Os caminhos da Pobreza: perfis e políticas sociais em Portugal*. Lisboa: SCML editora.
- Bauman, Zygmunt (2001). *La sociedad individualizada*. Madrid: Catedra.
- (2006). *Confiança e Medo na Cidade*. Lisboa: Relógio D’Água.
- Beck, Ulrich e Beck-Gernsheim, Elisabeth (2011). *Individualization*. London: Sage Publications.
- Castel, Robert (1995). *Les Métamorphoses de la Question Sociale*. Paris: Fayard.
- Cordeiro, Mário (2015). *Crianças e Famílias num Portugal em Mudança*. Lisboa: Fundação Francisco Manuel dos Santos.
- Costa, António Firmino da (2012). *Desigualdades Sociais Contemporâneas*. Lisboa: Editora Mundos Sociais.
- Galli, Carlos Maria (2014). *Dios vive en la ciudad: hacia una nueva pastoral urbana a la luz de Aparecida*. Buenos Aires: Agape Libros.
- Giddens, Anthony (1995). *As consecuencias da Modernidade*. Oeiras: Celta Editora.
- Guerra, Isabel e Pinto, Teresa Costa (2015). “Da Pobreza À Vulnerabilidade: Transformações identitárias e No Agir Coletivo”. Fernando Diogo, Alexandra Castro e Pedro Perista. *Pobreza e Exclusão Social em Portugal*. Famalicão: Húmus: 167-182.
- Oliveira, Ana (2010). *O Virar da Seta: Factores Positivos em Jovens em Risco*. Lisboa: UCP.
- Ribeiro, Teresa (2016). “Contributos da Psicologia para o Estudo da Família”. Rita Francisco, Joana Carneiro Pinto, Helena Rebelo Pinto e (Org.s). *Família e Psicologia - Contributos para a investigação e intervenção*. Lisboa: Universidade Católica Editora: 11-21.
- Soulet, Marc-Henry (2006). “Confiança e capacidade de acção. Agir em contexto de in-quietude”. Casimiro Balsa. *Confiança e Laço Social*. Lisboa: Edições Colibri: 25-47.
- Walgrave, Lode (2000). “Vulnerabilidade Societal e Acção Social”. Marc-Henry Soulet (org.). *Da Não Integração*. Coimbra: Quarteto: 75-106.

DETERMINANTES PSICOSSOCIAIS NO TRABALHO E SUA RELAÇÃO COM VARIÁVEIS DE SAÚDE PSICOLÓGICA EM CONDUTORES PROFISSIONAIS RODOVIÁRIOS

João Borges Lopes
Instituto Piaget
(joao.borgeslopes@hotmail.com)

RESUMO

O mundo do trabalho caracteriza-se hoje, por significativas mudanças nos últimos anos. Essas mudanças têm naturalmente consequências na saúde dos colaboradores, em contexto laboral. A atividade profissional relacionada com a condução rodoviária apresenta riscos significativos no domínio da segurança rodoviária em geral e na saúde dos condutores em particular. Em função das exigências normativas de trabalho, a saúde psicológica dos condutores tem sido afetada, levando a consequências significativas em termos de quadros clínicos de Ansiedade, Depressão e de Stresse, relacionados por um plano de controle e melhoria dos riscos psicossociais ainda pouco valorizados em Portugal pelas empresas em geral e pelas empresas de transportes em particular. Este estudo teve como objetivo, analisar a relação entre os Fatores Psicossociais e as dimensões afetivas negativas, Ansiedade e Depressão, bem como o Stresse, com intuito de prevenir os riscos psicossociais no trabalho, contribuir para a promoção e desenvolvimento da saúde psicológica dos condutores rodoviários portugueses. Os resultados revelaram relações significativas entre os fatores psicossociais no trabalho e as dimensões afetivas negativas, Ansiedade, Depressão e o Stresse. Discutem-se os limites do estudo e a necessidade de desenvolver novas investigações nesta área do conhecimento científico.

Palavras-chave: Determinantes Psicossociais, Saúde Psicológica, Condutores Profissionais.

1. INTRODUÇÃO

As mudanças profundas que têm ocorrido no contexto de trabalho, nas organizações em geral e nas empresas em particular, têm consequências na saúde física e psicológica dos trabalhadores. No cenário crescente de novas formas de organização do trabalho, a pressão exercida junto dos trabalhadores para trabalharem mais horas, a necessidade de aumentar o volume de negócios, os prazos de entrega cada vez mais reduzidos, a competitividade organizacional e empresarial centrada na redução de custos, de pessoas e de serviços, a definição de objetivos comerciais e de produção cada vez mais elevados, as mudanças organizacionais, tecnológicas e empresariais, a incerteza relativa à segurança de emprego, são alguns dos fatores que contribuem para a manutenção dos riscos no trabalho, com influência na promoção e no desenvolvimento de outros associados ao stresse, violência, assédio no trabalho, ansiedade e depressão, com impacto na qualidade de vida dos trabalhadores em termos de saúde psicológica. É necessário desenvolver mais estudos no sentido de permitir um maior e melhor conhecimento sobre as dimensões e as condições de trabalho e o seu impacto na saúde dos trabalhadores, sendo por isso, necessário relançar o debate na perspetiva global, uma vez que, esta matéria se enquadra no âmbito nacional e internacional.

1.1 Fatores e Riscos Psicossociais no Trabalho

Nos anos 70 os ambientes psicossociais sofreram mudanças significativas desde a Revolução Industrial. O ritmo das mudanças de natureza psicossocial transformaram a essência do trabalho humano (Coelho, 2010). Essas mudanças no ambiente de trabalho podem ser enquadradas em fatores causais que incluem aspetos sociais, políticos, económicos, demográficos e tecnológicos e outros fatores de âmbito mais específico relacionados com a organização do trabalho, conteúdo do trabalho, vínculos laborais, tempos de trabalho, reestruturações organizacionais. Algumas mudanças como a globalização da economia tiveram como consequência a desproteção dos trabalhadores e influência na qualidade de vida e do bem-estar psicológico dos trabalhadores. A liberalização do mercado, apoiada na globalização permite aumentar a competitividade e naturalmente as consequências para os trabalhadores em termos de tempos e condições de trabalho. A terciarização da economia desenvolveu novos riscos laborais, de natureza psicossocial, aumentando o mal-estar psicossocial, com elevados números de casos de baixas médicas motivadas por situações de crises de Ansiedade, Stresse e Depressão, observando-se a redução de acidentes de trabalho e de doenças profissionais típicas das sociedades industriais. Também as alterações sociodemográficas ocorridas com o aumento das mulheres no mercado de trabalho promoveu mudanças sociais em termos de saúde no trabalho relacionadas com o Stresse e a articulação entre o trabalho e a família (Zedeck & Mosier, 1990). O envelhecimento da população ativa replica o envelhecimento demográfico nos países desenvolvidos, principalmente na União Europeia (Ramos, 2016). Através do envelhecimento da força de trabalho surgiram novas preocupações em termos de saúde ocupacional, porque os trabalhadores mais envelhecidos são mais vulneráveis aos riscos psicossociais do trabalho (Coelho, 2010). O desenvolvimento tecnológico ao nível da automatização, robotização da produção industrial e todas as tecnologias de informação, alteraram a forma como o trabalho é desenvolvido e fundamentalmente a sua própria natureza.

No domínio da organização do trabalho considerada no âmbito de uma economia de serviços, em que a flexibilidade é considerada como regra fundamental da organização do trabalho consistindo na utilização do tempo dos trabalhadores minimizando os custos e maximizando os proveitos (Kompier, 2006, citado por Ramos, 2016, p. 67).

São múltiplos os riscos ocupacionais decorrentes da organização do trabalho, revelando sobretudo riscos de natureza psicossocial que estão relacionados com a cultura da organização ou da empresa, envolvendo aspetos da comunicação, disfuncionalidade estrutural, reduzido conhecimento do poder decisório, fracas perspetivas de desenvolvimento, grau de participação dos trabalhadores reduzido, níveis de satisfação no trabalho negativos, horários de trabalho rígidos, flexíveis, trabalho por turnos, competências relacionais enfraquecidas em termos de falta de apoio social, conflitos e violência, relações pouco saudáveis com os superiores hierárquicos e a incompatibilização nas dimensões da família e trabalho. Em termos de conteúdo de trabalho houve alterações significativas com a introdução de novas tecnologias de informação que influenciou outras alternativas de trabalho, designadamente o correio eletrónico, teletrabalho, entre outros, cuja situação desenvolveu outros aspetos em termos do aumento do trabalho em tempo parcial, trabalho temporário, a intensificação no aumento de horas extraordinárias acarreta um aumento do ritmo e da sobrecarga de trabalho, fatores e situações que contribuem cada vez mais para a diminuição da satisfação e bem-estar no trabalho, produzindo assim, maior número de casos em contexto clínico de Ansiedade, Stresse e Depressão.

Num cenário de modernidade as transformações crescentes mudaram no contexto de trabalho e no seu significado. Hoje discute-se muito a flexibilidade mas pouco se tem feito em termos das influências negativas que ela representa na saúde ocupacional, através da desregulação dos ritmos biológicos, fadiga dos trabalhadores, práticas de gestão organizacional, más condições de trabalho, articulação trabalho-família. A nova representatividade do trabalho e o seu significado apontam para novos riscos psicossociais, designados como emergentes por serem novos e crescentes. Da revisão de literatura realizada os fatores psicossociais no trabalho apresentam uma perspetiva negativa, isto é, fatores de risco para a saúde física e psicológica dos trabalhadores (Ramos, 2016).

Segundo algumas abordagens teóricas sobre os riscos psicossociais no trabalho associam-nos a causas organizacionais de stresse no trabalho (Cox, Griffiths & Randall, 2003). Estes autores, entendem que, os riscos psicossociais no trabalho estão relacionados com os fatores psicossociais, definindo-os como aspetos de toda a estrutura organizacional e da gestão do trabalho, incluindo os contextos sociais e ambientais, promotores de danos psicológicos e sociais. Existem outras abordagens que referem os efeitos e benefícios ao nível da saúde ocupacional, nomeadamente os fatores psicossociais positivos (ILO, 1986). Assim, poderemos considerar que, os fatores psicossociais podem ser negativos e positivos. Por um lado, devem ser entendidos quanto à natureza e por outro, quanto às consequências. Em qualquer dimensão (consequências), podem ser negativos ou positivos de acordo com a influência prejudicial na saúde ou como promotores da saúde e bem-estar. Quanto à natureza, podem ser negativos ou positivos em função da sua presença ou ausência. De acordo com os estudos realizados por Antonovsky (1979), os fatores psicossociais podem assumir fatores patogénicos ou salutogénicos, designados ainda por fatores de risco como negativos ou de resiliência enquanto fatores positivos.

De acordo com a categorização proposta por Leka, Griffiths e Cox (2004) e no trabalho desenvolvido por Ramos (2016), foram identificados os fatores psicossociais no contexto de trabalho, designadamente: *conteúdo de trabalho, carga e ritmo de trabalho, horário de trabalho, controlo, cultura organizacional, relações interpessoais, papel organizacional, desenvolvimento de carreira, interface casa-trabalho e características individuais*. Estes fatores podem assumir um impacto quer negativo quer positivo sobre a saúde no trabalho em geral, e na saúde psicológica em particular, em função da sua presença ou intensidade. Atualmente, existem ferramentas e instrumentos de avaliação que nos permitem medir os fatores de risco psicossocial, nomeadamente o *Copenhagen Psychosocial Questionnaire II (COPSOQ II)* de Kristensen, Hannerz, Høgh e Borg (2005). Este instrumento começou a ser criado na Dinamarca, em meados de 1990, para avaliar o ambiente psicossocial no trabalho. A versão portuguesa foi desenvolvida por Silva *et al.*, (2010b) e Silva (2012b), mantendo as mesmas dimensões do instrumento original, fixada com menos nove itens no total.

A procura constante de um equilíbrio entre os fatores humanos e as condições de trabalho permite um ambiente psicossocial positivo, mais saudável, promovendo assim, a saúde e o bem-estar no trabalho.

1.2 Saúde Ocupacional e Bem-Estar no Trabalho

A saúde no trabalho enquadra-se no âmbito da saúde em geral, podendo ser definida segundo Larson (1999) em quatro modelos conceituais: o modelo médico, o modelo da Organização Mundial de Saúde, o modelo do bem-estar e o ambiental. No modelo médico, a saúde é um estado de ausência de doença (Tetrick, 2002, citado por Ramos, 2016, p. 25). Desde a data da sua fundação, em 1948, a OMS reconheceu a saúde como um estado completo de bem-estar físico, psíquico e social e não apenas a ausência de enfermidade ou doença. Este modelo tem sido criticado devido ao conceito de *completo bem-estar*, que coloca de fora a maioria das pessoas, na maior parte do tempo, como saudáveis (Huber *et al.*, 2011). Estes autores identificaram três grandes limitações: (1) medicalização da sociedade, (2) as mudanças demográficas e a alteração da natureza da doença, (3) Operacionalização da definição de *completo* não pode ser medida. O modelo do bem-estar define que as pessoas dispõem de uma reserva de saúde, permitindo ultrapassar a doença evoluindo em termos de otimismo, como o caso dos estados de Ansiedade, Stresse e Depressão. Quanto ao modelo ambiental destaca a eficácia no desempenho dos papéis sociais relativos ao trabalho e família e nos processos adaptativos relativos às exigências impostas pelos ambientes físicos e sociais. Estes dois últimos modelos desvalorizam a ausência de doença e a existência de um completo bem-estar, funcionamento ótimo, de felicidade baseado nos pressupostos e nos paradigmas da Psicologia Positiva (Ramos, 2016).

Paralelamente, desde o início da colaboração entre a OMS e a OIT, após a reorganização desta, em 1949, a noção geral de saúde na área da saúde ocupacional, um Comité Misto da OIT/OMS, veio em 1950, definir a saúde ocupacional, como uma área de saberes multidisciplinar que tem como objetivo, promover e manter o mais elevado bem-estar físico, psíquico e social

dos trabalhadores em todas as profissões; prevenir qualquer dano causado à sua saúde pelas condições de trabalho impostas aos trabalhadores; proteger os trabalhadores no seu emprego contra riscos resultantes da presença de agentes prejudiciais à sua saúde; Colocar e manter o trabalhador num emprego adaptado às suas aptidões fisiológicas e psicológicas (Coelho, 2008).

1.3 Determinantes Psicossociais na Saúde e no Trabalho

Os determinantes psicossociais são considerados de nível intermédio sendo modificados pela estrutura macrosocial. Surgem através de relações interpessoais e atuam como fatores mediadores dos efeitos da estrutura social, no domínio da saúde dos trabalhadores, ou podendo condicionar ou modificar o estado de saúde através de estruturas sociais em que ocorrem (Martikainen & Lahelma, 2002). Neste âmbito, o ambiente psicossocial do trabalho é entendido como sendo o conjunto de influências sociais e psicossociais na saúde no contexto laboral (Cox & Griffiths, 2005). Uma vez verificadas essas influências como situação de desequilíbrio entre o conjunto de exigências laborais e as capacidades e recursos dos trabalhadores coexistem assim, tensões com o ambiente quer interno quer externo, que pode provocar respostas físicas e psicológicas alterando o estado de saúde dos trabalhadores.

Os determinantes psicossociais que exercem influência sobre a saúde são modeladas pelas características pessoais, como a personalidade, resiliência e outras suscetibilidades individuais. Os comportamentos e os estilos de vida influenciam a saúde através de hábitos como o consumo de tabaco, álcool, hábitos alimentares entre outros, em que a categoria profissional de condutores rodoviários presente neste estudo, é muito vulnerável a estes comportamentos, na perspetiva de internalização biológica. Outro aspeto importante, envolve os mecanismos psicobiológicos associados às respostas ao stresse, com efeitos em termos de sistema neuroendócrino, metabólico e imunológico (Neto & André, *in* Chambel, 2016). No entendimento da *European Commission* (2013) as doenças e outros problemas relacionados com a saúde no trabalho podem ser causados pelas condições de trabalho, e incluem problemas de natureza psicológica, para além dos problemas físicos. Alguns estudos associam o stresse no trabalho, e os fatores psicossociais à síndrome metabólica (Chandola, Brunner & Marmot, 2006). *Burnout*, Ansiedade e Depressão, relacionado com doenças cardiovasculares (Seidler *et al.*, 2014).

De acordo com a Recomendação nº 194 da OIT refere que, o risco ocupacional é causado através do stresse pós-traumático e outras doenças mentais ou alterações do comportamento, influenciando assim, a saúde psicológica. No âmbito das dimensões afetivas negativas, nomeadamente na depressão, o suicídio e o suicídio na forma tentada passaram a fazer parte das principais preocupações para as autoridades de saúde e organizações de gestão do trabalho, em toda a Europa, após o caso da France Telecom, em que ocorreram mais de 30 casos de suicídio durante dois anos. Na Bélgica e em França, o suicídio é reconhecido como acidente de trabalho desde que esteja previsto no respetivo contrato de trabalho e ocorra no local e tempo de trabalho. Em Espanha, o suicídio é considerado como acidente de trabalho desde que no histórico do trabalhador conste o registo de perturbação mental devidamente comprovada documentalmente (Neto & André, *in* Chambel, 2016). No caso de Portugal, não encontramos estudos com casos de suicídio cuja causa esteja associada a contextos de trabalho.

1.4 Riscos Psicossociais e Dimensões Afetivas Negativas na Condução Rodoviária

Durante o século XX o automóvel foi considerado o fenómeno mais relevante desenvolvendo um papel na sociedade de facilitador de deslocações e de proximidade entre locais. Existem aspetos nas pessoas relacionados com o automóvel, nomeadamente a afirmação pessoal e social, o sentimento da competição, o prestígio e a vaidade. Em função destas características e reportando à maneira de ser e de estar nas pessoas, surgem impulsos sem mediação do pensamento que leva as pessoas a atitudes e comportamentos pouco favoráveis à vida e à saúde e bem-estar.

A investigação realizada no âmbito da condução rodoviária revela que, a maioria dos acidentes de viação e outros problemas relacionados com a circulação rodoviária estão associados a causas de natureza comportamental, nomeadamente Stresse, Ansiedade e quadros clínicos de Depressão. Segundo Barros (1995), o processo de condução é determinado por um conjunto de variáveis relacionados com os elementos de trânsito rodoviário, como por exemplo, o condutor, o veículo, o meio e as normas de circulação. De acordo com um estudo realizado por Matos (1991), os acidentes de motorizada dos adolescentes não parecem ser devidos ao acaso, mas sim a um conjunto de circunstâncias individuais, familiares e psicossociais. A conjugação do risco de suicídio e da ansiedade parecem ser determinantes na média de acidentes e na tendência suicidária. Stork (1977) encara o suicídio, como uma perturbação do bem-estar e da autoestima, o que origina uma intenção de atentar contra a integridade e até a própria vida. Segundo o mesmo autor, considera que existe uma relação entre personalidade depressiva suicidária e o risco de suicídio, com os comportamentos que fazem parte do campo suicidário inconsciente, como é o caso do consumo de álcool, drogas. Outros autores (Haenal & Kielholz, 1983, citado por Matos, 1991), referem que muitas vezes a depressão está oculta sob forma de somatização e de risco autodestrutivo.

Ao longo dos tempos as relações entre as dimensões afetivas negativas, Ansiedade e Depressão, têm sido consideradas como dimensões clássicas na psicologia e na psicopatologia. A ansiedade costuma estar associada aos sintomas de Depressão. Até finais do século XIX as perturbações de Ansiedade não se separavam de outras perturbações de humor (Ribeiro, Honrado & Leal, 2004).

Watson e Clark (1995) salientam a evidência de que a Ansiedade e Depressão são difíceis de diferenciar empiricamente. Numa investigação anterior, Clark e Watson (1991), propõem um modelo tripartido em que os sistemas de Ansiedade e Depressão se agrupam em três estruturas básicas. A primeira é designada por *distress* ou afeto negativo, incluindo sintomas inespecíficos, que são experimentados tanto em sujeitos deprimidos como ansiosos e incluem ainda o humor deprimido e ansioso, irritabilidade. Para além deste fator inespecífico a Ansiedade e a Depressão constituiriam as outras duas estruturas, com a tensão somática e a hiperatividade, como específicas da Ansiedade, e a anedonia e a ausência de afeto positivo, específicas da Depressão. A operacionalização do modelo designado de tripartido levou à construção de medidas e originou o instrumento *Depression Anxiety Stress Scale* (DASS) de Lovibond e Lovibond (1995). O estudo fatorial realizado pelos

autores apresentou um novo fator que incluía os itens discriminativos das duas dimensões, a Ansiedade e Depressão. Estes itens referiam-se a dificuldades em relaxar, tensão nervosa, irritabilidade e agitação. Este novo fator foi designado pelos autores de “Stresse”. A versão portuguesa é denominada por Escalas de Ansiedade, Depressão e Stresse (EADS), adaptada por Pais-Ribeiro, Honrado, & Leal, (2004). A versão de 21 itens, designada por EADS-21, propõe-se medir os mesmos construtos do mesmo modo que a versão de 42 itens.

Portugal foi em 2011 considerado um dos países europeus com maior prevalência de perturbações mentais, com maior incidência nas perturbações de ansiedade e de humor (Wang *et al.*, 2011). De acordo com os dados publicados pela Direção Geral de Saúde em 2013 (DGS, 2013), Portugal é um dos países europeus com maior prevalência de perturbações mentais, em termos de ansiedade (16,5%) e perturbações depressivas (7,9%). A Ansiedade pode ser entendida como uma resposta adaptativa do organismo, caracterizada por um conjunto de alterações fisiológicas, comportamentais e cognitivas, que se traduzem num sinal de perigo ou ameaça para a saúde psicológica das pessoas (Ribeiro, 2005).

Quanto à depressão, a Organização Mundial de Saúde, caracteriza esta perturbação pela tristeza, perda de interesse, baixa autoestima. Enquanto estado afetivo, a depressão representa a tristeza normal da vida psíquica que, quando em níveis elevados, constitui-se como um sinal de alerta para o desenvolvimento de estados depressivos.

Relativamente ao Stresse, Selye (1951) considera que, os acontecimentos de vida stressantes podem precipitar episódios de Ansiedade e de Depressão, bem como levar a respostas características de stresse. O stresse pode ser entendido como um processo gerado por uma resposta não específica do indivíduo a um stressor interno ou externo. O mesmo autor chamou a resposta orgânica aos stressores como Síndrome de Adaptação Geral, composta por três fases: alerta, fase de energia devido à produção de adrenalina, resistência, fase de manutenção da homeostasia, exaustão, terceira e última fase em que existe persistência e intensidade dos fatores de stresse quebrando a resistência. Nesta última fase, surgem perturbações para além das físicas (problemas cardíacos), surgem problemas de saúde mental e psicológica, em termos de Depressão e de Ansiedade.

No contexto de trabalho, o cenário não é diferente tendo em conta os indicadores e as causas associadas em grande parte, a problemas de natureza ocupacional. Reconhecendo que existem diferentes fatores do trabalho que têm implicações na saúde e bem-estar dos trabalhadores, é necessário que sejam analisados os fatores específicos que podem ser causadores de doença e stresse, desenvolvendo aqueles que promovem a saúde e o bem-estar no trabalho.

Tendo como base a revisão de literatura, entendemos que a investigação nesta área ainda não é abundante, apesar dos desenvolvimentos teóricos verificados na área da Psicologia da Saúde Ocupacional serem significativos, na última década. Sendo uma área do conhecimento científico ainda recente tem adquirido elevada maturidade, revelando um corpo teórico robusto com efeitos práticos. Ao longo do século XX, conheceram-se alguns contributos da Psicologia para a área da prevenção de riscos ocupacionais, de natureza psicossocial. Em 1943 e 1965 Maslow referiu que só indivíduos psicologicamente são poderiam estar motivados para o trabalho e que ambientes repressivos, incluindo ambientes de trabalho, poderiam levar os trabalhadores a atingir o seu potencial máximo de capacidade de produção. Em 1948, Likert criou o primeiro Instituto de Investigação Social, na Universidade de Michigan, onde se começaram a desenvolver os primeiros contributos para a Psicologia da Saúde Ocupacional. O primeiro estudo e grande contributo para esta área, foi desenvolvido por Robert Karasek em 1979, sobre “*o papel das exigências do trabalho e a autonomia de decisão e saúde psicológica dos trabalhadores*” (Coelho, 2008).

Outro grande contributo, ficou a dever-se à publicação da Diretiva – Quadro da União Europeia sobre Segurança e Saúde no Trabalho, em 1989 (Diretiva nº 89/391/CEE), que veio consagrar o novo paradigma de Saúde Ocupacional. Em 1990, nos EUA, a *American Psychology Association* (APA) e o *National Institute of Occupational Health* (NIOSH) criaram a nova área da Psicologia, designada por Psicologia da Saúde Ocupacional, através da primeira conferência internacional sobre o trabalho e o bem-estar, em Washington. Em 1996, é criado, no âmbito da APA, *The Journal of Occupational Health Psychology* (JOHS). (Coelho, 2008).

Em termos de investigação, destacamos alguns autores pioneiros em estudos de grande interesse para a área da Psicologia da Saúde Ocupacional, como Steve Sauter, Murphy e Joe Hurrell, cujo trabalho desenvolvido, “*Prevention of workrelated psychological disorders: A national strategy proposed by the National Institute for Occupational Safety and Health*” foi publicado em 1990, na revista *American Psychologist*, nº 45, p.p. 1146-1158 (Coelho, 2008).

O estudo aqui apresentado insere-se no âmbito da Psicologia da Saúde Ocupacional, procurando analisar a relação entre os determinantes psicossociais no trabalho e as dimensões afetivas negativas (ansiedade e depressão) e o stresse, numa população específica como é o caso dos condutores profissionais rodoviários. Nesta classe profissional existem algumas categorias mais vulneráveis à exposição de riscos psicossociais e a quadros clínicos de Ansiedade, Depressão e Stresse, do que outras. Contudo, de modo geral esta problemática está presente na maioria dos profissionais deste setor de atividade. As cargas e ritmo de trabalho, os horários, relações interpessoais, interface casa-trabalho e as características individuais e organizacionais, parecem ser os fatores psicossociais no trabalho com maior prevalência nos condutores, assim como o Stresse e a Ansiedade, levando em casos mais graves a estados depressivos, com implicações no absentismo por motivo de doença, recorrendo a situações de baixa médica (Burton, 2010).

O presente estudo é de caráter exploratório, tendo como objetivo estudar a relação entre os fatores psicossociais no trabalho e as dimensões afetivas negativas (ansiedade e depressão) e stresse, no sentido de compreender em que medida os fatores psicossociais no trabalho estão associados a quadros clínicos de Ansiedade, Depressão e a situações de Stresse Ocupacional, fatores e situações de desenvolvimento de riscos psicossociais no trabalho. Procurámos analisar como se relacionavam os fatores psicossociais no trabalho e as dimensões da Ansiedade, Depressão e Stresse entre si, o sexo a idade, assim como a antiguidade na profissão. (Burton, 2010).

De modo a analisar a relação entre as variáveis propostas para este trabalho, apresentamos de seguida o respetivo estudo empírico.

2. MÉTODO

2.1 Participantes

A seleção da amostra para o presente estudo teve como pressuposto, incluir adultos portugueses do grupo de condutores profissionais rodoviários de transportes de mercadorias de longo curso (TIR), em situação ativa de emprego, cuja antiguidade na profissão fosse igual ou superior a três anos, residentes na zona centro de Portugal Continental.

Participaram 63 condutores profissionais rodoviários, dos quais 61 (96,83%) pertencem ao sexo masculino e 2 (3,17%) do sexo feminino, com idades compreendidas entre 50 e os 72 anos, tendo sido a amostra recolhida em clínicas de Leiria, Batalha e Figueira da Foz, no momento de avaliação psicológica para efeito de revalidação da carta de condução, grupo 2, nas categorias C e CE (DL 138/2012). Estes participantes são, maioritariamente, casados (n=58, 92,06%), com filhos (n=57, 90,48%), estando atualmente a trabalhar a tempo inteiro (n= 63, 100%). Recorreu-se a uma amostra não aleatória, tendo sido utilizada a técnica de amostragem de conveniência.

2.2 Instrumentos de Medida

O questionário *Copenhagen Psychosocial Questionnaire II – (COPSOQ II)* na versão original de Kristensen, Hannerz, Hogh e Borg (2005), começou a ser criado em meados de 1990 em resposta à solicitação de questionários padronizados e validados para medir o ambiente psicossocial do trabalho por parte de profissionais da saúde ocupacional dinamarqueses. Como nenhum dos questionários existentes, dinamarqueses ou internacionais, abrangia todos os fatores psicossociais do trabalho necessários, os investigadores do Instituto Nacional de Saúde Ocupacional dinamarquês decidiram criar o seu próprio questionário.

Existem três versões do COPSOQ: uma longa, para fins de investigação científica, uma média, para uso dos profissionais de saúde ocupacional, e uma curta, para autoavaliação dos trabalhadores e para locais de trabalho com menos de 30 trabalhadores. Inicialmente, o COPSOQ longo incluía 141 questões distribuídas por 30 escalas representativas de 20 dimensões psicossociais do trabalho, a saber: cinco relativas às exigências do trabalho, cinco sobre organização e conteúdo do trabalho, oito sobre relações interpessoais e liderança e duas da interface trabalho-indivíduo (Ramos, 2016).

A versão portuguesa desenvolvida por (Silva *et al.* 2010b, 2012b), versão média mantém as mesmas dimensões do instrumento original sendo fixada com menos nove itens no total. Os autores da versão portuguesa asseguram que o instrumento respeita a estrutura e conteúdo da versão original dinamarquesa, com a devida adaptação para Portugal (Silva, 2012b).

O COPSOQ II – versão média é um questionário de autorresposta composto por 76 itens avaliados através de uma escala tipo Likert de cinco pontos. Com exceção do item 61, referente à saúde geral, cotado numa escala de qualidade (*de deficitária a excelente*), todos os itens são classificados em termos de frequência (*de nunca/quase nunca a sempre*) ou intensidade (*de nada/quase nada a extremamente*). Todos os itens são cotados no sentido da escala de resposta, salvo os itens 42 e 45, que são cotados inversamente. As normas de utilização definidas para a população portuguesa recomendam o cálculo da média dos itens de cada escala. O programa informático para cotação e apresentação dos resultados distribui as classificações de cada escala em tercis, com pontos de corte nos valores de 2,33 e 3,66, os quais definem os mesmos níveis interpretativos acima descritos a propósito do questionário original, representados pelas cores verde, amarelo e vermelho. Os resultados são interpretados fator a fator. O instrumento não fornece um índice único, uma vez que o conceito avaliado é multidimensional. Existem dados normativos para a população portuguesa com os quais se podem confrontar os resultados obtidos em diferentes estudos desenvolvidos por investigadores portugueses (Silva, 2012b, citado por Ramos, 2016).

Este instrumento é constituído por 8 dimensões teóricas, 29 escalas e 76 itens (cf. Quadro 1).

Quadro 1. Dimensões, Escalas e Itens do Instrumento COPSOQ - II

Dimensões	Escalas	Itens
Exigências Laborais	Exigências Quantitativas	1, 2, 3
	Ritmo de Trabalho	4
	Exigências Cognitivas	5, 6, 7
	Exigências Emocionais	8
Organização do Trabalho e Conteúdo do Trabalho	Influência no Trabalho	9, 10, 11, 12
	Possibilidades de Desenvolvimento	13, 14, 15
	Significado do Trabalho	51, 52, 53
	Compromisso com o Trabalho	54, 55
Relações Sociais e Liderança	Previsibilidade	16, 17
	Recompensas (reconhecimento)	21, 22, 23

	Clareza do Papel	18, 19, 20
	Conflitos de Papel	24, 25, 26
	Qualidade da Liderança	36,37,38,39
	Apoio Social de Superiores	30, 31, 32
	Apoio Social de Colegas	27, 28, 29
Interface Trabalho-Indivíduo	Insegurança no Trabalho	60
	Satisfação no Trabalho	56, 57, 58, 59
	Conflito Trabalho-Família	62, 63, 64
Valores no Trabalho	Confiança nos Superiores	43, 44, 45
	Confiança nos Colegas	40, 41, 42
	Justiça	46, 47, 48
	Comunidade Social no Trabalho	33, 34, 35
Personalidade	Autoeficácia	49, 50
Saúde e Bem-Estar	Saúde Geral	61
	Stresse	69, 70
	<i>Burnout</i>	67, 68
	Problemas em Dormir	65, 66
	Sintomas Depressivos	71, 72
Comportamentos Ofensivos	<i>Bullying</i>	73, 74, 75, 76

Adaptado de Silva (2012b)

A consistência interna das novas escalas do COPSOQ II foi testada através do Alfa de Cronbach, tendo-se obtido valores superiores a 0,70 para todas as escalas da versão média (Pejtersen *et al.*, 2010). A versão média portuguesa apresentou valores de consistência interna em linha com os dos instrumentos originais, entre 0,60 e 0,90 em termos de Alfa de Cronbach. De forma global, podemos afirmar que existem evidências suficientes para concluir que, o COPSOQ II através das diferentes escalas que o constituem revela boa consistência interna, quanto ao tamanho e nacionalidade, quando medido pelo Alfa de Cronbach, ou seja, regista-se elevada intercorrelação entre os itens das escalas, considerados como aspetos diversos mas unitários do mesmo constructo.

A *Escala de Ansiedade, Depressão e Stresse* (EADS-21; Pais-Ribeiro *et al.*, 2004) visa avaliar os sintomas associados à Ansiedade, Depressão e stresse em jovens adultos e adultos portugueses. É constituída por 21 itens, agrupados em três subescalas, constituídas por 7 itens cada. Segundo Lovibond e Lovibond (1995) as escalas foram desenvolvidas de modo que os fatores começaram por ser definidos em termos de consenso clínico e posteriormente foram refinadas em termos empíricos nomeadamente com recurso a técnicas de análise fatorial.

A escala ficou assim organizada em termos de três subescalas:

Ansiedade é constituída por (a) Excitação do Sistema Autónomo (itens 2,4,19), (b) Efeitos Músculos Esqueléticos (item 7), (c) Ansiedade Situacional (item 9) e, (d) Experiências Subjetivas de Ansiedade (itens 15, 20). A subescala designada por *Depressão* é constituída por Disforia (item 13), (f) Desânimo (item 10), (g) Desvalorização da Vida (item 21), (h) Auto depreciação (item 17), (i) Falta de Interesse ou de Envolvimento (item 16), (j) Anedonia (item 3), e (K) Inércia (item 5).

A subescala *Stresse* é constituída por (l) Dificuldade em Relaxar (itens 1 e 12), (m) Excitação Nervosa (item 8), (n) Facilmente Agitado/Chateado (item 18), (o) Irritação/Reação Exagerada (itens 6, 11) e, (p) Impaciência (item 14).

Cada item consiste numa frase, uma afirmação, que remete para sintomas emocionais negativos experimentados nos últimos 7 dias. Todos os itens são avaliados através de uma escala de tipo Likert, de 4 pontos: (0 – “não se aplicou nada a mim”, 1 – “aplicou-se a mim algumas vezes”, 2 – “aplicou-se a mim muitas vezes”, e 3- “aplicou-se a mim a maior parte das vezes”). A cotação é dada pela soma dos resultados dos 7 itens, obtendo-se uma nota para cada subescala com um resultado mínimo de 0 e máximo de 21. As notas mais elevadas correspondem a estados afetivos mais negativos. Os itens da EADS-21 foram selecionados de modo que possam ser convertidas nas notas da escala completa de 42 itens multiplicando a nota por dois. Os resultados relativos à consistência interna revelaram Alfas de Cronbach elevados para as três subescalas (ansiedade

= 0,74; depressão = 0,85; stresse = 0,81). Verificou-se que a magnitude de correlação item escala a que pertence, corrigida para sobreposição é semelhante para as versões de sete e 14 itens (Pais-Ribeiro *et al.*, 2004).

2.3 Procedimentos de Recolha e Análise de Dados

Este estudo pretende contribuir para uma maior e melhor compreensão dos fatores psicossociais no trabalho e sua relação com as dimensões afetivas negativas (ansiedade, depressão) e stresse, com impacto nos riscos psicossociais no trabalho de condutores profissionais rodoviários, grupo profissional que, pelas suas características e natureza da profissão são muito vulneráveis a problemas associados ao stresse ocupacional, estados de ansiedade e quadros depressivos, como consequência da influência dos fatores e determinantes psicossociais em contexto laboral.

Os participantes foram convidados a responder a um questionário Sociodemográfico seguido de dois instrumentos de avaliação: (1) *Copenhagen Psychosocial Questionnaire II – (COPSOQ II)* na versão original de Kristensen, Hannerz, Hogh e Borg (2005), tradução e adaptação para Portugal por Silva *et al.*, 2010b, Silva, 2012b), que avalia os fatores psicossociais no trabalho; (2) Escala de Ansiedade, Depressão e Stresse (EADS-21) de Pais-Ribeiro *et al.* (2004), visando a avaliação de sintomas emocionais vivenciados nos últimos 7 dias. Os participantes responderam aos instrumentos no momento da avaliação psicológica de condutores profissionais rodoviários de mercadorias, de longo curso (TIR), para efeito de revalidação da carta de condução do grupo 2, categorias C e CE. Inicialmente, os dados obtidos através da EADS-21 foram utilizados para avaliar as propriedades psicométricas da versão portuguesa do instrumento, bem como analisar as diferenças entre variáveis sociodemográficas, antes de estudar a relação com os fatores psicossociais no trabalho. O mesmo procedimento foi efetuado com o COPSOQ II, no sentido de analisar previamente as propriedades psicométricas do instrumento.

Realizou-se uma análise descritiva das respostas dos 63 participantes no estudo, bem como da consistência interna de cada uma das dimensões constantes em cada um dos instrumentos (COPSOQ II e EADS – 21). A análise de fiabilidade dos itens de cada dimensão efetuou-se recorrendo ao Alfa de Cronbach como coeficiente de consistência interna.

A avaliação de ambos os instrumentos foi efetuada com uma análise fatorial exploratória (AFE) com extração dos fatores pelo método de componentes principais, seguida de uma rotação varimax onde se retiraram os fatores com valor próprio superior a 1, e a respetiva percentagem de variância retida. Para efeito de avaliação da validade da Análise Fatorial Exploratória (AFE) e adequação da amostra, foram utilizados o Kaiser-Meyer-Olkin (KMO) e o teste de esfericidade de Bartlett. Relativamente à estrutura fatorial da EADS-21, é esperada a identificação de três fatores – Ansiedade, Depressão e Stresse, correspondendo ao Modelo Tripartido desenvolvido por Clark e Watson (1991), em que a escala se sustenta teoricamente. Todos os fatores deverão apresentar níveis de consistência interna elevados, analisados através do Alfa de Cronbach, à semelhança do que se verificou no estudo de adaptação portuguesa (Pais-Ribeiro *et al.*, 2004).

É esperada a existência de diferenças estatisticamente significativas nos valores de Ansiedade, Depressão e Stresse, em função do sexo e da idade.

Relativamente à estrutura fatorial do COPSOQ II é esperada a identificação do número de fatores conforme Quadro 1. Todos os fatores deverão apresentar níveis de consistência interna elevados, analisados através do Alfa de Cronbach, à semelhança do que se verificou no estudo de adaptação portuguesa (Silva, 2012b).

Estima-se a existência de correlações significativas entre os fatores psicossociais no trabalho e os valores de Ansiedade, Depressão e Stresse.

A análise comparativa entre os grupos das variáveis sociodemográficas sexo e idade, com relação à EADS-21 foi realizada com o teste Mann-Whitney e o teste de Kruskal-Wallis. Para a análise das correlações entre os Fatores Psicossociais e os níveis de Ansiedade, Depressão e Stresse foi utilizado o coeficiente de correlação de Pearson.

A análise descritiva, análise de fiabilidade dos índices, AFE e os testes referidos foram efetuados com recurso ao software SPSS, versão 23.0 para Windows (Nie, Hull & Bent, 1968).

3. RESULTADOS

3.1 Resultados Descritivos da EADS – 21

Os resultados relativos à dimensão Ansiedade revelam valores acima da média, sendo que os valores mínimo e máximo da resposta por item se situam entre 0 e 3, face a uma amplitude teórica do somatório das respostas por dimensão de 0-21. A análise da distribuição de frequências e percentagens de resposta pelos quatro pontos da escala de Likert, permite verificar que os participantes utilizaram todos os pontos da escala. O valor obtido relativo à análise da consistência interna da subescala foi de ($\alpha=0,87$), o que no entender de Pestana e Gageiro (2003) é uma consistência interna boa uma vez que, o valor de Alfa de Cronbach pertence ao intervalo (0,80 – 0,90).

No que concerne à dimensão Depressão revelam valores acima da média, sendo que os resultados mínimo e máximo se situam entre 0 e 3, face a uma amplitude teórica do somatório das respostas por dimensão de 0-21. A análise da distribuição de frequências e percentagens de resposta pelos quatro pontos da escala de Likert, permite verificar que os participantes utilizaram todos os pontos da escala. O valor obtido relativo à análise da consistência interna da subescala foi de ($\alpha=0,88$), o que no entender de Pestana e Gageiro (2003) é uma consistência interna boa uma vez que, o valor de Alfa de Cronbach pertence ao intervalo (0,80 – 0,90).

Em termos da dimensão Stresse revelam valores acima da média, sendo que os resultados mínimo e máximo se situam entre 0 e 3, face a uma amplitude teórica do somatório das respostas por dimensão de 0-21. A análise da distribuição de frequências e percentagens de resposta pelos quatro pontos da escala de Likert, permite verificar que os participantes utilizaram todos os pontos da escala. O valor obtido relativo à análise da consistência interna da subescala foi de ($\alpha=0,85$),

o que no entender de Pestana e Gageiro (2003) é uma consistência interna boa uma vez que, o valor de Alfa de Cronbach se situa entre o intervalo (0,80 – 0,90). Estes resultados evidenciam ser os sintomas de stresse os mais vivenciados pelos participantes deste estudo, embora não faça parte das dimensões afetivas negativas, de acordo com o quadro teórico.

3.2 Análise Fatorial Exploratória

Os resultados obtidos através da Análise Fatorial Exploratória mostram uma estrutura fatorial com 3 fatores, cujo valor do KMO é de 0,92, teste de esfericidade de Bartlett $\chi^2 = 2643,96$; $p < 0,001$ e variância total explicada de 57,07%, o que indica uma muito boa adequabilidade da AFE. Todos os itens da EADS-21 têm comunalidade superior a 0,30 não existindo nenhum item com peso fatorial igual ou inferior a 0,40.

3.3 Análise de Diferenças

Para efeito da análise de diferenças, foram aplicados previamente os testes de ajustamento de *Kolmogorov-Smirnov* e de *Shapiro-Wilk* para testar a normalidade e o teste de *Levene* para testar a homogeneidade, no sentido de serem garantidos os pressupostos para aplicação de testes estatísticos paramétricos ou não paramétricos, tendo-se verificado que a estatística a utilizar é a estatística não paramétrica.

Os resultados da análise de diferenças entre o sexo feminino e o sexo masculino com relação às dimensões Ansiedade, Depressão e Stresse realizada através do teste *Mann-Whitney*, revelam não haver diferenças estatisticamente significativas entre os sexos em nenhuma das três dimensões estudadas, conforme Quadro 2.

Quadro 2. Diferenças entre Ansiedade, Depressão e Stresse em Função do Sexo

Dimensões	Sexo	<i>M</i>	<i>DP</i>	<i>U</i>	ξ	<i>p</i>
Ansiedade	F	2,92	3,21	6738,5	-0,764	0,468
	M	2,94	3,32			
Depressão	F	3,23	3,27	6501,5	-1,388	0,174
	M	2,98	3,90			
Stresse	F	5,79,	3,76	6247,0	-1,507	0,104
	M	4,06	3,11			

Nota. $P \leq 0,05$

Relativamente à idade, os resultados do teste de Kruskal-Wallis revelam que, nas dimensões Ansiedade, Depressão e Stresse não existem diferenças estatisticamente significativas nos diferentes grupos etários, tendo em consideração o nível de significância de $p \leq 0,05$. Contudo, as evidências estatísticas mostram que, a partir dos 40 anos de idade os valores médios são mais elevados em qualquer das dimensões. Na dimensão Ansiedade, o grupo etário com idade compreendida entre 40 e 49 anos, o valor médio é de 4,60 ($\chi^2(3) = 8,15$; $p < 0,05$). Na dimensão Depressão, o mesmo grupo etário apresenta o valor médio de 5,72 ($\chi^2(3) = 10,76$; $p < 0,05$). Em relação à dimensão do Stresse e considerando o mesmo grupo etário, o valor médio situa-se em 7,51 ($\chi^2(3) = 11,66$; $p < 0,05$). O quadro 3 apresenta os restantes valores médios por cada dimensão do estudo.

Quadro 3. Diferenças entre Ansiedade, Depressão e Stresse em Função dos Grupos Etários

Dimensões	Grupo Etário	<i>M</i>	<i>DP</i>	$\chi^2(3)$	<i>p</i>
Ansiedade	20-29	3,83	3,32	5,72	0,67
	30-39	3,82	3,43		
	40-49	4,60	3,56		
	≥ 50	7,61	3,86		
Depressão	20-29	2,51	2,13	4,07	0,29
	30-39	3,69	3,64		
	40-49	5,72	5,37		
	≥ 50	4,48	3,53		
Stresse	20-29	6,71	4,57	5,49	0,32
	30-39	6,83	3,63		
	40-49	7,51	3,85		
	≥ 50	7,07	4,33		

Nota. $P \leq 0,05$

3.4 Análise da Relação Entre Variáveis do Estudo

Para efeito da análise da relação entre as variáveis do estudo (fatores psicossociais no trabalho e as dimensões afetivas negativas e stresse), foi usado o coeficiente de correlação de Pearson, conforme resultados descritos no Quadro 4.

Na avaliação da magnitude das correlações foi utilizada a convenção de Pestana e Gageiro (2003), os quais sugerem que se considere uma associação *muito baixa* sempre que o coeficiente de correlação é inferior a 0,20; *baixa* entre 0,20 e 0,39; *moderada* entre 0,40 e 0,69; *alta* entre 0,70 e 0,89 e *muito alta* entre 0,90 e 1,0.

Pela análise dos resultados podemos verificar que, existem correlações significativas entre alguns fatores psicossociais no trabalho, as dimensões afetivas negativas e o stresse, o que poderá contribuir para desenvolver riscos psicossociais no trabalho.

Tendo por base as dimensões teóricas dos fatores psicossociais no trabalho (cf. Quadro 1), os resultados das análises correlacionais permitem observar associações significativas entre os fatores psicossociais no trabalho, as dimensões afetivas negativas e o stresse. Destacam-se as correlações positivas com significado estatístico entre as Exigências Quantitativas, a Ansiedade ($r = 0,76$) e o stresse ($r = 0,85$), o que significa que, as exigências quantitativas estão associadas aos problemas de Ansiedade e de Stresse respectivamente, dos condutores profissionais rodoviários. Outras associações significativas são observadas nas variáveis, Ritmo de Trabalho, com a variável Stresse ($r = 0,71$), Exigências Cognitivas com maior significado na relação na Ansiedade ($r = 0,81$), Exigências Emocionais com Ansiedade ($r = 0,74$) Stresse ($r = 0,73$). As Exigências Emocionais estão associadas à Depressão ($r = 0,52$). Conclui-se assim que, a dimensão das Exigências Laborais estão positiva e significativamente correlacionadas com os estados de Ansiedade, Depressão e com o Stresse, podendo assim, influenciar negativamente a saúde psicológica e o bem-estar no contexto laboral.

Na dimensão, Organização e Conteúdo do Trabalho, existem relações positivas entre Fatores Psicossociais no Trabalho, a Ansiedade, Depressão e o Stresse. Destacam-se a correlação positiva com significado estatístico entre o Significado do Trabalho e o Stresse ($r = 0,49$), Compromisso com o Trabalho com a Ansiedade ($r = 0,71$), o Compromisso com o Trabalho e o Stresse ($r = 0,63$).

No que concerne à dimensão, Relações Sociais e Liderança, o fator Recompensas está negativamente correlacionado com a Ansiedade ($r = -0,74$), associado com a Depressão ($r = -0,81$) positivamente correlacionado com o Stresse ($r = 0,78$). O fator Apoio Social dos Superiores está negativamente correlacionado com a Ansiedade ($r = -0,68$), Depressão ($r = -0,71$) e positivamente correlacionada com o Stresse ($r = 0,86$). O Apoio Social de Colegas está igualmente associado negativamente com a Ansiedade ($r = -0,54$) e positiva e significativamente com o Stresse ($r = 0,62$).

A Interface Trabalho-Indivíduo é outra das dimensões em estudo e que é constituída por outros fatores psicossociais, como a Insegurança no Trabalho que se encontra positiva e significativamente correlacionada com a Ansiedade ($r = 0,78$). A Satisfação no Trabalho está associada à Ansiedade, Depressão e Stresse. De salientar que, existe uma correlação positiva e significativa entre o Conflito Trabalho-Família, a Ansiedade ($r = 0,54$) Depressão ($r = 0,72$) e o Stresse ($r = 0,76$).

Quanto aos Valores no Trabalho, os resultados revelam correlações maioritariamente moderadas entre a Confiança nos Superiores e o Stresse ($r = 0,62$), Confiança nos Colegas e o Stresse ($r = 0,61$), entre Justiça, Depressão ($r = 0,60$) e Stresse ($r = 0,73$).

A Autoeficácia é o fator psicossocial inserido na dimensão da Personalidade, não se verificando qualquer relação significativa do ponto de vista estatístico.

A Saúde e Bem-Estar constitui a dimensão central do propósito deste estudo. Alguns Fatores Psicossociais no Trabalho estão de forma positiva e significativamente relacionados com a Ansiedade, Depressão e com o Stresse. A Saúde em Geral está correlacionada com a Ansiedade ($r = 0,73$), Depressão ($r = 0,63$) e com o Stresse ($r = 0,61$). O Stresse por sua vez, associa-se positivamente à Ansiedade ($r = 0,64$), Depressão ($r = 0,54$) e ao Stresse ($r = 0,80$). O *Burnout* é um fator relacionado positivamente com a Ansiedade ($r = 0,67$), Depressão ($r = 0,57$) e com o Stresse ($r = 0,72$). O fator Problemas em Dormir revela um resultado muito positivo e significativo do ponto de vista estatístico, com o Stresse ($r = 0,81$) e significativo com a Depressão ($r = 0,67$). Os resultados mostram ainda que, os Sintomas Depressivos estão de forma positiva e significativamente correlacionados com a Depressão ($r = 0,84$) e como o Stresse ($r = 0,73$).

O fator *Bullying* inserido na dimensão de Comportamentos Ofensivos, não apresentam resultados em termos de relação significativa com a Ansiedade, Depressão e com o Stresse.

Assim, de forma conclusiva e através dos resultados da análise correlacional, verifica-se que, existe uma relação positiva e significativa entre os Fatores Psicossociais no Trabalho e as dimensões afetivas negativas, a Ansiedade, Depressão e o Stresse. Em função das características da tipologia da amostra de participantes neste estudo, os resultados parecem indicar o sentido de que, os Fatores Psicossociais no Trabalho podem contribuir de forma significativa para os quadros clínicos de Ansiedade e Depressão, assim como para estados psicológicos associados ao Stresse, proporcionando a origem e o desenvolvimento de Riscos Psicossociais no Trabalho, nos grupos profissionais em geral e nos condutores profissionais rodoviários, em particular.

Quadro 4. Correlações Entre os Fatores Psicossociais no Trabalho, a Ansiedade, Depressão e Stresse

Fatores Psicossociais no Trabalho	N	Ansiedade	Depressão	Stresse	Dimensões
Exigências Quantitativas	63	0,76**	0,48	0,85**	Exigências
Ritmo de Trabalho	63	0,65	0,32	0,71**	Laborais
Exigências Cognitivas	63	0,81*	0,41	0,63	
Exigências Emocionais	63	0,74**	0,52*	0,73**	
Influência no Trabalho	63	0,23 <i>ns</i>	0,10 <i>ns</i>	0,45	Organização e
Possibilidades de Desenvolvimento	63	-0,46	0,37	-0,25	Conteúdo do
Significado do Trabalho	63	0,42	0,28	0,49*	Trabalho
Compromisso com o Trabalho	63	0,71*	-0,58	0,63*	
Previsibilidade	63	0,32	0,03 <i>ns</i>	0,42	Relações
Recompensas (reconhecimento)	63	-0,74**	-0,81*	0,78*	Sociais e
Clareza do Papel	63	0,65	0,45	0,32	Liderança
Conflitos de Papel	63	0,30	0,27	0,10 <i>ns</i>	
Qualidade da Liderança	63	0,41	0,32	0,67	
Apoio Social de Superiores	63	-0,68	-0,71	0,86*	
Apoio Social de Colegas	63	-0,54*	0,23	0,62*	
Insegurança no Trabalho	63	0,78**	0,65	0,78	Interface
Satisfação no Trabalho	63	0,83	0,45	0,62	Trabalho-
Conflito Trabalho-Família	63	0,54**	0,72	0,76**	-Indivíduo
Confiança nos Superiores	63	0,43	0,41	0,62	Valores no
Confiança nos Colegas	63	0,21	0,43	0,61	Trabalho
Justiça	63	0,43	0,60	0,73	
Comunidade Social no Trabalho	63	0,23	0,15	0,03 <i>ns</i>	
Autoeficácia	63	0,33	0,28	0,04 <i>ns</i>	Personalidade
Saúde Geral	63	0,73**	0,63*	0,61*	Saúde e Bem-Estar
Stresse	63	0,64*	0,54	0,80**	
<i>Burnout</i>	63	0,67	0,57	0,72	
Problemas em Dormir	63	0,46	0,67**	0,81**	
Sintomas Depressivos	63	0,54	0,84	0,73**	
<i>Bullying</i>	63	0,21	0,07	0,41	Comportamentos Ofensivos

Nota. * $p < 0,05$; ** $p < 0,01$; ns: não significativo.

4. DISCUSSÃO

Este estudo teve como principal objetivo analisar a relação entre os Fatores Psicossociais no Trabalho e as dimensões afetivas negativas, Ansiedade e Depressão, assim como o Stresse, em condutores profissionais rodoviários. Considera-se que a maioria dos participantes desta investigação são quase na totalidade sujeitos do sexo masculino, vai de encontro ao que é descrito na literatura (Murray, 1998), sabendo que, o foco tem sido dado ao risco da condução, da sinistralidade rodoviária, mas ainda é pouco frequente haver debates, discussões e poucos estudos que alertem os empresários de transportes rodoviários de mercadorias de longo curso, que é necessário pensar e refletir sobre as causas dos acidentes na estrada, que poderão em parte estar associados a outros fatores, atitudes e comportamentos inerentes ao trabalho do condutor, sua natureza, condição física, psíquica e social, , cujos Riscos Psicossociais no Trabalho quando não são avaliados e valorizados podem constituir uma forte ameaça para a saúde e bem-estar dos profissionais de condução rodoviária.

Ainda que seja um estudo exploratório preliminar, contribuiu em grande medida para compreender a necessidade de continuar a estudar a problemática bem como o tipo de população, face a diversas situações vividas e sentidas no exercício da profissão.

Em relação às variáveis Risco e Saúde Física e Psicológica, quanto maior o risco menor o sentimento de saúde em

geral. Esta relação poderá estar associada às vivências de risco que podem ter consequências ao nível físico e psicológico, levando os profissionais da condução rodoviária a adotar atitudes e comportamentos, estilos de vida para muitas das vezes tentarem superar dificuldades relacionadas com níveis elevados de Ansiedade e Stresse, recorrendo a hábitos de fumar intensamente, consumo de álcool e outras substâncias, alimentação enfraquecida, poucas horas para descansar, dormir e lazer, vida sedentária e separação psicológica em termos familiares, ficando semanas longe de casa, da família, como é o caso deste tipo de profissionais que participaram no presente estudo (Parker *et al.*, 1998). Trata-se de condutores profissionais rodoviários de mercadorias de longo curso (TIR).

Os resultados descritos apontam para a existência de uma relação significativa entre os Determinantes Psicossociais no Trabalho e as dimensões afetivas negativas, Ansiedade e Depressão, bem como o Stresse, tendo em conta a amostra de condutores profissionais rodoviários de mercadorias de longo curso (TIR), participantes desta investigação.

De acordo com os resultados, a análise de diferenças permitem concluir que, ao nível de significância de $p \leq 0,05$, não existem diferenças entre homens e mulheres relativamente à Ansiedade, Depressão e Stresse (Quadro 2). Quanto à idade, os resultados descritos apontam para valores médios mais elevados nas três dimensões, Ansiedade, Depressão e Stresse situam-se a partir de 40 anos (Quadro 3).

De salientar que, os Fatores Psicossociais no Trabalho parecem estar associados e estabelecem uma relação significativa com as dimensões afetivas negativas, Ansiedade, Depressão, assim como o Stresse, conforme conclusão de estudos anteriores (Cox & Griffiths, 2005; Burton, 2010). Verifica-se também que, os Fatores Psicossociais no Trabalho estão fortemente e positivamente correlacionados com as dimensões Ansiedade e Stresse. Estes resultados vão ao encontro de outros estudos realizados com as mesmas variáveis, no contexto ocupacional como contributo para o desenvolvimento da saúde e qualidade de vida e bem-estar no trabalho em geral.

Existe evidência empírica que revela a relação entre a saúde ocupacional e a conservação de recursos (Taris, 2006), bem como a relação entre a síndrome de Burnout e a conservação de recursos (Hobfoll & Freedy, 1993; Hobfoll & Shirom, 1993). Alguns estudos, relevantes evidenciam que o consumo de tabaco, uma alimentação pouco saudável, a inatividade física, sedentarismo e abuso de álcool constituem as principais causas de morbilidade decorrentes do comportamento em todas as profissões em geral e nos condutores profissionais rodoviários em especial. Existem evidências epidemiológicas de que estes fatores de risco comportamentais contribuem para o desenvolvimento de doenças crónicas como diferentes tipos de cancro, diabetes de tipo II e doenças cardiovasculares (Mokdad, Marks, Stroup & Gerberding, 2004). Além de afetarem a saúde física, alguns destes comportamentos e hábitos de vida, como a inatividade física e uma alimentação rica em açúcar, têm efeitos na saúde mental e psicológica, nomeadamente na Depressão (Cavill, Kahlmeier & Racioppi, 2007) e na esquizofrenia (Peet, 2004).

Os efeitos da não adoção de comportamentos e hábitos de vida recaem igualmente sobre a saúde profissional, dos condutores rodoviários, sendo uma má saúde física, objetiva ou percebida, considerada responsável, a par de elevados níveis de stresse, por níveis elevados de absentismo (Bauer *et al.*, 2007). Outros estudos encontraram benefícios psicológicos e sociais no envolvimento em atividades culturais e desportivas (Eime, Young, Harvey, Charity & Payne, 2013). Em relação à saúde mental e psicológica, não se encontraram diferenças ao nível de perturbações psiquiátricas entre condutores profissionais e outras profissões, apenas foi encontrada uma maior probabilidade de perturbação de ansiedade e stresse no sexo masculino e, entre os mais velhos (Peet, 2004).

Para além do bem-estar associado ao trabalho, outros estudos referem os efeitos na forma como os condutores profissionais relacionam o trabalho e a família com o seu bem-estar subjetivo (Mullen, Kelley & Kelloway, 2008). O trabalho e a vida familiar dos trabalhadores em geral e dos condutores profissionais em particular têm sido considerados duas áreas interdependentes e de maior investimento na vida adulta (Kanter, 1977). Compatibilizar as duas dimensões é compreender que os benefícios não é só para o próprio trabalhador, como também para as organizações e para Portugal.

A Fundação Europeia para a Melhoria das Condições de Vida e do Trabalho considera o equilíbrio entre a vida profissional e pessoal um dos pilares de análise obrigatória quando se pretende avaliar a qualidade de vida dos indivíduos (EUROFOUND, 2014, citado por Chambel, 2016).

Respostas para uma Condução Rodoviária Sem Risco em Ambiente de Trabalho Saudável

5. CONSIDERAÇÕES FINAIS

A prevenção dos riscos psicossociais e a promoção da saúde e bem-estar no trabalho, exige da parte das entidades governamentais e empregadores e outros atores sociais, um conjunto de respostas em termos do diálogo social, implementação de políticas de prevenção que permitam diminuir ou eliminar as consequências negativas dos riscos psicossociais no trabalho.

Os determinantes sociais da saúde exercem os seus efeitos ao longo da vida. O sistema português e a legislação existente permite o enquadramento e o reconhecimento de muitas doenças causadas por fatores psicossociais.

A investigação desenvolvida nesta área do conhecimento, revelou que se pode potenciar e promover as organizações saudáveis através de estratégias práticas tendo por base a Psicologia da Saúde Ocupacional e a Psicologia Organizacional Positiva, que consiste na promoção e desenvolvimento de níveis de positividade de todos os colaboradores.

Para uma melhor compreensão do stresse e dos riscos psicossociais relacionados com o trabalho requer boa formação de todos os profissionais que estão confrontados com a prevenção dos riscos psicossociais. Cada vez mais são os colaboradores que se queixam dos efeitos nocivos do seu trabalho na sua saúde psicológica. Estes problemas, que atingem grandes áreas do trabalho, desde dos impactos organizacionais, nomeadamente os níveis de produtividade e absentismo.

Outro aspeto relevante, enquadra-se ao nível das políticas sobre o emprego, a progressão na carreira como fatores de

gestão das causas e consequências da insegurança de emprego, uma vez que esta insegurança influencia a saúde e bem-estar dos trabalhadores.

Assim, as mudanças profundas que têm ocorrido no mundo do trabalho têm consequências na saúde e qualidade de vida no trabalho. Neste contexto, é necessário relançar o debate sobre as condições de trabalho e o seu impacto na saúde, segurança dos trabalhadores, bem-estar e qualidade de vida no contexto laboral, sendo urgente introduzir nas empresas, organizações e em toda a comunidade de trabalho, a obrigatoriedade da figura do Psicólogo do Trabalho, como contributo para a prevenção dos riscos psicossociais no trabalho, promovendo e desenvolvendo a saúde psicológica no trabalho.

Referem-se as limitações deste estudo, nomeadamente o tamanho da amostra, sendo necessário promover outros estudos, com amostras mais representativas, com mais variáveis sociodemográficas e outras, associadas à saúde psicológica.

REFERÊNCIAS

- Antonovsky, A. (1979), *Health, Stress, and Coping*, Jossey-Bass, São Francisco.
- Barros, A. M. (1995). Avaliação de atitudes e da intencionalidade dos condutores em cometer transgressões. *Análise Psicológica*, 18 (3), 343-347.
- Bauer, J., Unterbrink, T., Hack, A., Pfeifer, R., Buhi-Griebhaber, V., Muller, U. & Wirsching, M. (2007). Working conditions, adverse events and mental health problems in a sample of 949. German teachers. *International Archives of Occupational and Environmental Health*, 80, 442 – 449.
- Burton, J. (2010). *Healthy Workplace Framework and Model: Background and Supporting Literature and Practice*. World Health Organization. Disponível em: <http://www.who.int/en/>.
- Cavill, N., Kahlmeier, S. & Racioppi, F. (2007). *Physical activity and health in Europe: Evidence for action*. Geneve: WHO.
- Chambel, M. J.(coord.) (2016). *Psicologia da Saúde Ocupacional*. Lisboa: Pactor.
- Chandola, T., Brunner, E. & Marmot, M. (2006). Chronic stress at work and the metabolic syndrome: prospective study. *BMJ (Clinical Research Ed.)*, 332 (75-40), 521 – 5.
- Clark, L., & Watson, D. (1991). Tripartite Modelo of Anxiety and Depression: Psychometric Evidence and Taxonomic Implications. *Journal of Abnormal Psychology*, 100, 316-336. doi: 10.1037/0021-843X.100.3.316.
- Coelho, J. A. (2008). *Uma Introdução à Psicologia da Saúde Ocupacional: Prevenção dos Riscos Psicossociais no Trabalho*. Porto: Edições Universidade Fernando Pessoa.
- Coelho, J. A. (2010). *Prevenção de Riscos Psicossociais no Trabalho em Hospitais*. Porto: Edições Universidade Fernando Pessoa.
- Cox, T. & Griffiths, A. (2005). The nature and measurement of work-related stress: theory and practice. In C. N. Wilson JR (Ed.), *Evaluation of Human Work* (3ª ed.). CRC Press.
- Cox, T., Griffiths, A., & Randall, R. (2003). *A risk management approach to the prevention of work stress*, in Schabracq, M. J., Winnubst, J. A. M., & Cooper, C. L. (eds.). *The Handbook of Work and Health Psychology* (2nd Edition). Wiley Hoboken, N. J.
- DGS – Direção Geral de Saúde (2013). *Portugal: Saúde Mental em Números – 2013*.
- Eime, R., Young, J., Harvey, J., Charity, M. & Payne, W. (2013). A systematic review of the psychological and social benefits of participation in sports for adults: informing development of a conceptual modelo f health through sport. *International Journal of Behavioral Nutrition and Physical Activity*, 10, 135.
- European Comission (2013). *Report on the current situation in relation to occupational diseases systems in EU Member States and EFTA/EEA countries, in particular relative to Comission Recommendation 2003/670/EC concerning the European Schedule of Occupational Diseases and gathering of data on relevant related aspects*.
- Hobfoll, S. E. & Freedy, J. (1993). Conservation of resources: A general stress theory applied to burnout. In W. B. Schaufeli, C. Maslach and T. Marek (Eds.), *Professional burnout: Recent developments in theory and practice* (pp. 115-133). Washington, D.C.: Taylor and Francis.
- Hobfoll, S. E. & Shirom, A. (1993). Stress and burnout in the workplace: conservation of resources. In R. T. Golembiewski /Ed.), *Handbook of Organizational Behavior* (pp. 41-60). New York: M. Dekker.
- Huber, M., Knottnerus, J. A., Green, L. Van der Horst, H., Jadad, A. R., Kromhout, D., e Smid, H. (2011). *How should we define health?* BMJ, 343, doi: 10.1136/bmj. D4163.
- ILO, International Labour Organisation (1986), *Psychosocial factors at work: recognition and control*, Report of the joint ILO/WHO Committee on Occupational Health, International Labour Office, Geneva.
- Kanter, R. M. (1977). *Work and family in the United States: A critical review and agenda for research and policy*. New York: Russell Sage Foundation.
- Kristensen, T. S., Hannerz, H., Hogh, A., & Borg, W. (2005). The Copenhagen Psychosocial Questionnaire – A tool for the assessment and improvement of the psychosocial work environment. *Scandinavian Journal of Public Health*, 31 (6) 438-449.

- Larson, J. S. (1999). The conceptualization of health. *Medical care research and review*, (56) 123 – 136.
- Leka, S. Griffiths, A. & Cox, T. (2004). *Work Organization and Stress: Systematic problema Approaches for Employers, Managers and Trade Union Representatives*. World Health Organization, Geneva.
- Lovibond, P., & Lovibond, S. (1995). The structure of emotional negative states: Comparison of Depression Anxiety Stress Scales (DASS) and Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33, 335-343. doi: 10.1016/0005-7967(94)00075-U.
- Martikainen, P., Bartley, M. & Lahelma, E. (2002). *Psychosocial determinants of health in social epidemiology* (ed.). Int. J. Epidemiol. 31, 1091-1093.
- Matos, M. (1991). *Fatores de risco psicológico em jovens condutores de motorizadas e sua influência relativa na ocorrência dos acidentes*. Tese de Doutorado. Lisboa: Faculdade de Psicologia e Ciências da Educação da Universidade de Lisboa.
- Mokdad, A., Marks, J., Stroup, D. & Gerberding, J. (2004). Actual causes of death in the United States, 2000. *JAMA*, 291 (10), 1238 – 1245.
- Mullen, J., Kelley, E. & Kelloway, E. K. (2008). Health and well-being outcomes of the work-family interface. In K. Korabik, D. S. Lero & D. L. Whitehead (Eds.). *Handbook of work-family integration. Research, theory, and best practices* (pp. 191-214). New York: Elsevier.
- Murray, A. (1998). The home and school background of young drivers involved in traffic accidents. *Accident Analysis and Prevention*, 30 (2), 169 – 182.
- Nie, N. H., Hull, C. H. & Bent, D. H. (1968). *Statistic package for social sciences – SPSS (Version 23.0 for Windows)*. Chicago: SPSS.
- Pais-Ribeiro, J., Honrado, A., & Leal, I. (2004). Contributos para o estudo da adaptação portuguesa das escalas de Ansiedade, Depressão e Stresse (EADS) de 21 itens de Lovibond e Lovibond. *Psicologia, Saúde & Doenças*, 5, 229-239.
- Parker, S. K. & Walt, T. D. (1998). *Job and work design: Organizing work to promote well-being and effectiveness*. San Francisco, CA: Sage.
- Peet, M. (2004). International variations in the outcome of schizophrenia and the prevalence of depression in relation to national dietary practices: na ecological analysis. *British Journal of Psychiatry*, 184(5), 404 – 408.
- Pejtersen, J. H., Kristensen, T. S., Borg, V., & Bjorner, J. B. (2010). *The second version of the Copenhagen Psychosocial Questionnaire (COPSOQ II)*. *Scandinavian Journal of Public Health*, 38 (Suppl. 3), pp. 8-24.
- Ramos, M. (2016). *Confronto do stresse, fatores psicossociais e saúde no trabalho*. Lisboa: RH Editora.
- Ribeiro, J. P. L. (2005). *O importante é a saúde*. Lisboa: Fundação Merck Sharp Dohme.
- Seidler, A., Thinschmitt, M., Deckert, S., Then, F., Hegewald, J., Nieuwenhuijsen, K. & Riedel-Heller, F. G.(2014). The role of psychosocial working conditions on burnout and its core componente emotional exhaustion – a systematic review. *Journal of Occupational Medicine and Toxicology (London, England)*, 9(1), 10.
- Selye, H. (1951). The General Adaptation Syndrome. *Annual Review of Medicine*, 2, 327-342. doi: 10.1146/annurev.me.02.020151.001551.
- Silva, C. F. (2012b). *Copenhagen Psychosocial Questionnaire, Versão Portuguesa – Portugal e Países Africanos de Língua Oficial Portuguesa*.
- Silva, C., Pereira, A., Martins Pereira, A., Amaral, V., Vasconcelos, G., Rodrigues, V., Nossa, P. (2010b). The Portuguese version of Copenhagen Psychosocial Questionnaire. *International Journal of Behavioral Medicine* (17(1). Abstracts book of the 11th Congresso of Behavioral Medicine, Washington, DC.
- Stork, J. (1977). Échelle d'Evaluation de risque suicidaire. *La Psychiatrie de l'Enfant*, 20 (2), 493-520.
- Taris, T. W. (2006). Bricks without clay: on urban myths in occupational health psychology. *Work & Stress*, 20, 99-104.
- Wang, P., Aguilar-Gaxiola, S., AlHamzawi, A., Alonso, J., Angermeyer, M., Borges, G., Kessler, R. (2011). Treated and untreated prevalence of mental disorder worldwide. In G. Thornicroft, G. Szmukler, K. Mueser & Drake (Eds.), *Oxford Textbook of Community Mental Health* (pp. 50-66). New York: Oxford University Press.
- Watson, D., & Clark, L. (1995). Testing a Tripartite Model: Evaluating the Convergent and Discriminant Validity of Anxiety and Depression Symptom Scales. *Journal of Abnormal Psychology*, 104, 3-14. Doi: 10.1037/0021-843X.104.1.3.
- Zedeck, S., & Mosier, K. L. (1990). Work in the family and employing organizations. *American Psychologist*, 45(2), pp. 240-251.

THE DETERMINANTS OF TEACHERS' SATISFACTION AND ITS INFLUENCE IN STRATEGIC MANAGEMENT OF HUMAN RESOURCES IN THE INSTITUTE OF EDUCATION SCIENCES IN KWANZA SOUTH PROVINCE

Domingos Augusto Lunga
Instituto Superior Politécnico do Kwanza Sul
(dlunga23@gmail.com)

Cláudia Miranda Veloso
UNIAG; Instituto Politécnico de Bragança; Universidade de Aveiro
(claudiamiranda@ipb.pt; cmv@ua.pt)

Paula Odete Fernandes
UNIAG; Instituto Politécnico de Bragança; NECE
(pof@ipb.pt)

ABSTRACT

The organizational environment is characterised by forces which affect the dynamics and the organizational competitiveness. These factors influence the strategy of the organization and its objectives. In this context, professional satisfaction adopts a growing interest in understanding quality of professional life, strategic management and organizational performance. Greater job satisfaction contributes to the professional finding meaning in his professional activity and adopting positive attitudes towards organizational performance.

In this perspective, the article purposes to verify if there are differences between socio-demographic, professional, training and labour variables related to the level of satisfaction of the teachers that belong to the Institute of Education Sciences, as well as to know the level of satisfaction of these professionals.

The results show that the level of teachers' satisfaction is positive and allows to understand the determinants of teachers' satisfaction and their mastery in strategic management of human resources and organizational competitiveness.

Keywords: Strategic Management, Professional Satisfaction, Public Higher Education, Organizational Competitiveness.

JEL Classification: M10, M31

1. INTRODUCTION

The globalization of markets has meant that organizational competitiveness is more daring, both by reducing costs, improving quality, increasing productivity, and by constant innovation and knowledge. As a consequence, organizations have implemented an organizational culture that favors high performance, with particular attention to human resource management as an essentially strategic issue. When it comes to strategic human resource management, it refers to "designing and implementing a set of internally consistent policies that ensure that the company's human capital contributes to achieving business objectives" (Huselid, Jackson and Schuler, 1997: 172). This view states that not only the different human resources management practices and policies must be closely interlinked, but also aligned with the organization's overall strategy. The growing interest in strategic management of human resources reveals the progressive concern with people, considered as the key resource for organizational success, whether private or public organizations (Mendes, 2012).

The management of human resources is based on the affectation of the behavior of the people and their correlation with the institutional objectives. The management of the employees, their planning, their direction and leadership, and their control are closely related to the dimensions perceived by the workers. Validating dimensions that promote job satisfaction is building a set of determinants that can be evaluated in the context of Human Resource Management in order to maximize value for the professional and for the institution. This study was carried out for teachers of the Higher Institute of Education Sciences of Sumbe (ISCED). Tries to observe the job satisfaction of these professionals, and to relate the variables associated to this condition (sociodemographic, professional context, training context and work context).

Professional activity occupies most of the time of workers, and undoubtedly takes on a remarkable importance in the life of the active population. For this reason, it is extremely important that the workplace provides well-being, since this satisfaction shows a direct connection with the other areas of workers' lives. According to Grace (1999), job satisfaction comprises an attitude or emotion that assumes concrete meaning in behaviors and opinions uttered. Barros and Cunha (2010) affirm that it is the activity that determines the set of all the actions (thoughts, feelings and emotions) that characterize human behavior at work. There are several studies that show that job satisfaction has an effective effect on the productivity of organizations, on the well-being of employees and also on the various dimensions that are directly or indirectly associated

with people, both in the labor and personal fields. Several dimensions were indicated in order to ascertain professional satisfaction: working and health conditions, job security, achievement, autonomy, relationship, prestige and remuneration. Professional satisfaction can be assessed by different approaches and in different environments. Job satisfaction has become increasingly important because it is pointed out as a variable, implicitly and explicitly, that is linked cumulatively to the productivity and personal fulfillment of workers. Greater professional satisfaction contributes to the professional finding meaning in their work activity and adopting positive attitudes towards institutional development.

Despite the existence of a multiplicity of studies that deal with the subject of professional satisfaction, there are minimum studies that study the professional satisfaction of teachers, particularly in Angola. It is intended, therefore, to contribute in some way to the widening of knowledge and to the enrichment of the Angolan and international bibliography.

In this sense, the purpose of this study is to examine the determinants of ISCED job satisfaction and understand which aspects are more valued by these professionals in their work environment. The present study supposes a reflection about the way in which the sociodemographic variables, of professional context, of training context and of work context influence the level of professional satisfaction of the professors of ISCED. Thus, it is crucial that ISCED understands what its teachers expect and has a duty to promote such measures, evidently within the parameters admissible and practicable by the institution.

This article is organized in 5 sections. In addition to the present introduction, there is a section with the theoretical framework, another with the supporting methodology of the whole study. Following is the section where the results achieved with the satisfaction of ISCED professionals are displayed and analyzed. Finally, the main conclusions and contributions of the present study are highlighted.

It is hoped that this study will contribute to a better understanding of the job satisfaction of higher education teachers in order to allow ISCED to define strategies and adopt intervention measures that favor the well-being, the expectation of teachers and promote simultaneously, the better institutional competitiveness and the quality of education.

2. THEORETICAL BACKGROUND

In the current context of globalization, organizational strategic management and particularly human resources management reveal the progressive concern with people, seen as the key factor for excellent performance and organizational competitiveness. In addition to the usual sources of competitive advantage, people have come to be seen not as a mere organizational resource that should be managed like other resources, but rather as the strategically most important “resource” for gaining competitive advantage. In the search for this advantage, the contribution requested to the human resources management is in the capacity of production of added value, representing this capacity, the implementation of certain strategic activities of human resources management (Mendes, 2012).

The realization of this research on the job satisfaction of teachers and non-teachers makes it possible to understand the perception of these professionals about this reality, to know what motivates them and what their expectations, and through this knowledge to improve their productivity and efficiency, as well as Quality of education. Lobos (1978) argues that so many managers and social researchers believe that if labor dissatisfaction were reduced, human barriers to production would be eliminated and transformed into a force that would promote improved performance and consequently productivity.

With regard to the professional of the higher education, the way in which he feels and faces his work, determine categorically the success and the quality of the education. Because it is a profession that is dynamized particularly in the field of human relations, the satisfaction in the workplace becomes essential. In fact, teaching is a profession that has undergone changes and restructurings in the sense of achieving excellence in teaching. With the growing development of communication and information technologies, education professionals need constant updating so as not to compromise professional competence and the quality of teaching and service delivery to students and the community.

According to the two-factor theory developed by Frederick Herzberg there are two types of factors that affect the satisfaction of human needs, classified as hygienic factors and motivational factors. Hygienic factors are factors related to the working environment or living conditions; the motivational factors are those that can promote active attitude and job satisfaction (Alpay and Verschoor, 2014; Wei and Junyan, 2015). The motivation and the particular interest in this subject were triggered, above all, by the supposed relationship between teacher satisfaction and professional performance. In this paper it will be present the results of a study by Locke (1969) and Cure and Rodrigues (1999), Judge, Thoresen, Bono and Platten (2001), (Aiken, Clarke, Sloane and Caetane, 2010; Moura, 2012; Azevedo, 2012; Leite, 2013) that point to an implicit link between job satisfaction and the high performance of its professionals. According to Mezomo (2001), an organization with satisfied employees has a potential advantage, since it generally attracts the best, reduces staff turnover, increases productivity, reduces costs, improves image vis-à-vis the community and Gains competitiveness.

The senior management of a higher education institution has an important role in creating job satisfaction, identifying which factors cause satisfaction and/or dissatisfaction, and use those data to identify strategies that lead to improved situations that are less satisfactory. As a result, job satisfaction has a significant impact on employees' commitment to organizations, work performance, and motivation (Machado-Taylor, Meira Soares and Gouveia, 2010; Machado-Taylor *et al.*, 2016).

3. METHODOLOGY AND RESEARCH HYPOTHESES

This research deals with the professional satisfaction of the teachers who work in ISCED, and intends to understand some of the determinants that influence, how the teacher feels in the workplace and how he perceives his profession. In order to answer to the main objective, the following research hypotheses (HI) were established:

- HI₁: There are differences in the average values of job satisfaction for sociodemographic characteristics;
 HI₂: There are differences in average values of job satisfaction for the level of training;
 HI₃: There are differences in average values of job satisfaction for professional category;
 HI₄: There are differences in average values of job satisfaction for the labor characteristics;
 HI₅: There are differences in average satisfaction values in each leadership practice for each leadership style;
 HI₆: There is a direct positive relationship between satisfaction dimensions and overall satisfaction.

In order to answer to the main objective of the present study, an anonymous and confidential questionnaire survey was applied to ISCED teachers, divided into two parts. First part, consisting of a previous questionnaire, the questions were elaborated by the researchers, including sociodemographic, professional, training and labor variables, among others. A second part consists in the CAF Model 2006, Common Framework for Quality Assessment of the Common Administrations of the European Union (CAF). After data collection, the database was constructed, processed, processed, analyzed and interpreted.

Initially, in order to describe and characterize the study sample, an exploratory descriptive analysis of the data was performed according to the nature of the variables under study. Statistical measures were used: absolute frequencies, relative frequencies, mean, standard deviation, bar graphs, in order to describe the characteristics: sociodemographic, professional, labor and satisfaction manifested by the respondent.

Subsequently, in order to perform the necessary inferential analysis, it was applied the parametric tests, to understand the differences between means and the relationship between variables, whenever possible, and when the assumptions for their application were not violated, and when this is not possible non-parametric tests.

The relationship between variables of the first part of the questionnaire with the dimensions of the Satisfaction with Work scale, namely: Overall satisfaction of employees with the institution (SGFI); Satisfaction with management and management systems (SGSG); Satisfaction with working conditions (SCT); Satisfaction with Career Development (SDC); Levels of motivation (SL); Satisfaction with leadership style (SEL); Satisfaction with top leadership style (SELT); Satisfaction with leadership style of intermediate level manager (SELI); Satisfaction with hygiene, safety, equipment and service (SCHSES); Satisfaction with the current remuneration system (SSRV) will allow to establish the predominant determinants of satisfaction with work in these professionals.

4. FINDINGS

4.1 Sociodemographic characterization

Table 1 presents the sociodemographic characteristics of the respondents under study. The sample size is composed by 39 professors, who carry out teaching duties at ISCED.

Still, based on the information in the below table, 61.5% (24) of the respondents are male and 38.5% (15) female. Regarding age, 23% (9) of individuals are aged up to 30 years, 43.6% (17) are between 31 and 40 years old and 33.4% (13) are over 40 years old. In terms of nationality, 87.1% (34) of the respondents are Angolan, 10.3% (4) of the respondents are Cuban and one is Vietnamese. Regarding marital status, 46.2% (18) are single, 46.2% (18) are married/union in fact, one is divorced and two widowed. Most of the respondents, 74.4% (29) and 25.6% (10) of the respondents do not have children. Regarding the qualifications, it was verified that 51.3% (20) finished the master's degree, 23.1% (9) of the respondents are licensed and only 25.6% (10) have a PhD. Regarding the employment relationship, 74.4% (29) stated that they were employees and 25.6% (10) were effective.

Table 1. ISCED teachers profile

Variables		n	%
Gender	Male	24	61,5
	Female	15	38,5
	<i>Total</i>	<i>39</i>	<i>100</i>
Age	Up to 30 years	9	23,0
	From 31 to 40 years old	17	43,6
	Equal or greater than 41 years	13	33,4
	<i>Total</i>	<i>39</i>	<i>100</i>

Nationality	Angolan	34	87,1
	Cuban	4	10,3
	Vietnamese	1	2,6
	<i>Total</i>	<i>39</i>	<i>100</i>
Marital status	Not married	18	46,2
	Married/Union in fact	18	46,2
	Divorced/Separated	1	2,6
	Widower	2	5,0
	<i>Total</i>	<i>39</i>	<i>100</i>
Have children	Yes	29	74,4
	No	10	25,6
	<i>Total</i>	<i>39</i>	<i>100</i>
Educational qualifications	Licensed	9	23,1
	Master	20	51,3
	Doctor	10	25,6
	<i>Total</i>	<i>39</i>	<i>100</i>
Job link	Effective	29	74,4
	Collaborator	10	25,6
	<i>Total</i>	<i>39</i>	<i>100</i>

4.2 Results of the Sociodemographic Dimension

This section presents the results obtained regarding the satisfaction of ISCED teachers in the dimensions assessed by the CAF scale. In this subchapter we present the results of the dimensions of the CAF scale according to the sociodemographic dimension. Regarding the gender of the respondent, it is verified that in all dimensions of the CAF scale, the average values obtained for women are higher than the average values obtained for men. The following are the dimensions: Satisfaction with management and management systems (SGSG), women with a mean value of 3.44 and men with an average of 2.95; Satisfaction with career development (SDC), with a mean in the female of 3.66 and a mean of 2.87 in the male; Satisfaction with the hygiene, safety, equipment and service conditions (SCHSES), with an average of 2.71 for females and 2.29 for males. The following are the dimensions: Satisfaction with working conditions (SCT), Satisfaction with career development (SDC), Satisfaction with leadership style (SEL), be it top leadership (SELT) or intermediate leadership (SELI) and SCHSES that the observed differences between men and women are statistically significant, with women being the most satisfied. Regarding the satisfaction with the current remuneration system (SSRV), both genders are similarly satisfied, with a mean of 3.08 for females and 3.04 for males.

The results of the dimensions of the CAF scale for teachers according to the age group of the teacher show that the employees aged up to 30 years had higher mean values of satisfaction in SGSG (3.16), SCT (3.26), SDC (3.28), NM (3.96), SEL (3.79), SELT (3.75) and SCHSES (3.54). By the application of the ANOVA test it is concluded that the observed differences are statistically significant in the SSRV dimension, with the teachers older than 40 years who are more satisfied (3.15) and by the Tukey multiple comparison it is concluded that the Differences between individuals between the ages of 31 and 40 and the remaining age groups. In the remaining dimensions the differences observed are not statistically significant.

Regarding the nationality of the respondent, the results obtained show that in all dimensions the average values obtained for employees with a nationality other than Angolan are higher than the average values obtained for Angolan employees. The following stand out: SGFI, non-Angolan with mean value of 3.54 and Angolan with a mean of 3.20; SCT with a mean of 3.54 in non-Angolan and 2.98 in Angolan, SCHSES with an average value of 2.71 in non-Angolan and 2.29 in Angolan, SSRV, with a 3.65 non-Angolan average and 2.67 In Angola. The SGFI, SCT, SCHSES and SSRV dimensions show that the observed differences between Angolans and non-Angolans are statistically significant, with non-Angolan employees being the most satisfied.

The results of the dimensions of the CAF scale according to whether or not the child has children shows that the institution's teachers who did not have children were, on average, more satisfied in the dimensions: SGFI (3.36), SGSG (3.16), SDC (3.21), NM (4.11), SEL (3.59), SELT (3.49) and SELI (3.69). In the remaining dimensions, employees with children presented the highest results, namely in SCT (3.19) and SSRV (3.27). By applying the Student's t-test it is concluded that the observed differences are statistically significant in the SSRV dimension, with those with children who were significantly more satisfied. In the other dimensions, the observed differences are not statistically significant.

Based on all the information that was previously mentioned and taking into account the first hypothesis of research it is verified that this first hypothesis was not validated.

4.3 Dimension Training Results

The results of the dimensions of the CAF scale according to the literary qualifications of the respondents reveal that the teachers with literacy at the master's/doctoral level have higher average levels of satisfaction in all dimensions. By the application of the Mann-Whitney test it was concluded that the differences are statistically significant in the dimensions: SGFI, SGSG, SCT, SEL, SELT and SELI.

With regard to the results of the dimensions of the CAF scale according to the facility that the institution offers to make the respondent frequent training, it is verified that in all dimensions, with the exception of the SSRV dimension, the average values obtained by the respondents who stated that they are easy to attend training were higher than respondents who stated that they did not have an easy time attending training. The SGSG, SCT, SDC, SEL, SELT, SELI, and SCHSES dimensions were analyzed in the the dimensions of satisfaction due to the ease of attending training, for which it was concluded that the differences are statistically significant. In other words, teachers who feel that the institution is easily trained in their area of work are clearly more satisfied. Thus, the second hypothesis of research was confirmed.

4.4 Results of the Professional Dimension

The results of the dimensions of the CAF scale as a function of the teachers' work link show that in all dimensions, with the exception of SCHSES, the average values obtained for the employees are higher than the average values obtained for the employees. However, at a significance level of 5%, it is concluded that the differences are not statistically significant. The third hypothesis of research can be said that it is not validated since there was insufficient statistical evidence to corroborate it.

4.5 Results of the Work Dimension

The results of the dimensions of the CAF scale according to the reasons that led the teacher interviewed to work at the institution show that the teachers who invoked the interest/experience reasons to work at the institution had higher average satisfaction values in all dimensions. By applying the Mann Whitney test it was concluded that the differences are statistically significant in the SEL, SELI and SSRV dimensions. With regard to the results of the dimensions of the CAF scale depending on the possibility of re-choosing the same institution to work. Teachers who stated that they would choose the same institution to work showed the highest average levels of satisfaction in all dimensions of the scale. On the other hand, teachers who stated that they would not choose the same institution to work had the lowest average levels of satisfaction in all dimensions, except for the SGFI, MN and SSRV dimensions, whose lowest satisfaction values belong to teachers who did not know if they would choose the same institution again. It should be noted that in the SGSG, SCT, SDS, SCHSES and SSRV dimensions the average levels of satisfaction presented by employees who would not choose the institution and those who did not know if they would choose are up to 3 points. By the application of the ANOVA Test it was concluded that the differences are statistically significant in the dimensions: SGFI, SGSG, SCT, SDC, SEL, SELT, SELI and SSRV. By Scheffé's multiple comparison it was concluded that the significant differences occur between the respondents who would return and those who would not return to work in the institution. As regards the fourth hypothesis of investigation, it can be said that it is validated once enough statistical evidence has been recorded to corroborate it.

4.6 Result of management practices for the different leaderships

It was noted that in general the focused initiatives are identified by the majority of respondents at both top-level and intermediate levels. At the top leadership stand the initiatives: "Demonstrates commitment to the process of change" and "Delegates competencies and responsibilities"; "Which showed levels of agreement slightly higher than the intermediate leadership. In the remaining initiatives the agreement of its existence is slightly superior in the intermediate leadership.

The table below shows the characterization of the satisfaction with the leadership practices (top and intermediate) of the ISCED institution's teachers. It was observed that for all the focused initiatives the average levels of satisfaction are close between top leadership and intermediate leadership, and there are no statistically significant differences between the two types of leadership. With the exception of the "Delegate competencies and responsibilities" initiative, all other initiatives have slightly higher average satisfaction scores in the lead. In this sense, the fifth hypothesis of research was not corroborated.

Table 2. Characterization of satisfaction with the leadership practices (top and intermediate)

Dimensions	Activity	Mean	Standard deviation	<i>tStudent</i> Test	p-value
Lead through example	Top Manager	3,47	1,13	-0,861	0,393
	Intermediate manager	3,61	1,05		
Demonstrates commitment to the process of change	Top Manager	3,44	1,09	-0,444	0,659
	Intermediate manager	3,49	1,15		
Accepts constructive criticism	Top Manager	3,22	1,10	-1,913	0,061
	Intermediate manager	3,46	1,16		

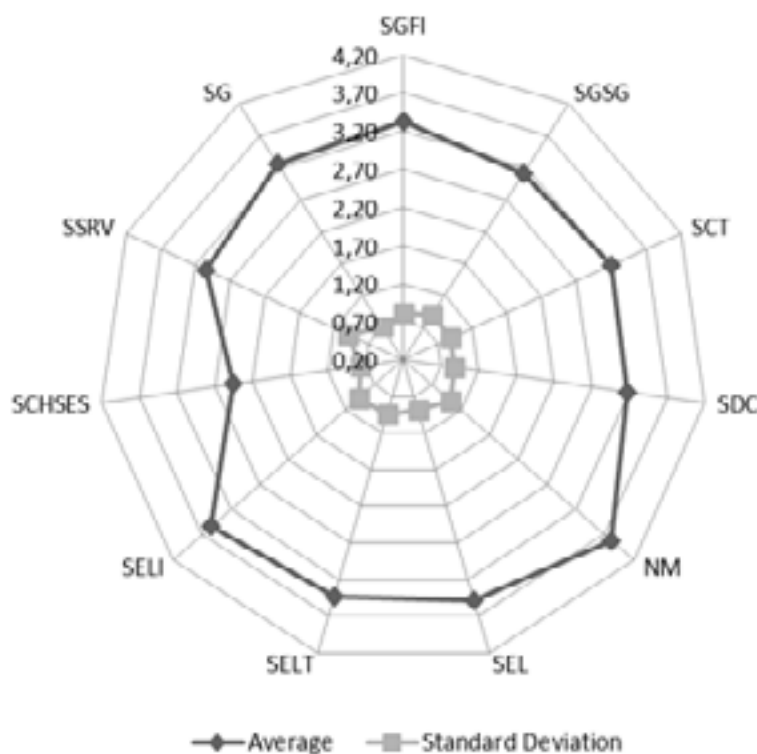
Accepts suggestions for improvement	Top Manager	3,51	1,07	-1,158	0,252
	Intermediate manager	3,64	1,13		
Delegates powers and responsibilities	Top Manager	3,71	1,18	0,252	0,802
	Intermediate manager	3,68	1,12		
Stimulates people's initiative	Top Manager	3,44	1,19	-0,375	0,709
	Intermediate manager	3,49	1,14		
Encourages mutual trust and respect	Top Manager	3,36	1,23	-0,629	0,532
	Intermediate manager	3,46	1,25		
Ensures the development of a culture of change	Top Manager	3,44	1,22	-0,358	0,721
	Intermediate manager	3,49	1,17		
Promotes training actions	Top Manager	3,63	1,32	-0,616	0,541
	Intermediate manager	3,73	1,11		
Recognizes and rewards individual and team efforts	Top Manager	3,24	1,15	-1,120	0,267
	Intermediate manager	3,41	1,16		
It suits the treatment given to people, needs and situations	Top Manager	3,25	1,27	-1,301	0,198
	Intermediate manager	3,47	1,22		

4.7 Characterization of the Job Satisfaction Scale

The results obtained for the dimensions of the CAF scale are presented in this section. For each dimension its average was calculated based on the number of items that integrate each dimension. The scale used to measure the items was Likert's 5-point, where 1 corresponds to Very dissatisfied and 5 to Very Satisfied.

By analyzing the values presented in Figure 1 it is possible to observe the average level of satisfaction of the respondents in all dimensions as well as the dispersion of results. It is verified that, with the exception of the SCHSES and SSRV dimensions, the average satisfaction recorded was close to or higher than 3.5 and that the dispersion values in all dimensions are small. It can be said that the employees of the institutions under study are generally satisfied. Table 3 complements and reinforces this satisfaction.

Figure 1. Summary of global mean and overall standard deviation of dimensions



SGFI - Overall satisfaction of employees with the institution; SGSG- Satisfaction with management and management systems; SCT - Satisfaction with working conditions; SDC- Satisfaction with career development; NM - Levels of motivation; SEL - Satisfaction with leadership style; SELT - Satisfaction with top leadership style; SELI- Satisfaction with the managerial style of intermediate level manager; SCHSES - Satisfaction with hygiene, safety, equipment and service conditions; SSRV - Satisfaction with the current remuneration system.

Table 3 presents the results of dimension characterization. It is observed that in terms of internal consistency this varies from good to very good, since the smallest Cronbach Alpha coefficient is 0.837 and the highest is 0.976.

In table 3 it can be observed that the empirical average values obtained are higher than the theoretical average value (3 points), except for the dimension Satisfaction with hygiene, safety, equipment and service (SCHSES) (average of 2.46 points) and Satisfaction dimension With current remuneration system (SSRV) the average obtained (3.06 points) is slightly higher than expected. It can be stated that, considering only the average values obtained, it is possible that the respondents are minimally satisfied in the dimensions: Overall satisfaction of the employees with the institution (SGFI), Satisfaction with management and systems of management (SGSG), Satisfaction with the conditions of (SCT), Satisfaction with Career Development (SDC), Levels of Motivation (NM), Satisfaction with leadership style (SEL), Satisfaction with top leadership style (SELT) and Satisfaction with leadership style of Manager (SELI).

Table 3 Characterization of the dimensions evaluated in the CAF questionnaire

Dimensiones	Alpha Cronbach	Empirical minimum	Mean	Standard deviation
SGFI	0,893	1,44	3,33	0,81
SGSG	0,933	1,11	3,11	0,91
SCT	0,894	1,13	3,19	0,87
SDC	0,830	1,60	3,18	0,87
NM	0,929	1,25	3,82	1,02
SEL	0,965	1,27	3,48	0,88
SELT	0,947	1,00	3,43	0,95
SELI	0,959	1,45	3,54	0,97
SCHSES	0,867	1,00	2,46	0,77
SSRV	0,823	1,00	3,06	1,00
Satisfaction	0,976	1,75	3,25	0,71

SGFI - Overall satisfaction of employees with the institution; SGSG- Satisfaction with management and management systems; SCT - Satisfaction with working conditions; SDC- Satisfaction with career development; NM - Levels of motivation; SEL - Satisfaction with leadership style; SELT - Satisfaction with top leadership style; SELI- Satisfaction with the managerial style of intermediate level manager; SCHSES - Satisfaction with hygiene, safety, equipment and service conditions; SSRV - Satisfaction with the current remuneration system

In order to complement the study, the correlation analysis was performed between all dimensions and also the weight of each dimension in the overall satisfaction (Table 4). It was necessary to produce the Spearman's correlation coefficients because the normality assumption in all dimensions was not verified. Table 4 shows the coefficients with a value greater than 0.70, which shows a strong relation. Thus, it can be said that the associations between: SGFI and SGSG; SCT and SGSG; SDC with SGSG; SEL with SGSG, SCT and SDC; SELT with SGSG, SCT, SDC and SEL; SELI with SEL are strong. Regarding the overall satisfaction, the strongest and statistically significant contributions are of the dimensions: SEL, SGSG, SDC, SCT, SELT and SGFI, with correlation coefficients above 0.80. In this sense, it can be said that there is a direct positive relationship between the dimensions of satisfaction and overall satisfaction, so the sixth research hypothesis is confirmed.

Table 4 Spearman's correlation coefficients

Dimensions	SGFI	SGSG	SCT	SDC	NM	SEL	SELT	SELI	SCHSES	SSRV	Satisfaction
SGFI	1	0,781	0,604 ^b	0,649 ^b	0,490 ^b	0,619	0,547 ^b	0,544 ^b	0,544 ^b	0,568 ^b	0,796 ^b
SGSG		1	0,773 ^b	0,765 ^b	0,329 ^a	0,774	0,804 ^b	0,604 ^b	0,624 ^b	0,372 ^b	0,918 ^b
SCT			1	0,692 ^b	0,262 ^a	0,709	0,727 ^b	0,579 ^b	0,637 ^b	0,352 ^b	0,842 ^b
SDC				1	0,242	0,811	0,777 ^b	0,696 ^b	0,569 ^b	0,221	0,860 ^b
NM					1	0,361	0,315 ^a	0,264 ^a	0,147	0,201	0,406 ^b
SEL						1	0,889 ^b	0,901 ^b	0,593 ^b	0,175	0,917 ^b
SELT							1	0,642 ^b	0,573 ^b	0,154	0,858 ^b
SELI								1	0,478 ^b	0,149	0,792 ^b
SCHSES									1	0,454 ^b	0,715 ^b
SSRV										1	0,399 ^b
Satisfaction											1

SGFI - Overall satisfaction of employees with the institution; SGSG- Satisfaction with management and management systems; SCT - Satisfaction with working conditions; SDC- Satisfaction with career development; NM - Levels of motivation; SEL - Satisfaction with leadership style; SELT - Satisfaction with top leadership style; SELI- Satisfaction with the managerial style of intermediate level manager; SCHSES - Satisfaction with hygiene, safety, equipment and service conditions; SSRV - Satisfaction with the current remuneration system; Satisfaction - overall average satisfaction. a - significant correlation coefficient at 5%; b - significant correlation coefficient at 1%. Spearman correlation coefficient.

5. CONCLUSIONS

As final considerations, it is intended to summarize the information discussed in previous sections, also explaining the limitations of the study as well as the possible directions for future research. According to Almeida (2003), any organization is a result of its human capital and, of course, does not exist if there are no people. In this sequence, the strategic management of human resources has been adopting new roles, from a management of only administrative and bureaucratic personnel, with concerns centered only on compliance with the legislation, a management of human resources with more strategic orientations, focused on Valuation of human capital, motivation and job satisfaction (Mendes, 2012). In this research it can be said that meet the view of Mezomo (2001), who argues that no organization is successful, that is, it achieves objectives without the effort and reciprocal commitment of all workers, who must work as a team, in the search for and operationalization of the objectives, which are added to improve organizational performance. Any organization with satisfied employees has the potential to add benefits, as it typically attracts the best, reduces staff turnover, increases productivity, reduces costs, improves image vis-à-vis the community, and gains competitiveness. The present study was based on a reflection on how sociodemographic variables, professional context, training context, work context and leadership context determine the level of job satisfaction of ISCED teaching professionals. At the same time it provided the knowledge of the image that the teachers perceive of the higher education institution where they carry out activity. This knowledge allows identifying the reasons for mismatches and nonconformities and their consequences in order to implement measures that promote the desired transformations and satisfaction.

This research proposes, regarding sociodemographic variables and job satisfaction, that:

- Female professors always declared a superior satisfaction than male professors;
- Professionals with lower age had higher satisfaction than those of the highest age groups, except for satisfaction with the current remuneration system (SSRV), which showed higher satisfaction among older teachers;
- Marital status did not significantly influence teacher satisfaction;
- Professors without children showed higher satisfaction than those with children, except in the SSRV dimension;
- Non-Angolan professors presented greater satisfaction than Angolan professors.

Respecting the professional variables in job satisfaction, it can be conclude that:

- Professors with ties to the institution were slightly less satisfied than the collaborators, although the differences observed in each dimension were not statistically significant;
- Regarding the salary, teachers satisfied with this, presented higher levels of professional satisfaction.

Concerning the variables of training in job satisfaction, it can be conclude that:

- Professors with higher academic qualifications presented greater satisfaction;
- Professors who stated that they were able to attend training were more satisfied than those who did not have the opportunity to attend training.

Regarding labor variables and job satisfaction, it can be concluded that:

- Professors who invoked the interest/experience reasons to work at the institution showed higher satisfaction values.
- Professors who stated that they would choose the same institution to work showed the highest average levels of satisfaction in all dimensions of the scale.

About variables leadership and job satisfaction, it can be concluded that:

- Professors satisfaction levels are close to top leadership and intermediate leadership;
- Professors have slightly higher satisfaction in all intermediate leadership initiatives, with the exception of the “Delegate Competencies and Responsibilities” initiative that delights the top leadership.
- Professors performing ISCED functions were moderately satisfied (empirical average of 3.25 and standard deviation of 0.71).

Given the results obtained, it can be affirmed that it was possible to relate sociodemographic variables with the degree of professional satisfaction of ISCED teachers and thus contribute to a better understanding of the influence of satisfaction on improving the competitiveness and performance of this institution. The results obtained aim to highlight the relation between age and job satisfaction, where it was observed that the group of subjects over 40 years of age showed the highest degree of job satisfaction in the SSRV dimension. The statistical analysis applied to the data of this study with respect to the age group proves that the hypothesis is only validated in the SSRV dimension, because in this dimension the results obtained showed significant differences being the teachers between the ages of 31 and 40 which were significantly different from the others (less satisfied). In the remaining dimensions, the observed differences between age groups were not statistically significant. The results achieved converge with satisfaction theories, particularly with the pyramid theory of Maslow's needs, which identifies one of the needs as security (stable employment, social protection), which in this study can be observed in

the determinant of the link with the organization. Which allows to conclude that although the satisfaction of individuals with fixed-term contracts is slightly higher than the actual teachers, the differences observed in each dimension were not statistically significant. It is believed that the labor bond factor did not present the clearly superior result in favor of the effective state because the collaborating professors are foreign professionals with remunerations much higher than the salaries earned in their countries of origin (Cuba and Vietnam). This raises the discussion about considering this fact in the design of policies and strategies of Management and more specifically Human Resources Management (HRM). The purpose of the reflection is to impose flexibility, adaptability and availability, without there being a compromise between the employee and the organization in the long term. In recent years there has been a growing choice of organizations for forward contracts and services, in a clear adaptation to the demands of global society and to internal and external policies that affect organizations economically and socially. In this context, it is essential that human resource managers remain alert to employee signals. In this investigation it can be concluded that the professionals pay particular attention to the values and attitudes of their managers and leaders, both intermediate and top. To this extent, it is believed that this study can contribute to a reflection on how to contribute to the construction of a better and healthier society, inside and outside the organizations, where the values that identify the professionals as human beings, dignified, respectful, ethical, supportive, and do not get run over by negative attitudes such as selfishness, egocentrism, rivalry. It is assumed that this scenario is possible since greater job satisfaction contributes to the employee finding meaning in their professional activity and adopting positive attitudes towards institutional development. Successful organizations are known to take pride in practicing excellent HRM and for their part, the professionals are proud and “wear the jersey of the organization” leading these organizations to success. This study reveals that ISCED’s teaching staff are globally satisfied and this satisfaction has contributed directly to improving the teaching quality and competitiveness of this institution. It is recommended to the management, particularly to HRM, a greater participation and involvement of the teachers in the institutional decision, especially in the decision making related to the teaching, so that this involvement, stimulates a greater satisfaction and consequently, to promote a better performance in the teaching. A greater commitment of the management bodies and the intermediate directors, covering these professionals, enhances a better communication and institutional valuation.

The main limitation of the study is related to the sample size. Although the collection of data has not proved easy, it is intended that future research may involve larger samples, extended to other professional categories and institutions, comparing professional satisfaction between teachers and non-teachers, national and Countries.

REFERENCES

- Aiken, L. H., Clarke, S. P., & Sloane D. M. (2002): Hospital staffing, organizational support and quality of care: cross-national findings. *International Journal for Quality in Health Care*, 14, 5-13.
- Almeida, H. (2003): Quality Standards and Centrality of Care: an ongoing project. II Congress of the Order of Nurses - The Nurse and the Citizen: Commitment (d) and Proximity.
- Alpay, E., & Verschoor, R. (2014): The teaching researcher: faculty attitudes towards the teaching and research roles. *European Journal of Engineering Education*, 39(4), 365-376.
- Azevedo, R. (2012): Satisfaction of primary health care professionals. Masters dissertation. University of Fernando Pessoa.
- Barros, C., & Cunha, L. (2010): INSAT 2010 - Health and Work Survey: other issues, new relationships. *Laboreal*, 2,19-26.
- Huselid, M., Jackson, S., & Schuler, R. (1997): Technical and strategic human resource management effectiveness a determinants of firm performance, *Academy of Management Journal*, 40(1), 171-188.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Platten, G. K. (2001): The job satisfaction -job performance relationship: a qualitative and quantitative review. *Psychological Bulletin*, 127, 376-407.
- Leite, M. (2013): Satisfaction at work: most relevant organizational and personal determinants. Masters dissertation. ISLA.
- Lobos, J.A. (1978): Organizational Behavior. Readings selected.
- Locke, E. A. (1969): What is job satisfaction? *Organizational Behavior and Human Performance*, 4, 309-336.
- Machado-Taylor, M., Soares, V., & Gouveia, O. (2010): The Study of Academic Job Satisfaction and Motivation: An Ongoing Study in Portuguese Higher Education. *Global Business and Economics Anthology*, 2 (2), 242-46.
- Machado-Taylor, M., Soares, V., Brites, R., Ferreira, J., Farhangmehr, M., Gouveia, O., & Peterson, M. (2016): Academic job satisfaction and motivation: findings from a nationwide study in Portuguese higher education. *Studies in Higher Education*. 41(3), 541-559.
- Mejomo, J. C (2001): Quality management in health: basic principles. São Paulo: Manole.
- Mendes, I. (2012): Strategic management of human resources in Public Administration: myth or reality? Perception of I.G.F.S.S. I.P., on the strategic management of human resources and the possible impacts on performance. Masters dissertation. Polytechnic Institute of Setúbal. Portugal
- Moura, S. (2012): Satisfaction of nursing professionals. Masters dissertation. IPB- APNOR.
- Wei, W., & Junyan, L. (2015): A Study on Teachers’ Occupational Belief in Local Universities and Colleges: Based on the Survey of a College in Xiamen. *Chinese Education & Society*, 48, 312-325.

EDUCAÇÃO AFETIVO- SEXUAL E PREVENÇÃO DE ABUSOS SEXUAIS EM LARES DE ACOLHIMENTO DE MENORES

Carla Rocha

Associação para o Planeamento Familiar e Saúde Sexual e Reprodutiva-Açores
(carlasrocha@gmail.com)

Solange Ponte

Associação para o Planeamento Familiar e Saúde Sexual e Reprodutiva-Açores
(solangeponte12@hotmail.com)

Suzana Nunes Caldeira

Universidade dos Açores, Centro Interdisciplinar de Ciências Sociais – CICS.UAc/CICS.NOVA.UA
(suzana.n.caldeira@uac.pt)

RESUMO

Crianças e jovens em situação de acolhimento apresentam uma história de vida caracterizada por situações de risco psicossocial que, tendencialmente, aumentam a vulnerabilidade individual. As Instituições de acolhimento têm como função a educação, mas também a proteção desses menores, face a qualquer forma de violência, nomeadamente a de abuso sexual. Neste trabalho apresenta-se um Projeto de intervenção, ainda em curso, em Instituições de acolhimento de crianças e jovens que visa contribuir para diminuir vulnerabilidades e promover capacidades na área da educação sexual, como forma de prevenir o abuso sexual. A intervenção ocorre por meio de um programa de formação e desenvolvimento de competências com oito crianças dos 8 aos 11 anos, com atividades lúdico- pedagógicas na área da Educação Sexual com todas as crianças acolhidas e por uma formação breve sobre sexualidade e sexualidade infantil para ajudantes de lar. A avaliação da intervenção das oito crianças, em termos de ganhos na capacitação para o estabelecimento de relações saudáveis, é realizada através de instrumentos psicológicos; dados sobre efeitos das atividades lúdico-pedagógicas são obtidos com base em registos dos profissionais da Instituição; a formação breve é avaliada através de questionário.

Palavras-chave: Abuso Sexual, Sexualidade, Prevenção.

JEL Classification: I00, I12

1. INTRODUÇÃO

Segundo a Organização Mundial de Saúde (OMS) a sexualidade caracteriza-se por uma energia que motiva o Ser Humano a procurar amor, contacto, ternura, intimidade, integrando-se no modo como este se sente, move, toca e é tocado (2001). Influencia os seus pensamentos, sentimentos, ações e interações e, por isso, influencia também a sua saúde física e mental (Pontes, 2011). Podemos ainda dizer que a sexualidade é também influenciada por variáveis biológicas, psicológicas e sociais, pelo que não é vivida de igual forma em todas as fases do ciclo da vida e em todas as sociedades e culturas.

Neste artigo interessa-nos incidir sobre a sexualidade na infância, uma vez que o foco do nosso trabalho é a proteção do normal desenvolvimento sexual da criança e a prevenção de situações que o perturbem. Para entendermos de que forma esse desenvolvimento pode ser perturbado, importa perceber o que o caracteriza. Segundo López e Fuertes (1999) a sexualidade na infância caracteriza-se por órgãos genitais pouco desenvolvidos, quantidade muito pequena de hormonas sexuais no sangue, sensações de prazer sem significado específico e práticas sexuais baseadas em motivações muito diferentes das dos adultos. Vários autores identificam que estas práticas ocorrem por imitação de comportamentos de pares e adultos, curiosidade sexual, desejo de conhecimento do próprio corpo e do corpo de outros e, ainda, por procura de prazer (Marques, Vilar & Forreta, 2002; Fávero, 2003). São descobertas e vivências caracterizadas pela curiosidade, pela exploração divertida, espontânea e consensual, dirigida a si própria ou a crianças da mesma idade, que permite a aprendizagem da própria sexualidade, do corpo, dos sentimentos e dos afetos (Marques, Vilar & Forreta, 2002; Fávero, 2003; Robert & Jacob, 2006).

É um direito da criança o respeito pela sua sexualidade, cabendo ao adulto permitir-lhe conhecer atividades sexuais próprias da sua idade (Berman, 2010). Contudo há adultos que são inapropriados em relação à sexualidade infantil, por exemplo, por serem descuidados em relação aos seus próprios comportamentos sexuais, expondo-os à criança, ou por promoverem comportamentos erotizados nos mais novos, não os protegendo de conteúdos sexuais impróprios para a sua idade. Estes comportamentos, por vezes, são também adotados por jovens que, ao terem um desenvolvimento psicosexual mais adiantado do que a criança, fazem uso de uma relação de poder ou controlo para satisfazer os seus próprios desejos em detrimento do bem-estar daquela (Aguilhas, Figueiredo, Alexandre & Cifuentes, 2016).

Quando um jovem ou um adulto assume comportamentos que comprometem o desenvolvimento sexual da criança, podemos falar em abuso sexual. Com efeito, este conceito é definido pela OMS (2006) como o envolvimento da criança em

atividades sexuais que não compreende totalmente, para as quais é incapaz de dar o seu consentimento informado e não está preparada do ponto de vista do seu desenvolvimento. No Código Penal Português (Rocha, 2013) os atos sexuais que caracterizam o abuso sexual infantil podem envolver comportamentos de natureza diversa, como sejam carícias, masturbação, cópula, coito anal, coito oral ou a introdução vaginal ou anal de partes do corpo ou objetos. Pode ainda abranger outros comportamentos de importunação, tais como exposição a pornografia, utilização da criança para produção de material pornográfico, telefonemas obscenos, exibicionismo ou favorecimento, facilitação ou fomento da prática da prostituição infantil.

O abuso sexual é uma realidade social muito grave e complexa, com relevantes prejuízos para a saúde física e psicológica das vítimas (Magalhães, 2010). Uma criança sexualmente abusada pode apresentar comportamentos sexuais desequilibrados, de natureza compulsiva, agressiva, incluindo comportamentos erotizados próprios de adultos (Finkelhor, 1986; Navais & Britto, 2013). As suas atividades sexuais podem ser dirigidas a outras crianças mais novas e vulneráveis, não sendo consensuais, mas sim baseadas na força e coerção (Sanderson, 2005). É também frequente que apresente conhecimentos sexuais inapropriados para a idade (Schaefer, Rossetto & Kristensen, 2012; Florentino, 2015). As consequências psicológicas do abuso sexual variam de acordo com a idade da vítima e do agressor, o grau de relação entre ambos, a duração e frequência do abuso (Furniss, 1993; Beutler, Williams & Zetzer, 1994; Trickett & Putnam, 1998; Putnam, 2003; Mateus, 2012; Maria, 2012) a personalidade da criança, o tipo e a gravidade do ato e as reações do ambiente.

Quando uma criança vive num contexto onde alguma área do seu desenvolvimento está gravemente comprometida, por omissão ou ação dos seus pais ou responsáveis legais, pode ser necessário o Estado intervir, sendo a Institucionalização a última das respostas legalmente previstas para assegurar a proteção do seu desenvolvimento (Carvalho, 2013).

Nestes casos compete às Instituições de acolhimento substituírem temporariamente a família de origem, assumindo o significado de família junto dos menores que acolhem (Alves, 2007) configurando um ambiente reparador securizante e organizador do psiquismo dos menores. Devem configurar um ambiente reparador (Teixeira, 2009). Fornecendo-lhes um adequado suporte, tendo em vista o seu desenvolvimento biopsicossocial, (Carvalho, 2013) através de ações estruturadas que colmatem necessidades decorrentes do contexto adverso no qual aqueles se encontravam anteriormente ao acolhimento. Acreditamos que muitas das crianças que se encontram institucionalizadas, independentemente do motivo maior que levou a esta situação, foram expostas, em algum momento, a diferentes formas de abuso relacionado com a sua sexualidade. Esta nossa convicção prende-se com a falta de supervisão e proteção a que estas crianças estiveram expostas, tornando-as mais suscetíveis e vulneráveis a estes perigos. Assim, é importante que profissionais, habilitados para o efeito, desenvolvam práticas educativas com estes menores (Yano & Ribeiro, 2011) no âmbito da sexualidade, as quais ajudem aqueles a viver a sua sexualidade de forma positiva e segura.

Neste sentido, a Equipa de Apoio Técnico ao acolhimento Residencial de Crianças e Jovens do Instituto de Segurança Social dos Açores (ISSA) considerou importante a realização de ações de educação afetivo-sexual e prevenção de abusos nos Lares de acolhimento da ilha de São Miguel. Para tal solicitou a colaboração da Associação para o Planeamento Familiar e Saúde Sexual e Reprodutiva – Açores (APFSSR-Açores). Esta é uma associação, particular, sem fins lucrativos que tem entre os seus objetivos a promoção da educação e o aconselhamento sobre sexualidade, por forma a ajudar as pessoas a fazerem escolhas livres e conscientes ao nível da sua vida sexual e reprodutiva e a promoção da formação e do treino de profissionais para a abordagem das questões ligadas ao planeamento familiar e à educação sexual.

2. EDUCAR SOBRE SEXUALIDADE

A sexualidade é uma dimensão fundamental da vida humana, com uma função reguladora da saúde física e emocional (Volpi & Leszczynski, 2008). Expressa-se em práticas e desejos ligados à afetividade, ao prazer, aos sentimentos e ao exercício da liberdade individual (Ramiro, 2013).

“Estar informado sobre sexo, sobre sexualidade ou sobre saúde sexual e reprodutiva é antes de mais um Direito! Um Direito de mulheres e homens, raparigas e rapazes... um Direito de todos e de todas!” (Associação para o Planeamento da Família, s/d).

A educação sexual pode ser dividida em informal e formal. A primeira caracteriza-se pela aprendizagem com os outros através da observação direta, no contacto com as figuras parentais, outros familiares, educadores, professores, pares e com os meios de comunicação social em geral, ocorrendo de forma espontânea e não intencional. Já a educação sexual formal caracteriza-se por ações estruturadas e intencionais, que visam a aquisição de conhecimentos e o desenvolvimento de competências (Marques, Vilar & Forreta, 2002; Vieira, 2009), essenciais para a vivência plena, livre e responsável da vida afetiva, pessoal e social (Amor Pan, 1997). Estas duas formas de educação sexual complementam-se, isto é, por um lado, as crianças e os jovens precisam de amor e apoio no seu ambiente social e familiar para desenvolverem a sua identidade sexual, mas também precisam adquirir conhecimentos específicos, atitudes e competências, que devem ser transmitidos por profissionais habilitados para o fazer (OMS & Federal Centre for Health Education, 2010).

Está bastante fundamentada e justificada a necessidade de práticas de educação sexual, promotoras da vivência positiva da sexualidade. A educação sexual formal é cada vez menos encarada como a realização de atividades com carácter predominantemente informativo sobre saúde reprodutiva (Marques, Vilar & Forreta, 2002), sendo cada vez mais pensada no formato de ações que identificam a sexualidade como uma componente positiva do desenvolvimento pessoal, cujas expressões contribuem para o bem-estar pessoal e relacional e não só para a reprodução (Berman, 2010).

No ano 2010, foram desenvolvidas diretrizes para Educação em sexualidade na Europa, sob a orientação do Centro Federal de Educação em Saúde (BzGA) da Alemanha, do Centro Colaborador da OMS e do Escritório Regional da OMS para a Europa, segundo as quais, é necessária uma abordagem holística baseada numa compreensão da sexualidade como uma

área do potencial humano. Neste sentido, deve ajudar as crianças e os jovens a desenvolverem competências essenciais para autodeterminarem a sua sexualidade e os seus relacionamentos, sendo essencial também para a autoproteção das crianças e jovens perante possíveis situações de risco.

Ainda em 2010, a Organização das Nações Unidas para a Educação, a Ciência e a Cultura (UNESCO) publicou um documento de orientação técnica internacional sobre educação em sexualidade desenvolvido juntamente com o Fundo de População das Nações Unidas (UNFPA), a OMS e Fundo das Nações Unidas para a Infância (UNICEF), bem como com o Secretariado do Programa Conjunto das Nações Unidas sobre o VIH/SIDA (ONUSIDA) e uma série de peritos independentes e especialistas de todo o mundo. Este documento baseou-se na perspetiva de que as crianças e os jovens necessitam de deter informações e desenvolver habilidades na área da educação em sexualidade, tendo em conta que existem muitas ameaças ao seu bem-estar que assumem múltiplas formas, incluindo relacionamentos abusivos, riscos à saúde associados à gravidez precoce indesejada, exposição a Doenças Sexualmente Transmissíveis (DSTs), inclusive VIH, ou estigma e discriminação devido à orientação sexual. Foi fundamentado em dezenas de estudos realizados em todo o mundo e apresenta diretrizes para a elaboração e aplicação de programas e material didático em educação para a sexualidade.

Estes exemplos de orientações internacionais, a uma escala mundial, demonstram que educar sobre sexualidade é uma preocupação global. Através do relatório “*Sexuality Education in Europe*” de The Safe Project (2005) e do relatório “*Policies for Sexuality Education in the European Union*” (2013), do Parlamento Europeu, pode-se conhecer a designação geral da educação sexual e existência (ou não) de orientações curriculares mínimas, em vários países, dados que apresentamos na tabela 1.

Tabela 1: Designação geral da educação sexual e orientações curriculares por país

	Designação Educação Sexual	Orientações mínimas de conteúdo		Designação Educação Sexual	Orientações mínimas de conteúdo
Alemanha	Educação Sexual	Sim	Hungria	Planeamento Familiar	Não
Áustria	Educação Sexual	Sim	Irlanda	Relacionamentos e Educação Sexual	Não
Bélgica	Relacionamentos e Educação Sexual	Sim	Islândia	Educação Sexual	Sim
Bulgária	Educação Sexual	Não	Itália	Educação Sexual	Não
Chipre	Relacionamentos e Educação Sexual	Não	Letónia	Outro	Sim
Dinamarca	Educação Sexual	Sim	Lituânia	Educação Sexual	?
Eslováquia	Planeamento Familiar	Não	Luxemburgo	Relacionamentos e Educação Sexual	Sim
Espanha	Educação Sexual	Não	Noruega	Educação Sexual	Sim
Estónia	Outro	Sim	Polónia	Planeamento Familiar	Sim
Finlândia	Educação Sexual	Sim	Portugal	Educação Sexual	Sim
França	Educação Sexual	Sim	Reino Unido	Relacionamentos e Educação Sexual	Sim
Grécia	Educação Sexual	?	República Checa	Educação Sexual	Sim
Holanda	Outro	Não	Suécia	Relacionamentos e Educação Sexual	Sim

Fonte: Relatório “*Sexuality Education in Europe*” de The Safe Project (2005) e relatório “*Policies for Sexuality Education in the European Union*” (2013) do Parlamento Europeu.

Em Portugal, a educação para a sexualidade ganhou destaque, a partir de 1980, através da Associação para o Planeamento Familiar (APF) (<http://www.apf.pt/>). Esta Associação nasceu em 1967 e foi a organização pioneira, no nosso país, do planeamento familiar nos anos 60 e 70 do século XX, e da educação sexual nas escolas, mais tarde, nas décadas de 80 e 90. Recordamos que nesta década diversas organizações conservadoras, incluindo algumas associações de pais, opunham-se publicamente à educação sexual, pressionando o Ministério da Educação para não desenvolver intervenções nesta área. Contrariamente aos grupos conservadores da época, a maior parte dos pais apoiava as ações sobre educação sexual nas escolas. Para a APF era crucial mostrar à sociedade portuguesa que os progenitores e os agentes educativos das crianças deveriam ser encarados como parceiros na educação sexual (Vilar, 2011). Em 1984 foi criada e aprovada a primeira lei nas escolas, a qual assumiu a educação sexual como uma necessidade e um direito das crianças, jovens e das famílias (Lei n.º 3/84 - Direito à Educação Sexual e ao Planeamento Familiar). Na referida lei definia-se o papel do Estado como garante do direito à educação sexual e preconizava-se a inclusão de conhecimentos científicos sobre anatomia, fisiologia, genética e sexualidade humana, adequados aos vários níveis de ensino. Contudo, esta lei nunca chegou a ser regulamentada na sua parte relativa à educação sexual (<http://www.apf.pt/>).

Desde 2010, em Portugal Continental, a educação sexual em meio escolar tem carácter obrigatório e destina-se a todos os alunos que frequentam estabelecimentos de ensino básico e secundário da rede pública e estabelecimentos da rede privada e cooperativa com contratos de associação. Dois anos depois, na Região Autónoma dos Açores, foi publicado o decreto legislativo regional n.º 8/2012/A, que fixa o regime da educação para a saúde em meio escolar e no qual consta, além do carácter obrigatório, que a educação afetivo-sexual pretende, de uma forma estruturada e sustentada, que os alunos desenvolvam conhecimentos e adquiram competências, atitudes e comportamentos adequados à saúde afetivo-sexual e reprodutiva. Contribuindo para a diminuição dos comportamentos de risco e para o aumento dos fatores de proteção em relação à sexualidade.

Ainda a nível regional, dados sobre a intervenção na promoção da saúde em contexto escolar, relativo ao ano letivo 2014/2015, revelam que foram realizadas 679 sessões de educação afetivo-sexual e reprodutiva em 175 escolas da Região, o que dá uma média de 4 sessões por escola. Pode-se também verificar que o ciclo de ensino menos abrangido por sessões de educação para a saúde é o 1º ciclo. O relatório relativo ao ano letivo 2015/2016 indica que foram realizadas mais sessões num total de 774, bem como, ocorreram mais sessões de educação para a saúde no 1º ciclo, de 10% do total das sessões passou para 26%. Estes relatórios não especificam as temáticas a trabalhar, que profissionais dirigem as sessões de cada temática, quem dirige as sessões de educação afetivo-sexual, bem como quantas horas de educação afetivo-sexual beneficia cada criança ou jovem no ano letivo (Direção de Serviços de Promoção de Hábitos de Vida Saudáveis, 2016).

Quanto à prevenção do abuso sexual na Região, a APFSSR-Açores realizou, ano letivo 2015/2016, 49 sessões, de 90 minutos cada, em Escolas do 1º ciclo do ensino básico e em Instituições Particulares de Solidariedade Social (IPSS's), dirigidas a crianças com idades compreendidas entre os 8 e os 10 anos, tendo sido abrangidas um total de 1082 crianças. Mesmo assim, considera-se que as crianças nos Açores não estão a beneficiar de uma real capacitação para a proteção face ao abuso sexual.

3. ABUSOS SEXUAIS DE MENORES

3.1 Incidência do abuso sexual a nível mundial, nacional e regional

Um estudo da UNICEF (2006) conclui que a violência contra as crianças acontece em qualquer lugar, ou seja, em todos os países e sociedades e em todos os grupos sociais. Conclui, ainda, que em todo o mundo há falta de dados sobre a violência contra as crianças, situação que impede e compromete a compreensão do problema, para além de fazer notar que os números disponíveis estão muito aquém da dimensão do fenómeno.

O abuso sexual infantil é considerado pela OMS (2003) como um dos maiores problemas de saúde pública. Dados desta organização estimam que 150 milhões de meninas e 73 milhões de meninos, menores de 18 anos de idade, sofreram relações sexuais forçadas ou outras formas de violência física e sexual. Estimam ainda, que 1.8 milhão de crianças por ano estão envolvidas em sexo comercial, forçadas a fazê-lo, quando são vendidas à escravidão sexual por famílias pobres desesperadas, ou por rapto e tráfico.

Pesquisas em países europeus indicam que 6.36% de meninas e 1.15% de meninos sofreram experiências sexuais abusivas antes dos 16 anos. Dados dos Estados Unidos da América revelaram índices mais elevados de prevalência, onde 32.3% das mulheres e 14.2% dos homens sofreram abuso sexual na infância (Briere, 2003).

O relatório *Hidden in Plain Sight*, realizado em 2014 pela UNICEF, baseado em dados de 190 países, é a maior compilação feita até hoje sobre a violência contra as crianças, dando a conhecer a escala impressionante dos abusos físicos, sexuais e emocionais. Dos seus resultados salienta-se que cerca de 120 milhões de raparigas com idade inferior a 20 anos, em todo o mundo (cerca de 1 em cada 10), foram sujeitas a relações sexuais forçadas ou outro tipo de atos sexuais forçados. Salienta-se ainda, a referência a menores a viverem em países de elevado rendimento não estarem isentos de perigo de violência sexual. Como exemplo, é referido o caso da Suíça onde, em 2009, 22% de raparigas e 8% de rapazes com idades entre os 15 e os 17 anos tinham vivido pelo menos uma experiência ou incidente de violência sexual envolvendo contacto físico. No entanto, neste país, a forma mais comum de violência sexual, para ambos os sexos, ocorre no espaço virtual. É também referido o caso dos Estados Unidos, onde, em 2011, registaram taxas de vitimização sexual prolongada em raparigas e rapazes entre os 14 e 17 anos na ordem dos 35% e 20%, respetivamente.

Em Portugal, a população em geral passou a estar mais desperta para a temática dos abusos sexuais de crianças desde que a mesma passou a ser um assunto comum nos noticiários e nos jornais, sobretudo com o caso das crianças abusadas na Casa Pia de Lisboa, que se tornou público em Novembro de 2002 (Ornelas & Maria, 2010).

Um estudo retrospectivo realizado por Mateus no ano 2012, com uma amostra de 200 sujeitos de nacionalidade portuguesa, com idades compreendidas entre os 18 e os 30 anos de idade, residentes no distrito de Lisboa, verificou que a prevalência de abuso sexual nos inquiridos foi de 14.5%, constatando-se uma taxa superior no género feminino (15.9%) comparativamente ao género masculino (11.7%). A maioria dos participantes sobreviventes de abuso sexual infantil identificou como agressor uma “pessoa conhecida, mas não amiga” e indicou que o abuso ocorreu, sobretudo, entre os 8 anos e os 10 anos de idade. Quanto ao tipo de abuso, a indicação prevalecente foi a de que envolveu algum tipo de contacto físico (70.5%), embora também se registassem situações abusivas que não envolveram contacto físico (29.5%).

Uma outra investigação realizada por Moleiro em 2014, com uma amostra de 200 sujeitos de nacionalidade portuguesa, com idades compreendidas entre os 18 e os 25 anos de idade, residentes nos distritos de Lisboa e Évora, revelou que a prevalência de abuso sexual nos inquiridos foi de 16.0%, constatando-se uma taxa superior no género feminino (17.0%) comparativamente ao género masculino (13.8%). A maioria dos participantes sobreviventes de abuso sexual infantil identificou como agressor “amigos” ou “pessoas conhecidas, mas não amigas” e indicou que o abuso ocorreu, sobretudo, entre os 9 e os 12,9 anos de idade.

Dados relativos à atividade das Comissões de Proteção de Crianças e Jovens (CPCJ) permitem uma noção do número de casos de abusos sexuais de crianças comunicados a estas Entidades. As CPCJ são instituições oficiais não judiciais com autonomia funcional que visam promover os direitos da criança e do jovem e prevenir ou pôr termo a situações suscetíveis de afetar a sua segurança, saúde, formação, educação ou desenvolvimento integral. Segundo o Relatório de Avaliação da Atividade das CPCJ referente ao ano 2015, das situações de perigo comunicadas em Portugal nesse ano, 759 foram de abuso sexual, representando 2.0% do total de comunicações. Em comparação com o ano anterior, verifica-se que aumentou o número destas comunicações, tendo no ano 2014 existido 694 comunicações de abuso sexual (1.8% das comunicações totais). Em 2015 o abuso sexual é a oitava causa que motiva a intervenção das CPCJ.

Focalizando nos Açores, segundo dados não oficiais das situações sinalizadas às CPCJ no ano 2015, 31 delas foram de abuso sexual. De acordo com os dados registados pelas polícias portuguesas (PJ, GNR e PSP), relativos aos crimes contra a liberdade e autodeterminação sexual, especificamente no que diz respeito aos casos de abuso sexual de criança, adolescente e menores dependentes, o número de crimes desta natureza tem vindo a aumentar entre 2011 e 2015, de 61 crimes para 98 crimes (Pordata, 2015).

Face a todos os dados anteriormente apresentados, sobre a prevalência e a incidência dos abusos sexuais de crianças, importa referir que, estes permitem conhecer a quantidade de crimes participados e comunicados, mas não são inteiramente fiáveis, uma vez que deixam escapar um elevado número de ocorrências silenciadas. (Berliner, 1995; UNICEF, 2006; Bruck, Ceci & Shuman, 2005; Mateus, 2012). Não deixam de ser relevantes, na medida em que evidenciam a necessidade de serem desenvolvidos programas de prevenção nesta área.

3.2. Programas de prevenção de abusos sexuais na literatura

A intervenção preventiva tem como principal objetivo fornecer aos indivíduos e/ou a grupos específicos conhecimentos e competências necessárias para lidarem com riscos de vária natureza. A intervenção pode incidir sobre diversificados contextos, nomeadamente individual, familiar, escolar e comunitário (National Research Council and Institute of Medicine, 2009), com vista à redução de fatores de risco e à promoção e desenvolvimento de fatores de proteção.

No que diz respeito ao abuso sexual, preveni-lo envolve educar para a sexualidade, abordando com as crianças, desde cedo, noções de violência e de autoproteção que garantam o seu direito de dizer “não” aos contactos sexuais do/a agressor e de revelar a situação a alguém de sua confiança (Brino & Williams, 2008; Maria, 2012). Vários estudos revelam que crianças bem informadas sobre temas de educação-sexual são menos vulneráveis a situação de risco em comparação com crianças desinformadas, na medida em que estas últimas podem ser mais facilmente coagidas a manter o segredo sobre a violência (Brino & Williams, 2008).

A dimensão preventiva da educação sexual está relacionada com o desenvolvimento de habilidades, tais como comunicação, negociação, expressão dos próprios sentimentos, e formas de lidar com situações indesejadas (Brino & Williams, 2008). Segundo Wurtele (2002), a partir da década de 80 do século passado multiplicaram-se os programas de prevenção dos abusos sexuais de crianças. Estes tinham como finalidade alterar as competências e os conhecimentos das crianças, através da intervenção em grupo conduzida em contextos educativos, bem como enfatizavam que a responsabilidade dos abusos sexuais nunca é da criança. Para esta autora, os programas preventivos devem ter como base o modelo dos 3 “R’s”: Reconhecer, Resistir e Reportar, bem como devem ser uma intervenção alargada, envolvendo os pais e professores, mas direcionada para o fortalecimento da vítima (criança) (Daro & Donnelly, 2002; Wurtele, 2002).

Historicamente, a prevenção dos abusos sexuais da criança distingue-se da prevenção do abuso físico e da negligência, em dois aspetos essenciais: (1) direciona-se, sobretudo, para as potenciais vítimas e não para os potenciais agressores e (2) dá ênfase à prevenção primária, em alternativa à prevenção secundária ou terciária. O contexto educativo foi sempre eleito como privilegiado para a aplicação de programas de prevenção do abuso sexual (Henriques, 2008; Maria, 2012) por permitir abranger mais público-alvo, bem como, por eliminar o estigma de que algumas famílias estariam mais em risco do que outras (Daro, 1994).

Finkelhor (2008) concebeu um estudo de avaliação de programas de prevenção focados nas vítimas de abuso sexual e verificou que, embora seja importante trabalhar com aquelas a prevenção dos abusos, considera mais eficaz a utilização de estratégias que envolvem a comunidade. Segundo este autor, os programas de prevenção devem ser direcionados aos pais/cuidadores, crianças, professores, profissionais de saúde e polícias, fornecendo a toda a comunidade informação para que possam detetar situações de abuso e atuar de forma ajustada perante uma denúncia.

A análise de diversos programas de prevenção demonstra que existem temas frequentemente abordados com as crianças, como por exemplo, saberem identificar possíveis abusos sexuais e outras situações abusivas, dizerem “não” ou evitarem abordagens não desejadas, relatarem a situação a um adulto de confiança, aprenderem que a culpa/responsabilidade dos abusos nunca é da criança, identificarem toque adequado de um toque inadequado, distinguirem bom segredo e um mau segredo e reconhecerem estratégias que reduzam a possibilidade do abuso (Maria, 2012).

Quando se pretende avaliar o impacto de um programa de prevenção pode-se colocar as seguintes questões: “estará o programa a alcançar os objetivos e as metas a que se propõe?”, “o que difere nos participantes após estarem envolvidos no programa?”. A avaliação de resultados dos programas de prevenção recai, habitualmente, sobre a análise ao nível de conhecimentos, atitudes, competências ou comportamentos (Schewe & Bennett, 2002 citado por Susana, 2012).

Barron e Topping (2008, p. 34) afirmam que “evidências apoiam a conclusão de que a maioria das crianças beneficia com programas de prevenção, através da aprendizagem de conceitos, do aumento do conhecimento e da aquisição de habilidades de autoproteção”. Em Ornelas e Maria (2010), encontra-se uma análise sumária feita por Wurtele (2002) sobre resultados de várias investigações que procuraram analisar o impacto de programas de prevenção dos abusos sexuais, obtendo-se várias categorias: ampliação de conhecimentos, desenvolvimento de competências, redução da incidência dos casos de abusos sexuais.

A investigação na área da prevenção do abuso sexual sugere a necessidade de uma intervenção mais sistemática e menos pontual e que os conteúdos sejam enquadrados em projetos mais globais de prevenção e educação para a sexualidade e para a saúde (Melo, Martins, Sampaio, Baptista & Antunes, s/d; Barron & Topping 2008; Kenny, Thakkar-Kolar, Ryan & Runyon, 2008) nos quais as crianças tenham um papel ativo/participativo (Wurtele, 2002; Barron & Topping 2008; Kenny, Thakkar-Kolar, Ryan & Runyon, 2008).

4. HISTÓRIA DO PROJETO DE EDUCAÇÃO AFETIVO-SEXUAL E PREVENÇÃO DE ABUSOS EM SÃO MIGUEL – AÇORES

A educação sexual possibilita, com credibilidade, aumentar o conhecimento, discutir sentimentos e atitudes, bem como elevar as capacidades individuais e de grupo para tomar decisões responsáveis (Sampaio, 2010). Muitas das crianças em situação de acolhimento institucional viveram anteriormente em contexto de insegurança, com pouca supervisão e informação, condição que as tornou mais suscetíveis e vulneráveis a situações de risco ao nível da sua sexualidade e que violam o seu direito de obter um desenvolvimento sexual sadio (Yano & Ribeiro, 2011). Com vista à estruturação da resposta ao pedido Equipa de Apoio Técnico ao Acolhimento Residencial de Crianças e Jovens do Instituto de Segurança Social dos Açores (ISSA) foi realizada uma pesquisa do estado da arte sobre programas e instrumentos nacionais e internacionais que prevenissem o abuso sexual e facilitassem a promoção de uma sexualidade saudável. Foi, também, realizado um levantamento de necessidades de intervenção com as crianças das Instituições de acolhimento da ilha de São Miguel, através de um questionário. Este foi respondido pelos profissionais de 7 Instituições.

Foram entregues às equipas de profissionais (ajudantes de lar e técnicos), de cada Instituição, três questionários:

- Questionário de recolha de informação sobre as áreas da educação sexual prioritárias para a intervenção. Foram sugeridas seis áreas e os profissionais poderiam acrescentar outras, ordenando-as da mais à menos prioritária;
- Questionário de recolha de informação sobre historial de intervenções de educação sexual realizadas nas Instituições;
- Questionário de recolha de informação sobre o número de crianças com historial de abuso sexual prévio ao acolhimento e de situações de abuso sexual entre menores dentro das Instituições, desde 2010 até ao momento.

Com este levantamento constatou-se que nenhuma Instituição detém um projeto estruturado no âmbito da educação para a sexualidade. Das 7 Instituições 1 nunca foi abrangida por intervenções na área da educação sexual, as restantes foram alvo de intervenções muito pontuais, maioritariamente de curta duração (entre 2 a 5 sessões) e dirigidas às crianças e jovens. Apenas 1 Instituição realizou 3 ações dirigidas à equipa educativa e às ajudantes de lar.

Quanto às áreas consideradas prioritárias pelos profissionais para a intervenção, estes ordenaram em primeiro lugar a demonstração positiva de afeto, seguindo-se o desenvolvimento de noções de respeito pelo seu corpo, a identificação de situações abusivas relacionadas com a intimidade, o estabelecimento de limites de respeito pelo outro (noção de privacidade e intimidade), a distinção e identificação de bom toque e mau toque e, por último, a distinção de emoções e formas de as expressar.

Relativamente às situações de crianças acolhidas com historial de abuso sexual e de situações de abuso entre menores nas instituições, foram identificadas 41 situações na totalidade dos casos.

4.1 Objetivos

Com base nas informações recolhidas a partir do levantamento efetuado e da revisão do estado da arte, a intervenção foi denominada de *Projeto de Educação Afetivo-Sexual e Prevenção de Abusos* e foram definidos objetivos direcionados para as crianças e para as ajudantes de lar.

Em relação às primeiras, pretende-se a capacitação para:

- Reconhecer diferentes emoções e as suas manifestações no corpo e no comportamento;
- Distinguir bom toque e mau toque;
- Diferenciar bons e maus segredos;
- Identificar a noção de privacidade e intimidade relativas ao corpo;
- Pedir ajuda a adultos, em situações ativadoras de medo, preocupação, tristeza, desconforto;
- Responder assertivamente perante situações sociais problemáticas.

Em relação às segundas, pretende-se que sejam capazes de:

- Expressar conhecimentos sobre sexualidade, especificamente sexualidade infantil;
- Distinguir entre exploração normal do desenvolvimento sexual infantil e situações abusivas;
- Realizar atividades de educação sexual com todas as crianças da Instituição.

4.2 Escolha dos materiais lúdico-pedagógicos de prevenção

Na pesquisa efetuada ao nível da literatura pretendeu-se encontrar Projetos e materiais lúdico-pedagógicos já testados e avaliados para a prevenção do abuso sexual, ou seja, práticas de intervenção apoiadas empiricamente com indicação de resultados da sua eficácia.

Selecionou-se o Projeto Integrado de Prevenção do Abuso Sexual (PIPAS), implementado na Casa Pia de Lisboa, entre 2013 e 2011, pela ARISCO/Novos Alvos, Instituição para a Promoção Social e da Saúde. Esta escolha deveu-se a características do Projeto PIPAS que iam ao encontro dos nossos objetivos e contexto de intervenção, nomeadamente, ter

sido construído para a população portuguesa, constituído por materiais lúdico-pedagógicos muito apelativos e desenhados para a prevenção do abuso sexual junto dos jovens e crianças abrangidos pela ação Casa Pia de Lisboa, quer em regime de internato quer de semi-internato. Também alguns dos seus pressupostos vão ao encontro da visão das responsáveis pelo Projeto de Educação Afetivo-Sexual e Prevenção de Abusos, nomeadamente, por considerar que a prevenção do abuso sexual deve ser encarada numa perspetiva integradora, através do desenvolvimento de competências mais globais e não numa perspetiva específica centrada no abuso, e que a prevenção deve ser dirigida, além do grupo-alvo constituído por crianças e jovens, à instituição como um todo. Este passo é feito através da mobilização e envolvimento dos profissionais, em processos formativos associados à intervenção a implementar.

O PIPAS assenta num conjunto de 4 materiais, direcionados ao desenvolvimento de competências sócio emocionais em torno da sexualidade: “A Quinta do Queria Ser” (pré-escolar); “O Caminho para Vila do Porto” (6 aos 8); “A Vila do Porto” (8 aos 12 anos) e “A Grande Travessia” (acima dos 12 anos). Para garantir uma continuidade entre materiais que transmitisse a noção de um processo gradual de desenvolvimento a ARISCO/Novos Alvos criou uma narrativa comum a todos, através de um mundo imaginário que contempla um Continente (*Adultis*) e uma ilha (*Infantia*) separados por um mar (*Adoles*) recheado de imprevistos, riscos, oportunidades e ameaças. Nesta realidade particular os adultos concentram-se no Continente onde vivem e trabalham, enquanto as crianças são enviadas precocemente para Ilha *Infantia* onde crescem num contexto natural, sob o acompanhamento de adultos mais velhos (os senhores idosos) que, pela sua idade, conquistaram o direito a uma vida mais descansada e menos marcada pelas obrigações de produção e de eficácia. Como consequência do seu processo maturativo as crianças atingem a idade e a competência que lhes permite iniciar o caminho para se juntarem de novo ao mundo dos adultos. É um caminho longo, arriscado e cheio de desafios/obstáculos (Melo, Martins, Sampaio, Baptista & Antunes, s/d; Alvarez, Marques-Pinto, Miranda, Melo, Baptista, Duarte, Raimundo & Marôco, 2010).

De entre os vários materiais que constituem o PIPAS, a equipa da ARISCO orientou-nos na escolha daquele que melhor correspondia aos nossos objetivos, sendo selecionado o material “O Caminho para Vila do Porto”. Trata-se de um jogo de tabuleiro – tipo “jogo da glória” – onde o jogador, individualmente ou em grupo, percorre um caminho onde encontra casas que o beneficiam e/ou o prejudicam no seu objetivo de chegar à meta (chegar à Vila onde poderá entrar na escola de navegadores e aprender a navegar no mar (*Adoles*)). Este caminho parte de cinco quintas distintas que confluem para um cruzamento (o carvalho) a partir do qual o trajeto é comum para os vários jogadores ou as várias equipas (Alvarez, Marques-Pinto, Miranda, Melo, Baptista, Duarte, Raimundo & Marôco, 2010).

À componente lúdica, assim criada, é aliada a componente informativa, integrando no jogo as “Casas do Pote”, onde os jogadores são confrontados com situações face às quais deverão mobilizar os seus recursos ao nível da tomada de decisão e gestão de problemas. Os desafios das Casas do Pote integram cinco temas (desenvolvimento físico, higiene, comunicação, dinâmica de grupos e tomada de decisão). A escolha dos temas baseou-se em diferentes propostas de organização de Programas de educação sexual em contexto escolar (Melo *et al.*, s/d).

As duas técnicas da APFSSR-Açores, responsáveis pela construção da intervenção nos Açores, receberam uma formação de 14 horas, da ARISCO/Novos Alvos, para a utilização do material e adaptação deste a outras faixas etárias, nomeadamente até aos 11 anos. Esta adaptação deveu-se ao facto de pretendermos abranger crianças dos 6 aos 11 anos o que implicaria a aquisição de dois materiais distintos. Com a adaptação foi-nos possível utilizar o mesmo material para as várias faixas etárias.

Após formação e aquisição dos materiais para a intervenção, construiu-se o Projeto de Educação Afetivo-Sexual e prevenção de abusos. Nesta fase foram tidas em conta as conclusões preliminares da avaliação do PIPAS (avaliação de resultados para o material Vila do Porto), com vista a colmatar algumas das limitações apontadas. Estas conclusões indicaram que as medidas mais sensíveis, nas condições de aplicação do material Vila do Porto, foram as relativas às competências emocionais e sociais das crianças e menos as relativas à auto-estima global e corporal ou conhecimentos sobre o abuso sexual. Podendo este resultado ter sido determinado pela possibilidade do conteúdo das sessões ter enfatizado mais umas competências do que outras (Alvarez *et al.*, 2010). Por este motivo, no Projeto de Educação Afetivo-Sexual e Prevenção de Abusos, estabeleceram-se as áreas de intervenção para cada sessão, num total de duas sessões dedicadas a cada uma.

As conclusões apontaram também para a necessidade de um número mínimo de sessões (12), que permitisse uma progressão no grau de profundidade das temáticas e o aumento das competências das crianças e jovens (Alvarez *et al.*, 2010). Foi neste sentido que o Projeto de Educação Afetivo-Sexual e Prevenção de Abusos estipulou a realização de 12 sessões. Ainda assim, foi necessário aumentar a intervenção para 16 sessões, com vista a assegurar essa progressão e profundidade.

De seguida apresenta-se a implementação do Projeto.

4.3 Implementação do Projeto de Educação Afetivo-Sexual e Prevenção de Abusos

O Projeto de Educação Afetivo-Sexual e Prevenção de Abusos foi apresentado, pelas técnicas da APFSSR-Açores, ao Instituto de Segurança Social dos Açores (ISSA) e aprovado para implementação nas Instituições de acolhimento de crianças e jovens da ilha de São Miguel. Após aprovação foi realizada a apresentação deste às equipas técnicas das várias Instituições de acolhimento.

A intervenção é dirigida a crianças dos 8 aos 11 anos dos Lares de acolhimento da Ilha de São Miguel, prevendo-se a possibilidade de alargar a intervenção a outras Ilhas. De acordo com dados do Relatório de caracterização anual da situação de acolhimento das Crianças e Jovens (CASA), do ano 2015, estavam a residir em Lares de acolhimento nesse ano, na Região Autónoma dos Açores, 335 crianças e jovens. Dados não oficiais indicam que atualmente na Ilha de São Miguel estão acolhidas 167 crianças e jovens entre os 0 e os 21 anos de idade, sendo que a maioria dos menores acolhidos encontram-se entre os 14 e os 18 anos. A faixa etária das crianças abrangidas pelo Projeto, ao nível do programa de formação, foi determinada pela fase escolar, sendo crianças que já possuem uma linguagem desenvolvida e capaz de expressar ideias e narrativas na ordem cronológica dos fatos, bem como espera-se que já tenham suficiente domínio da leitura e da escrita.

Estes dados são importantes para a avaliação que se pretende realizar uma vez que, deve ser adequada à população-alvo e, nem sempre é fácil encontrar instrumentos adequados e desenhados especificamente para a idade pré-escolar ou início do 1º ciclo (Denham & Burton, 2003; Epstein *et al.*, 2009).

O Projeto encontra-se atualmente em aplicação na primeira Instituição, desde Novembro de 2016. Antes do seu início foram necessárias reuniões com a equipa técnica, nas quais foi possível conhecer a história do acolhimento de cada criança, constituir o grupo alvo do programa de formação e calendarizar as sessões de acordo com os horários da Instituição e os horários escolares de cada criança.

O programa de formação com recurso ao material “O Caminho para Vila do Porto” está a abranger um grupo de 8 crianças da Instituição, 3 do sexo masculino e 5 do sexo feminino, com idades compreendidas entre os 8 e os 13 anos. A criança com 13 anos foi incluída tendo em conta que está avaliada com o défice cognitivo. A intervenção foi estruturada em 16 sessões de 90 minutos cada, realizadas uma a duas vezes por semana.

Para além do programa formativo para as crianças, o Projeto é também constituído por uma intervenção específica com dez ajudantes de lar, composta por parte formativa e uma parte prática e ainda, de forma mais pontual, uma intervenção dirigida a todas as crianças acolhidas na Instituição.

Em seguida passamos a apresentação das diferentes atividades.

O Programa é composto por três tipos de atividades:

- Formação através de jogo lúdico-pedagógico com o grupo-alvo (dos 8 aos 13 anos);
- Formação às ajudantes de lar;
- Atividades de educação afectivo-sexual para todas as crianças acolhidas na Instituição.

4.3.1 Formação através de Jogo Lúdico-Pedagógico com um grupo-alvo

O jogo é destinado às crianças e foca-se no desenvolvimento de competências que permitam àquelas uma vivência saudável da sexualidade e permite a exploração de um conjunto de temas, dinâmicas e momentos de reflexão que facultam uma crescente consolidação das aquisições, ligadas à sexualidade, essenciais nesta faixa-etária (Novos Alvos, 2005a). O jogo é o centro da sessão, a qual gira em volta de dinâmicas resultantes deste.

Foi estruturado inicialmente com 12 sessões de 90 minutos cada, no entanto, no decorrer da intervenção foi alterado para 16 sessões, tal como referido anteriormente. Esta alteração prendeu-se com a necessidade de mais momentos para aplicação de instrumentos psicológicos de avaliação pré e pós-intervenção, por estes serem muitos extensos tornando-se cansativo para as crianças. Foi ainda necessário realizar 2 sessões prévias à aplicação do jogo, para trabalhar com as crianças a coesão de grupo, o respeito por si e pelo outro e regras de funcionamento do grupo.

Segue-se a estrutura do Programa de formação, por sessão:

1ª Sessão:

- Apresentação das dinamizadoras (apresentação individual a cada criança);
- Aplicação dos instrumentos de avaliação, para definição da *base line*.

2ª Sessão:

- Aplicação dos instrumentos de avaliação, para definição da *base line* (conclusão).

3ª Sessão:

- Dinâmicas de quebra-gelo e de conhecimento interpessoal;
- Avaliação final da sessão.

4ª Sessão:

- Dinâmicas de coesão de grupo;
- Avaliação final da sessão.

5ª Sessão:

- Início do jogo: apresentação da narrativa do jogo (história e personagens com destaque para a personagem principal, o Capitão-Mor);
- Construção das regras de funcionamento do grupo;
- Constituição de equipas e escolha da quinta de cada equipa;
- Construção das quintas;
- Avaliação final da sessão.

6ª Sessão:

- Temática Gestão de emoções (cartas do pote sobre emoções e casas complementares com dinâmicas sobre emoções);
- Avaliação final da sessão.

7ª Sessão:

- Continuação da temática Gestão de emoções;
- Avaliação final da sessão.

8ª Sessão:

- Temática Conhecimento corporal e autoimagem (cartas do pote sobre desenvolvimento físico e casas complementares com dinâmicas sobre o corpo);
- Avaliação final da sessão.

9ª Sessão:

- Temática da Higiene (cartas do pote sobre desenvolvimento físico, higiene e casas complementares com dinâmicas sobre o corpo e higiene);
- Avaliação final da sessão.

10ª Sessão:

- Temática Competências de comunicação assertivas e de tomada de decisão (cartas do pote sobre comunicação, tomada de decisão e casas complementares com dinâmicas de comunicação e prevenção do abuso sexual);
- Avaliação final da sessão.

11ª Sessão:

- Continuação da temática Competências de comunicação assertivas e de tomada de decisão;
- Avaliação final da sessão.

12ª Sessão:

- Temática Promoção de relações interpessoais saudáveis (cartas do pote sobre dinâmicas de grupos e casas complementares com dinâmicas de prevenção do abuso sexual);
- Avaliação final da sessão.

13ª Sessão:

- Continuação da temática Promoção de relações interpessoais saudáveis;
- Avaliação final da sessão.

14ª Sessão:

- Final do jogo: entrada na Escola de Navegadores da Vila do Porto onde as crianças conhecem pessoalmente a personagem principal, o Capitão- Mor, o qual fala com as crianças sobre os desafios ultrapassados no caminho e sobre as maiores dificuldades das equipas e entregará os certificados de participação;
- Avaliação final da intervenção.

15ª Sessão:

- Aplicação dos instrumentos de avaliação final.

16ª Sessão:

- Aplicação dos instrumentos de avaliação final (conclusão).

4.3.2 Formação destinada às ajudantes de lar

Às ajudantes de lar é oferecida uma formação breve sobre sexualidade, sexualidade infantil e prevenção, composta por 3 sessões de 90 minutos, de modo a que aquelas possam expandir as atividades realizadas com o grupo mais restrito de crianças a todas as outras que também se encontram acolhidas na Instituição, a partir de um guião orientador que lhe é facultado. As sessões decorreram no contexto do Lar.

Segue-se a descrição de cada sessão.

1ª Sessão

- Apresentação das formadoras e das ajudantes de lar através de dinâmicas de quebra-gelo;
- Reflexão sobre o pedido para elaboração do Programa de educação afetivo-sexual e prevenção de abusos.
- Partilha com as profissionais dos resultados do levantamento inicial de necessidades, como ponto de partida para a sensibilização e mobilização destas para o envolvimento participativo no Programa.
- Abordagem à sexualidade com recurso a dinâmicas de grupo e *brainstorming*.

2ª Sessão

- Reflexão sobre diferenças na sexualidade entre as fases do desenvolvimento humano e sobre a distinção entre contacto sexual exploratório e contacto sexual abusivo (abuso sexual) no âmbito da sexualidade na infância.
- Reflexão sobre a prevenção do abuso sexual nas rotinas diárias da Instituição, nomeadamente sobre as estratégias já utilizadas pelas profissionais.
- Reflexão sobre estratégias facilitadoras do debate e diálogo entre ajudantes de lar e crianças, sobre sexualidade.

3ª Sessão

- Apresentação e exploração dos materiais do Jogo “O Caminho para a Vila do Porto”.

- Reflexão sobre a aplicabilidade de 4 atividades de educação afetivo-sexual nas rotinas da Instituição, por forma a serem dinamizadas pelas ajudantes e de abrangerem todas as crianças, durante o período de intervenção com o grupo-alvo do programa formativo.
- Preenchimento do “questionário de avaliação da formação”.

4.3.3 Atividades de educação afetivo-sexual para todas as crianças acolhidas na Instituição

Estas atividades foram desenhadas pelas técnicas responsáveis pela intervenção e constituem um guião orientador facultado às ajudantes de lar, para que elas possam estender o tipo trabalho realizado com as crianças em pequeno grupo a todas as outras crianças da Instituição. Desta forma todas as crianças acolhidas foram abrangidas pelas mesmas temáticas que estavam a ser trabalhadas com o grupo-alvo do programa de formação, ou seja, área das emoções, autoimagem e conhecimento corporal, relações interpessoais e assertividade e tomada de decisão.

Para cada temática, a Instituição foi decorada com materiais alusivos à mesma, como forma de motivar a adesão dos participantes. Foi entregue às ajudantes um guia de atividade, de apoio à dinamização com as crianças e respetiva calendarização. No final da atividade as profissionais preencheram uma folha de registo de avaliação da mesma.

Segue-se a descrição das atividades realizadas.

1ª Atividade: Área das Emoções

O Barómetro das Emoções. Esta atividade tem por objetivo promover a partilha de emoções entre crianças e ajudantes de Lar. O barómetro contém a fotografia de criança, por grupo a que pertence. Neste sentido foram elaborados três barómetros (um para cada grupo de crianças). Decorreu durante cinco dias, no final de cada um destes dias as ajudantes juntaram as crianças e refletiram através do barómetro como se sentiram nesse dia e porquê. Na reflexão final as ajudantes transmitiram às crianças a importância de partilharem as suas emoções, boas ou menos boas.

2ª Atividade : Área da Auto-imagem e Conhecimento corporal

A minha silhueta, o meu corpo. Esta atividade tem por objetivo facultar a compreensão das crianças sobre todas as partes do corpo e a sua importância, pelo que devem todas ser bem cuidadas e que sobre estas se deve falar com naturalidade. Remete-se para um assunto sério, que tem a ver com a saúde. As ajudantes depois de preparadas através da formação breve sobre sexualidade dialogam com as crianças sobre a existência de partes do nosso corpo que são privadas e porquê. A partir de duas silhuetas, as crianças identificam as diferentes partes do corpo da rapariga e do rapaz, desenharam as partes em falta e taparam as zonas privadas do corpo (de cada silhueta) com roupa interior em papel, entregue para o efeito.

3ª atividade: Área das Relações interpessoais

6 dias especiais: dia de ajuda; dia da partilha; dia do elogio; dia do agradecimento; dia do carinho; dia do pedido de desculpa. Nesta atividade as ajudantes convidam as crianças a refletir sobre a importância de cada dia especial e porque é especial. A reflexão é feita em grupo no final de cada dia. As ajudantes promovem a partilha no grupo sobre como cada um passou o dia na relação com os outros (reflexão sobre os comportamentos desse dia). A reflexão final é dirigida à importância de tratar bem os demais, de que forma o podem fazer e como se sentem quando são bem tratados pelos outros.

4ª atividade: Assertividade e Tomada de decisão

Aprender a posicionar-se. Esta atividade tem por objetivo a reflexão sobre a existência de diferentes opiniões, perante as mesmas situações ou circunstâncias, por parte de diferentes pessoas. As crianças são questionadas em relação a diversas situações, sobre as quais têm de se posicionar e justificar a sua decisão. A reflexão final incide sobre o saber justificar o porquê das próprias opiniões.

4.4 Instrumentos de Avaliação

A avaliação das três vertentes do Projeto é feita a partir de diferentes instrumentos, que passamos a nomear.

Junto das crianças intervencionadas utilizam-se os mesmos instrumentos do Projeto PIPAS:

- **Questionário Sobre Emoções** (Assessment of Children's Emotion Skills de Schultz *et al.*, 2004), adaptado para a população portuguesa por Alves, 2006;
- **Questionário de Relações Interpessoais** (Children's Assertive Behavior Scale de Michelson e Wood, 1982), versão portuguesa adaptada pelo serviço de Aconselhamento Educacional da FPUL;
- **Questionário Como é que eu Sou** (Self-Perception Profile for Children, de S. Harter, 1985) adaptado para a população portuguesa por Faria e Fontaine, 1985;
- **Questionário Sabemos Proteger-nos?** (de F. Lopez e A. Sánchez, 1997), traduzido por Alvarez, 2007.
- Utilizaram-se ainda procedimentos complementares de registo:
- **Ficha de descrição e avaliação de cada sessão** (preenchido pelas dinamizadoras após cada sessão);
- **Grelha de observação de comportamentos das crianças na sessão** (preenchido pelas dinamizadoras após cada sessão);
- **Ficha de avaliação da sessão** pelas crianças (sol, o que mais gostaram na sessão; lua, o que menos gostaram e nuvem, o que aprenderam na sessão), (preenchido pelas crianças abrangidas pelo programa de formação);
- **Questionário de avaliação final da intervenção** (o que aprenderam em cada temática), (preenchido pelas crianças abrangidas pelo programa de formação);

Para perceber os efeitos da ação de formação junto das ajudantes de lar e das ações dirigidas ao grande grupo recorre-se a:

- **Questionário de avaliação de formação** (respondido pelas Ajudantes de Lar);
- **Questionário de opinião sobre as atividades lúdico-pedagógicas aplicadas a todas as crianças acolhidas** (preenchimento pelas ajudantes de lar).

Como o Projeto ainda está em fase de realização, não dispomos de resultados objetivos.

5. REFLEXÕES FINAIS

Na implementação do nosso Projeto temo-nos deparado com algumas dificuldades de natureza distinta.

Uma primeira dificuldade é referente aos comportamentos das crianças, com relações entre si marcadas por muita violência quer verbal quer física. Esta situação levou-nos a realizar duas sessões, prévias ao início da aplicação do jogo, para trabalharmos a coesão e as regras do grupo. Como já referimos anteriormente, as crianças não estavam habituadas a funcionar como grupo, por pertencerem a diferentes valências da Instituição, pelo que, esta situação de trabalho em pequeno grupo pode ter contribuído para o aumento dos conflitos. A partir da 6ª sessão do jogo, e tendo em conta que os conflitos se mantinham, optámos por solicitar a comparência de uma ajudante. Esta opção teve um impacto moderadamente positivo nos comportamentos e relacionamento das crianças, reduzindo ligeiramente os conflitos. Auscultadas sobre esta situação, as crianças expressaram que a presença das ajudantes seria benéfica, pois os comportamentos desadequados seriam alvo de castigo, o que não deixa de ser sintomático sobre o tipo de funcionamento com que habitualmente convivem.

Uma segunda dificuldade reporta-se à compatibilização de horários, entre equipa de dinamizadoras, ajudantes e crianças, para a realização das sessões. Em relação às crianças, há que atender aos horários escolares, das atividades extracurriculares e a situações inesperadas, tais como visitas de familiares. Em relação às ajudantes, há a considerar o trabalho por turnos diurno e noturno. Todas estas contingências obrigam, por vezes, a alterações na calendarização inicialmente programada.

Contudo, o balanço, realizado ainda numa base intuitiva, é favorável. Parece-nos que as crianças gostam das atividades e demonstram interesse na história/narrativa do material, embora possam beneficiar mais do conteúdo do Jogo “O Caminho para a Vila do Porto” se houver oportunidade de, primeiro, trabalhar com elas as questões comportamentais e relacionais. Isto implica a oportunidade de realização de um número mais alargado de sessões. Também nos parece que as ajudantes de lar aderiram à formação e estão empenhadas na sua ação junto do restante grupo de crianças. Podemos, então, presumir que houve uma boa adesão à intervenção por parte de toda a comunidade da Instituição, o que nos estimula para prosseguir com o Projeto, analisando objetivamente os resultados e introduzindo os reajustamentos que venham a ser considerados úteis e frutíferos na educação Sexual, como forma de prevenir o abuso sexual.

REFERÊNCIAS

- Agulhas, R.; Figueiredo, N.; Alexandre, J.; & Cifuentes, P. (2016). *Vamos Prevenir! As aventuras do Búzio e da Coral – Jogo de prevenção primária do abuso sexual para crianças entre os 6 e os 10 anos*. Lisboa: Edições Sílabo.
- Alvarez, D., Castro, J.; Costa, M., & Macedo, P. (2016). *Avaliação da atividade das comissões de proteção das crianças e jovens*. Acedido a 28 de Abril de 2016, no site: http://www.cnpcejr.pt/preview_documentos.asp?r=5752&m=PDF.
- Alvarez, M., Marques-Pinto, A., Miranda, G., Melo, R., Baptista, V., Duarte, B., Raimundo, R., & Marôco, J. (2010). Avaliação do Projeto Integrado para a Prevenção do Abuso Sexual (PIPAS): Estudo Preliminar. *Psychologia*, 52, 1, 231-252.
- Alves, S. (2007). *Filhos da Madrugada: percursos de jovens em lares de infância e juventude*. Lisboa: Universidade Técnica de Lisboa. Instituto Superior de Ciências Sociais e Políticas. ISBN: 9789728726836.
- Amor Pan, J. R. (1997). *Afectividad y Sexualidad en la Persona con Deficiencia Mental*. Madrid, Publ. Universidad Pontificia Comillas, Catedra de Bioetica, nº2.
- Beaumont, K. & Maguire, M. (2013). *Policies for Sexuality Education in the European Union*. Acedido a 9 de Fevereiro de 2017, no site: <http://www.europarl.europa.eu/studies>.
- Berman, L. (2010). *Educação Sexual. Como falar com os seus filhos sobre sexo*. Londres: Dorling Kindersley. ISBN 978-989-550-898-3.
- Berliner L, Conte JR (1995). The effects of disclosure and intervention on sexually abused children. *Child Abuse Negl*, 19: 371-84.
- Beutler, L., Williams, R., & Zetzer, H. (1994). Efficacy of Treatment for Victims of Child Sexual Abuse. *The Future of Children*, 4 (2), 156-175.
- Briere J, Elliott D (2003). Prevalence and psychological sequelae of selfreported childhood physical and sexual abuse in a general population sample of men and women. *Child Abuse Negl*, 27:1205-22.
- Brino, R. F., & Williams, L. C. A. (2008). Professores como agentes de prevenção do abuso sexual infantil. *Educação & Realidade*, 33(2), 209-230.

- Britton, A. (2006). *A Reference Guide to Policies and Practices: Sexuality education in europe*. Acedido a 9 de Fevereiro 2017, no site: https://www.dge.mec.pt/sites/default/files/Esaude/sexuality_education_in_europe.pdf.
- Bruck, K., Ceci, S., & Shuman, D. (2005). Disclosure of child sexual abuse: what does the research tell us about the ways that children tell? *Psychology, Public Policy, and Law*, 11, (1), 196-226.
- Carvalho, M. (2013). *Sistema Nacional de Acolhimento de Crianças e Jovens*. Acedido a 12 de Março de 2014, no site: https://gulbenkian.pt/wp-content/uploads/2016/05/31_03-SNACJ.pdf.
- Daro, D. (1994). Prevention of child sexual abuse. In K. Renk (Eds), *Prevention of Child Sexual Abuse: Are We Doing Enough. Trauma, Violence & Abuse*, 3(1), 68-84.
- Daro, D., & Donnelly, A. (2002). Child Abuse Prevention: Accomplishments and Challenges. In J. Myers, L. Berliner, J. Briere, C. Hendrix, T. Reid & C. Jenny (Eds.), *The APSAC Handbook on Child Maltreatment* (pp. 2-24). EUA: Sage Publications, Inc.
- Decreto Legislativo Regional n.º 8/2012/A de 16 de Março de 2012.
- Decreto-lei n.º 3 / 84 de 24 de Março.
- Denham, S. A., & Burton, R. (2003). *Social and emotional prevention and intervention programming for preschoolers*. New York: Kluwer Academic/Plenum.
- Direção de Serviços de Promoção de Hábitos de Vida Saudáveis (s/d). *Relatório da Área de Intervenção da Promoção da Saúde em Contexto Escolar 2014/2015*. Acedido a 10 de novembro de 2016, através do site: <http://www.azores.gov.pt/Portal/pt/entidades/srs/drs/textoImagem/Saude+Escolar.htm>.
- Epstein, M. H., Synhorst, L. L., Cress, C. J., & Allen, E. A. (2009). Development and standardization of a test to measure the emotional and behavioral strengths of preschool children. *Journal of Emotional and Behavioral Disorders*, 17(1), 29-37. doi:10.1177/1063426608319223
- Fávero, M. (2003). *Sexualidade infantil e abusos sexuais a menores*. Lisboa: Clempsi. ISBN: 9789727960866
- Finkelhor, D. (2008). *Childhood victimization: Violence, crime, and abuse in the lives of young people*. New York: Oxford University Press.
- Florentino, B. (2015). As possíveis consequências do abuso sexual praticado contra crianças e adolescentes. *Revista de Psicologia*, v. 27, n. 2, p. 139-144.
- Furniss, T. (1993). *Abuso sexual da criança. Uma abordagem multidisciplinar*. Porto Alegre: Artes Médicas.
- Guimarães, V. (2012). A concepção freudiana da sexualidade infantil e as implicações da cultura e educação. *Educativa*, v. 15, n. 1, p. 53-66.
- Habigzang, L. F.; Koller, S. H.; Azevedo, G. A., & Machado, P. X. (2005). Abuso sexual infantil e dinâmica familiar: aspectos observados em processos jurídicos. *Psicologia: Teoria e Pesquisa*, 21(3), 341-348.
- Henriques, P. (2008). *Atitudes, Crenças, Conhecimento e Competências de Pais, Professores e Crianças do 1º Ciclo – Após aplicação de Programa de Prevenção Dos Abusos Sexuais de Crianças*. Dissertação de Mestrado. Instituto Superior de Psicologia Aplicada. 233 pp.
- Kenny, M., Thakkar-Kolar, R., Ryan, E., & Runyon, M. (2008). Child sexual abuse: From prevention to self-protection. *Child Abuse Review*, 17, 36-54.
- Lemos, M. E. C. M. (2001). *O papel dos conhecimentos e atitudes sobre sexualidade como para comportamentos saudáveis*. Dissertação de Mestrado. Faculdade de Medicina da Universidade de Coimbra.
- Lionço, T. (2008). Corpo somático e psiquismo na psicanálise: uma relação de tensionalidade. *Ágora*, v. XI, n. 1, 117-136.
- López, F. & Fuertes, A. (1999). *Para compreender a sexualidade*. Lisboa: Associação para o Planeamento Familiar. ISBN:972-8291-04-3.
- Magalhães, T. (2010). *Abuso Sexual de Crianças e Jovens. Da Suspeita ao Diagnóstico*. Lisboa: Lidel. ISBN: 978-972-757-655-5.
- Major, S. (2011). *Avaliação de Aptidões Sociais e Problemas de Comportamento em Idade Pré- em Idade Pré-Escolar Escolar: Retrato das Crianças Portuguesas Retrato das Crianças Portuguesas*. Tese de Doutoramento. Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra. 547 pp.
- Maria, S. (2012). *Abusos sexuais de crianças: Mudanças resultantes de uma intervenção Preventiva*. Tese de Doutoramento. Instituto Superior de Psicologia Aplicada. 312 pp.
- Marques, A., Vilar, D., & Forreta, F. (2002). *Educação Sexual no 1º Ciclo. Um Guia para Professores e Formadores*. Lisboa: Texto Editora. ISBN: 972-47-2167-1.
- Mateus, M. (2012). *Prevalência de abuso sexual em crianças portuguesas*. Tese de Mestrado. Instituto Superior de Psicologia Aplicada. 63 pp.
- Melo, R., Martins, S., Sampaio, C., Baptista, V., & Antunes, C. (s/d). *Projeto Integrado de Prevenção do Abuso Sexual (PIPAS). - Criação de contextos de desenvolvimento de uma sexualidade a partir do jogo*.

- Ministério da Educação *et al.*, (2000). *Educação sexual em meio escolar: Linhas Orientadoras*. Lisboa. Ministério da Educação, Ministério da Saúde.
- Moleiro, M. (2014). *Estudo da prevalência do abuso sexual de crianças na população portuguesa*. Tese de Mestrado. Instituto Superior de Psicologia Aplicada.
- National Research Council and Institute of Medicine. (2009). *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities. Committee on Prevention of Mental Disorders and Substance Abuse Among Children, Youth and Young Adults: Research Advances and Promising Interventions*. Washington, DC: The National Academies Press. ISBN: 13: 978-0-309.
- Navais, M., & Britto, I. (2013). Comportamentos-problema de uma criança vítima de abuso sexual. *Revista Brasileira de Terapia Comportamental e Cognitiva*, Vol. XV, nº 1, 4-19.
- Organização Mundial de Saúde (2003). *Guidelines for medico-legal care for victims of sexual violence*.
- Organização Mundial de Saúde & Federal Centre for Health Education, BZgA Cologne. (2010). *Standards for Sexuality Education in Europe*. Acedido em 20 de Abril de 2017, através do site: <http://www.bzgawhocc.de/?uid=072bde22237db64297daf76b7cb998f0&id=Seite4486>.
- Ornelas, J. & Maria, S. (2010). O papel da comunidade na prevenção dos Abusos Sexuais de Crianças. *Análise Psicológica* (2010), 3 (XXVIII): 411-436.
- Pontes, A. (2011). *Sexualidade: Vamos Conversar sobre Isso? Promoção do Desenvolvimento Psicossocial na Adolescência: Implementação e Avaliação de um Programa de Intervenção em Meio Escolar*. Tese de Doutoramento. Instituto de Ciências Biomédicas de Abel Salazar da Universidade do Porto. 282 pp.
- Pordata (2016). *Crimes contra a liberdade e a autodeterminação sexual: Abuso sexual a crianças, adolescentes, menores dependentes*. Acedido a 23 de Fevereiro de 2017, através do site: <http://www.pordata.pt/>.
- Portal do Governo (2011). *Diploma de Educação para a Saúde promove educação sexual nas escolas açorianas*. Acedido a 24 de Abril de 2017, no site: <http://azores.gov.pt/Portal/pt/entidades/srec/noticias/Diploma+de+Educacao+para+a+Saude+promove+educacao+sexual+nas+escolas+acorianas.htm?mode=category>.
- Putnam, F. (2003). Ten-Year Research Update Review: Child Sexual Abuse. *Journal of American Academy of Child & Adolescent Psychiatry*, 42(3), 260-278.
- Ramiro, L. (2013). *A educação sexual na mudança de conhecimentos, atitudes e comportamentos sexuais dos adolescentes*. Dissertação de Doutoramento. Faculdade de Motricidade Humana da Universidade Técnica de Lisboa. 232 pp.
- Renk, K. *et al.* Prevention of Child Sexual Abuse: are we doing enough? *Trauma, Violence & Abuse*, Washington, v. 3, n. 1, p. 68-84, 2002.
- Robert, J., & Jacob, J. (2006). *A minha sexualidade até aos 6 anos*. Porto: Porto Editora. ISBN – 10: 2-76199-2046-5.
- Rocha, I. (2013). *Códigos Penal e Processo Penal*. Porto: Porto Editora. ISBN: 978-972-0-017314.
- Sampaio, D. (2010). *Educação Sexual em Meio Escolar*. Acedido em 30 de Março de 2017, no site: <https://www.dgs.pt/areas-em-destaque/educacao-sexual-em-meio-escolar.aspx>
- Sanderson, C. (2005). *Abuso sexual em crianças. Fortalecendo pais e professores para proteger crianças de abusos sexuais*. São Paulo: M. Books do Brasil.
- Santos, V. A. (2007). *Projeto Piloto – Centro de Referência para Violência Sexual contra Crianças e Adolescentes*. Acedido a 22 de Março de 2017, através do site: www.tjdft.gov.br/tribunal/vij/projetos/relatorio%20projeto%20piloto.pdf.
- Schaefer, L., Rossetto, S., & Kristensen, C. (2012). Perícia Psicológica no Abuso Sexual de Crianças e Adolescentes. *Psicologia: Teoria e Pesquisa*, Vol. 28 n. 2, pp. 227-234.
- Susana, M. (2012). *Abusos sexuais de crianças: Mudanças resultantes de uma intervenção preventiva*. Tese de Doutoramento. Instituto Superior de Psicologia Aplicada. 312 pp.
- Teixeira, C. (2009). *O Tecer e o Crescer – Fios e Desafios: Construção identitária em crianças institucionalizadas*. Dissertação de Mestrado. Instituto Superior de Serviço Social do Porto. Universidade do Porto. Porto.
- Trickett, P. & Putman, F. (1998). Developmental consequences of child sexual abuse. En: Trickett, P & Schellenbach, C. (Eds.), *Violence against children in the family and the community* (pp.39-56). Washington: American Psychological Association.
- United Nations Children's Fund –UNICEF. (2006). Situação mundial da infância. Acedido a 14 de Abril de 2017, no site: https://www.unicef.pt/docs/situacao_mundial_da_infancia_2007.pdf.
- United Nations Children's Fund –UNICEF. (2014). *HIDDEN IN PLAIN SIGHT. A statistical analysis of violence against children*. Acedido a 14 de Março de 2017, através do site: http://reliefweb.int/sites/reliefweb.int/files/resources/Hidden_in_plain_sight_statistical_analysis_EN_3_Sept_2014.pdf.
- Vilar, D. (2011). *Ditos E Não Ditos: Educação Sexual e Parentalidade. Conversas em família sobre sexualidade e educação sexual: Um guia para o trabalho com pais e mães*. Lisboa: Associação para o Planeamento da Família. ISBN: 978-972-8291-41-9.

- Volpi, S.; & Leszczynski, S. (2008). Evolução da sexualidade e as causas e consequências de sua repressão ao longo do desenvolvimento físico, energético e emocional: perspectiva psico-corporal. In: *Encontro Paranaense, Congresso Brasileiro, Convenção brasil/ latino-américa*, XIII, VIII, II. Curitiba:Centro Reichiano.
- Wurtele, S. (2002). School-based child sexual abuse prevention. In Paul A.Schewe (Ed.), *Preventing violence in relationships: Interventions across the life span* (9-25). Washington, DC, US: American Psychological Association.
- Yano, K. & Ribeiro, M. (2011). O desenvolvimento da sexualidade de crianças em situação de risco. *Revista Esc Enferm USP*, 45(6):1315-22

PSICOLOGÍA DEL LENGUAJE DIPLOMÁTICO Y POLÍTICO

Edgar Galindo

Departamento de Psicologia, Centro de Investigação em Educação e Psicologia, Universidade de Évora
(ecota@uevora.pt)

RESUMEN

Este artículo es un análisis del lenguaje en la diplomacia y la política desde el punto de vista psicológico, dirigido principalmente al lenguaje oral. Su objetivo no es analizar la enorme bibliografía existente sobre el tema, sino las aplicaciones de la teoría de los actos del habla (TAH) en la práctica diplomática y política. Se explican las técnicas de reconocimiento de los signos de división social, uso de los pronombres personales para expresar “clusividad”, estrategias de conciliación y “escuchar activamente”. Se abordan las estrategias de formulación y reformulación (*framing* y *reframing*) y otras, así como la comunicación no verbal en el contexto del lenguaje oral. Los casos son explicados con ejemplos tomados de la historia reciente. En conclusión, se afirma que la psicología puede hacer una contribución importante para analizar sistemáticamente las diferentes formas de expresión usadas en la política y en la diplomacia, así como también para aplicar estos conocimientos a fin de enseñar a dominarlas en el entrenamiento de negociadores, mediadores, líderes, diplomáticos y políticos.

Palabras clave: Psicología del Lenguaje, Teoría de los Actos del Habla, Psicología Política, Relaciones Internacionales.

1. INTRODUCCIÓN

El lenguaje es la herramienta principal del diplomático y del político. La diplomacia utiliza un lenguaje propio, en el cual las omisiones son tan importantes como las menciones, en el que a menudo es necesario leer el mensaje entre líneas. Sería para nosotros sumamente difícil comprender una nota diplomática enviada a un país lejano en 1950, pues el contexto es la clave para comprender el contenido. Es imprescindible conocer el contexto histórico, político y social de un país y una región en un momento determinado para aquilatar el significado real de un intercambio de mensajes.

En lo que se refiere al lenguaje de los diplomáticos, Nicolson (1964) explica brillantemente el arte de redactar documentos: Si un gobierno declara que «no puede mantenerse indiferente ante el acontecimiento x», significa que va a intervenir en el acontecimiento x; si el gobierno dice que «observa con preocupación» el acontecimiento, significa que está listo para dar un paso decisivo. De esta manera, dice Nicolson, los diplomáticos tienen la posibilidad de prevenirse uno al otro, sin amenazas directas. Desgraciadamente, dice, estas maneras tienen la desventaja de que no son comprendidas por mucha gente. Kowaljew (1980) subraya papel del lenguaje en las relaciones entre los estados, mostrando cómo la formulación de una frase puede determinar eventos políticos; por ejemplo, la tormenta provocada por de Gaulle durante su visita a Canadá (1967), cuando exclamó desde el ayuntamiento de Montreal “¡Viva Quebec libre!”. En la diplomacia, las palabras, habladas o escritas, nunca son tomadas a la ligera. Estas son algunas de las razones que han originado el lenguaje rígido y ceremonioso de la diplomacia, en el que cada palabra, cada punto y cada coma han sido pensados y repensados minuciosamente antes de expresarlos.

A pesar de los avances de la tecnología de las comunicaciones, los gobiernos del mundo se comunican principalmente por escrito y a través de “notas verbales”. La lógica es obvia: solamente lo que está escrito cuenta verdaderamente a la hora de ajustar cuentas

No obstante, el lenguaje oral y la comunicación no verbal han ganado preponderancia en la diplomacia y en la política en general a través del auge de los medios de comunicación. En consecuencia, el lenguaje oral y su componente contextual, la comunicación no verbal, merecen un análisis detallado. En este artículo abordaremos principalmente la parte oral del lenguaje, aunque muchas de nuestras afirmaciones valen también para la escritura.

El análisis del lenguaje ha sido uno de los dominios históricos de la psicología política, como puede apreciarse en una de las obras pioneras en la materia, *Language of Politics* del propio creador de la psicología política, Harold Lasswell (Lasswell & Leites, 2011/1949). Un abordaje de esta interesante obra, que constituye el origen de los procedimientos de análisis de la propaganda política y de la comunicación de masas en general, nos permitirá comprender las premisas, los objetivos y los métodos del análisis del lenguaje político desde la perspectiva de la psicología.

El libro quiere demostrar que es posible comprender el poder político a través de la comprensión del lenguaje y que el lenguaje de la política puede ser estudiado con métodos cuantitativos. Para los autores, la propaganda es un poderoso instrumento para influir sobre las masas y conseguir apoyos sin violencia. En la introducción, los autores analizan el papel del lenguaje en la historia. En la época clásica el lenguaje era un instrumento de la verdad y una herramienta para la persuasión, la oratoria era cultivada como un arte y la acción colectiva dependía de los resultados de debates abiertos; por esa razón, los filósofos sofistas crearon reglas prácticas para el discurso. En la Edad Media, el sermón se convierte en un instrumento que trasciende la instrucción religiosa para convertirse en instrumento de control de las masas. Con la invención de la imprenta, el poder del lenguaje como vehículo de transmisión de ideas se diversifica para dar poder a la escritura, pero en el siglo XX, con el cine y la televisión, el lenguaje oral y sus componentes gestuales adquieren de nuevo enorme relevancia. En consecuencia, dicen los autores, el lenguaje ha sido desde siempre parte de la política, pero todavía queda mucho por saber sobre la función

práctica del lenguaje. Debemos distinguir varias funciones del lenguaje, de acuerdo con las intenciones del que lo usa y los efectos que se logran sobre los oyentes:

Cuando el objetivo es influir en el poder y hay un impacto sobre el poder, estamos hablando de la función política del lenguaje. (Lasswell & Leites, 2011/1949, p. 8).

Así, abordan dos características del lenguaje, la semántica y la sintáctica. La semántica política examina los términos, los eslógans y las doctrinas desde la perspectiva del oyente, o sea, estudia cómo han sido recibidos. La sintáctica política estudia las relaciones gramaticales y lógicas del propio discurso. El material a estudiar es el discurso de los políticos, ya sea el actual o bien el pasado, a través de registros conservados. En la semántica de la política hay dos aspectos de interés que deben ser estudiados, uno es la apariencia de lo que se dice y el otro el estilo al decirlo. En este contexto es evidente la necesidad de un estudio objetivo del lenguaje, a fin de mejorar la práctica del discurso en la política y en otros ambientes. En consecuencia, los autores proponen un conjunto de métodos científicos para el estudio del lenguaje político, incluyendo el análisis del contenido, el tratamiento de la validez, la fiabilidad y la elección de muestras.

A partir de este libro, se han publicado miles de estudios sobre el lenguaje en la política y en los medios de comunicación. Estos análisis son hoy una herramienta común en las ciencias de la comunicación y las ciencias políticas. En este artículo no analizaremos la abundante bibliografía existente, sino las contribuciones prácticas de la psicología a la diplomacia y a la política en el campo del lenguaje.

La psicología del lenguaje puede aportar mucho para ayudar a los diplomáticos y políticos a dominar el lenguaje. Esto significa en primer lugar mostrarles la naturaleza de la lengua y luego proporcionarles un conjunto de herramientas para comprender mejor a los demás y para manejar su propio discurso.

Una teoría especialmente interesante para los diplomáticos y políticos por sus aplicaciones prácticas, es la llamada “*Speech Act Theory*” de Searle (1969), que ha sido traducida como “Teoría de los actos de habla” (TAH). Es un tratamiento filosófico del lenguaje basado en Ludwig Wittgenstein, quien argumenta que las palabras son acciones y no sirven únicamente para nombrar las cosas.

La actualidad de la TAH es evidente en publicaciones recientes como Martínez-Flor y Usó-Juan (2010), que hacen una revisión de los campos de investigación y aplicación más connotados, como la comprensión de las normas sociales, la conversación, la conducta de saludar y responder a saludos, el establecimiento de buenas relaciones sociales, la enseñanza de estrategias para manifestar desacuerdos o rechazos cortésmente, el lenguaje en ambientes de trabajo y en contextos interculturales, así como de aspectos metodológicos como la recolección y el análisis de datos. No obstante, hasta donde sabemos no se ha abordado la aplicación de la TAH en la diplomacia y la política como en este artículo. Entramos entonces, en un campo de análisis teórico relativamente nuevo, en donde analizaremos también aspectos prácticos.

En términos generales, la TAH sostiene que al realizarse una expresión verbal (hablar), no solamente se describen objetos y se externan afirmaciones, sino que se realizan acciones. Las órdenes, por ejemplo, implican siempre hacer algo. Lo mismo sucede con las promesas de hacer algo o los avisos preventivos, que implican cambios concretos en la realidad, si se hace o no se hace algo. Hablar no es solamente emitir sonidos, sino que constituye un conjunto de acciones que incluyen palabras, gestos, contextos, intenciones, lo dicho y lo no dicho. Al mismo tiempo, las palabras tienen fuerza de acciones. Las palabras de un juez tienen fuerza legal y las de un gobierno fuerza política; así cuando una nación “previene” a otra, o le “exige” o la “condena”, no se trata únicamente de palabras, sino de hechos con consecuencias graves. Podemos decir, entonces, que las comunicaciones diplomáticas no son un medio para un fin, sino un fin en sí mismas: Los diplomáticos controlan el mundo a través del lenguaje.

La TAH hace una distinción entre el acto de decir algo, lo que se hace al decirlo y lo que se logra al decirlo. Cada uno de estos aspectos tiene su nombre técnico: Un “acto locutivo” se refiere a lo que se dice, un “acto ilocutivo” a lo que el hablante hace cuando dice y un “acto perlocutivo” se refiere a lo que se ha logrado como resultado de lo que se dijo. Un análisis más profundo de estos términos y de sus implicaciones trasciende los objetivos de este artículo, por lo que me limitaré a exponer los aspectos de la teoría que tienen implicaciones prácticas.

La sola emisión de palabras no nos da suficiente información para comprender lo que se está haciendo al decirlo. Es necesario ir más allá de lo que se dice para comprender las intenciones del hablante. Al mismo tiempo, es importantísimo identificar las consecuencias de lo dicho: La diferencia entre una promesa y una mentira es lo que sucedió después de decir algo.

La TAH distingue también entre actos discursivos directos y actos discursivos indirectos. Los actos discursivos directos incluyen menciones explícitas, como “pido”, “exijo”, “prevengo”, o introducen lo que se va a decir como “por medio del presente...”, “con este documento...”. Un buen ejemplo son los preámbulos de tratados internacionales que se inician con las palabras: Los gobiernos de A y B, “plenamente convencidos de...”, “deseosos de...”, “acuerdan...”

En los actos discursivos indirectos, la intención del hablante debe ser inferida de su contexto. Una sola frase puede tener diferentes significados, dependiendo de su contexto, de manera que la comprensión del significado depende de la comprensión del contexto en que se dijo. El contexto abarca una amplia gama de factores, pues se refiere al conocimiento de los valores y creencias del hablante, el propósito de la afirmación, las características del auditorio a que se dirige, la dinámica entre los interlocutores, factores culturales, cultura general del hablante, etc. Entre los factores contextuales destaca la comunicación no verbal que veremos más adelante. Así, por ejemplo, Ting-Toomey (2005) ha estudiado la función de los gestos faciales en la comunicación y afirma que las culturas individualistas tienden a ser directas, mientras que las colectivistas suelen ser indirectas¹, llenas de sutilezas expresadas en gestos faciales sólo comprensibles dentro de su contexto cultural; en consecuencia, el conocimiento del contexto es esencial para la comunicación.

¹ Para mayor información sobre la importancia de los factores culturales en la diplomacia, véase Galindo (2013)

De manera que debemos partir del principio de que no es importante lo que la gente dice, sino lo que quiere decir, lo cual exige un importante esfuerzo de interpretación por parte del escucha, o del lector, dentro del cual la comprensión del contexto es fundamental. Basándose en la TAH, Skinner (2002) ha escrito un análisis de lo que “quiso decir” Maquiavelo en su obra famosa, partiendo del contexto socio-político de la época.

Así una expresión como “todos están de acuerdo” puede ser una simple constatación de lo que sucede en una sala, para informar al auditorio del hecho, o puede ser interpretada como una pregunta para ser confirmado el hecho, o un aviso para otros que no están presentes. Al mismo tiempo, una intención puede ser expresada de diversas maneras; por ejemplo, el hecho de que todos estén de acuerdo puede formularse como “todos están de acuerdo”, “hay acuerdo general”, o “concordamos sin excepción”, incluso también con palabras aparentemente opuestas “veo que se avecina un gran debate” (en tono de broma).

A veces, el propio hablante puede dejar en la incertidumbre el significado de su expresión con un fin determinado, como ocurre en el caso de la metáfora, la ambigüedad, la sugestión, la implicación y la cortesía. El manejo de la ambigüedad es un arte y, a veces, una necesidad.

Por otro lado, no debe olvidarse que no basta con que el hablante formule con una cierta intención su lenguaje, pues existe un amplio margen para que el interlocutor capte el contenido: el mensaje puede ser incomprendido. Así, Luntz (2007) llama la atención hacia el hecho de que todo mensaje es susceptible de interpretaciones múltiples: Lo importante no es lo que se dice, sino lo que se escucha. Por esa razón, cuando hablamos debemos corroborar constantemente si nuestro mensaje ha llegado. El peligro de ser malinterpretado es constante, sobre todo en la política y la diplomacia, de ahí la enorme importancia del contexto.

Hay empero un elemento más que determina el que las palabras tengan el poder de la acción, a saber, que el hablante esté investido de autoridad. Así, la frase “lo condeno a dos años de prisión” tiene fuerza legal pronunciada por un juez, pero no la tiene si la dice un lego. La autoridad se tiene por la posición que se ocupa, pero también se puede perder, sobre todo cuando se toma en cuenta la integridad a los ojos de otras personas. Esta situación es especialmente importante en el contexto de negociaciones internacionales, donde la autoridad de los negociadores debe ser incuestionable. La autoridad puede perderse también cuando una orden o una recomendación no es cumplida; justamente uno de los dilemas de las Naciones Unidas es que no tiene medios para imponer el cumplimiento de sus decisiones, lo cual desgasta su autoridad constantemente. En la TAH, se parte del supuesto de que una declaración se vuelve acción cuando el hablante tiene autoridad para ser obedecido o hacerla cumplir.

Cabe preguntarnos qué interés tienen estas consideraciones para la práctica de la diplomacia y la política.

En primer lugar, las competencias que menciona la TAH pueden ser entrenadas. Si sabemos que lo importante no es lo que la gente dice, sino lo que quiere decir, esto implica otra manera de escuchar, para comprender mejor. Si sabemos que se logra una mejor comprensión entendiendo el contexto, en un proceso de inferencia que toma en cuenta todos los factores relevantes presentes en la locución, podemos aprender a reconocer esos factores. Si sabemos que el hablante puede sufrir malentendidos y malinterpretaciones, es necesario entrenar técnicas para asegurar la comprensión por parte del oyente. Asimismo, es posible aprender a reconocer la estrecha relación entre los actos de habla, la autoridad y la integridad, para identificar los casos en los que hay una alta probabilidad de que las promesas sean incumplidas, las amenazas vacuas y las apologías falsas. En resumen, el dominio de las herramientas que proporciona la psicología del lenguaje puede mejorar el trabajo de los diplomáticos y de los políticos. En las páginas siguientes pasaremos revista a los tópicos más relevantes para explicar los aspectos prácticos que nos interesan: estrategias de conciliación, recursos retóricos, el uso y mal uso de la ambigüedad, el recurso a lo que no se dice, la reformulación de mensajes, el “escuchar activamente” y la comunicación no verbal.

2. ESTRATEGIAS DE CONCILIACIÓN

La psicología del lenguaje nos puede enseñar maneras de proceder en un intercambio verbal, a fin de manejar nuestro lenguaje con objetivos precisos. Algunas técnicas son: reconocimiento de los signos de división social, uso de los pronombres personales para expresar “clusividad”, estrategias de conciliación y “escuchar activamente”.

Comenzaremos por el reconocimiento de los signos de alerta que indican desacuerdos entre las partes. Luego analizaremos la tendencia a excluir al otro, para ver después cómo se puede buscar la unidad y la inclusión del otro, o sea, la aplicación de estrategias de conciliación.

En la diplomacia, es importante eliminar los desacuerdos, justamente porque su interés principal es lograr acuerdos. Una forma común de discusión desagradable es el recurso a las referencias personales, pues éstas se refieren casi siempre a la imagen, que suele ser muy importante. Responder en el mismo nivel a una provocación de este jaez significa entrar en una dinámica de escalada. La mejor estrategia podría ser llamar la atención hacia lo inadecuado de tales expresiones. Sin embargo, en un contexto político el problema es que la mala impresión creada difícilmente se borra. Negar el contenido es entrar en un debate desagradable y peligroso. Ignorarlo puede ser interpretado como una aceptación de culpa. La mejor solución es aceptar o no aceptar el comentario malévol y, más tarde, tratar de salvar la cara ante el interlocutor.

Otra forma desagradable es la descontextualización, en la cual una expresión determinada es mostrada fuera de su contexto con propósitos agresivos. Cambiar el contexto para hacerlo absurdo es un procedimiento común en la parodia, la sátira, la ironía y el chiste², aunque no necesariamente son desagradables. El modo como se recurre a alguno de ellos determina si resulta ofensiva o no. Aquí entra en juego la intención del hablante, que puede usar una afirmación aparentemente agradable para producir desagrado. El humor es al mismo tiempo inclusivo y exclusivo, porque implica reírse con alguien (el *ingroup*)

² Un ejemplo es el chiste argentino que corría en tiempos de crisis: “Argentina estaba al borde del abismo y con el actual gobierno dio un paso hacia adelante”.

de alguien (el *outgroup*), por ende, siempre se ríe uno a expensas de otro. Éste es el peligro de usar el humor en las relaciones diplomáticas. La mejor solución parece ser reírse de uno mismo, aunque también entraña peligros.

Como mostraron Tajfel y Turner (2004), el ser humano parece tener una tendencia especial que lo hace ver el mundo dividido entre “los míos” y “los demás” (*ingroup* & *outgroup*); su teoría de la identidad social sostiene que el ser humano categoriza a los demás en grupos, para identificarse luego con uno y derivar de ahí su pertenencia, su estabilidad y su autoestima. Este proceso implica también la creación de prejuicios hacia los extraños, que nos hace ver mejores a los nuestros y atribuir defectos a los otros. La psicología del lenguaje muestra correlatos lingüísticos que fundamentan la tendencia humana a promover al *ingroup* en detrimento del *outgroup*. Uno es el uso de los pronombres. Las palabras “nosotros”, “nuestros” y “nos” implican un sentimiento de pertenencia a un grupo, con exclusión de los demás.

Los psicólogos han creado el término “clusividad” para nombrar esta primera persona del plural, ya que denota al mismo tiempo el uso inclusivo y el exclusivo que es característico de los idiomas indoeuropeos. Por supuesto, este “nosotros” puede variar ampliamente: “nosotros creemos que...” (los lectores), “nosotros los españoles”, “nosotros (los de un partido)”, “nos el rey”. Muchos de estos usos incluyen un elemento que fomenta la unidad de un grupo a expensas de otro y, por tanto, tienen un fin ideológico.

El uso del “tú” en singular o plural muestra muchas semejanzas. En ambos casos se establece una relación de solidaridad dentro del *ingroup*: En ambos casos, el uso del pronombre hace un enunciado implícito sobre la relación entre las partes.

La tercera persona (él, ella, ellas, ellos) es utilizada con frecuencia para representar a “los otros”, pero en un contexto negativo, que puede llegar a ser peyorativo o denigrante. El “ellos” puede ser utilizado para denotar a un otro inespecífico, sin cara, sin nombre, visto con desconfianza y culpable de crímenes.

Así, el simple uso de los pronombres puede tener cargas emocionales concretas, que es necesario interpretar para manejar propositivamente el lenguaje. Superar estos problemas de división significa buscar recursos para combatir el desacuerdo, dicho en términos psicológicos, estrategias de conciliación basadas en la reformulación del enunciado (*reframing*) y en el escuchar activamente.

La primera estrategia en este sentido es tomar a los miembros del *outgroup* como individuos y establecer una relación cordial con ellos, concentrándose en problemas personales, aspiraciones e intereses, que comúnmente son semejantes en todos los seres humanos. La segunda es la búsqueda de un terreno común, en donde existan afinidades por encima de las diferencias religiosas, políticas o lingüísticas. La definición de un terreno común significa definir objetivos compartidos para lograr en el futuro. La tercera estrategia es ampliar el círculo de la “clusividad”, en el sentido de que el “nosotros” incluya un círculo cada vez más amplio.

La cuarta es la técnica de escuchar activamente, que implica el uso de la paráfrasis, la reformulación reflexiva y el esclarecimiento para devolver al hablante su mensaje con la señal de que ha sido recibido correctamente. El objetivo es lograr la mayor comprensión posible de la otra parte, a fin de crear un ambiente de apertura, confianza y colaboración para resolver malentendidos y disputas. Parte de las premisas de que una relación implica reciprocidad entre las partes y de que la construcción de una buena relación implica atención hacia la otra parte. Su ventaja es que constituye un procedimiento concreto que ha demostrado su eficacia.

Escuchar activamente es una pieza fundamental del diálogo y el diálogo con socios cada vez más diferenciados y forma parte de la diplomacia moderna. En un interesante artículo, Riordan (2004) subraya la necesidad de crear un nuevo paradigma para la política exterior, que incluye el diálogo del gobierno con la amplia gama de los miembros de la nueva sociedad civil, lo cual requiere de una actitud abierta y modesta, donde el saber escuchar es importantísimo.

En las próximas páginas, veremos como el hablante puede aplicar otras estrategias de formulación y reformulación (*framing* y *reframing*) para persuadir al público de sus ideas.

3. LA RETÓRICA: RECURSOS RACIONALES (COGNITIVOS)

Ahora analizaremos otras formas de formulación usadas para persuadir al oyente; son técnicas de sugestión y retórica. Las primeras herramientas que veremos son las que apelan al poder de la razón (afirmar, encasillar y usar categorías semánticas). Luego veremos el papel de las emociones en este proceso, revisando el uso las connotaciones y las metáforas. Estamos entrando en el campo de la vieja retórica griega.

Apelar a la razón y a la emoción es el método por excelencia de los buenos oradores políticos. Muchas llamadas a la razón tienen gran poder de convencimiento debido, precisamente, a su contenido emocional. Al mismo tiempo, el uso de términos cargados de valor emocional es el resultado de una elección racional. En el caso de la diplomacia, la persuasión es el resultado de la combinación adecuada de ambos elementos para lograr un cambio de conducta en la otra parte.

Lo primero que debemos saber es que la formulación de una frase es un factor determinante, de manera que dominar la formulación de los enunciados es una técnica para manejar propositivamente el lenguaje de la emoción y la razón. Para mostrar la importancia de la formulación, voy a citar un chiste que circulaba en América Latina en los años ochenta:

¿Cuál sería el encabezado para comentar la historia de Caperucita Roja en los diversos diarios del país?:

- 1) ‘Niña atacada en el bosque: una muestra más de la inseguridad reinante en el país’ (diario de la oposición).
- 2) ‘Todos los cuerpos policiales a la caza del asesino de Caperucita’ (diario adicto al régimen).
- 3) ‘El asesinato de una niña en el bosque relanza el debate sobre la seguridad ciudadana’ (diario liberal centrista).
- 4) ‘La violó, la mató y la devoró’ (diario amarillista).
- 5) ‘Niña atacada y muerta por vestir de rojo’ (diario comunista).
- 6) ‘Otro caso de mujer atacada por atreverse a andar sola en el bosque’ (diario feminista).

Obviamente, se trata de una broma que utiliza la exageración como herramienta, pero en estos ejemplos son notorias las connotaciones, implicaciones, metáforas y sugerencias implícitas utilizadas por el formulador para lograr su objetivo. Algunas de estas técnicas son menos explícitas en la realidad; así, un paquete de medidas económicas del gobierno puede ser anunciado como “Medidas para mejorar la economía del país”, o “Medidas para tratar de evitar la crisis inminente”, o “Medidas para salir de la crisis”.

Sabiendo cuál es la función de la formulación (*framing*), podemos aplicar diversas técnicas para reformular los enunciados (*reframing*).

Además de las tres estrategias de conciliación que tratamos anteriormente uno de los recursos de formulación más socorridos es apelar a los valores del propio grupo (*ingroup*). El buen orador es un gran conocedor de los valores y los tabúes de su grupo. Esta técnica es especialmente eficaz si logra además trazar una línea divisoria con respecto a los otros (*outgroup*). Un ejemplo contundente es el estribillo de la radio alemana durante el Tercer Reich: *Aus Deutschland, auf Deutsch, für die Deutschen* (“Desde Alemania, en alemán, para los alemanes”). Un recurso menos controvertido es apelar a las aspiraciones compartidas; presentar una visión del futuro en la que todos, oyentes y hablante, están de acuerdo: “La patria que todos queremos...”, “La Europa del futuro...”

Otros recursos son la afirmación, la argumentación preventiva (reconocimiento y contraargumento), apelar a la autoridad, apelar a la emoción, el encasillamiento, el descubrimiento selectivo, la “clusividad”, el uso de la música del lenguaje, la reparación, las categorías semánticas, y la credibilidad.

Todas ellas pueden usarse igualmente en un proceso de reformulación.

La afirmación consiste en presentar algo como verdad incontrovertida, con una introducción como “Todos sabemos que...”, “Lo importante es...”, “La verdad es que...”, seguida de una frase cuya veracidad, en realidad, no es tan clara. Un analista político experimentado presta especial atención a este tipo de frases, a fin de descubrir los objetivos implícitos del hablante.

La argumentación preventiva consiste en reconocer la postura de la oposición mostrando comprensión e incluso simpatía, para mostrar a continuación que en las condiciones actuales, lo correcto es hacer otra cosa (lo que yo propongo). Una de las ventajas de este recurso es que el hablante da la impresión de ser una persona bien informada y reflexiva que ha pensado mucho en lo que está diciendo.

Apelar a la autoridad es un recurso típico del orador político y religioso. Los creyentes pueden citar la biblia o el corán. Un político americano cita a Washington, un venezolano a Bolívar y un portugués a Fernando Pessoa. Al hacerlo, el hablante crea un marco de referencia en que él mismo está incluido junto con el héroe citado, al tiempo que se cubre con su aura de sabiduría, legalidad, amor a la patria y deseo de emulación. Es también una forma de dar legitimidad a la propia posición, ya que se apoya en frases que son aprobadas y compartidas por la mayoría de los oyentes.

Apelar a la emoción cumple una función semejante en términos de que el hablante crea un marco de miedo, indignación, fe o responsabilidad colectiva en la que se incluye e incluye a los oyentes. Usualmente, las emociones son provocadas mediante el uso de imágenes o metáforas que impresionan al auditorio. Las metáforas tienen el efecto de pequeñas historias en una cápsula y pueden ser evocadas con una sola palabra. En la política son conocidas expresiones como “holocausto” o “apartheid”, que generan emociones irrefrenables.

El encasillamiento tiene que ver con las actitudes y los estereotipos. Presentar estereotipos ante un auditorio es una herramienta muy común, sobre todo en tiempos de guerra. Durante la Segunda Guerra Mundial, la propaganda nazi presentaba a los judíos como sub-humanos, mientras la propaganda americana mostraba a los japoneses y a los alemanes como seres sanguinarios que era necesario exterminar. En tiempos de la Guerra Fría, era común deshumanizar a “los rojos” o a “los capitalistas”. En el siglo XXI, la retórica anti-musulmana retoma muchos de los elementos clásicos de la deshumanización: describir al enemigo como inhumano es el primer paso para justificar cualquier medida en su contra, incluyendo las inhumanas.

El encasillamiento puede ser positivo. Así, es común que los políticos americanos presenten a su país como “la patria de la libertad” y los franceses gustan de verse como “la cuna de la ilustración”; en tiempos de la intervención americana en Irak, Saddam Hussein convocaba a su gente llamándola “el pueblo más antiguo de la tierra”.

Las características más notorias del encasillamiento son la revelación selectiva, la generalización y la simplificación.

En la revelación selectiva, el hablante selecciona ejemplos que apoyan su argumentación, pero omite otros hechos que la contradicen. Así, un político americano puede presentar a su país como gran defensor de los derechos humanos poniendo como ejemplo la Declaración de los Derechos del Hombre y del Ciudadano, pero omite mencionar los bochornosos hechos de Guantánamo.

En las generalizaciones y las simplificaciones es evidente el papel de los estereotipos. Generalmente es políticamente más redituable presentar historias en blanco y negro, con buenos y malos, que ofrecer al auditorio la ocasión de fijarse en detalles. “Los judíos”, “los negros”, “los rojos”, “los capitalistas”, “los burgueses”, “los imperialistas”, “los gringos”, “los enemigos de la libertad”, “los enemigos del pueblo”, “los musulmanes” son palabras que permiten generalizaciones y simplificaciones útiles en el discurso político poco diferenciado. La experiencia histórica muestra que recursos como éstos pueden tener éxito en determinadas circunstancias socio-políticas.

En el encasillamiento encontramos numerosos ejemplos de “clusividad”. Así, el “nosotros” puede incluir a nuestro grupo y los demás grupos (nuestro pueblo y los demás pueblos) o puede incluir solo a nuestro grupo (nuestro pueblo, sin los otros), excluyendo a todos los demás. De hecho, en algunos idiomas no europeos existen dos formas de “nosotros”, una incluyente y otra excluyente. En las lenguas indoeuropeas no existen formas diferentes, pero sí herramientas semánticas que permiten al hablante hacer la distinción entre los dos tipos de “nosotros”; el buen orador manipula con maestría estas herramientas. En muchos discursos podemos observar el uso del “nosotros” (o “nuestro”) en ambos sentidos. Por ejemplo, cuando un político portugués habla de “nuestro mar” no se está refiriendo a un recurso que es propiedad de toda la especie humana, sino al de

su país con exclusión de los otros. Sin embargo, cuando se refiere a “nuestros problemas con el calentamiento global”, está aludiendo a toda la humanidad.

Las propiedades musicales del lenguaje, como la rima, la aliteración, la repetición y el quiasmo tienen un papel primordial en la comunicación. El sonido armonioso de la lengua da al oyente la impresión de que está escuchando la verdad. Los sonidos armoniosos que se repiten como letanía o refrán crean un efecto convincente que trasciende al contenido racional de las palabras. La técnica de aderezar el lenguaje con armonía es antiquísima; la encontramos en los cantos religiosos de todo el mundo, desde la antigua India hasta la iglesia cristiana contemporánea. En la política encontramos muchos ejemplos de musicalidad que pretenden aumentar el poder del lenguaje. Así, en tiempos de la Guerra Fría los americanos anticomunistas decían “*better dead than red*”; los nacionalistas franceses acuñaron el eslogan “*Ni bleu, ni rouge: bleu, blanc, rouge!*”; en el mundo hispanoamericano es famoso el grito “el pueblo unido jamás será vencido”; los portugueses, viejos lobos de mar, dicen “*de Espanha, nem bons ventos nem bons casamentos*”.

El quiasmo es una venerable figura retórica que consiste en repetir palabras o expresiones en sentido inverso, manteniendo la simetría en la siguiente cláusula, pero manipulando el sentido: “vivir para trabajar o trabajar para vivir”. Es famosa la frase de John F. Kennedy en su discurso de toma de posesión (20 de enero de 1961): “...no preguntes lo que tu país puede hacer por ti, pregúntate lo que tú puedes hacer por tu país”. Se dice que el poder del quiasmo se deriva de su capacidad de inducir a la reflexión, de su fuerte contenido filosófico expresado en pocas palabras y de su musicalidad.

La reparación significa componer lo descompuesto y reedificar lo destruido. Es una estrategia de formulación orientada hacia el futuro que conlleva el mensaje de que todo se compondrá y regresará a su sitio correcto si los oyentes actúan como dice el hablante. Encontramos algunos ejemplos históricos en el discurso de Winston Churchill ante la Cámara de los Comunes del parlamento británico, en los albores de la Segunda Guerra Mundial (13 de mayo de 1940):

No tengo nada más que ofrecer que sangre, sudor y lágrimas. Tenemos ante nosotros un calvario de la más penosa naturaleza. (...) Ustedes se preguntan: ¿Cuál es nuestro objetivo? Puedo contestarlo en una palabra: La victoria.

Actualmente se ha popularizado en la lingüística y las ciencias cognitivas el enfoque de la teoría de los prototipos, que se opone al esquema clásico aristotélico de las categorías semánticas. En vez de las categorías aristotélicas que son claras, definidas y mutuamente excluyentes, las nuevas categorías no tienen límites claros, sino que pueden ser definidas constantemente.

En la teoría de los prototipos (Rosch, 1975), se propone una categorización graduada en la que algunos miembros son más centrales que otros. En consecuencia, no es un modelo basado en definiciones (como en la lógica aristotélica), sino una noción graduada de categorías. El ejemplo más citado de una categoría aristotélica es el de “ave”, definido como un animal que vuela, tiene plumas y pico; esta definición tiene el problema de que deja fuera a los pingüinos y a las avestruces, que no vuelan, pero tienen pico y plumas, y por otro lado puede incluir a los murciélagos, que vuelan pero no tienen pico ni plumas.

El ejemplo más citado de categoría prototípica es “mueble”, que incluye una gran cantidad de objetos, donde algunos son más centrales que otros; así, los experimentos muestran que “silla” es un elemento central, mientras que “teléfono” es miembro periférico de la categoría. La teoría de los prototipos sostiene que los miembros de una categoría se agrupan en torno de prototipos (“los mejores ejemplos”); ahora bien, los miembros de la categoría tienen estatus diferentes. Volviendo a nuestros ejemplos, una golondrina es un ejemplo ideal de “ave”, en torno del cual se agrupan otros que se alejan cada vez más del ejemplo ideal: calandria, garza, pavo, gallina, perdiz, pingüino.

La ventaja de las definiciones prototípicas es que son flexibles (siempre se pueden incluir nuevos miembros) y adaptables (las nuevas inclusiones pueden ser negociadas), además de que reflejan el uso normal del lenguaje moderno, en el que es común recurrir a expresiones como “en términos estrictos” o “en términos amplios”; la desventaja es que se abre el camino a toda suerte de ambigüedades.

En una obra reciente, Rogers y McClelland (2008) proponen una teoría sobre la adquisición, la representación y el uso del conocimiento semántico, cuyo sustrato es un conjunto de cambios de unidades neurológicas --ergo, en el sistema nervioso central-- que se producen en respuesta a la experiencia; de esta manera pretenden explicar fenómenos como la diferenciación de conceptos, el agrupamiento de unidades en categorías coherentes y la asignación de propiedades diferentes a conceptos diferentes.

Cabría preguntarnos ahora que tiene que ver esta disquisición lingüística y filosófica con la práctica de la persuasión y la reformulación de frases. El hecho es que un buen retórico crea nuevas categorías semánticas con propósitos definidos. La “guerra santa” de los musulmanes es un buen ejemplo, con su equivalente, “guerra justa” en el mundo cristiano: no se trata de cualquier guerra, sino de una categoría de guerra que se hace moralmente aceptable a través de una redefinición que sirve a los propósitos del orador. Dicho de otra manera, el hablante escoge categorías semánticas para reformular un concepto; un ejemplo son palabras como “daños colaterales”, término acuñado durante las guerras de la antigua Yugoslavia, para denotar a las víctimas civiles de los ataques de la OTAN. El objetivo de este neologismo es, evidentemente, minimizar el efecto que tienen en la opinión pública la muerte de gente inocente en los bombardeos. Otro ejemplo es el llamado de Saddam Hussein al pueblo iraquí para librar “la madre de todas las batallas” durante la Guerra del Golfo Pérsico en 1991.

Estos términos suelen operar a un nivel subliminal, por lo cual es importante percibirlos conscientemente, mediante la herramienta de las categorías semánticas, para conocer la influencia que ejercen sobre nuestro pensamiento y el de otras personas.

En consecuencia, dicen Rogers y McClelland, el significado es algo negociable y los negociadores son los hablantes de una comunidad lingüística. Es importante que los diplomáticos y los políticos tengan estos hechos en cuenta.

Terminaremos nuestro análisis con el recurso retórico llamado “credibilidad”, que los griegos llamaron “*ethos*”. La credibilidad del hablante es un reflejo de su autoridad, su conocimiento y las evidencias que muestran que es lo que pretende

ser. Todo buen orador hace lo posible por mostrar que merece estar donde está y recurre para ello a herramientas que son aceptadas en su cultura. En los Estados Unidos, por ejemplo, un candidato a un puesto público debe presentarse como creyente, honesto, respetuoso de las leyes, marido fiel y buen padre de familia. Cualquier demostración de que es deshonesto (p.ej. evade impuestos) o ha sido infiel puede destruir su credibilidad y, por ende, su carrera política. Si bien la credibilidad se refiere principalmente a una característica del hablante, el término se usa también para referirse a las creencias y los valores que caracterizan a una comunidad, nación o ideología. En este caso, el uso de la credibilidad tiene un enorme potencial emocional.

La consecuencia más importante de la revisión que acabamos de hacer de los recursos retóricos es que todos ellos pueden ser aprendidos mediante un programa de entrenamiento adecuado.

4. LA RETÓRICA: RECURSOS EMOCIONALES (*PATHOS*)

Continuamos nuestro análisis con las herramientas retóricas que recurren a la emoción (el “*pathos*” de los griegos), como son las falacias lógicas, las “historias en cápsula”, la metáfora y la manipulación de la inferencia. Debemos empero aclarar que no hay una división tajante entre los recursos emocionales y los racionales.

Una falacia lógica no es un pensamiento erróneo, sino un conjunto de recursos del lenguaje de gran fuerza emocional utilizados en el discurso político y en la propaganda. El más común es apelar al miedo, la adulación, el odio, el orgullo, la compasión, la solidaridad, la culpa o la reverencia para conmover al auditorio.

Una falacia común en la política es la “pregunta capciosa”, consistente en plantearla de tal manera que la respuesta implica una reconocimiento de algo: “¿Por qué mataste a tu esposa?”

Otros ejemplos de falacias lógicas son los ataques personales (referirse a particularidades del oponente y no al tema en discusión), los falsos dilemas (crear la ilusión de que hay sólo dos opciones, donde existen varias), la pendiente jabonosa (argumentar que dar un paso en una dirección lleva inevitablemente a otros pasos y al desastre), la causa falsa, la diversión (desviación del sujeto de discusión), las falsas analogías y las generalizaciones apresuradas.

Las historias en cápsula son narraciones emotivas que impulsan al oyente a la acción. Tienen básicamente cinco componentes: una emoción (la emoción del hablante y la que provoca en el oyente), un problema que a todos preocupa, un protagonista con un punto de vista (que el oyente debe compartir o rechazar), una propuesta de cambio y, por último, un momento de toma de conciencia que señala el camino para llegar al cambio; generalmente, el relato se basa en mitos y se desarrolla en metáforas (Lakoff, 1991). Lo interesante de estas historias es que pueden ser cortas como una palabra o largas como ensayo. El político usa estas historias para encandilar al oyente, capturar su imaginación y darle una directiva; el relato estructura eventos de una cierta manera, crea cohesión de grupo e invita al oyente a identificarse con los personajes y los valores del narrador; apela, por tanto, a la imaginación y a la identificación del o los oyentes. Los componentes más importantes de la historia son las connotaciones y las metáforas.

En la semántica se distinguen dos componentes del significado, la denotación y la connotación. La denotación se refiere a la relación que tiene una palabra con la realidad (objetos o acontecimientos, o atributos de objetos o acontecimientos), mientras que la connotación se refiere a los significados secundarios asociados con la palabra. Un ejemplo muy querido de los analistas es la persona que lucha contra el régimen establecido de un país determinado; se le pueden aplicar las denotaciones de “insurgente”, “rebelde”, “opositor”, “sedicioso”, “patriota” o incluso “terrorista”. Pero la connotación de cada una de estas palabras es muy diferente; en cada caso, el significado político es diferente; así, los miembros de Al Fatah de Yasser Arafat fueron considerados terroristas o luchadores de la libertad, según el punto de vista del hablante.

En la diplomacia es evidente el uso selectivo de los términos al referirse a una situación determinada. Tomemos el caso hipotético de una guerra civil en el país A, que merece la atención del país X:

- “El Gobierno de X observa con preocupación los acontecimientos en A e insta a las partes a ...”
- “El gobierno de X observa con preocupación los acontecimientos en A e insta al Gobierno de A y a los rebeldes...”
- “El Gobierno de X observa con preocupación los acontecimientos en A e insta al Gobierno de A y a los insurgentes...”

En cada caso, la connotación de los opositores es claramente diferente. En el primero, el Gobierno de X da al Gobierno y a los opositores el mismo estatus; en el segundo, los opositores son simples rebeldes; en el tercero está implícito un reconocimiento a las razones de los opositores. Cada término evoca emociones diferentes en los oyentes.

La elección de los términos correctos es una de las tareas más minuciosas de la diplomacia. Así, el uso del nombre “Malvinas” o “*Falkland*” para referirse a las islas del Atlántico Sur implica una clara toma de posición en el conflicto entre Gran Bretaña y la Argentina.

La metáfora es una figura retórica muy conocida en las ciencias literarias que consiste en denominar algo a través de su semejanza con otra cosa. En nuestros términos, la importancia de la metáfora es que es capaz de encerrar toda una historia en unas palabras: tomemos como ejemplo a Macomber (1975), que llama a la diplomacia “el juego de los ángeles”.

Ahora bien, contra la opinión de algunos críticos literarios que opinan que la metáfora añade colorido a lo que se dice, sin afectar la sustancia, los teóricos de la TAH sostienen que esta figura crea una realidad y mueve a la acción. Así, por ejemplo, designar a un grupo de gente como “terroristas” o “defensores de la libertad” tiene claras consecuencias en la práctica: La metáfora y la analogía ayudan al hablante a estructurar la realidad y guían su conducta real; en otras palabras, la manera como se formula un tema determina cómo y quién va a actuar con respecto a ese tema. Además, las metáforas convincentes determinan qué políticas van a ser aprobadas, pues tienen la función de vincular al oyente individual con el mundo político (o diplomático) proporcionándole una vía para ver relaciones que de otra manera no percibiría fácilmente.

Uno de los autores más interesantes en este campo, George Lakoff, llama la atención hacia la importancia de comprender el papel de la metáfora:

El discurso sobre ir o no a la Guerra del Golfo fue un panorama de metáforas. (...) Baker vio a Saddam Hussein 'pisando nuestra línea económica vital' (...) Bush lo retrató ocupando un 'bastión' en nuestra economía (...) Schwarzkopf caracterizó la ocupación de Kuwait como 'una violación' en curso. El Presidente dijo que los EUA estaban en el golfo para "proteger la libertad, proteger nuestro futuro y proteger al inocente" (...) Es vital, literalmente vital, comprender justamente el papel que ha tenido el pensamiento metafórico para llevarnos a esta guerra. (Lakoff, 1991, p. 1).

Las metáforas son ambiguas por naturaleza porque su contenido se comunica en buena medida a través de lo que no se dice y no a través de las palabras dichas explícitamente.

La manipulación de la inferencia consiste en hacer al oyente llegar a las conclusiones que quiere el hablante, sin que aquel se percate, mediante el uso de una red de presuposiciones, preguntas capciosas, connotaciones prejuiciadas, metáforas e historias en cápsula.

Podemos observar que el lenguaje es capaz de influir en el oyente no sólo a través de su cabeza, sino también de su corazón: cognición y emoción son los dos componentes que confluyen para cambiar la conducta en una dirección determinada.

5. AMBIGÜEDAD Y CONTEXTO

La TAH considera que la definición del contexto en la interpretación del lenguaje y el reconocimiento del papel central de la ambigüedad son parte de la nueva perspectiva, en la que el lenguaje no solamente describe la realidad, sino que la recrea.

Es difícil definir la ambigüedad. Podemos decir que es una expresión capaz de generar al menos dos significados diferentes o un enunciado que puede dar lugar a reacciones diferentes. La realidad nos muestra que hay diferentes tipos de ambigüedades: ambigüedad en sentido estricto (homofonías), ambigüedad en sentido amplio (vaguedad de referencia, o historias en cápsula), y ambigüedad en ambos sentidos.

Para comprender la ambigüedad, el factor más importante es el contexto. Así, mientras más definido sea un contexto, menores las posibilidades de que surjan ambigüedades. Por esa razón, el citar fuera de contexto es un procedimiento sencillo para desacreditar a un político o a un diplomático.

Los teóricos de la TAH consideran que la ambigüedad y, por ende, la subjetividad son parte consustancial del lenguaje político:

No puede haber un mundo de eventos distinto de la interpretación de los observadores (...) la ambigüedad y la subjetividad no son desviaciones ni patologías (...) constituyen el mundo político. (Edelman, 1988, p. 95).

En el lenguaje diplomático, la ambigüedad es tan importante como la precisión. La falta de precisión puede ser una virtud en determinadas circunstancias. La precisión tiene las desventajas de que puede ser ofensiva, puede generar rechazo y hostilidad y puede reducir el espacio para maniobrar diplomáticamente. La ambigüedad tiene las desventajas de que puede dar lugar a disputas sobre la interpretación de un texto y puede causar una pérdida de confianza no sólo en una persona, sino también en un grupo de personas (un equipo negociador o una nación), lo cual es un grave problema en las relaciones diplomáticas.

Con todo y sus desventajas, el objetivo principal de la ambigüedad es crear espacio de maniobra, en el tiempo y en el espacio, para la diplomacia. La ambigüedad permite interpretaciones múltiples, por lo cual puede acomodar opiniones divergentes. Gracias a ella es posible que dos partes mantengan posiciones irreconciliables en la realidad y, sin embargo, logren un compromiso por escrito. En términos políticos esto es importantísimo, pues el mismo mensaje puede ser llevado a diferentes auditorios con interpretaciones convenientes, permitiendo así al hablante "no perder la cara". Por otro lado, la ambigüedad permite ganar tiempo, a fin de lograr mejores acuerdos en el futuro, o para generar diferencias de interpretación que pueden ser la base de acuerdos en circunstancias cambiantes.

El arte de la diplomacia consiste, precisamente, en usar inteligentemente las dos cosas en los contextos adecuados.

Existen varios tipos de ambigüedad:

- 1) La homofonía: "ético" y "hético", o "deshecho" y "desecho".
- 2) La polisemia: "estado" puede ser un país, una entidad federativa, una condición física o una condición de salud.
- 3) El ámbito de aplicación: "mujeres, niños y hombres enfermos" (¿"enfermos" se refiere a todos o solamente a los hombres?)
- 4) La vaguedad; un ejemplo conocido es la declaración del gobierno americano sobre la "política de una China" (febrero de 1972), a propósito de la polémica entre la República Popular China y la República China (Taiwán): "Los Estados Unidos reconocen que todos los chinos en ambas márgenes del Estrecho de Taiwán sostienen que hay sólo una China y que Taiwán es una provincia de China".
- 5) La señalización: Uso de acciones para comunicar un mensaje; como abandonar una sala de sesiones como forma de protesta.
- 6) Lo que no se dice: Se trata de un mensaje encerrado entre las palabras.

El tema de lo que no se dice merece un tratamiento especial: no en balde alguien definió la diplomacia como "el arte de decir algo cuando no hay nada que decir y de no decir nada cuando hay algo que decir". Lo no dicho es un aspecto central,

pues el lenguaje oral tiene numerosos espacios vacíos que tienen una función comunicativa; la ironía, el humor y el doble sentido se nutren de estos espacios. Lo que no se dice funciona como un vínculo entre el hablante y su entorno verbal. Lo no dicho tiene la ventaja, o desventaja, de que su existencia puede ser negada. El hablante puede siempre recurrir a testimonio o a registros para demostrar que “no lo dijo”, o “no fue esa mi intención”. Asimismo, tiene la característica de que permite una manipulación de la inferencia, pues el hablante puede dar lugar a sugerencias, connotaciones, analogías, metáforas y ambigüedades basadas en lo no dicho para manipular al oyente.

Un recurso muy común, que en la literatura recibe el nombre de parataxis, es la unión de dos oraciones sin conjunción evidente entre ellas que indique una relación lógica. Un ejemplo de esta práctica en la política es la conocida frase de George W. Bush: “Saddam Hussein es una amenaza para nuestra nación. El 11 de septiembre cambió el pensamiento estratégico de cómo proteger nuestro país” (Bush, 2003)³; la falta intencional de un vínculo entre ambas frases invita al oyente a inferir que Saddam Hussein fue el responsable de los ataques.

Todos los tipos de ambigüedad que hemos revisado pueden aparecer simultáneamente.

6. COMUNICACIÓN NO VERBAL

Los elementos no verbales son parte constitutiva del contexto del lenguaje. Los trabajos de psicólogos como Mehrabian (1972, 1981) muestran que hay básicamente tres elementos que intervienen en una comunicación directa entre dos personas, a saber, las palabras, el tono de voz y la expresión facial (la conducta no verbal). Para que tenga lugar una comunicación eficaz entre dos personas, especialmente de las emociones, las tres partes del mensaje tienen que apoyarse mutuamente. Si falta congruencia, el oyente puede percibir dos mensajes diferentes, con la consiguiente irritación. La parte no verbal es tan importante para comunicar los sentimientos y las actitudes, que si hay una incongruencia entre ella y las palabras, se producen problemas en la interacción; por ejemplo, cuando una persona dice algo evitando el contacto visual, tendemos a creer que miente; otro ejemplo es el orador que transmite sus ideas al auditorio no solamente a través de las palabras, sino también a través de indicios no verbales que revelan su convicción.

La conducta no verbal participa también en el proceso de comunicación, a través de mensajes visuales que son enviados a través de gestos, expresiones faciales, contacto corporal, contacto visual, postura o movimientos corporales⁴. Veremos cómo funcionan algunas de estas categorías en la comunicación, no sin antes subrayar que el mensaje contenido por las formas de conducta que vamos a mencionar pueden variar de una cultura a otra (véase Galindo, 2013).

Las expresiones faciales son un medio de comunicación por excelencia, ya que el control preciso que ejerce el ser humano sobre la boca, los labios, los ojos, la nariz, la frente y el mentón posibilita miles de expresiones de felicidad, tristeza, enojo, miedo, sorpresa, disgusto, vergüenza, angustia e interés que son más o menos universalmente reconocidas (Ekman, 2003).

La postura puede comunicar el grado de atención de una persona, la diferencia de estatus entre los participantes y el grado en que uno gusta del otro. Posturas como estar encorvado, abrir las piernas, adelantar los hombros o cruzar los brazos indican sentimientos y actitudes hacia otra persona. Algunas envían un mensaje positivo durante el proceso de comunicación, como el inclinarse hacia adelante. Por el contrario, cuando alguien está hablando con otro y mira constantemente al piso o al techo, muestra desinterés por la conversación. Una postura correcta sería inclinarse hacia adelante para escuchar y mantenerse erecto al hablar (Pease y Pease, 2004).

Los gestos son movimientos hechos con las manos, los brazos, la cabeza, los ojos o el cuerpo como un todo; como asentir, aumentar la abertura de los ojos o pestañear. Hay un conjunto de gestos convencionales, específicos de cada cultura, que pueden usarse en vez de palabras, como agitar la mano para decir adiós en nuestro medio. Algunos gestos son complementarios, en el sentido de que aparecen acompañando al lenguaje oral para modificar su significado.

El contacto visual, puede indicar interés, atención y dedicación. Cuando una persona está interesada, sus pupilas se dilatan. La duración del contacto visual es un dato significativo: mientras más largo, mayor el interés. La falta de contacto visual en una situación social suele indicar desinterés. Por esa razón, las personas observan constantemente la cara y los ojos del otro en busca de señales positivas o negativas (Ekman, 2003).

El tacto es un sentido que, además de proporcionar información sobre superficies y texturas es un componente importante de la comunicación, pues determina el grado de intimidad física entre la gente. El tocarse, como medio de comunicación, incluye darse la mano, besar (mejilla, mano, labios), dar palmadas en la espalda y apretar el brazo. Obviamente, existen también el “tocarse” como conducta sexual y como forma de violencia, que incluye empujar, jalar, golpear, patear, etc.

No obstante, los expertos citados consideran que también existe un proceso de comunicación no verbal a través de objetos, artefactos y contextos físicos que tienen un significado, como la ropa, los espacios arquitectónicos, o bien objetos que confieren rango o prestigio (medallas, bandas, uniformes, collares, bastones, togas, incluso portafolios y material de escritorio). Por ejemplo, la ropa es un indicio no verbal, pues contiene en principio información sobre la personalidad de la persona, su origen y su nivel financiero; pero también puede indicar la cultura, el humor, el nivel de confianza, los intereses, la edad, la autoridad, los valores y la identidad sexual del usuario. Las otras personas siempre reaccionan a estos indicios.

El espacio en que tiene lugar la comunicación es otro factor no verbal. El espacio que media entre el hablante y el oyente influye en la manera como se percibe el mensaje. Los estudiosos del tema consideran que el espacio puede ser dividido en cuatro categorías principales: íntimo (2 a 45 cm), social (45 a 122 cm), personal (122 a 365 cm) y público (más de 365 cm) (Pease y Pease, 2004). Todos tendemos a defender nuestro espacio íntimo cuando alguien se nos acerca demasiado.

Argyle (2013) cree que existen códigos no verbales que usa el ser humano para establecer y mantener las relaciones interpersonales, los cuales tienen cinco funciones primarias: 1) expresar emociones, 2) expresar actitudes interpersonales, 3)

³ “Saddam Hussein is a threat to our nation. September 11 changed the strategic thinking for how to protect our country.” (Bush, 2003).

⁴ La visión puede ser sustituida por otras formas de percepción en el caso de los ciegos, como por ejemplo, movimientos corporales percibidos a través de ruidos.

acompañar el lenguaje aportando indicios de comunicación, 4) presentarse a sí mismo (la propia personalidad) y 5) cumplir rituales (como los saludos). Por ejemplo, la persona manifiesta su cercanía interpersonal a través de acciones verbales llamadas conductas de inmediatez, como sonreír, tocar, posturas corporales abiertas y contacto visual. En resumen, Argyle sostiene en sus numerosas obras que el contacto visual, las expresiones faciales, el tono de voz, las posturas y los gestos determinan la interacción social que tenemos con los demás, de una manera más o menos inconsciente.

Obviamente, estos hallazgos científicos han despertado el interés de muchos otros psicólogos y existen innumerables líneas de investigación. Por ejemplo, el trabajo de Remland y Jones (2005) sobre la distancia interpersonal, la orientación del cuerpo y el tocarse.

Las capacidades no verbales parecen ser importantes para el desarrollo del individuo; de ellas depende el éxito para iniciar y mantener una interacción social, para desarrollar relaciones interpersonales y para manejar impresiones, elementos imprescindibles para el desarrollo del individuo en ambientes empresariales, políticos y diplomáticos. Lo más importante, para los objetivos de este artículo es la constatación de que estas capacidades pueden ser aprendidas mediante procedimientos de entrenamiento psicológico (Riggio y Feldman, 2005).

Actualmente la comunicación no verbal se ha convertido en un fecundo campo de investigación de la psicología, con publicaciones propias, como el *Journal of Non Verbal Behavior*; sus recomendaciones para el entrenamiento de competencias sociales han hallado aplicación no sólo en la psicología, sino también en la educación, la administración de empresas, el trabajo social y, por supuesto, la diplomacia y la política.

7. CONCLUSIÓN

Al analizar las competencias que debe tener un buen diplomático, Macomber (1975) concluye no hay buenos negociadores natos, pues negociar es una aptitud que se adquiere con el entrenamiento. No podemos más que concordar con Macomber. Podemos agregar que los programas para enseñar las competencias de negociar, mediar y resolver conflictos en contextos internacionales, tal como se enseñan en el Proyecto de Negociación de Harvard (Fisher y Ury, 1991; Fisher, Kopelman y Schneider, 1994), contienen entrenamientos para la “percepción del conflicto”, “asumir el punto de vista del otro”, “análisis del lenguaje”, “los motivos personales” y “posiciones e intereses”. La negociación es básicamente un proceso de comunicación. Es decir que cada participante debe ser capaz de hablar claramente y escuchar con atención, identificando correctamente lo que se dice, cómo se dice y qué se omite. Al mismo tiempo, el participante debe tener claro que su conducta de escuchar puede favorecer o perturbar el proceso. Por ello, el primer paso en la negociación es resolver los problemas de comunicación. Pese a que todos los aspectos de la comunicación son muy subjetivos, los psicólogos han podido crear métodos para mejorarla. En este campo, destacan los trabajos de Gordon (2001), cuyo método general para mejorar la comunicación ha encontrado aplicación en numerosos ambientes, incluyendo la resolución de conflictos. Es el autor de técnicas como las de “escuchar activamente” y la reformulación de mensajes que revisamos en las páginas anteriores.

Las aptitudes de hablar y escuchar –incluyendo la comunicación no verbal– son tan importantes que reciben una atención especial en el entrenamiento de diplomáticos, negociadores, mediadores y, obviamente, políticos.

Para terminar, cabe reiterar que la psicología y la psicolingüística pueden hacer una contribución importante para ayudar a los diplomáticos y a los políticos a comprender el lenguaje, a dominar las diferentes formas de expresión y a resolver situaciones conflictivas; así, ha creado métodos de entrenamiento derivados de los conocimientos arriba revisados, a fin de mejorar las habilidades de las personas en esos ámbitos.

BIBLIOGRAFÍA

- Argyle, M. (2013). *Bodily communication*. Methuen. London. 978-0-415-05114-9
- Edelman, M. (1988). *Constructing the political spectacle*. The University of Chicago Press Books. Chicago, Ill. ISBN: 9780226183992
- Ekman, P. (2003). *Emotions revealed: Recognizing faces and feelings to improve communication and emotional life*. Times Books. New York. ISBN: 9780805083392
- Fisher, R., & Ury W. (1991). *Getting to yes*. Penguin Books. New York: ISBN: 01401.57352
- Fisher, R., Kopelman E., & Schneider, A. K. (1994). *Beyond Macchiavelli. Tools for coping with conflict*. Penguin Books. New York. ISBN: 0674069161
- Galindo, E. (2013). La psicología intercultural en la diplomacia y las relaciones internacionales. *International Review of Political Psychology*. 4(1-2): 6-21.
- Gordon, T. (2001). *Leader Effectiveness Training: L.E.T*. Berkley Publishing Group. New York. ISBN: 0-399-52713-3
- Jost, J. T. & Sidanius, J. (2004). (eds.). *Political Psychology*. Psychology Press. New York. ISBN: 1-84169-069-4
- Kowaljew, A. (1980). *ABC der Diplomatie* (ABC de la diplomacia). Staatsverlag der Deutschen Demokratischen Republik. Berlin. (Sin ISBN)
- Lakoff, George. 1991. "Metaphor and War: The Metaphor System Used to Justify War in the Gulf." *Vietnam Generation Journal & Newsletter*. Retirado el 23 de enero de 2016 de la página de: Viet Nam Generation Journal & Newsletter: http://lists.village.virginia.edu/sixties/HTML_docs/Texts/Scholarly/Lakoff_Gulf_Metaphor_1.html

- Lasswell, H. D. & Leites, N. (2011). *Language of Politics. Studies in Quantitative Semantics*. Literary Licencing. Whitefish MT. ISBN: 9781258029425. (Publicado originalmente en 1949).
- Luntz, F. (2007). *Words That Work: It's Not What You Say, it's What People Hear*. Hyperion Books. New York. ISBN: 1-4013-0259-9
- Macomber, W. (1975). *The angel's game. A Handbook of Modern Diplomacy*. Stein and Day. New York. ISBN: 0-8128-1791-5
- Martínez-Flor, A. y Usó-Juan, E. (Ed.) (2010). *Speech act performance: theoretical, empirical and methodological issues*. John Benjamin Publishing Co. Amsterdam. ISBN: 978-90-272-8836-3
- Mehrabian, A. (1972). *Nonverbal Communication*. Aldine-Atherton. Chicago, IL. ISBN: 978-0-202-30966-8
- Mehrabian, A. (1981). *Silent Messages: Implicit Communication of Emotions and Attitudes*. Wadsworth. Belmont, CA. ISBN: 0-534-00910-7
- Nicolson, H. G. (1964). *Diplomacy*. Oxford University Press. New York. ISBN: 0-19-889192-X
- Pease B., & Pease A. (2004). *The Definitive Book of Body Language*. Bantam Books. New York. ISBN: 9781489223159
- Remland, M.S., & Jones, T.S. (2005). Interpersonal distance, body orientation, and touch: The effect of culture, gender and age. *Journal of Social Psychology*. **135**: 281-297.
- Riggio, R. E., & Feldman, R. S. (Eds.) (2005). *Applications of nonverbal communication*. Erlbaum. Mahwah, NJ. ISBN: 978-0-8058-4334-7
- Riordan, S. (2004). Dialogue-based public diplomacy: A new Foreign Policy Paradigm? *Clingendael Discussion Papers in Diplomacy*. **95**: 1-15.
- Rosch, E. (1975). Cognitive Representation of Semantic Categories. *Journal of Experimental Psychology*. **104**:192-233.
- Rogers, T. T. & McClelland J. L. (2008). Précis of Semantic Cognition: A Parallel Distributed Processing Approach. *Behavioral and Brain Sciences*. **31**: 689–749.
- Searle, J. R. (1969). *Speech Acts: An Essay in the Philosophy of Language*. Cambridge University. London. ISBN: 0-521-09626-X
- Skinner, Q. (2002). *Visions of Politics, Volume I: Regarding Method*. Cambridge University Press. Cambridge. ISBN: 0-521-58105-2
- Tajfel, H. & Turner J. C. (2004). The social identity theory of intergroup behavior. En: J. T. Jost & J. Sidanius (eds.), *Political Psychology*. Psychology Press. New York.
- Ting-Toomey, S. (2005). The Matrix of Face: An Updated Face-Negotiation Theory. En: W. B. Gudykunst (Ed.), *Theorizing About Intercultural Communication*. Sage. Thousand Oaks, CA. ISB: 0-7619-2749-2

ASSESSING THE IMPACT OF PRECISION AGRICULTURE TECHNIQUES IN MAIZE PRODUCTION UNDER MEDITERRANEAN CONDITIONS

Luís Loures

Polytechnic Institute of Portalegre; Research Centre
for Spatial and Organizational Dynamics (CIEO),
University of Algarve
(lcloures@esaelvas.pt)

José Nunes

Polytechnic Institute of Portalegre
(ratonunes@esaelvas.pt)

Alejandro Chamizo

Agroprecision
(agroprecision@gmail.com)

José Gama

University of Extremadura
(zeigama@gmail.com)

Antonio Lopez'Piñero

GORSAS - Grupo de Gestión, Conservación y
Recuperación de Suelos, Agua y Sedimentos, University
of Extremadura
(apinero@unex.es)

Ana Loures

Polytechnic Institute of Portalegre
(aloures@esaelvas.pt)

ABSTRACT

World population is increasing. According to recent forecast it is expected that in approximately 30 years, planet's population will reach 10 billion people. At the same time, climate change, urban growth and unsustainable agricultural practices will contribute for considerable losses on the arable land available, causing serious problems to the production-consumption balance. In this regard, recent studies foreseen significant impacts on agricultural lands both in terms of productivity and in terms of environmental sustainability. In this scenario, agricultural modernization is pointed out as a crucial step to overcome forthcoming difficulties. Precision agriculture management systems (PA), Smart Agriculture (SA) procedures, normalized difference vegetation index (NDVI) techniques and unmanned aerial vehicles (UAVs) appear as feasible options to help solving these issues. However, their use needs to be reinvented and tested considering different parameters in order to ascertain both the environmental and the economic impact of these new technologies not only in agricultural production, but also on their impact on agricultural sustainability.

This paper intends thus to contribute to a better understanding of the impact of precision agriculture throughout the use of UAVs and NDVI techniques in maize production under Mediterranean conditions, presenting specific data obtained through the application of the aforementioned techniques on specific farms located on Extremadura - Spain, in order to ascertain the benefits of these methods not only in ecologic but also in economic and productivity aspects. The obtained results may, with the necessary care and adaptations, be extrapolated to other regions of similar characteristics in the Mediterranean basin and can be a tool for improving resource management thus augmenting the use of these methods. The obtained results, based on these methods highlights the fact that an efficient combination of UAVs and NDVI techniques enable important savings in productivity factors, promoting sustainable agriculture both in ecological and economic terms.

Keywords: Precision Agriculture, UAVs, NDVI, Sustainable Agriculture.

JEL Classification: R58

1. INTRODUCTION

World population is increasingly growing. It is expected that in approximately 30 years, planet's population will grow from 7.200 to 10.000 million (Dolgonosoy, 2016 and FAO, 2015). At the same time, climate change, urbanization and agricultural overexploitation will contribute for considerable losses on the arable land available for food production, causing serious problems in the production-consumption balance (Bruce *et al.*, 2013; Foley *et al.*, 2005; Guerra *et al.*, 2016; Li, Wu and Qian 2016; Prosdocimi *et al.*, 2017 and Yang, 2016).

Several studies predict the significant impact of these changes on agricultural lands both in terms of productions and in terms of farm income, pointing out that modernization processes are crucial in order to surpass these difficulties (Amjath-Babu *et al.*, 2016; Graveline, 2016; Grundy, 2016 and Zhang). In this scenario, precision agriculture, normalized difference vegetation index (NDVI) techniques and unmanned aerial vehicles (UAV) or Remotely Piloted Aircraft Systems (RPAS) appear as feasible options to help solving these issues. In fact, precision agriculture, a farming management model based on observing, determining and responding to inter and intra-field productive variability enables the definition of a decision

support system (DSS) for specific farm management with the goal of optimizing returns on inputs while preserving resources (McBratney, Whelan and Ancev, 2005).

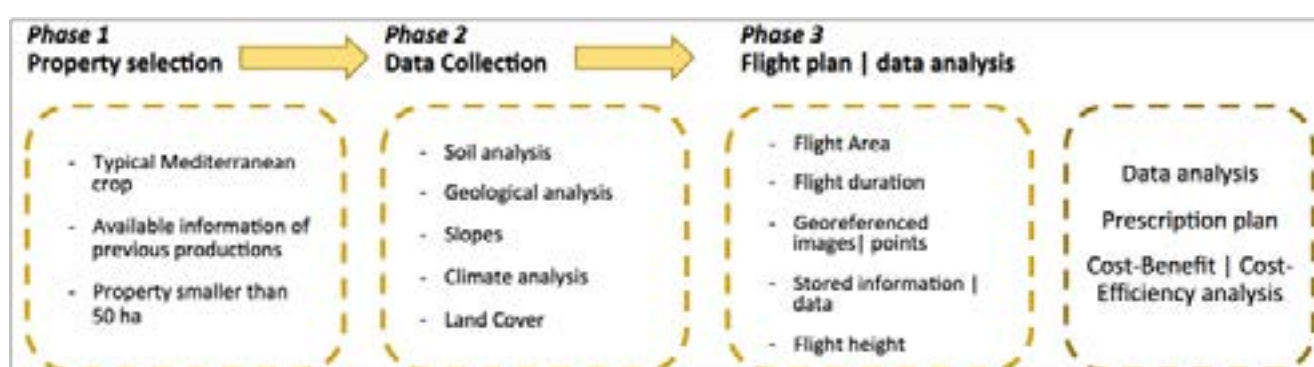
Still, even if NDVI has been used for over forty years, it is a fact that just recently, technological advances in UAV and RPAS technology offered new opportunities for assessing agricultural plot experiments using UAV/RPAS imagery. Vegetation indices (VIs) based on aerial images (Figure 1) derived from consumer-grade cameras became a simple and cheap alternative compared to VIs derived from other type of devices as is the case of proximal (on-ground) sensors (Rasmussen *et al.*, 2016).

Nevertheless, few studies concentrate on the feasibility of these technologies for small-scale corporations, considering not only their cost, but also the necessary knowledge to obtain, treat and process the information gathered bearing in mind the use of these devices. To address this problem serious involvement will be required, both by agricultural specialists and farmers in order to assess the impact of these new methods not only economically but also environmentally.

2. MATERIALS AND METHODS

Several scientific methods have been used through the present research, including indirect and direct methods and tools. The methodological approach was divided into three main phases (Figure 1), ending with a Cost-Benefit | Cost-Efficiency analysis regarding the feasibility and success of using the PA techniques in corn production in Mediterranean regions.

Figure 1. Methodological approach scheme



Since the study required not only the use of specific technology throughout the research, but also the collection of data during farm activity in which it was essential to have a very well established protocol, so that the research did not cause any inconvenient on farming activities. In this regard, the general research methodology (Figure 3) was divided in three main sections related to case study/property selection, to the collection and analysis of data related to the selected property, and to the definition of a flight plan that enabled the collection of NDVI information useful to develop a prescription plan and a cost-benefit analysis both from environmental and economic perspective.

2.1. Study area

The properties in which the study was developed are located on Spain on the county of Estremadura which is located along the Portuguese border (Figure 2).

Property A – irrigated parcel of 19,8 hectares dedicated to the production of corn;

Property B – irrigated parcel of 17,4 hectares dedicated to the production of corn.

According to the collected data the average annual rainfall is nearly 480 mm, most of which during the season of coolest temperatures ranging from October to March. The maximum monthly average temperature corresponds to July in which temperature reaches 24.7 °C and the minimum average temperature corresponds to January with 8.8 °C (Loures *et al.*, 2015). According to the *Koppen* classification the study area corresponds to a *Csa* climate, characterized by hot dry summers and cool wet winters.

Figure 2 – Study area - localization map of the selected farms



According to Nunes *et al.* (2016), generally the study area might be defined as very heterogeneous regarding geology; still hipercalcine and basic rocks are the most representative ones (Loures *et al.*, 2015). Regarding agricultural production olive orchards with 35% (*Olea europaea*), cornfields with 20% (*Zea mays*) and tomato and garlic plantations both with 15% (*Lycopersicon esculentum* and *Allium sativum*, respectively) are the most representative crops produced in the region (Nunes *et al.*, 2016). According to the World Reference Base of the FAO Soil Resource (WRBSR) (FAO, 2006) 3 different soil types, the fluvisols, luvisols, and cambisols represent the soils present on the analyzed farms.

2.2. Used technologies/equipments

Considering the objectives of the research a multi-rotor drone with two sensors was equipped with a RGB and a NIR camera, with the purpose of elaborating different vegetation indices and showing the agronomic variability that exists within agricultural and production parcels. The specific equipments used in order to obtain this data are specified after.

2.2.1 RPAS

The system with which the flights were completed is a RPAS - Model DJI Phantom 3 professional. This RPAS, owned by AgPrecision, incorporates a flying electric propulsion system with vertical take-off and landing capability, which has advanced technology onboard, reason why it presents a considerable flight stability through a built-in GPS, equipped with a multispectral sensor capable of taking data from the Near Infrared Spectrum Region (NIR).

2.2.2 Cameras/sensors

The images were taken by two different sensors: a RGB (Visible Spectrum) and a NIR (MAPIR).

2.2.3 Image processing

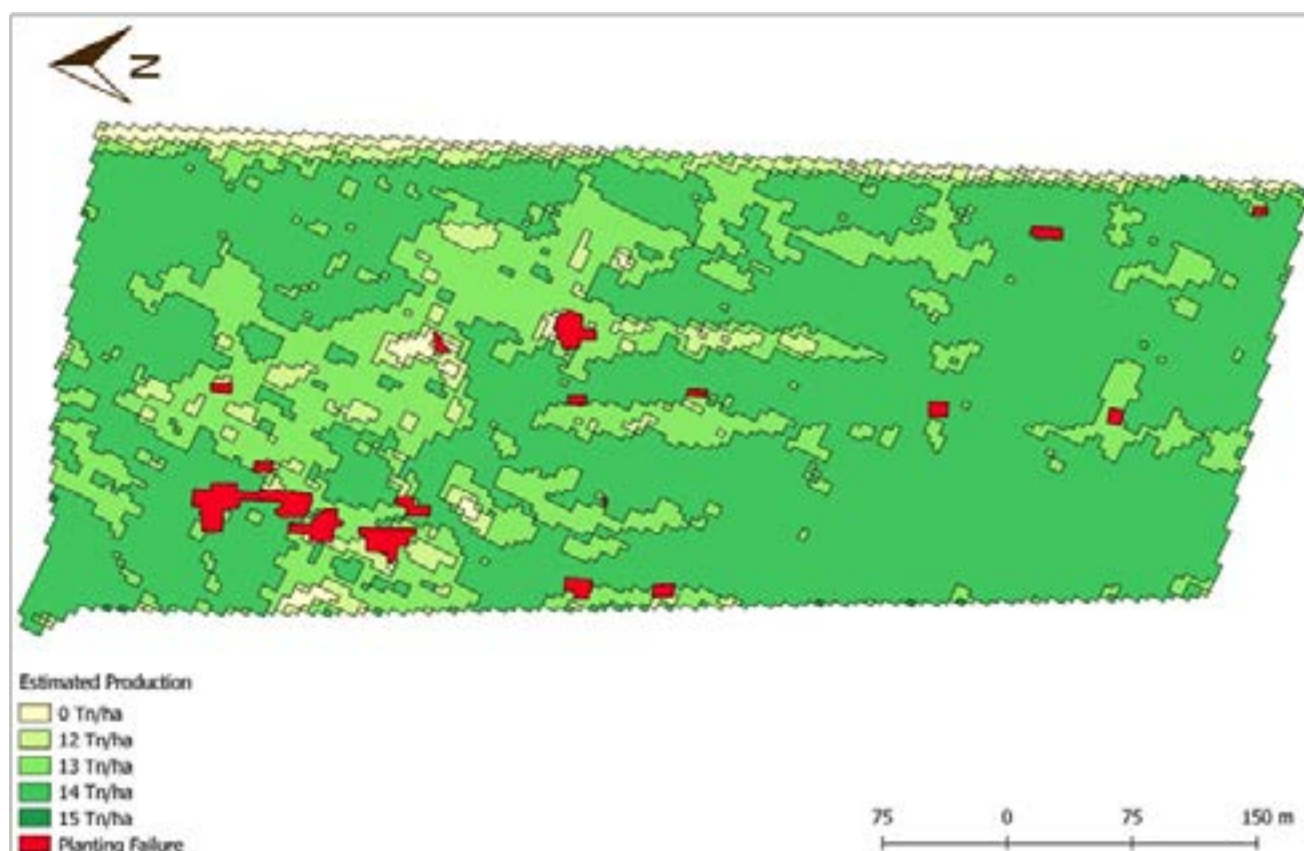
The subsequent processing of the images to develop a coherent mosaic used both for the product in RGB as for the NIR, was realized by means of services of image processing in the cloud, since it was considered that the advantages offered by this type of service when compared to the processing in a desktop equipment are very outstanding, both for processing speed as for quality of the results. The *Dronedeploy* cloud processing service (www.dronedeploy.com) was the selected one. Once the different cloud imaging products were obtained, different spatial analyzes were performed using the free open source GIS desktop software - QGIS 16.0.

3. RESULTS AND DISCUSSION

The obtained results as it will be shown after, considered both the data collected according to the pre-established protocol and the data provided by farmers regarding prior campaigns. In fact, though there is a lot of research available regarding precision agriculture (Auernhammer, 2001; Castle, Lubben and Luck, 2016; Lowenberg-DeBoer, 2015 and Yost *et al.* 2016), there is no precise information regarding feasibility studies towards the effectiveness of the use of these management procedures considering cost-benefit analysis.

Regarding *Property - A*, the collected data highlighted that an area of 0,3hectares was left we no seeding in a property with less than 20 hectares. Coupling the collected data with the production data recorded on previous campaigns, in which the highest average production levels of the plot were approximately 15T/ha, in areas where the plants presented high vigorosity, and the lowest levels around 12 T/ha in areas where the vigorosity was moderate, it is possible to perform an estimation of the expected production according to the NDVI map (Figure 3).

Figure 3 – Property A - seeding failure and production estimation map based on NDVI indexes



The elaborated map based on the average productions of previous campaigns enabled us to develop a table based on standard productions according to NDVI information, in which it was possible to ascertain the differences between potential and expected productions both in terms of weight and cost. In this case, the collected data enabled us to verify that the differences in terms of potential and expected production will be of approximately 33,3T, which in terms of economic productivity represents, considering the price for tone of corn published by MAGRAMA (Ministry of Agriculture and Fisheries, Food and Environment) for the 2016/2017 season (175.6€) approximately 5852.7€, as presented in table 1.

In the event of seeding failure, the result is obvious. The flight must be done during the germination season, so that according to the size of the faults it is possible to verify the feasibility of performing a reseeding considering a cost-benefit analysis. Considering the average cost of a flight (500€ on properties of less than 50ha), the potential benefits of applying these technologies can easily be realized, even on a smaller scale properties where cost of flight, data analysis and prescription plan is much higher. These results are in fact very relevant, since they contradict the idea that these type of technology is only feasible for large properties.

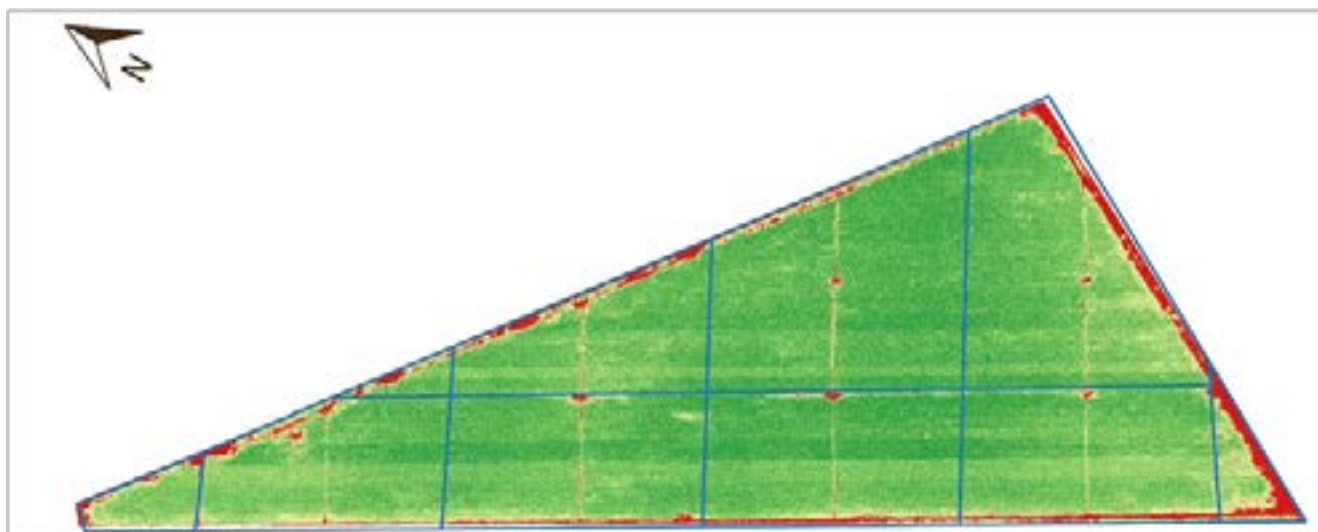
Table 1: Corn productivity analysis

Variables	Area (Ha)	Potential production (15T/ha)	Potential production (€)	Expected production (T)	Expected production (€)	Balance
0 T/ha	0,38	0,00	0,0 €	0,00	0,0 €	0,0 €
10 T/ha	0,95	14,20	2.493,1 €	9,47	1.662,1 €	-831,0 €
12 T/ha	5,19	77,90	13.679,8 €	62,32	10.943,8 €	-2.736,0 €
14 T/ha	13,02	195,24	34.284,7 €	182,23	31.999,1 €	-2.285,6 €
15 T/ha	0,01	0,18	32,4 €	0,18	32,4 €	0,0 €
TOTAL	19,5	287,5	50.490,0 €	254,2	44.637,3 €	-5.852,7 €

Regarding *Property - B*, it was possible to evaluate resource economy, considering the goal to promote an effective reduction on the use of fertilizers in corn production. Though the assessed property presented some limitation related to the use of

an irrigation system based in 10 sectors, it was clear that the use of the collected NDVI results, would enable an effective reduction on the use of fertilizers (Table 2), while fostering productivity.

Figure 4 – Property B - NDVI indexes per irrigation sector



The benefits of using the precision agriculture technologies under analysis in this study are evident (Table 2), considering that instead of the traditional 230 units of nitrogen (32N nitrogen solution) per hectare, that normally were applied undifferentiated throughout the property, the fertilization plan, proposed a distinguished dose plan for each sector which allowing to maintain productivity, enabled a reduction of 211 units of nitrogen in a parcel of less than 20 hectares. Besides the natural cost reduction, augmenting productivity, this measure enabled an effective gain in terms of environmental cost, since there was a reduction of approximately 5% on the overall use of fertilizer.

Table 2: Fertilization plan Reduction of fertilizer use in corn production

Sector	Area (ha)	Prescription N (L/ha)	Consumption (L)
<i>Traditional application</i>	<i>19,29</i>	<i>230</i>	<i>4437</i>
<i>Proposed application</i>	<i>19,29</i>	<i>variable</i>	<i>4216</i>
1	0,48	240	116
2	2,42	220	532
3	3,36	230	774
4	2,42	210	508
5	3,7	200	739
6	2,41	210	506
7	1,82	230	419
8	2,03	230	466
9	0,21	240	50
10	0,44	240	105

4. FINAL REMARKS

The obtained results, based on the assessment methods used throughout this research highlight the fact that an efficient combination of UAV/RPAS and NDVI enable important savings in productivity factors, promoting sustainable agriculture both in ecological and economic terms. The use of UAVs and GIS would facilitate not only to diagnose failures with greater efficiency in plots, where by the foot it would be almost impossible. the performed study reinforces the fact that precision agriculture constitutes a very important agricultural management procedure that contrarily to generalized ideas is also feasible in small farms. This fact is corroborated by the obtained results, since the costs inherent to the use of these technologies generally, largely surpassed by the economic and environmental benefits that would be gained with the introduced recommendations. Still, it is important to mention that the obtained data used for comparison was collected in the farms in previous campaigns.

The developed analysis enabled us to conclude that the use of aerial images and NDVI, though not used in this research, might serve to acquire important information to identify nutrition disorders, diseases in plants, plus the presence of weeds

or pests in the field, utilities, that considering the world needs to produce more food, enable not only the increase of productivity, but also to mitigate nutrition and disease problems with relative ease, constituting a crucial step towards sustainable agriculture not only in environmental but also in economic terms.

The obtained results create a momentum for the development of further studies regarding the use of precision agriculture techniques in small farms, for which precision agriculture procedures are generally considered not feasible and too costly from a cost-benefit analysis perspective.

ACKNOWLEDGEMENTS

The authors would like to acknowledge financial support given by National Funds provided by FCT- Foundation for Science and Technology through project UID/SOC/04020/2013, and the support given to Luis Loures as a Post-Doc fellow at GORSAS (Research Group on Soils, Water and Sediments Management, Conservation and Recovery) – Universidad de Extremadura, throughout his postdoctoral research.

REFERENCES

- Amjath-Babu, T., Krupnik, T., Aravindakshan, S., Arshad, M. and Kaechele, H. 2016. Climate change and indicators of probable shifts in the consumption portfolios of dryland farmers in Sub-Saharan Africa: Implications for policy. *Ecological Indicators*, Vol.67: 830–838.
- Auernhammer, H. 2001. Precision farming - the environmental challenge. *Comput. Electron. Agric.* 30(1-3):31–43. doi:10.1016/S0168-1699(00)00153-8
- Bruce McCarl, B., Fernandez, M., Jones, J. and Wlodarz, M. (2013). Climate Change and Food Security. *Current History* 112.750: 33.
- Castle, M., Lubben, B. and Luck, J. (2016). *Factors Influencing the Adoption of Precision Agriculture Technologies by Nebraska Producers*, UNL Digital Commons.
- Dolgonosov, B. (2016). Knowledge production and world population dynamics. *Technological Forecasting and Social Change*, vol. 103:127–141.
- FAO (2006). *Guidelines for Soil Description*, 4th ed.; Food and Agriculture Organization of the United Nations: Rome, Italy.
- FAO, Statistics (2015). *Food and Agricultural Organisation, Data base results*. Available on www.fao.com. Retrieved June.
- Foley, J., DeFries, R., Asner, G., Barford, C., Bonan, G., Carpenter, S., Chapin, S., Coe, M., Daily, G., Gibbs, H., Helkowski, J., Holloway, T., Howard, E., Kucharik, C., Monfreda, C., Patz, J., Prentice, C., Ramankutty, N., Snyder, P. (2005). Global consequences of land use. *Science* 309.5734: 570–574.
- Graveline, N. (2016). Economic calibrated models for water allocation in agricultural production: A review. *Environmental Modelling & Software*, Vol. 81: 12–25.
- Grundy, M., Bryan, B., Nolan, M., Battaglia, M., Dodds, S., Connor, J. and Keating, B. (2016). Scenarios for Australian agricultural production and land use to 2050. *Agricultural Systems*, Vol. 142: 70–83.
- Guerra, C., Metzger, M., Maes, J. e Pinto-Correia, T. (2016). *Landscape Ecology*, Vol. 31:271–290
- Li, P., Wu, J. and Qian, H. (2016). Regulation of secondary soil salinization in semi-arid regions: a simulation research in the Nanshantaizi area along the Silk Road, northwest China. *Environmental Earth Sciences*, Vol. 75:698
- Loures, L., Nunes, J., López-Piñeiro, A., Loures, A. and Navarro, A. (2015). Assessing Soil Edaphic Properties' influence in Phosphorus Adsorption in Vertisols - Extremadura (Spain). *International Journal of Energy and Environment*, vol. 9:53-60.
- Lowenberg-DeBoer, J. (2015). The precision agriculture revolution making the modern farmer. *Foreign Aff.* 94(3):105–112.
- McBratney, A., Whelan, B., Ancev, T. (2005). Future Directions of Precision Agriculture. *Precision Agriculture*, Vol.6: 7-23.
- Nunes, J., Loures, L., Lopez-Piñeiro, A., Loures, A., Vaz, E. (2016). Using GIS towards the Characterization and Soil Mapping of the Caia Irrigation Perimeter. *Sustainability*, 8, 368.
- Prosdoci, M., Burguet, M., Di Primac, S., Sofia, G., Terold, E., Comino, J., Cerdà, A. and Tarolli, P. (2017). Rainfall simulation and Structure-from-Motion photogrammetry for the analysis of soil water erosion in Mediterranean vineyards. *Science of the Total Environment*, Vol. 574:204–215
- Rasmussen, J., Ntakos, G., Nielsen, J., Svensgaard, J., Poulsen, R. and Christensen, S. (2016). Are vegetation indices derived from consumer-grade cameras mounted on UAVs sufficiently reliable for assessing experimental plots? *European Journal of Agronomy*, Vol 74:75–92.
- Yang, F., An, F., Ma, M., Wang, Z., Zhou, X. and Liu, Z. (2016). Variations on Soil Salinity and Sodicity and Its Driving Factors Analysis under Microtopography in Different Hydrological Conditions. *Water* Vol. 8(6):227.

- Yost, M., Kitchen, N., Sudduth, K., Sadler, E., Drummond, S., Volkmann, M. (2016). Long-term impact of a precision agriculture system on grain crop production. *Precision Agriculture*, pp.1-20. doi:10.1007/s11119-016-9490-5
- Zhang, Q., Sun, Z., Wu, F., Deng, X. (2016). Understanding rural restructuring in China: The impact of changes in labor and capital productivity on domestic agricultural production and trade. *Journal of Rural Studies*, Vol. 47, Part B: 552–562.

POSTERS

A VOYAGE IN TIME. HISTORY AT THE MUSEUM: EDUCATIONAL SPACE FOR DYNAMIC INTERVENTION

Natividad Arias Contreras
Universidad de Huelva
(natiariasc@gmail.com)

Mónica Trabajo Rite
Universidad de Huelva
(monica.trabajo@ddcc.uhu.es)

ABSTRACT

Our heritage is preserved in museums, places of learning where educational activities are especially relevant. We shall use the museum as a resource for teaching a historical period characterised by overseas conquests and the change in medieval cartography.

We propose a historical re-enactment where students assume the role of leading figures of the time, researching them and their context thanks to the museum's resources, to represent a single event marked by the figure, in this case, of Prince Henry the Navigator (*Infante* Don Enrique of Portugal).

Nautical charts, cartography, stargazing ... are some of the contents we will be working on. Through investigation, the students answer questions such as: What shape would the world be to the society of the day, how is a map made, what were the instruments used to guide them, what routes were discovered, and their impact in shaping present-day reality. This way, they weigh up the technical advances that made the long late-mediaeval expeditions possible and learn about the cultural and economic exchanges took place through the opening of new routes.

This proposal is framed within the possibilities available in the Social Science teaching research line working on heritage preserved in museums.

Keywords: Museum, Heritage Education, Emotional Intelligence, History.

1. INTRODUCTION

Ter consciência da nossa inelutável condição de herdeiros é ter consciência histórica.

A. R. Mendes

This study is based on the potential of heritage to educate, a patrimony which in our case we find inserted in a space, the museum. To develop this proposal, we set out from the importance of Heritage Education for the comprehensive development of individuals, favouring the attainment of skills/competencies associated with emotional intelligence. These skills are related on the one hand with the ability of individuals to know themselves, learn to identify and manage their emotions, to regulate them, reflect on the feelings created and act critically and flexibly towards other viewpoints. These are defined as intrapersonal skills in emotional intelligence models.

On the other hand, interpersonal skills are described as the social abilities of the individual to relate, empathise, recognise emotions in others, control social relations, act with civic responsibility and cooperate in their community context, while living in a complex and increasingly multicultural society. Education is the backbone of social life, which should lay the foundations for the development of a well-rounded knowledge that encourages citizens to reflect and relate to each other, coexisting socially with a responsible, thoughtful, active and committed attitude.

Educational contexts are increasingly diverse, based on a new concept of teaching that goes beyond the classroom. The teaching and learning process is moving ever more frequently to alternative spaces in a territory that contextualizes the social reality of students.

The city thus becomes a stage that allows different concepts of educational spaces, configured as a platform for comprehensive, multidisciplinary and holistic learning, with infinite resources that can and should be used as teaching tools. To this end, it becomes a space at the service of education in all its contexts. One of these, within which this proposal is framed, is museum space and the options it provides for the development of activities focused on knowledge, identification, assessment, transmission and dissemination of the heritage object as a reference for individual and social identity.

In our work, we highlight the role of this non-formal education area, the museum, at the service of formal education, where it becomes the seat of wisdom which the education system can and should use for development of the teaching and learning process.

To this end, we link three key ideas; on one hand, the notion of the museum as a dynamic space whose purpose is to educate. On the other, the concept of heritage education as a tool underpinning the teaching and learning process, and finally, the notion of emotional intelligence, understood as the skills/abilities the individual needs to live in society.

To this end, based on the construction of a theoretical framework for these concepts, we put forward a proposal related to best practices, with a view to achieving a critical and responsible citizenry able to live in a cooperative, participatory and democratic society.

Heritage education, emotional intelligence and the museum are the cornerstones on which our didactic proposal is based, in what is intended as yet another step towards the use of our past to let us understand our present and help build the future.

2. HERITAGE EDUCATION

Ninguém educa ninguém, ninguém se educa a si mesmo, os homens se educam entre si, mediatizados pelo mundo.

Pedagogía do Oprimido. Paulo Freire

Heritage plays a key role in the world we live in. Studying patrimony helps us build knowledge favouring the understanding of our reality and provides us with the necessary tools to assess and transform it. Through its assimilation, a process of cultural literacy is initiated (Parreiras, Grumberg, and Queiroz, 1999), leading us towards the assimilation of cultural, historic and social processes affecting humanity in its attempts to comprehend its existence. What is the human being without memory? To respond to this question, we define heritage education.

Since the 90s, many research works have focused on heritage education. In Spain, studying the interpretation and understanding of heritage began to be encouraged based on the works by Prats (1997), Estepa, Domínguez and Cuenca (2001) or Calaf (2009), among others, both in formal and informal contexts within the field of Social Science Didactics. Cuenca and Martín (2009) state that heritage education is a theoretical-practical foundation that enables the implementation of actions or projects aimed at spreading patrimonial knowledge and the interpretation and understanding of the heritage references of every society.

On the basis of the cited research, heritage is no longer understood as merely an asset used as a resource in teaching and learning processes, or, in the case of non-formal education, as an exhibition object “unattainable” in the eye of the beholder. This is where heritage education comes to be considered a scientific discipline, an area of study within the social sciences, leading towards integral education of persons, the construction of critical and responsible citizens with emotional attitudes towards patrimony.

Copeland (2009) affirms that heritage brings society closer to knowledge from its own past experience, ideas and processes, raising awareness of causes and consequences and providing different approaches to the resolution of conflicts within democratic society. In this sense, heritage education fosters an understanding of how the values of cultural patrimony and ethics influence peoples’ decisions and actions.

In our work, we set out from a conception of heritage from its symbolic and identity perspective, encompassing not only artistic, historical and monumental patrimony. This way, we consider heritage in its several variants and typologies from a holistic and integrative standpoint. To this end, we understand heritage education through a globalising, inclusive and symbiotic approach, where patrimony is seen as educational content.

Once the concept is defined, we must apply it, as we understand it to be a means to achieve an end. And this is not unique, as we may talk of several objectives, among which we highlight the following. Heritage education enables us to:

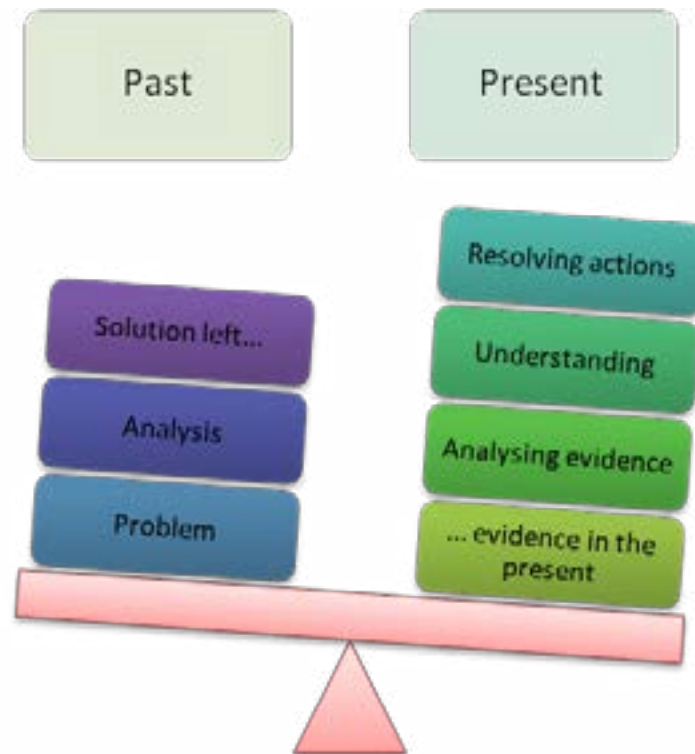
- Understand the heritage asset as a resource that generates identity. We are the people with the power to identify ourselves with an asset, perceiving it thus as part of our individual social history. Heritage is not in objects, but in the minds of people (Fernández-Salinas and Romero, 2008: 19).
- Foster affective attitudes towards the heritage asset, in such a way that commitment arises to its defence and protection. Querol (2010) emphasises the importance of recognition and appreciation of cultural property by society in order for its protection and conservation to make sense.
- It lets you understand how the values of cultural heritage and ethics influence peoples’ decisions and actions. It develops opinions on cultural questions and how they affect political economic and environmental issues. (Copeland, 2009: 15)
- Understand the present for the source of future standpoints, considering heritage as a legacy that stimulates critical and reflective awareness of beliefs and social identities.
- Encourage the development of tolerance criteria towards other lifestyles, cultural empathy, solidarity and intellectual autonomy (Cuenca, Estepa and Martín, 2011). This in turn encourages the valuation of multiculturalism as a symbol of cultural and social wealth.
- Comprehend past and present societies, understanding heritage assets as witnesses and sources for analysis. It is the historian (the person) who creates the document and gives the indications, the vestiges, the status of source (Ginzburg, 1976) (Figure 1).

Heritage is part of human beings, their environment and everyday life, permeating the territory they inhabit; it must therefore be integrated in society (Romero, 1998). Whether an object, natural scenery, a historical or archaeological space, a piece of music, a work of art or an architectural element... All are likely to be deemed heritage and all are closely related with

human beings in their daily lives. As long as an emotional attachment is formed both individually and collectively, generating identity relationships between a person or community with the asset in question, it is considered heritage.

We therefore consider that heritage education must also be integrated within teaching/learning processes, both in formal and non-formal education. The disciplinary, methodological and curricular barriers must be overcome, promoting critical and reflective knowledge of the social and natural environment (Estepa, Wamba and Jiménez, 2005) and favouring the individual's integral development.

Figure 1: Applying lessons learned. Based on - Parreiras, M^a. L., Grumberg, E. and Queiroz, A. (1999)



3. EMOTIONAL INTELLIGENCE (EI): EDUCATING IN EMOTIONAL COMPETENCIES ON THE BASIS OF HERITAGE

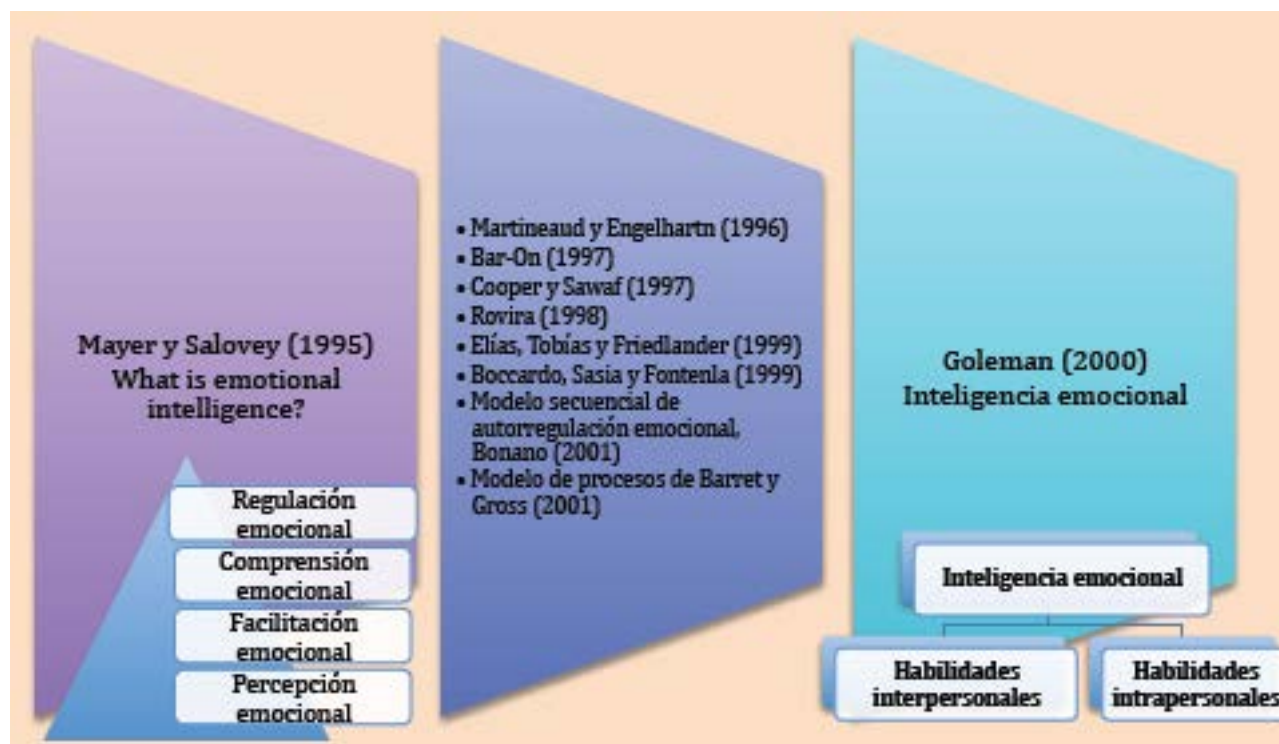
Out-of-control emotions can make the smartest people stupid.

Daniel Goleman (2009)

Emotions are part of human life. They are primary and inherent and we are in continuous connection with them. Everything around us, tangible and intangible, elicits feelings and emotions. Identifying, using, understanding and managing one's own emotions is one of the challenges for humans, as beings able to educate the many facets of their personality at different stages of development throughout their existence.

The concept of emotional intelligence (EI) is nothing new. It is defined as a hypothetical construct in the field of psychology created by Salovey and Mayer in 1990 and popularised by Goleman in 1995. But previously, in the 20s, researchers such as Thorndike (1920) had already set out the basis by conceptualising as "social intelligence" the ability to understand people and act accordingly in human relations. Salovey and Mayer (1990 and 1997) assimilated EI as part of *social intelligence*, including abilities that mark individual differences in the way emotions are perceived, valued and expressed. It includes the skill of being able to control one's own emotions and those of others, the ability to identify them and the capacity to use this information as a guide to our thoughts and actions. Because, although the importance of human beings' cognitive abilities is undeniable, it is the emotions that orchestrate our lives and our surroundings. Combining both would mean increasing our flexibility to adapt and resolve everyday conflicts. The term reached the height of its popularity after publication of the best seller *Emotional Intelligence* by Goleman in 1995, in which he defined EI as the human ability to understand/comprehend emotions (one's own and those of others) and steer them towards ways of acting that make it possible for us to achieve better outcomes (Figure 2).

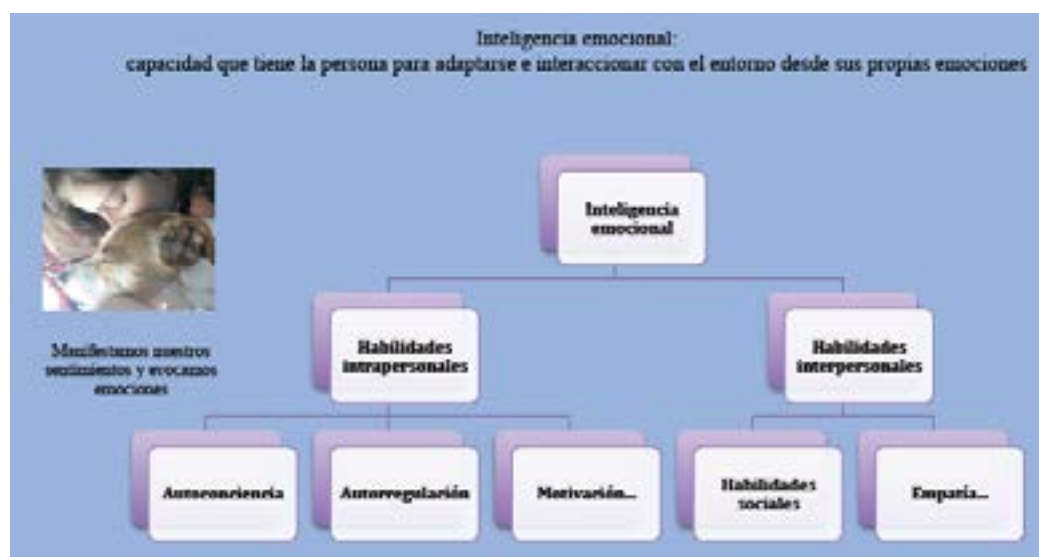
Figure 2. Emotional Intelligence models. Own creation



When talking about EI, we must not confuse the term with *emotional competence* and/or *emotional education*. The fact of having a high EI does not mean that the person has acquired the necessary competencies to achieve greater development, but rather that they are equipped to develop them.

Emotional competencies consist of a set of acquired knowledge items, capacities, skills and attitudes which are closely related to personal experience (Figure 3). They rely on stimulation from the surroundings in order to manifest, focusing on the interaction between person-environment. The purpose of emotional competencies is to put the potential of EI into practice, so as to achieve outstanding performance of the individual in all personal and social areas.

Figure 3. Emotional competencies. Own creation based on Goleman's model (1995)



Once the concept is defined, we pose the following question: How can we favour the development of emotional competencies through Heritage Education?

We set out from the principle that emotion arises from the interaction between person and environment. Within this environment, the unquestionable and permanent presence of heritage in all its typologies stands out. We may or may not recognise it, which means that in order to value it we must identify it as such and assume it as our own, as a symbol of our identity.

Among other authors, we highlight the perception of Santacana (2007), who talks about the capacity of heritage to make an impact on the mind, causing different feelings and excitement. These emotions will be different depending on the person and the heritage element observed. And knowledge is an indispensable condition to be able to value, feel and make it ours.

For, what colour are emotions? How do we identify, define, assume and control them?

We understand that through Heritage education, patrimony may become a vehicle for personal motivation encouraging the acquisition of inter- and intra-personal competencies, thus “giving colour” to these emotions inspired by the object. For Bisquerra (2008: 63) Emotions are reactions to information (knowledge) we receive in our relations with the environment. So, we understand that the main function of emotion is to motivate behaviour, insofar as an emotion triggers a reaction - voluntary or involuntary - and thus an action. For an emotion to be controlled, it must be recognised, understood and defined. Consequently, one of the aims of heritage education is to identify these reactions, favouring actions focused on the notable achievement of coexistence from a personal, citizen and social perspective.

On the other hand, we highlight the potential of heritage education to further the understanding of the various events leading up to the current configuration of reality, its causes and consequences. The goal is the development of social skills such as empathy, respect, flexibility, adaptability, compromise, commitment, cooperation... avoiding actions against what we understand as an inclusive and responsible citizenship.

The final aim is to achieve a state of personal and social well-being, so that heritage is constituted as a vehicle whereby this ideal status can be achieved.

We may become emotional when faced with an artwork, a text, an image, a story, a landscape... (Figure 4) so we must develop the capacity to be thrilled by beauty, and this involves knowledge and educating about heritage. Our proposal is presented as a way to construct learning experiences around heritage objects that help spread knowledge of our history, assessing the achievements of our society through study. Moreover, our intention is that the approach to these cultural assets should trigger emotions. The aim is to identify and work with/on them towards the achievement of emotional competencies.

Figure 4. *Emotions. Own development*



4. THE MUSEUM: A SPACE FOR KNOWLEDGE INTEGRATION

The museum space has abandoned its traditional static and merely expository conception to make way for open and dynamic spaces. This process has come hand-in-hand with opening up to another type of visitor, far removed from the traditional, erudite or specialist. Now, our visitors' interests cover a broad spectrum; everything from simple entertainment to wishing to increase their knowledge. The relation of humans with the environment, with the cultural and natural heritage (Pinheiro, 2015: 55) is becoming increasingly necessary.

For J. Ballart (2008: 19), the museum is Any permanent public institution that preserves collections of objects whose purpose is education. This is the area in which our proposal is developed, closely related with heritage education as leitmotif. In this work, the museum becomes the central space where knowledge is developed, transporting the public to contexts which, for their importance, are key to building a personal and collective identity. Thus, the exhibit, understood in a holistic and integrated manner, takes on a symbolic-identitarian value for the observer, promoting its knowledge, valuation, conservation and communication. The heritage element becomes resource, object and content (Cuenca, Estepa and Martín, 2011), a means to heritage education and an end in itself, as an agent potentially bearing identity values.

The museum is a privileged space in which to frame the relationship between people and patrimonial assets, a space that allows visitors to establish a direct, personal and emotional communication with the exhibits, in parallel to the primary interest of the museum, aimed at the general public. This communication establishes, in the words of A. Rechená (2011: 176), *a ligação entre o passado e o presente* thanks to those objects which *têm uma função de documento com valor simbólico*. In the introduction to this article we acknowledge the role of the museum in heritage education, although it is still occasionally treated as a space for passive transmission of knowledge, one-way and without interchanges.

Another different question is whether the museum manages to encourage the visitor to consider interpreting what is exhibited, regardless of the modality adopted to do so. Knowing whether it feels the need to question or question itself, in a process of assimilation that sets out from a “taught” history, with the connotations and limitations that this implies, and ideally, encourages the questioning of the facts, their interpretation and their inclusion in the personal imagination. Voltaire

(1774: 177-178), wrote that “this” History *attempts to discover what were the dominant radical vice and virtue of a nation; why it has been powerful or weak at sea (...)*.

We interpret the museum in its educational role as a space that allows the realisation of actions aimed at construction by the spectator of the present based on the past. The museum is seen, therefore, as a key to achieving a historical awareness, construction of the past per se through exploration of the cultural assets we find there. This historical awareness comes partly conditioned by the family and cultural surroundings, and of course the school, as recalled by Lee (2004), the place where we learn about a version of the past. *We see according to what we know and make sense according to what we see. This way, we construct our meanings, but not definitively. The construction of meanings depends on how we relate the past with the present*” (Hooper-Greenhill, 1999: 13).

And this question is essential part of heritage education. There is increasing awareness of the possibilities offered by the museum as an educational space in which to carry out innovative and dynamic proposals that arouse emotions in the visitor/student. Students, with suitable guidance, can develop their own knowledge through this resource, constructing a meaningful learning to the extent that they are involved in the process. The communication process established between the visitor and the museum has been covered and described by Martín (2012). In her doctoral thesis, she stresses the importance of the research focused on the analysis of activities and materials that museums and heritage institutions to offer school audiences, and which guides the current practical proposal, under the title: “A voyage in time. History in the Museum: educational space for a dynamic intervention”.

5. THE OBJECT AS A DYNAMIC TOOL FOR INTERVENTION

One of the main knowledge areas that can be developed in the museum is Social Sciences. Our proposal revolves around an age that can take on a life of its own in the museum space - the era of great transoceanic voyages. For example, the working proposal features 14th century Portugal, focusing on the figure of Enrique, Infante de Sagres.

There is no doubt about the primacy identified with Portugal in those initial ocean voyages, nor its importance and relevance in subsequent events, such as the meeting of two worlds which changed the world view.

The heading of our proposal is as follows: *A Voyage in Time. Constructing a history in the Museum*.

Some of the questions we wish to answer are as follows: What was the image of the world in the 14th century? How was it represented? What were mankind’s concerns about it? How did technical progress affect nautical projects? What consequences did it have on the current global setup? Can analysing past events help us resolve current questions? Can museum exhibits help us respond to these questions?

The possibilities offered by the museum space allow us to adapt this project to different educational cycles. The aim is to promote awareness of heritage, mimicking it to transport ourselves to a particular period of history.

To achieve our goal, we propose a number of activities:

- Initially: Introducing the working theme, contextualising the contents to be developed. To this end, once in the museum, we shall ask the students a series of questions to assess their preconceptions. What is a museum? What objects can we find in them? Why are they preserved? What do they represent in our history? What is heritage? What is it for? Can help us to answer the question “Who was Infante Don Enrique”? How important were the 14th century expeditions for Portugal? And for the world? What do we know about the instruments used by the navigators? What is an astrolabe? And a nautical chart?...

Then, we explain to the students how the session will be carried out. We shall visit the museum to get acquainted with this space and the objects it contains and which are of interest for the workshops that will make up the project.

- In development: We construct, research, learn... The class will be divided into work groups, giving each one a task to carry out (Figure 5).

Figure 5: Task distribution: activities development. Own development



Following this research activity, information will be pooled to set out a frame of reference that allows a global overview of our voyage. Next, we shall prepare the instruments, from the most basic to the most complex, depending on the students' educational level, that we will have seen in the museum: nautical chart, quadrant, model ship, compass, ships log, apparel, gear ... and give them voice.

- **Synthesis:** We pool all the information from the tasks performed. We compile what is learnt and draw conclusions. To disseminate our work, we present the object prepared to the public, tell their story, explain their use and introduce them in the context proposed.

As a synthesising activity, in subsequent sessions we can perform a historical re-enactment, which would require some basic research to enable us to understand what the different characters in our story were like and how they lived, related to each other and thought. This will let us put the instruments created into practice, giving way to an action-research process that allows a significant and comprehensive learning experience.

6. HISTORICAL RE-ENACTMENT AS A TEACHING RESOURCE

The use of alternative scenarios for the development of teaching and learning processes is becoming increasingly commonplace. We find an evolution of learning environments in the formal field ranging from the exclusive use of an ordinary classroom to the utilisation of different installations in the locality (library, parks, museums, etc.). On the other hand, the range of activities proposed expands into new types of proposal, leaving behind approaches using only the textbook approach through curricular material.

In our work, we propose an innovative and dynamic activity, which by proposing several tasks guided by an innovative and alternative methodology such as action-research, will be completed in what is known as historical re-enactment.

We set out from the concept of historical re-enactment as an educational, recreational, cultural and social activity based on the re-enactment of various aspects, events, that occurred in the past. To this end, we try to reproduce the atmosphere of a given era.

From the educational point of view, the proposal of these activities is enriching, as the students have the main and fundamental role in constructing the necessary knowledge, which provides them with a comprehensive overview of historical events. To carry out the historical re-enactment, students must be fully introduced in the period to be represented, studying the day-to-day life, ideologies, beliefs, society, economics, language, literature, musical works and other aspects. Given the complexity of this proposal, several activities must be carried out to achieve it, such as documenting; investigating sources such as literature, art, historical studies; drawing up the instruments needed for dramatization, clothing, to reconstruct a particular event, etc. In short, all those activities aimed at development of historical recreation of the selected period. (De Paz and Ferreras, 2010).

To carry out a historical re-enactment proposal, it must be scheduled and carefully planned by the educational team taking part. The wide variety of activities described should be developed from a multidisciplinary teaching and learning approach covering several fields of study. We must not lose sight of the educational objectives, which must be incorporated into the curriculum development of the centre that proposes it.

Through the implementation of these proposals, the students acknowledge their own identity, tradition, history and heritage. Prats (2001) or Buesa (2001) consider the importance of Heritage as a gateway to the past and as such, it forms part of the development of an individual's own personal and social identity. Moreover, Copeland (2009) highlights the importance of heritage for citizen training and construction of personal and global identities. Through action-research, the students reconstruct their history, acknowledging their heritage, learning to appreciate and value it, thus proceeding to adopt a positive and active attitude in relation to its protection and conservation.

Action-research makes it possible for the students to enter into the conceptual, procedural and attitudinal contents, thus conforming their integral development. Working with educational contents in an integrated manner favours the student's personal and social growth, guiding them to words becoming aware of their own reality as global citizens, assuming the importance of coexistence in community.

7. REFLECTIONS

The importance of conceptualising museums as dynamic spaces is becoming increasingly evident. In them, the general public and students in particular can construct a meaningful learning through contact with the primary heritage object. The museum gives us the chance to contextualise our project by basing it on heritage.

If we understand the heritage education as the relationship between goods and people (Fontal, 2013), the museum becomes the ideal space for the construction of knowledge. The object acquires the status of source for the teaching and learning of Social Sciences.

To this approach must be added the potential of heritage education for achieving personal and social skills related to the development of emotional intelligence. Proposing activities where personal relationships are the basis of research is critical to the student's intrinsic development. Two cornerstones for the formulation of identity are thus combined: heritage education and emotional education.

We present an innovative proposal where history, museum, heritage education and school come together in a project to enable the knowledge of the past to help us understand the present and equip us with tools for the future.

REFERENCES

- Arouet, F.M. (1978). Nuevas consideraciones de la Historia. En *Opúsculos satíricos y filosóficos*. Madrid: Alfaguara
- Bisquerra, R. (2008). *Educación emocional y bienestar*. Barcelona: Wolters Kluwer Educación
- Buesa, D. (2001). Patrimonio cultural y ciencias sociales. Aspectos didáctico-prácticos para la enseñanza secundaria. En J. Morales, M.C Bayod, J. Prats, D. Buesa. *Aspectos didácticos de Ciencias Sociales*, 15, 171-183. Zaragoza: ICE-Universidad de Zaragoza.
- Calaf, R. (2009) *Didáctica del patrimonio. Epistemología, metodología y estudio de casos*. Gijón, Trea.
- Copeland, T. (2009). Archaeological Heritage Education: Citizenship from the Ground Up. En *Treballs d'Arqueologia*, Vol. 15, 9-20.
- Cuenca, J. M^a, Estepa, J. y Martín, M.J. (2011) El patrimonio cultural en la educación reglada. En *Patrimonio cultural de España*, n° 5, 44-57.
- Cuenca, J.M^a, Estepa, J. y Martín, M. J. (2016) El patrimonio como objeto de enseñanza y aprendizaje en la educación formal. En Fuentes S. (Coord.) *La educación patrimonial en Lanzarote. Teoría y práctica en las aulas*, 45-60. Lanzarote: IDP.
- Cuenca, J. M^a, Estepa, J. y Martín, M. J. (2017). Patrimonio, educación, identidad y ciudadanía. Profesorado y libros de texto en la enseñanza obligatoria. En *Revista de Educación*, n° 375, 136-152.
- De Paz, J. J. y Ferreras, M. (2010) La recreación histórica en el proceso de enseñanza-aprendizaje en las ciencias sociales: metodología, buenas prácticas y desarrollo profesional. En R. M^a Ávila, Rivero, M^a. P. y Pedro L. Domínguez (Coords). *Metodología de Investigación en Didáctica de las Ciencias Sociales*. Zaragoza: Institución "Fernando el Católico".
- Estepa, J. (Ed.) (2013). *La educación Patrimonial en la Escuela y el Museo: Investigación y Experiencias*. Huelva: Universidad de Huelva.
- Estepa, J., Domínguez, C. y Cuenca, J.M. (Eds.) (2001). *Museo y Patrimonio en la Didáctica de las Ciencias Sociales*. Huelva: Universidad de Huelva
- Estepa, J., Wamba, A.M. y Jiménez, R. (2005) Fundamentos para una enseñanza y difusión del patrimonio desde una perspectiva integradora de las Ciencias Sociales y Experimentales. *Investigación en la Escuela*, 56. Recuperado de <https://dialnet.unirioja.es/ejemplar/117410>.
- Fernández-Salinas, V. y Romero-Moragas, C. (2008). El patrimonio local y el proceso globalizador. Amenazas y oportunidades. En J. Alonso y M. Castellano (Eds.). *La gestión del patrimonio cultural. Apuntes y casos en el contexto rural andaluz*, 17-29. Granada: Asociación para el Desarrollo Rural de Andalucía (ARA).
- Fontal, O. E Ibañez, A. (2017). La investigación en Educación patrimonial. Evolución y estado actual a través del análisis de indicadores de alto impacto. En *Revista de Educación*, n° 375, 184-205.
- Hooper-Greenhill, E. (1999). *The educational role of the museum*, 2^aed. Londres: Routledge.
- Lee, P. (2004). Understanding history. En P. Seixas (Ed.), *Theorizing historical consciousness*. Toronto: University Press of Toronto, 129-164.
- Martín, M. J. (2012). *La educación y la comunicación patrimonial: una mirada desde el Museo de Huelva*. Tesis doctoral. Huelva: Universidad de Huelva.
- Mayer, J. y Salovey, P. (1990). *Emotional Intelligence*. Recuperado de http://www.unh.edu/emotional_intelligence/EIAssets/EmotionalIntelligenceProper/EI1990%20Emotional%20Intelligence.pdf
- Mayer, J. D. y Salovey, P. (1997) What is emotional intelligence? En P. Salovey y D. Sluyter (Eds). *Emotional Development and Emotional Intelligence: Implications for Educators*, 3-31). New York: Basic Books.
- Parreiras M^a. L. Grumberg, E. y Queiroz, A. (1999). *Guia Básico de Educação Patrimonial*. Brasília: Instituto do Patrimônio Histórico e Artístico Nacional, Museu Imperial.
- Recuperado de http://portal.iphan.gov.br/uploads/temp/guia_educacao_patrimonial.pdf
- Peinado M^a A. (Coord.) (2012). *I Congreso Internacional "El Patrimonio Cultural y Natural como Motor de Desarrollo: Investigación e Innovación"*. Sevilla: Universidad Internacional de Andalucía.
- Pinheiro, Á. de Paz (2015). Patrimônio cultural e museus: por uma educação dos sentidos. En *Educar em Revista I*, Curitiba, Brasil, n° 58, 55-67. Recuperado de www.scielo.br/pdf/er/n58/1984-0411-er-58-00055.pdf.
- Prats, J. (1997). *Antropología y patrimonio*. Barcelona: Ariel.
- Prats, J. (2001). Hacia una definición de la investigación en didáctica de las Ciencias Sociales. En F. J. Perales *et alii* (Eds). *Congreso Internacional de Didácticas Específicas. Las Didácticas de las Áreas Curriculares en el siglo XXI*. Vol. 1, 245-259. Granada: Grupo Editorial Universitario.
- Querol, M^a.A. (2010). *Manual de gestión del patrimonio cultural*. Akal: Madrid.

- Rechena, A. M^a D. (2011). *Sociomuseologia e género: imagens da mulher em exposições de museus portugueses*. (Tesis de Doutoramento). Lisboa: Universidade Lusófona de Humanidades e Tecnologias. Recuperado de www.museologia-portugal.net/files/upload/doutoramentos/aida_rechena.pdf.
- Santacana, J. (2007). Museografía didáctica, museos y centros de interpretación del patrimonio. En J. Santacana y N. Serrat, *Museografía didáctica*. Barcelona: Ariel, 395-471.
- Thorndike, E.L. (1920). Intelligence and its issues. En *Harper's magazine*, nº 140, 227-235.

A TEORIA DA MENTE EM INDIVÍDUOS SOCIALMENTE ANSIOSOS E NÃO-ANSIOSOS – AVALIAÇÃO DA DIMENSÃO SÓCIO-PERCETIVA

Patrícia Correia

Departamento de Psicologia e Ciências da Educação, Universidade do Algarve
(a45017@ualg.pt)

Verónica Rijo

Departamento de Psicologia e Ciências da Educação, Universidade do Algarve
(a44497@ualg.pt)

Alexandra Gomes

Departamento de Psicologia e Ciências da Educação, Universidade do Algarve; CIEO - Research Centre for Spatial and Organizational Dynamics
(asgomes@ualg.pt)

RESUMO

A Teoria da Mente assume importância na explicação do mecanismo que permite a reflexão, compreensão e predição tanto do próprio comportamento, como do outro. Entre os vários modelos, o mais estudado é o que diferencia duas componentes: a sócio-percetiva (capacidade para decodificar o estado mental dos outros) e a sócio-cognitiva (capacidade de raciocinar acerca dos estados mentais dos outros).

Os indivíduos com Ansiedade Social parecem ter dificuldade em prever com exatidão os estados mentais dos outros. Este estudo tem como objetivo verificar a existência de um compromisso na leitura de pistas sociais em indivíduos identificados como socialmente ansiosos. Deste modo, compararam-se as respostas de indivíduos socialmente ansiosos e não ansiosos numa prova de leitura de pistas sociais, procurando avaliar o compromisso, ao nível da dimensão sócio-percetiva.

O estudo foi efetuado em dois momentos: no primeiro recolheram-se 177 respostas para apurar indivíduos com ansiedade social. O segundo incluiu a aplicação de uma bateria de provas, para aplicação de critérios de exclusão da amostra final. A amostra final ficou composta por 39 participantes.

Contrariamente ao preconizado pela teoria, os principais resultados não demonstraram a existência de défices na leitura de pistas sociais nos indivíduos socialmente ansiosos, o que pressupõe que o défice observado na literatura talvez tenha origem na dimensão sócio-cognitiva.

Palavras-chave: Teoria da Mente, Ansiedade Social, Défices, Sócio-percetiva.

1. INTRODUÇÃO

A interação humana baseia-se na capacidade de lermos e interpretarmos os comportamentos dos outros. Esta habilidade integrante da cognição social, que estrutura a forma como percebemos, interpretamos e explicamos os estados mentais e comportamentos dos outros, denomina-se Teoria da Mente.

A Teoria da Mente compreende um mecanismo inato que permite ao ser humano refletir; compreender e prever o seu próprio comportamento, assim como o comportamento do outro.

O estudo da Teoria da Mente ganhou amplitude com a exploração do conceito num estudo realizado com chimpanzés (Premack & Woodruff, 1978). A aplicação das provas que implicavam a Teoria da Mente permitiu compreender que estes animais possuíam as mesmas capacidades do ser humano para inferir acerca dos estados mentais dos outros e do próprio, sem serem diretamente observáveis.

Ao longo do tempo, a Teoria da Mente acabou por se estruturar e ser desenvolvida sob diversas perspetivas. A principal teorização acerca desta capacidade evidencia duas distintas componentes: a sócio-percetiva e a sócio-cognitiva (Tager-Flusberg & Sullivan, 2000). A sócio-percetiva relaciona-se com a integração de pistas no contexto social, fazendo referência a avaliações rápidas acerca do estado mental dos outros, através de simples expressões faciais e corporais, por exemplo. A sócio-cognitiva refere-se à capacidade de raciocinar acerca dos estados mentais dos outros, de forma a dar-lhes sentido.

Todavia, o estudo acerca da Teoria da Mente levou a que houvesse uma necessidade de aprofundar o conhecimento acerca da mesma. Dado o facto de ser uma capacidade humana, procurou-se estabelecer uma ligação entre o desenvolvimento da Teoria da Mente e a maturação do indivíduo (Carpendale & Lewis, 2004; Scholl & Leslie, 1999; Carlson, Moses, & Hix, 1998). Assim, diferentes teorias emergiram e expuseram várias perspetivas. Por um lado, a abordagem sócio-construtivista coloca a socialização como fator determinante. Por outro lado, outros teóricos salientam a importância do desenvolvimento das funções executivas. Também existe a possibilidade de se relacionar com a maturação de certos mecanismos neurológicos.

O crescente interesse em compreender a importância que esta habilidade assume na vida do ser humano permitiu a exploração e desenvolvimento de provas que permitissem a avaliação desta capacidade. Consequentemente, assumem-se

algumas provas como relevantes para avaliar a Teoria da Mente, como por exemplo o *Reading The Mind in the Eyes Test* (Baron-Cohen, Wheelwright, Hill, Raste, & Plumb, 2001), o *Faux Pas Test* (Stone, Baron-Cohen, & Knight, 1998) e o *TOM Picture Stories Task* (Brune, 2003).

A Teoria da Mente está interligada não só com o próprio indivíduo, mas também com o contexto social, necessitando assim o sujeito de procurar apreender o que o ambiente apresenta. Contudo, esta nem sempre é uma tarefa simples. Uma das condições passíveis de modificar a forma como apreendemos as pistas sociais, criando um défice na Teoria da Mente, é a Perturbação de Ansiedade Social (Hezel & McNally, 2014). Esta perturbação pode produzir dificuldades na avaliação que é feita pelos indivíduos acerca de comportamentos, desejos, atitudes e crenças dos próprios e dos outros, no contexto social. Mais precisamente, os indivíduos ansiosos processam os estímulos ou situações de forma enviesada, avaliando-se a si mesmos de modo mais negativo e considerando que os outros também se avaliam de forma mais negativa. Para além disso, podem existir outros fatores condicionantes, que conjugados com a Ansiedade Social, podem ter influência na Teoria da Mente. Deste modo, a capacidade da Teoria da Mente em indivíduos que manifestem a presença de Ansiedade Social pode apresentar défices que acabam por influenciar o indivíduo no contexto social.

O estudo da Teoria da Mente é, assim, um tema atual e com a necessidade de explorar as consequências das falhas deste mecanismo importante para a vida social do ser humano.

O objetivo deste estudo é verificar se existem défices ao nível da componente sócio-percetiva da Teoria da Mente em indivíduos com Ansiedade Social. Este objetivo será operacionalizado através de um estudo *quasi-experimental*, em que se pretende avaliar a capacidade de análise das pistas sociais de indivíduos socialmente ansiosos, tendo como base um grupo de controlo de indivíduos não ansiosos.

Inicialmente será apresentado um breve enquadramento teórico acerca da Teoria da Mente e a própria evolução do conceito em diversas áreas. Em seguida, será exposto o método utilizado para a prossecução do objetivo deste estudo, sendo posteriormente apresentados os resultados obtidos. Por fim, será apresentada uma breve discussão sobre os resultados obtidos e apresentadas sugestões para estudos futuros.

2. ENQUADRAMENTO TEÓRICO

Os estudos com animais (e.g. Köhler, 1925) foram criando o caminho para o conhecimento que temos hoje acerca da Teoria da Mente. O surgimento deste termo foi cunhado pelo estudo de Premack e Woodruff, em 1978, no qual, através da resolução de problemas, foi possível observar que os chimpanzés, tal como os humanos, tinham a capacidade de inferir acerca dos estados mentais dos outros e dos próprios.

A partir da definição do conceito da Teoria da Mente, a comunidade científica interessou-se cada vez mais pelo seu estudo. Era emergente compreender como esta capacidade se desenvolvia e o impacto que tinha na vida do ser humano.

Começou-se por explorar através de pequenas tarefas a capacidade de inferir acerca de falsas crenças em populações de diferentes faixas etárias (e.g. Carpendale & Lewis, 2004; Keyser, Linn, & Barr, 2003; Scholl & Leslie, 1999; Carlson *et al.*, 1998). Salienta-se que o primeiro estudo conduzido com crianças foi por Wimmer e Perner (1983), que concluíram que as crianças à volta dos quatro anos eram capazes de prever uma ação com base numa falsa crença. Para além disso, a Teoria da Mente foi abordada em diferentes populações clínicas, como por exemplo em indivíduos com autismo (e.g. Baron-Cohen, Leslie, & Frith, 1985; Colle, Baron-Cohen, & Hill, 2006; Montgomery *et al.*, 2016), com esquizofrenia (e.g. Corcoran & Frith, 2003; Brune, 2005; Couture, Penn, & Roberts, 2006), com Perturbação de Ansiedade Social (e.g. Samson, Lackner, Weiss, & Papousek, 2012; Hezel & McNally, 2014), entre outros. Estes, por sua vez, permitiram aos investigadores compreender os obstáculos que se relacionam com a Teoria da Mente e proporcionar um maior conhecimento acerca da forma de lidar com défices nesta capacidade.

A incidência do foco na Perturbação de Ansiedade Social em estudos da Teoria da Mente prende-se com o facto de os défices poderem ser significativos para o indivíduo e poderem condicioná-lo. Um dos modelos cognitivistas basilares que auxilia a compreensão da Perturbação de Ansiedade Social foi explorado por Rapee e Heimberg (1997). Este modelo é percecionado como um ciclo que o indivíduo, numa situação social, forma uma representação mental da sua própria aparência e do seu comportamento que são observáveis pelo outro(s), a partir da memória a longo prazo, de pistas internas e externas. São, então, canalizados os seus recursos atencionais tanto para a representação criada, como para qualquer ameaça percebida no ambiente envolvente, que pode advir da comparação entre esta mesma representação e do que seria expectável socialmente. Por sua vez, é gerado um julgamento da probabilidade e das consequências de uma avaliação negativa por parte do(s) outro(s) e iniciam-se sintomas de ansiedade em diversos níveis: comportamental, cognitivo e físico. Simultaneamente, são percebidas estas pistas internas e os indicadores de uma avaliação negativa. Em seguida, é iniciado de novo o ciclo.

No que diz respeito à relação entre a Perturbação de Ansiedade Social e a Teoria da Mente, verifica-se que existe um condicionamento no momento de interpretar as pistas sociais. Os sujeitos com este diagnóstico interpretam os estímulos neutros ou ambíguos de forma mais ameaçadora do que os sujeitos não ansiosos, afetando, deste modo, a Teoria da Mente (Hezel & McNally, 2004). Todavia, pode ocorrer a possibilidade de se verificar comorbidade com a depressão, dada a estreita relação com a Perturbação de Ansiedade Social (Inoue, Yamada, & Kanba, 2006; Beesdo *et al.*, 2007; Wang *et al.*, 2008; Washburn, 2012; Kircanski, Joormann, & Gotlib, 2015).

Como ser social, o Homem necessita de analisar as pistas sociais que lhe permitem interpretar o mundo envolvente. Assim, a existência de défices na Teoria da Mente necessita de ser estudado, de forma a compreender a sua origem e a explorar as possibilidades de colmatar os mesmos.

2.1 A Teoria da Mente

A Teoria da Mente é um mecanismo que permite o desenvolvimento e a integração dos indivíduos, tornando-os capazes de perceber e explicar aquilo que os próprios e os outros estão a sentir ou a pensar, de modo a compreender e prever o comportamento (Hezel & McNally, 2014). Esta capacidade permite a criação de inúmeras conceções acerca do outro, mais precisamente dos seus estados mentais e também a explicação dos seus comportamentos passados e antecipação e predição das suas ações futuras (Keyser, Lin, & Barr, 2003). Não é em vão que se crê que a Teoria da Mente constitui um mecanismo inato que evoluiu a partir de vários processos cognitivos preexistentes no ser humano, que acabaram por contribuir para o seu desenvolvimento, isto é, para o desenvolvimento da capacidade de mentalização. Algumas das funções, inerentes a esta capacidade, incluem a habilidade de distinguir entre entidades animadas e inanimadas, a habilidade de partilhar atenção seguindo fixamente outro agente, a habilidade de representar ações dirigidas aos objetivos e a habilidade de distinguir entre as próprias ações e as dos outros (Gallagher & Frith, 2003). Torna-se, assim, um auxílio fundamental na interação humana e social, constituindo um alicerce fundamental na condição humana.

A capacidade para compreender o comportamento dos outros, no que diz respeito aos seus objetivos e crenças, requer a existência de algumas expectativas sobre os mesmos objetivos e crenças. Estas expectativas derivam do conhecimento geral que se tem acerca do mundo, do conhecimento acerca daquela pessoa e das próprias observações daquilo que a outra pessoa faz (Gallagher & Frith, 2003).

Apesar da Teoria da Mente ser uma capacidade automática do ser humano, o seu desenvolvimento está ligado à maturação do sujeito. (e.g. Keyser *et al.*, 2003; Frith & Frith, 2003).

Autores como Uta Frith e Christopher Frith (2003) constataram que as crianças com apenas um ano e meio de idade já são capazes de entender que os outros têm intenções, sendo capazes de tomar atenção e de prever o seu comportamento através de pistas comunicativas. Mesmo antes, por volta dos doze meses de idade, podem ser evidentes algumas aquisições como a representação dos agentes de forma separada, de objetivos e do significado de alcançar os objetivos (Frith & Frith, 2003).

Entre os dezoito meses e os dois anos de idade pode-se observar o desenvolvimento da verdadeira compreensão da atenção partilhada, da imitação deliberada, da apreensão da intenção do adulto que transmite uma mensagem verbal e uma possível compreensão de falsas crenças a um nível implícito (Frith & Frith, 2003).

Por volta dos cinco anos já há uma evolução das capacidades inerentes à Teoria da Mente (e.g. Keyser *et al.*, 2003). Contudo, a capacidade para interpretar os estados mentais dos outros desenvolve-se com a idade, estando esta associada ao desenvolvimento de algumas funções cognitivas como a linguagem, a memória, o autocontrolo e a representação temporal (Sodian & Kristen, 2010; Perner & Lang, 1999); assim como a funções executivas mais específicas, como a memória de trabalho, a inibição ou desinibição do controlo e a flexibilidade cognitiva (Carlson, Koenig, & Harms, 2013).

Por volta dos seis anos, quando é iniciada a frequência da escola, as crianças já são capazes de observar que os outros podem não saber acerca de algo que eles próprios sabem (Marvin, Greenberg, & Mossler, 1976) ou de que os outros podem ter falsas crenças (Perner, Leekam, & Wimmer, 1987; Wimmer & Perner, 1983; Zaitchik, 1991). Já por volta dos oito anos, a criança é capaz de perceber que a pessoa que está aparentemente desocupada com o exterior pode continuar preocupada com a sua atividade mental interior; sendo explicada pela compreensão do curso da atividade construtiva mental e da ideia intuitiva do fluxo da consciência (Sodian & Kristen, 2010).

Face à génese do desenvolvimento da Teoria da Mente, emergem diferentes teorias. Alguns teóricos descrevem os estágios do desenvolvimento, como no caso de Bartsh e Wellman (1995). Estes autores afirmaram que o primeiro estágio ocorre por volta dos dois anos, quando as suas predições são realizadas com base nos desejos. Por sua vez, o segundo estágio é desenvolvido aos três anos de idade, no qual são passadas a ter em conta as crenças. Por último, um ano mais tarde, as crianças começam a compreender que as crenças podem ser enquadradas nos desejos e que, consequentemente, podem motivar o pensamento e o comportamento humano.

A abordagem sócio-construtivista (Carpendale & Lewis, 2004) postula que o desenvolvimento da Teoria da Mente ocorre através da socialização, iniciando-se com a relação entre bebé e mãe, progredindo para a tríade entre bebé, mãe e objeto.

Outros teóricos desenvolvimentistas afirmam que a evolução da Teoria da Mente está dependente das capacidades executivas, uma vez que a aquisição de competências como o planeamento, a memória de trabalho ou o controlo inibitório constituem aspetos que se encontram relacionados com a compreensão dos estados mentais (i.e. Teoria da Mente) [Hughes, 1998]. Ainda existe outra teoria que indica que o desenvolvimento decorre aliado à maturação de sucessivos mecanismos cognitivos específicos e modulares (Scholl & Leslie, 1999).

Alguns estudos na área da neurologia apontam para o facto de certas regiões do cérebro responderem quando é solicitado aos indivíduos que infiram acerca do estado mental de outro indivíduo e quando são levados a refletir acerca do seu próprio estado mental (Samson *et al.*, 2012). Estas descobertas sugerem a hipótese de existir uma base biológica comum para o processo mais elementar de inferir acerca dos estados internos (Gentilli *et al.*, 2009; Oberman & Ramachandran, 2007). Acredita-se que as áreas implicadas na Teoria da Mente tratam-se do córtex anterior paracingulado, o sulco temporal superior e ambos os pólos temporais (Gallagher & Frith, 2003). Existem algumas evidências que comprovam esta hipótese, como o facto de, na presença de ansiedade social, estes circuitos apresentarem défices que se encontram relacionados tanto com a cognição social, como com a avaliação do seu próprio estado mental (Gentilli *et al.*, 2009).

2.2 As componentes da Teoria da Mente

A Teoria da Mente pode ser subdividida em duas componentes, mais precisamente a componente sócio-percetiva e a sócio-cognitiva (Tager-Flusberg & Sullivan, 2000). A primeira compreende a capacidade de descodificar o estado mental dos outros baseando-se na informação disponível e observável, através de pistas sociais. A segunda traduz-se na capacidade

de raciocinar acerca dos estados mentais dos outros, de modo a inferir ou predizer as ações dos outros. De forma mais aprofundada, Tager-Flusberg e Sullivan (2000) descreve a componente sócio-percetiva como estando mais relacionada com a perceção e conhecimento do próprio sujeito, permitindo-lhe distinguir entre objetos e pessoas e, ainda, realizar julgamentos rápidos acerca dos estados mentais dos outros com base em expressões faciais e corporais. No que diz respeito à componente sócio-cognitiva, esta engloba a compreensão, mediante um sistema representacional (Tager-Flusberg & Sullivan, 2000) que depende das capacidades cognitivas, como por exemplo a linguagem.

O ser humano tem a capacidade de reconhecer os outros através das características faciais e do tom de voz, o que lhe confere um comportamento social adaptado (Zilbovicius *et al.*, 2006). Para além disso, o ser humano é capaz de, através da face, não só reconhecer, mas também categorizar emoções, denotar a configuração dos lábios de modo a interpretar aquilo que a face está a transmitir (Langton, Watt, & Bruce, 2000). A interpretação do olhar também auxilia no comportamento social, pois regula muitos dos aspetos relacionados com este, tal como discernir quando é a sua vez de falar através do fornecimento de informação, na expressão de intimidade e no exercício do controlo social (Klinke, 1986).

É importante para o ser humano dar sentido às ações do outro, com o intuito de conseguir prever o que fará a seguir (Langton *et al.*, 2000). Segundo o modelo de Baron-Cohen (1997) existem quatro componentes associados que permitem a leitura do meio social. Estes componentes são o detetor de intencionalidade, o detetor da direção do olhar, o mecanismo de atenção partilhada e o mecanismo da Teoria da Mente. O primeiro é um mecanismo de perceção primitiva, que interpreta os estímulos de movimento, analisando os desejos e objetivos. O segundo deteta a presença do olhar, depois calcula a direção do olhar com base na posição da íris e atribui um estado mental ao “ver” que os olhos estão direcionados para si ou para outros objetos ou agentes. O terceiro mecanismo tem como principal função identificar quando o próprio e outro estão a prestar atenção à mesma coisa. Por sua vez, a Teoria da Mente complementa este processo, na medida em que permite inferir uma gama de estados mentais através de comportamentos observáveis. Este conhecimento do estado mental é integrado e pode ser utilizado para explicar e prever o comportamento.

Todavia, no meio social, todas as pistas funcionam como importantes para desvendar tanto o próprio comportamento, como o dos outros e para auxiliar na toma de decisões relativamente à atenção. Estas pistas englobam, como referido, a direção do olhar, o movimento da cabeça e o movimento da boca, o que faz referência tanto a aspetos verbais, como a aspetos não-verbais (Allison, Puce, & McCarthy, 2000).

Existem algumas evidências que apontam para o facto dos indivíduos com défices na Teoria da Mente apresentarem um viés atencional para estímulos negativos (Ribeiro & Fearon, 2010), bastante evidente no processamento de expressões faciais.

2.3 Défices na Teoria da Mente

A deteção das dificuldades inerentes à utilização da Teoria da Mente acaba por permitir uma melhor compreensão de determinadas alterações cognitivas e comportamentais.

A existência de défices na Teoria da Mente pode prejudicar o desempenho social dos indivíduos, sendo evidente em casos de presença de autismo (Baron-Cohen, 1990; Baron-Cohen & Belmonte, 2005; Baron-Cohen *et al.*, 1985; Frith, 1989) e de esquizofrenia (Brune, 2005; Couture *et al.*, 2006).

O autismo trata-se de uma perturbação biológica que se parece caracterizar por um défice seletivo na Teoria da Mente, que é capaz de explicar muitos dos défices de comunicação, socialização e imaginação que se manifestam em indivíduos com esta perturbação (Gallagher & Frith, 2003).

No caso dos indivíduos com esquizofrenia, estes experienciam as situações sociais de forma diferente, comparativamente àqueles que não possuem a perturbação (Lysaker *et al.*, 2010). Alguns sintomas como os delírios de referência e os delírios de perseguição são caracterizados por uma má interpretação do comportamento ou das intenções de outra pessoa; sendo assim estes sintomas o resultado de um défice na Teoria da Mente. Os pacientes com este diagnóstico apresentam um comportamento muito semelhante aos pacientes com autismo, no que diz respeito à Teoria da Mente (Corcoran, Mercer, & Frith, 1995).

No que diz respeito à Perturbação de Ansiedade Social, com a presença de défices na Teoria da Mente, são evidentes algumas dificuldades, como a interpretação e o raciocínio acerca das intenções dos outros, o que incrementa a ansiedade experienciada em situações sociais (Hezel & McNally, 2014). Deste modo, existe uma acrescida importância em compreender de que forma esses défices afetam os indivíduos com Perturbação de Ansiedade Social, permitindo explorar formas de alterar essa condição.

A depressão é uma perturbação que também pode afetar o desempenho em tarefas da Teoria da Mente, podendo até decorrer pela presença da Perturbação de Ansiedade Social. Assim sendo, é importante verificar a existência de comorbilidade de modo a compreender adequadamente o que implica os défices na Teoria da Mente. No que diz respeito à depressão, o estudo do impacto desta na Teoria da Mente ainda é um tema pouco explorado e que demonstra resultados inconclusivos e contraditórios. Todavia, o estudo de Wolkenstein, Schönenberg, Schrim e Hautzinger (2011), demonstrou que na componente sócio-percetiva, isto é, na descodificação do estado mental dos outros, não ocorrem défices significativos em indivíduos deprimidos; porém estes demonstram uma maior precisão a detetar os estímulos negativos. Já na componente sócio-cognitiva, ou seja, no raciocínio do estado mental dos outros de forma a formar uma razão válida para esse estado, os indivíduos depressivos revelaram défices no que diz respeito à Teoria da Mente. Deste modo, torna-se pertinente aprofundar esta questão e entender de que forma a Teoria da Mente pode estar afetada pela presença desta perturbação.

Concluindo, devido à abrangência do tema da Teoria da Mente, torna-se emergente a necessidade de explorar os seus efeitos e consequências, de modo a compreender como se processam e como afetam o desempenho social e cognitivo.

2.4 A Perturbação de Ansiedade Social

A ansiedade é gerada pela exposição a situações de *stress*, estando relacionada com perceção do estímulo, por parte do indivíduo, ou pela forma como este avalia a situação. No caso concreto da Perturbação de Ansiedade Social, esta é caracterizada por um medo persistente e pelo evitamento de situações sociais (Hezel & McNally, 2014).

A Perturbação de Ansiedade Social é marcada por um viés cognitivo, tanto no início como na manutenção da perturbação, isto é, existe uma monitorização desadequada dos recursos cognitivos e atencionais ao interpretar o estímulo ou a situação social (Constans, Penn, Ihen, & Hope, 1999). Esta perturbação engloba um conjunto de três componentes. O primeiro diz respeito aos aspetos somáticos e cognitivos que se ativam através da perceção ou interpretação do perigo que constitui determinada situação social para o indivíduo; evidenciados através do rubor, taquicardia, sudação e dificuldades de concentração, por exemplo. Por sua vez, estes sintomas aumentam ainda mais a ansiedade pela maior perceção de perigo que decorre daquela situação, acabando por criar um ciclo. A segunda componente faz referência à atenção auto-focada, que consiste numa focalização acentuada através da observação e monitorização exaustiva e pormenorizada relativa a si mesmo enquanto objeto social; colocando em evidência os sintomas somáticos e cognitivos, que acabam por acentuar os sintomas e por levar ao processamento inadequado dos sinais de comunicação emitidos pelos outros. O último componente associa-se à criação de uma impressão ou imagem de si próprio, que pressupõe que corresponde à forma como os outros o vêem ou pensam acerca dele; o que revela que a sua atenção se centra nos seus sintomas somáticos e cognitivos e não nos sinais e informações acerca de como o outro o pode perceber (Pinto-Gouveia, 2000). Para além disso, os altos níveis de ansiedade social estão associados a um fraco desempenho em testes de cognição social (Sutterby *et al.*, 2012).

O estudo realizado por Hezel e McNally (2014) sugere que os indivíduos com Perturbação de Ansiedade Social interpretam estímulos neutros e ambíguos como mais ameaçadores do que as pessoas não ansiosas. Para além disso, os indivíduos com Perturbação de Ansiedade Social percebem-se a si mesmos de forma mais negativa e acreditam que são avaliados de forma negativa socialmente. Assim, é possível depreender que a Perturbação de Ansiedade Social pode ter repercussões negativas a Teoria da Mente, uma vez que as pessoas ansiosas acabam por avaliar com dificuldade os estados mentais dos outros. Deste modo, o presente estudo tem como finalidade avaliar se a ansiedade social afeta o desempenho em tarefas da Teoria da Mente.

3. OBJETIVO

O estudo da Teoria da Mente tem sido amplamente investigado em diversas áreas, de forma a compreender o seu impacto no quotidiano do ser humano.

De acordo com os estudos neurológicos efetuados (e.g. Gallagher & Frith, 2003; Samson *et al.*, 2012), verificou-se que a presença de ansiedade social condiciona algumas áreas cerebrais que estão associadas à Teoria da Mente; tanto a nível da cognição social, como também na avaliação do seu próprio estado mental.

A componente sócio-percetiva baseia-se nas pistas sociais para prever o comportamento humano. Assim, a Teoria da Mente, que compreende esta componente, permite observar e prever os comportamentos sociais. Torna-se, deste modo, necessário compreender se esta componente é afetada pela presença da ansiedade social.

Os défices na Teoria da Mente encontram-se, muitas vezes, associados à presença de perturbações psicológicas. A literatura tem colocado em destaque várias perturbações, como o autismo, a esquizofrenia, a ansiedade social e a depressão. Assim, a partir do presente estudo, procura-se verificar se a ansiedade social influencia o desempenho na Teoria da Mente.

O presente estudo tem como objetivo averiguar a existência de diferenças nas provas que avaliam a Teoria da Mente entre indivíduos que manifestam a presença de ansiedade social e indivíduos não ansiosos; tendo em conta a componente socio-percetiva. Mais precisamente, pretende-se verificar a existência de um compromisso na leitura de pistas sociais em indivíduos ansiosos.

Deste modo, espera-se que o grupo de indivíduos com ansiedade social apresentem défices na leitura de pistas sociais, comparativamente ao grupo de controlo.

4. METODOLOGIA

Foi realizado um estudo de natureza quantitativa, com um desenho de estudo *quasi-experimental*. Este tipo de estudo empírico implica a manipulação das variáveis independentes, fazendo com que a amostra não seja aleatória, dada a necessidade de obter uma amostra de controlo e uma amostra que apresentasse ansiedade social. Assim, neste caso, foi controlado o grau de ansiedade (variável independente) dos participantes, através da constituição de dois grupos: um grupo com ansiedade social e outro sem ansiedade social.

As variáveis dependentes envolvidas neste estudo foram a idade, o género, a escolaridade, a profissão, a nacionalidade, o estado civil, o rendimento familiar, os dados psiquiátricos, o nível de ansiedade e as pontuações obtidas nos diferentes testes aplicados.

4.1 Amostra

Os participantes foram recrutados na Universidade do Algarve, assim como através de um questionário *on-line* à população em geral. A técnica de amostragem utilizada foi não probabilística por conveniência.

No total, na primeira fase do estudo, foram avaliados 177 participantes, com idades compreendidas entre os 18 anos e

os 65 anos, tanto do sexo feminino como masculino. No que diz respeito aos fatores de exclusão, estes centraram-se na presença de doença neurológica ou psiquiátrica.

Na segunda fase do estudo, foi possível recrutar apenas 39 participantes, segundo os fatores de exclusão e a disponibilidade individual.

4.2 Instrumentos

Com o objetivo de caracterizar a amostra, foi utilizado um questionário sociodemográfico, que incluía informações sobre a idade, género, escolaridade, profissão, nacionalidade, estado civil e rendimento familiar. Para além disso, foi utilizado também um questionário sobre questões psiquiátricas, que fazia referência a informações clínicas, como situações de acidentes vasculares cerebrais (A.V.C.), de epilepsia ou a existência de algum diagnóstico neurológico, psiquiátrico ou um psicológico.

A Escala de Ansiedade e de Evitamento em Situações de Desempenho e de Interação Social (EAESDIS; Pinto-Gouveia, Cunha, & Salvador, 2003) foi adaptada para a população portuguesa a partir do *Social Interaction and Performance Anxiety and Avoidance Scale*. É um instrumento que avalia o grau de ansiedade e de evitamento experienciado em situações sociais concretas. É constituído por 44 itens e para cada uma destas situações apresentadas é solicitado ao participante que avalie o desconforto ou ansiedade gerado, através de uma escala de 1 a 4 (1-Nenhum; 2-Ligeiro; 3-Médio; 4-Severo) e, para além disso, que indique o grau de evitamento perante a situação (1-Nunca; 2-Às Vezes; 3-Muitas Vezes; 4-Quase Sempre). No final, o participante deve ainda indicar cinco situações, das apresentadas, que lhe provoquem mais ansiedade (Pinto-Gouveia, 2000). No que diz respeito à cotação do instrumento, esta é feita através da soma dos itens assinalados pelos participantes, variando segundo a escala (de 1 a 4). A soma da cotação é feita tanto para a subescala de ansiedade, como para a subescala de evitamento perante as situações apresentadas, de forma independente. A pontuação total representativa de cada uma das subescalas de ansiedade ou de evitamento pode variar entre 44 e 176. Para a subescala de ansiedade, o ponto de corte situa-se em 115 e para a subescala de evitamento situa-se em 105, sendo apenas considerada a primeira para o estudo em questão. Acrescenta-se que este instrumento, para a subescala de ansiedade, apresentou uma elevada consistência interna ($r = 0,95$) em ambas as amostras (“normais” e fóbicos sociais); e para a subescala de evitamento, a amostra “normal” evidenciou uma consistência interna de $r = 0,94$ e a amostra de fóbicos sociais apresentou $r = 0,87$. Apesar da subescala de ansiedade demonstrar valores mais altos, ambas as subescalas apresentam uma boa fiabilidade temporal e discriminam a população de fóbicos sociais dos doentes com outros distúrbios ansiosos e da população normal (Pinto-Gouveia; Cunha & Salvador, 2003).

As Matrizes Progressivas de Raven (Série E) [Raven & Raven, 2001], originalmente denominado *Standard Progressive Matrices* (Bandeira, Alves, Giacometti, & Lorenzatto, 2004), foi adaptado para a população portuguesa por Simões (1994; cit in Almeida, 2009). É um instrumento que tem como objetivo a avaliação da capacidade mental geral. A última série deste instrumento contém doze itens. Cada item contempla um retângulo com um desenho, no qual falta uma parcela e em seguida são apresentadas oito hipóteses como resposta para completar a parcela em falta. Deste modo, o participante deve escolher de entre as hipóteses possíveis, aquela que pode ser considerada a resposta correta para completar o desenho. Relativamente à cotação, cada item respondido corretamente pelo participante obterá um ponto, podendo assim o resultado final variar entre 0 e 12 pontos. A pontuação total é observada de acordo com a escolaridade do participante. Quanto à consistência interna, os coeficientes de precisão variam entre os 0,80 e 0,93 (Almeida, 2009).

O *Beck Depression Inventory II* (BDI-II; Beck, Steer, & Brown, 1996, cit in Steer, Ball, Ranieri, & Beck, 1999) foi adaptado para a população portuguesa por Fernando Brochado e Ana Brochado (2008). É um instrumento que avalia a presença de sintomatologia depressiva. Consiste num questionário de autorresposta, com 21 questões que englobam itens relativos à tristeza, pessimismo, fracassos passados, perda de prazer, sentimentos de culpa, sentimentos de punição, auto-desinteresse; auto-criticismo, pensamentos suicidas, choro, agitação, perda de interesse, indecisão, desvalorização, perda de energia, mudança nos hábitos de sono, irritabilidade, mudanças de apetite, dificuldades de concentração, cansaço ou fadiga e perda de interesse sexual. Em cada item são apresentadas quatro a seis frases, das quais os participantes têm de selecionar aquela que melhor descreve a forma como se têm sentido nas duas últimas semanas, incluindo o dia atual. Por sua vez, essas frases refletem a gravidade do sintoma que está a ser avaliado, variando de 0 (baixo) a 3 (alto) a sua pontuação. Deste modo, os resultados totais podem apresentar-se entre 0 (mínimo) a 63 (máximo). De acordo com Beck, Steer e Brown (1996; cit in Brochado & Brochado, 2008), as pontuações globais de 0 a 13 revelam sintomatologia depressiva “mínima”; de 14 a 19 refletem sintomatologia depressiva “ligeira”; de 20 a 28 fazem referência a sintomatologia depressiva “moderada” e as pontuações acima de 29 representam sintomatologia depressiva “grave” ou “severa”. Salienta-se que este instrumento parece apresentar uma boa consistência interna, relativamente aos 21 itens, exibindo um valor de 0,89 (Brochado & Brochado, 2008).

O *Reading the Mind in the Eyes Test* (RMET; Baron-Cohen et al., 2001) foi adaptado à população portuguesa por Sousa (2010; cit in Sousa, 2012). Consiste numa prova que permite detetar emoções complexas a partir de pouca informação, na medida em que utiliza um conjunto de 36 imagens de olhares de indivíduos, com quatro palavras para opções de resposta. Assim, é solicitado ao participante que, das quatro opções, escolha apenas uma, sendo a que melhor descreve o que a pessoa na imagem está a sentir ou a pensar. Cada resposta correta assinalada pelo participante obtém um ponto e cada seleção de um estímulo distrator obtém 0 pontos. Deste modo, as pontuações totais podem estar distribuídas entre 0 e 36 pontos (Guimarães, 2013). No que diz respeito à validade discriminante, este instrumento revela-se independente de constructos como a inteligência, apresentando o valor de $r = 0,99$ (Baron-Cohen et al., 2001; cit in Sousa, 2012).

4.3 Procedimento

O processo de recolha de dados foi conduzida em duas fases distintas.

A primeira fase tinha como objetivo caracterizar a ansiedade e evitamento social dos participantes. Após terem dado por escrito o consentimento informado para participação nas duas fases do estudo, os participantes preencheram um questionário sociodemográfico e de historial clínico. Em seguida, completaram em autorrelato a Escala de Ansiedade e de Evitamento em Situações de Desempenho e de Interação Social (EAESDIS).

No segundo momento avaliativo, os participantes foram selecionados e, em seguida, foram contactados. De acordo com a disponibilidade individual, agendou-se a realização do procedimento experimental.

Os participantes foram informados acerca da duração média do procedimento e preencheram o consentimento informado, assim como o questionário sociodemográfico e sobre o historial clínico.

Em seguida, foram aplicadas as Matrizes Progressivas de Raven, mais precisamente, a série E, de modo a efetuar uma breve avaliação cognitiva. Os itens foram apresentados individualmente e foi solicitado ao participante que indicasse qual a resposta que considerava a mais correta para cada um. As respostas foram anotadas pelo examinador.

Posteriormente, foi efetuado o *Beck Depression Inventory II* (BDI-II), de modo a identificar a existência de comorbilidade. Foi solicitado que o participante lesse com atenção a instrução. O participante teve de responder a vinte e uma questões, de acordo com a forma como se tinha sentido nas últimas duas semanas, incluindo o dia atual.

Por último, procedeu-se à aplicação do *Reading The Mind in The Eyes Test* (RMET). Foi explicado a cada participante que teria de observar os pares de olhos apresentados individualmente, ler as quatro palavras que rodeavam os pares de olhos e escolher aquela que melhor descreveria o que a pessoa estaria a pensar ou a sentir. Para além disso, foi indicado que poderia consultar o glossário, caso não soubesse o significado de alguma palavra. Assim, realizou-se com cada participante um exemplo prático e depois de verificar que a prova tinha sido entendida, cada participante completou a prova de forma autónoma, assinalando as suas respostas na folha de respostas.

5. RESULTADOS

Na primeira fase do estudo foram recolhidos 177 questionários que correspondiam a uma amostra composta por 62,1% mulheres, maioritariamente solteiros (92,7%), com uma média de idades de 22,95 anos (DP=6,806) e com uma média de anos de escolaridades correspondente a 15,06 anos (DP=2,139). Acrescenta-se que 50% da amostra apresenta um rendimento mensal até 1200 euros por agregado familiar.

De acordo com o questionário que averiguava a existência de problemas de saúde verificou-se que nenhum participante apresentou um historial de Acidentes Vasculares Cerebrais. No entanto, foi verificado que um dos participantes sofreu de epilepsia, 9% já havia recorrido a consultas de neurologia, 7,9% já haviam consultado um psiquiatra, assim como já haviam sido diagnosticados com algum tipo de psicopatologia, sendo a mais comum a depressão e ansiedade.

Para verificar o grau de ansiedade em situações sociais foi utilizada a Escala de Ansiedade e de Evitamento em Situações de Desempenho e Interação Social. Foram somadas todas as respostas dadas aos diversos itens e, a partir destas, foram obtidos dois *scores*, um que indicava o desconforto e/ou ansiedade e outro a frequência de evitamento em situações sociais. O ponto de corte para a ansiedade situa-se em 115 pontos e para o evitamento em 105 pontos, mas para a seleção dos elementos para a segunda fase de recolha de dados, foi apenas considerado o ponto de corte para a ansiedade.

No que diz respeito aos valores obtidos pelos participantes na escala de ansiedade, a média de respostas situou-se nos 93,07 pontos (DP=21,47), sendo que a pontuação mínima correspondeu a 50 pontos e a pontuação máxima foi de 137 pontos. Acrescenta-se que dos 177 participantes, 25 pontuaram acima dos 115 pontos na escala de ansiedade social, dos quais 6 eram homens e 19 eram mulheres.

Foram comparadas as diferenças das médias de homens e de mulheres como se pode ver na tabela 1.

Tabela 1 - Diferenças de médias da ansiedade social entre homens e mulheres

Grupo	Média	Desvio-padrão	Mann-Whitney
Homem	136,33	17,154	U=41,500 , p=0,333
Mulher	128,74	10,038	

Apesar dos homens apresentarem uma média mais elevada para a ansiedade social, homens e mulheres não diferem significativamente na pontuação da escala de ansiedade social.

Depois de contactados todos os participantes, de modo a realizarem o conjunto de provas que contemplavam a segunda parte do estudo, foi apenas possível recolher uma amostra com um total de 39 participantes, com idades compreendidas entre os 18 anos e os 54 anos (M=23,32; DP= 8,100), dos quais 59,5% eram do sexo feminino.

Dos 39 participantes que efetuaram a segunda parte do estudo, a maioria eram solteiros (94,6%), havendo apenas 2 indivíduos que eram casados ou encontravam-se em união de facto. A maioria dos participantes apresentavam um rendimento até 1200 euros do agregado familiar (35,1%) e, ao nível das habilitações literárias, os participantes apresentavam uma média de 14,95 anos de escolaridade (DP=1,943).

No que diz respeito ao questionário de questões psiquiátricas, verificou-se que a amostra não apresentou nenhum historial relevante, o que permitiu cumprir os critérios de exclusão.

Todos os participantes não ansiosos foram contactados para fazerem parte do grupo de controlo, sendo que apenas 24

aceitaram participar na segunda parte do estudo. Também todos os participantes ansiosos foram contactados, mas apenas 15 indivíduos aceitaram participar, dos quais 3 eram homens e 12 eram mulheres. Apresentaram uma média de idades de 22,13 (DP=8,061) e com anos de escolaridade compreendidos entre 13 e 19 anos (M=14,87; DP=2,295). Para além disso, apenas se verificou que um indivíduo era casado, sendo a restante amostra solteira (93,3%) e a maioria apresentou um rendimento familiar até 1200€ (33,3%). Salienta-se que o nível de ansiedade variou entre os 115 pontos e os 144 pontos, com uma média de 129,40 (DP=9,745).

A partir das Matrizes Progressivas de Raven, que permitiram avaliar de uma forma mais simples a capacidade cognitiva, verificou-se que nenhum dos participantes apresentou défices cognitivos. A média situou-se nos 7,26 (DP=2,863), o que indica que, em geral, a maioria dos participantes acertaram em mais de metade dos itens. Para além disso, como é possível observar na tabela 2, não existem diferenças significativas entre não ansiosos e ansiosos nos resultados obtidos nas Matrizes Progressivas de Raven.

Tabela 2 - Diferenças de médias entre não ansiosos e ansiosos nas Matrizes Progressivas de Raven

Grupo	Média	Desvio-padrão	Mann-Whitney
Não ansioso	7,62	2,700	$U=143,000, p=0,296$
Ansioso	6,67	3,109	

No que diz respeito ao Inventário da Depressão de Beck, foi possível constatar que a maioria apresentou ausência de depressão (N=24) e apenas dois (5,1%) manifestaram depressão grave. Dado que as pontuações variavam entre 0 e 44, a média da amostra correspondeu a 10,59 (DP=9,661). Quando os resultados da amostra são analisados relativamente ao facto de os participantes serem ou não ansiosos, verifica-se que existem diferenças significativas (Tabela 3), pois os ansiosos apresentam pontuações superiores neste Inventário.

Tabela 3 - Diferenças de médias entre não ansiosos e ansiosos no Inventário da Depressão de Beck

Grupo	Média	Desvio-padrão	Mann-Whitney
Não ansioso	6,13	5,220	$U=314,500, p=0,000$
Ansioso	17,73	10,944	

De forma a avaliar a componente sócio-percetiva utilizou-se o *Reading the Mind in the Eyes Test*. Verificou-se que as pontuações obtidas pelos participantes foram desde os 20 pontos até aos 33 pontos, com uma média de 26,90 (DP=3,016). Apesar das variâncias iguais não serem assumidas, não é possível identificar diferenças significativas entre não ansiosos e ansiosos (Tabela 4).

Tabela 4 - Diferenças de médias de acertos entre não ansiosos e ansiosos no *Reading The Mind in the Eyes Test*

Grupo	Média	Desvio-padrão	Mann-Whitney
Não ansioso	27,04	3,520	$U=167,500, p=0,721$
Ansioso	26,67	2,059	

De uma forma geral, os acertos foram sempre superiores (>20) aos erros na amostra total; excetuando o item 23, em que houve 19 acertos e 20 erros.

De acordo com a tabela 5, é possível verificar que o grupo de ansiosos realizaram mais erros na prova, comparativamente ao grupo de não ansiosos.

Tabela 5 - Percentagem de acertos em cada item entre não ansiosos e ansiosos

Item	Não Ansioso	Ansioso	Item	Não Ansioso	Ansioso
1	64,0%	36,0%	19	65,3%	34,8%
2	58,6%	41,4%	20	63,3%	36,7%
3	64,0%	36,0%	21	63,3%	36,7%
4	58,1%	41,9%	22	63,2%	36,8%
5	62,5%	37,5%	23	57,9%	42,1%
6	75,0%	25,0%	24	66,7%	33,3%
7	65,2%	34,8%	25	60,7%	39,3%
8	59,4%	40,6%	26	60,6%	39,4%
9	65,5%	34,5%	27	61,5%	38,5%

10	66,7%	33,3%	28	57,6%	42,4%
11	53,6%	46,4%	29	69,2%	30,8%
12	60,0%	40,0%	30	58,8%	41,2%
13	55,9%	44,1%	31	58,6%	41,4%
14	62,1%	37,9%	32	59,4%	40,6%
15	63,9%	36,1%	33	64,7%	33,3%
16	60,0%	40,0%	34	66,7%	33,3%
17	53,6%	46,4%	35	72,7%	27,3%
18	59,5%	40,5%	36	58,6%	41,4%

Todavia, após a realização do teste do *qui-quadrado* a cada um dos itens da prova em questão e uma análise detalhada, foi possível compreender que a ansiedade é independente do resultado obtido no item (i.e. acerto ou erro). Apenas no item 6 verificou-se que a ansiedade se associa ao resultado obtido (, refletindo diferenças entre as frequências observadas e as frequências esperadas.

Posteriormente, foram analisados os itens em que se constatarem menos acertos por parte dos participantes. Comprovou-se que, entre o grupo de ansiosos e o grupo de não ansiosos, as diferenças apresentam-se como quase significativas ($U=113,500$; $p=0,054$). Esta constatação coloca a possibilidade de a ansiedade poder ter algum efeito negativo no desempenho da Teoria da Mente.

Com base num estudo piloto dirigido por Harkness, Sabbagh, Jacobson, Chowdrey e Chen (2005), com uma amostra de 12 mulheres, é possível agrupar as diversas emoções correspondentes aos 36 itens do *Reading the Mind in the Eyes Test* de acordo com três valências: negativas, positivas e neutras (Tabela 6).

Tabela 6 - Lista de itens do *Reading the Mind in the Eyes Test* de acordo com a valência emocional

Valência	Item	Adjetivo	Item	Adjetivo
Negativa	2	Infeliz	23	Desafiador
	5	Angustiado	26	Hostil
	11	Arrependido	27	Cauteloso
	14	Acusatório	34	Desconfiado
	17	Duvidoso	35	Nervoso
	22	Preocupado	36	Suspeitoso
Positiva	1	Brincalhão	21	Sonhador
	6	Sonhador	25	Interessado
	16	Pensativo	30	Galanteador
	20	Amigável	31	Confiante
Neutra	3	Desejoso	15	Contemplativo
	4	Insistente	18	Decidido
	7	Desconfortável	19	Hesitante
	8	Desanimado	24	Absorto
	9	Preocupado	28	Interessante
	10	Cauteloso	29	Refletivo
	12	Cético	32	Sério
	13	Expectante	33	Apreensivo

No nosso estudo, verificou-se que, na amostra global, os participantes identificaram corretamente uma média de 8,67 emoções negativas (DP=1,938); uma média de 6,03 emoções positivas (DP=1,246) e uma média de 12,21 emoções neutras (DP=1,750). No que diz respeito às diferenças entre o grupo de ansiosos e o grupo de não ansiosos, constatou-se que não existem diferenças significativas, tanto ao nível das emoções negativas ($U=190,500$; $p=0,765$), como ao nível das emoções positivas ($U=161,000$; $p=0,598$) e das emoções neutras ($U=167,000$; $p=0,721$).

6. DISCUSSÃO

Para conseguir compreender e dar sentido às intenções e comportamentos pessoais e dos outros, o ser humano desenvolveu várias estratégias cognitivas. A Teoria da Mente constitui uma dessas estratégias, que se desenvolve com a maturação cognitiva (Sodian & Kristen, 2010), facilitando a adaptação ao meio em que está inserido (Gallagher & Frith, 2003).

São vários os modelos que procuram esclarecer a Teoria da Mente. Fazendo referência à sua evolução ao longo do tempo, emergem algumas explicações, como a afirmação de que a socialização é um fator determinante (Carpendale & Lewis, 2004); que são as capacidades executivas que refletem o desenvolvimento da Teoria da Mente (Carlson *et al.*, 1998) ou que são os mecanismos neurológicos que influenciam o seu desenvolvimento (Scholl & Leslie, 1999). No que se refere ao funcionamento do próprio mecanismo, pode-se salientar a teoria de Baron-Cohen (1997) que compreende quatro componentes (o detetor de intencionalidade, o detetor de direção do olhar, o mecanismo de atenção partilhada e o mecanismo da Teoria da Mente). No entanto, a classificação mais reconhecida é a que assume a divisão em dois níveis, mais precisamente, na componente sócio-percetiva (descodificação dos estados mentais dos outros através de pistas sociais) e na componente sócio-cognitiva (raciocínio acerca dos estados mentais dos outros) [Tager-Flusberg & Sullivan, 2000]. Apesar de ambas componentes utilizarem estratégias que estão interligadas, poderão existir comprometimentos distintos quer na leitura das pistas quer na racionalização dos estados mentais. Desta forma, parece relevante que os estudos se enfoquem sobre uma ou outra estratégia, compreendendo onde se situa o défice ao nível da Teoria da Mente e contribuindo para a sua discussão.

Por exemplo, as perturbações psicológicas parecem ser um fator condicionante na Teoria da Mente (e.g. Corcoran, Mercer, & Frith, 1995; Gallagher & Frith, 2003; Lysaker *et al.*, 2010; Wolkenstein *et al.*, 2011). Particularmente, na Perturbação de Ansiedade Social, os indivíduos parecem avaliar as situações sociais e os comportamentos de forma mais negativa, supondo-se que o problema assenta em dificuldades na interpretação de pistas sociais observáveis (Hezel & McNelly, 2014).

O presente estudo tem como objetivo avaliar a existência de diferenças nas provas que avaliam a Teoria da Mente, entre indivíduos que manifestavam a presença de ansiedade social e indivíduos não ansiosos. Isto é, pretende-se verificar se existe um compromisso de leitura de pistas sociais em indivíduos identificados como ansiosos sociais.

Foram recolhidas 177 respostas voluntárias à Escala de Ansiedade e Evitamento em Situações de Desempenho e de Interação Social, de forma a categorizar os participantes de acordo com o seu nível de ansiedade social. Foram contactados todos os participantes que apresentassem um *score* superior ao nível de corte para dimensão a ansiedade social e também participantes com *scores* inferiores. Procurou-se manter a equidade de género. Contudo, o nível de respostas positivas para continuar a participar no estudo foi diminuto, verificando-se uma grande mortalidade da amostra.

A amostra final do estudo foi constituída por 39 participantes, que cumpriam os critérios de inclusão, dos quais 15 estavam identificados como ansiosos sociais.

Através das Matrizes Progressivas de Raven foi possível verificar a homogeneidade cognitiva dos participantes, pois nenhum evidenciou défices cognitivos e não se encontraram diferenças entre ansiosos e não ansiosos. Esta ausência de diferenças entre os grupos permite sugerir que os resultados obtidos não se devem a possíveis diferenças cognitivas.

Relativamente ao Inventário de Depressão de Beck, verificou-se a existência de uma relação significativa entre o facto de os indivíduos manifestarem depressão e estarem identificados como socialmente ansiosos. Ou seja, existe a possibilidade da perturbação de Ansiedade Social poder estar relacionada com a depressão. Tal facto é corroborado pelo estudo de Beesdo e colaboradores (2007), que indica que a ansiedade social é um preditor do risco de depressão. Todavia, os indivíduos que evidenciaram a presença de depressão deveriam ter sido retirados, mas a dada a dimensão da amostra final, estes sujeitos foram mantidos.

Para além do referido anteriormente, a depressão tem na sua génese as dificuldades a nível social (Wang *et al.*, 2008), o que acaba por interligar estas duas perturbações. Acrescenta-se que estudos como os de Inoue e colaboradores (2006) e de Wang e colaboradores (2008) demonstraram que podem ocorrer défices na Teoria da Mente aquando a existência de diagnóstico de depressão. Inclusivamente, o estudo de Kircanski e colaboradores (2015) colocou em evidência que existe uma forte comorbidade entre a Perturbação de Ansiedade Social e a depressão, que apresentam défices significativos na componente sócio-percetiva da Teoria da Mente.

No que diz respeito ao *Reading the Mind in the Eyes Test*, de uma forma geral, as respostas constituíram mais acertos do que erros nos diversos itens dos testes. Para além disso, não foram detetados resultados significativos, o que pode indicar a inexistência de défices ao nível da componente sócio-percetiva na amostra recolhida; tanto no grupo de controlo, como no grupo de ansiosos sociais. Estes resultados não suportam os resultados obtidos no estudo de Hezel e McNally (2014), no qual os indivíduos com ansiedade social apresentaram défices significativos em comparação ao grupo de controlo nas tarefas relacionadas com a Teoria da Mente, isto é, os indivíduos com ansiedade social foram significativamente menos precisos a identificar os estados mentais no *Reading the Mind in the Eyes Test*. Também no estudo realizado por Washburn (2012), os participantes socialmente ansiosos tiveram um pior desempenho no *Reading the Mind in the Eyes Test* do que os indivíduos sem ansiedade social. Todavia, salienta-se que as amostras de ambos os estudos designados anteriormente eram significativamente maiores do que a do presente estudos: o estudo de Hezel e McNally (2014) contava com uma amostra de 80 participantes (40 indivíduos sem ansiedade social e 40 indivíduos com ansiedade social) e o estudo de Washburn (2012) obteve uma amostra total de 109 participantes, divididos por quatro grupos (41 indivíduos no grupo de controlo, 36 indivíduos com perturbação de depressão major, 9 indivíduos com perturbação de ansiedade social e 23 indivíduos com comorbidade).

Assim, os resultados obtidos no *Reading the Mind in the Eyes Test* mostram que não existem diferenças significativas entre os dois grupos, o que pode sugerir que a ansiedade social não afeta a Teoria da Mente. Contudo, é necessário ter em consideração o facto de a amostra ser bastante pequena, o que pode ter ditado os resultados encontrados.

No que concerne ao desempenho na prova que avalia a Teoria da Mente, ao nível das respostas dos participantes, pode-se depreender que o grupo de participantes ansiosos apresentaram mais dificuldades em realizar a prova, evidenciando mais erros na atribuição do estado mental representado. Numa análise mais aprofundada, verificou-se que as diferenças eram quase significativas nos itens em que ocorreu um maior número de erros, o que ressalta o facto de existir a possibilidade dos participantes ansiosos efetuarem uma análise das pistas sociais de um modo mais cuidado e atento. Esta aparente tendência de respostas poderá ser explorada em estudos futuros.

Nos resultados obtidos no *Reading the Mind in the Eyes Test* procurou-se também verificar se os diversos tipos de emoções (positivas, negativas e neutras) apresentavam respostas distintas, em cada um dos grupos. Tornou-se emergente a exploração do facto de existirem diferenças na avaliação com carácter emocional efetuada por indivíduos com ansiedade social, na medida em que existem estudos que apresentam resultados controversos. No presente estudo, não foram detetados diferenças significativas entre os grupos ao avaliarem os diferentes pares de olhares, consoante a valência emocional.

Segundo estudos efetuados, os participantes socialmente ansiosos são mais precisos a identificar emoções do que os não ansiosos, existindo um viés consoante a valência emocional (Arrais *et al.*, 2010; Machado-de-Sousa *et al.*, 2010). Por outro lado, outros estudos concluíram que não existem diferenças entre grupos de controlo e os grupos com ansiedade social, na avaliação de expressões com valência emocional (Merckelbach, van Hout, van den Hout, & Mersch, 1989; Philippot & Douilliez, 2005). O mesmo aconteceu no estudo efetuado por Washburn e colaboradores (2016), que não identificou um efeito significativo da valência emocional em nenhum dos quatro grupos (indivíduos com ansiedade social, indivíduos com ansiedade social e depressão, indivíduos com depressão, e indivíduos sem historial de ansiedade social nem de depressão).

Todavia, o *Reading the Mind in the Eyes Test* constitui um teste que assume que o estado mental pode ser avaliado apenas com a informação disponível na região do olhar e que os indivíduos **são sensíveis a essa informação; mas no desenvolvimento deste teste não foi tido em conta o facto destas expressões apresentadas serem genuínas ou de pose** (Jonhston, Miles & McKinlay, 2008). Sem este critério de acuidade, é necessário ter cuidado a retirar conclusões. Apesar do autor do teste indicar que os défices no desempenho podem ser explicados como uma consequência da inability em identificar o estado mental dos outros, pode existir outra explicação, como o facto de os indivíduos não partilharem as normas sociais ou as crenças estereotipadas (Jonhston *et al.*, 2008). Inclusivamente, segundo Jonhston e colaboradores (2008), o *Reading the Mind in the Eyes Test* acaba por ser uma forma de avaliar as normas sociais, em vez de avaliar a acuidade na perceção social.

A forma como foram aplicadas as diferentes provas no nosso estudos e, consequentemente, os resultados obtidos podem estar relacionados com a ansiedade de desempenho, isto é, os participantes podem ter sido mais cautelosos nas respostas, uma vez que o tempo de resposta não era limitado nem contabilizado. Assim, a medição do tempo poderia ser um factor importante a ter em atenção, podendo até ser explorado em estudos futuros.

É importante compreender as causas e a extensão que os défices da ansiedade social podem assumir, principalmente na leitura de pistas sociais em contexto de situação real. Deste modo, a utilização de um instrumento interativo poderia constituir um auxílio no estudo.

O facto de não terem sido encontrados resultados significativos que eram objetivados no estudo, pode dever-se a diversos fatores. Em primeiro lugar, a amostra acabou por limitada, tanto relativamente ao número de participantes, como no que diz respeito ao número de homens e de mulheres. Em segundo lugar, dado que a aplicação das provas ocorreu em dois momentos distintos acabou por ter uma menor adesão por parte dos participantes no estudo. Por último, a duração da aplicação das provas no segundo momento do estudo acabou por diminuir o interesse em participar e a própria desistência de alguns voluntários.

Para estudos futuros sugere-se que seja reformulado o método de recolha de participantes e se estruture de forma diferente a aplicação das provas, de modo a diminuir o tempo de aplicação das mesmas e procurando efetuar o processo num único momento. Para além disso, seria relevante possuir um maior número de participantes pertencentes aos dois grupos (i.e. ansiosos e não ansiosos) no estudo e, também, obter mais participantes do sexo masculino, de forma a ser possível realizar uma análise mais aprofundada.

REFERÊNCIAS

- Allison, T., Puce, A., & McCarthy, G. (2000). Social perception from visual cues: role of the STS region. *Elsevier Science*, 267-278.
- Almeida, F. (2009). Teste das Matrizes Progressivas de Raven. *Peritia – Revista Portuguesa de Psicologia*.
- Arrais, K., Machado-de-Sousa, J., Trzesniak, C., Filho, A., Ferrari, M., Osório, F., ... & Crippa, J. (2010). Social anxiety disorder women easily recognize fearful, sad and happy faces: the influence of gender. *Journal of psychiatric research*, 44(8), 535-540.
- Bandeira, D., Alves, I., Giacometti, A., & Lorenzatto, L. (2004). Matrizes Progressivas Coloridas de Raven – Escala Especial: Normas para Porto Alegre, RS. *Psicologia em Estudo*, 9, 479-486.
- Baron-Cohen, S. (1990). Autism: A Specific Cognitive Disorder of Mind-Blindness?. *International Review of Psychiatry*, 2, 81-90.
- Baron-Cohen, S. (1997). How to build a baby that can read minds: Cognitive mechanisms in mindreading. *The maladapted mind: Classic readings in evolutionary psychopathology*, 207-239.
- Baron-Cohen, S., & Belmonte, M. (2005). Autism: a window onto the development of the social and the analytic brain. *Annual Reviews Neuroscience*, 28, 109-126.
- Baron-Cohen, S., Leslie, A., & Frith, U. (1985). Does the autistic child have a “theory of mind”? *Cognition*, 21, 37-46.

- Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The “Reading the Mind in the Eyes” Test Revised Version: A Study with Normal Adults, and Adults with Asperger Syndrome or High-functioning Autism. *Journal of Child Psychology and Psychiatry*, 42, 241-251.
- Bartsch, K., & Wellman, H. (1995). *Children talk about the mind*. New York: Oxford University Press.
- Beedso, K., Bittner, A., Pine, D., Stein, M., Hofler, M., ... Wittchen, H. (2007). Incidence of Social Anxiety Disorder and the Consistent Risk for Secondary Depression in the First Three Decades of Life. *Arch Gen Psychiatry*, 64, 903-912.
- Brochado, F., & Brochado, A. (2008). Estudo da presença de sintomatologia depressiva na adolescência. *Revista Portuguesa de Saúde Pública*, 26, 27-36.
- Brune, M. (2003). Theory of mind and the role of IQ in chronic disorganized schizophrenia. *Schizophrenia Research*, 60, 57-64.
- Brune, M. (2005). Emotion recognition, ‘theory of mind,’ and social behavior in schizophrenia. *Psychiatry research*, 133, 135-147.
- Carlson, S. Moses, L., & Hix, H. (1998). The role of inhibitory processes in young children’s difficulties with deception and false belief. *Child development*, 69, 672-691.
- Carlson, S., Koenig, M., & Harms, M. (2013). Theory of Mind. *WIREs Cognitive Science*, 4, 391-402. doi: 10.1002/wcs.1232.
- Carpendale, J., & Lewis, C. (2004). Constructing an understanding of mind: The development of children’s social understanding within social interaction. *Behavioral and brain sciences*, 27, 79-96.
- Colle, L., Baron-Cohen, S., & Hill, J. (2007). Do children with autism have a theory of mind? A non-verbal test of autism vs. specific language impairment. *Journal of autism and developmental disorders*, 37, 716-723.
- Constans, J., Penn, D., Ihen, G., & Hope, D. (1999). Interpretative biases for ambiguous stimuli in social anxiety. *Behaviour Research and Therapy*, 37, 643-651.
- Corcoran, R., & Frith, C. (2003). Autobiographical memory and theory of mind: evidence of a relationship in schizophrenia. *Psychological medicine*, 33, 897-905.
- Corcoran, R., Mercer, G., & Frith, C. (1995). Schizophrenia, symptomatology and social inference: Investigating “theory of mind” in people with schizophrenia. *Schizophrenia Research*, 17, 5-13.
- Corcoran, R., Mercer, G., & Frith, C. (1995). Schizophrenia, symptomatology and social inference: investigating “theory of mind” in people with schizophrenia. *Schizophrenia research*, 17, 5-13.
- Couture, S., Penn, D., & Roberts, D. (2006). The functional significance of social cognition in schizophrenia: a review. *Schizophrenia bulletin*, 32, S44-S63.
- Frith, U., & Frith, C. (2003). Development and neurophysiology of mentalizing. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 358, 459-473.
- Frith, U. (1989). A new look at language and communication in autism. *British Journal of Disorders of Communication*, 24, 123-150.
- Gallagher, H., & Frith, C. (2003). Functional imaging of ‘theory of mind’. *TRENDS in Cognitive Sciences*, 7, 77-83.
- Gentili, C., Ricciardi, E., Gobbin, M., Santarelli, M., Haxby, J., Pietrini, P., & Guazzelli, M. (2009). Beyond amygdala: default mode network activity differs between patients with social phobia and healthy controls. *Brain research bulletin*, 79, 409-413.
- Guimarães, C. (2013). *Tomando o envelhecimento bem-sucedido como desenvolvimento psicológico: efeito da TOM e da inteligência*. Dissertação de Mestrado. Universidade do Minho. Portugal.
- Harkness, K., Sabbagh, M., Jacobson, J., Chowdrey, N., & Chen, T. (2005). Enhanced accuracy of mental state decoding in dysphoric college students. *Cognition and Emotion*, 7, 999-1025.
- Hezel, D., & McNally, R. (2014). Theory of Mind Impairments in Social Anxiety Disorder. *Behavior Therapy*, 45, 530-540.
- Hughes, C. (1998). Executive function in preschoolers: Links with theory of mind and verbal ability. *British Journal of Developmental Psychology*, 16, 233-253.
- Inoue, Y., Yamada, K., & Kanba, S. (2006). Deficit in theory of mind is a risk for relapse of major depression. *Journal of affective disorders*, 95, 125-127.
- Johnston, L., Miles, L., & McKinlay, A. (2008). A critical review of the Eyes Test as a measure of social-cognitive impairment. *Australian Journal of Psychology*, 60, 135-141.
- Keysar, B., Lin S., & Barr D. (2003). Limits on theory of mind use in adults. *Cognition*, 89, 25-41.
- Kircanski, K., Joormann, J., & Gotlib, I. (2015). Attention to emotional information in Social Anxiety Disorder with and co-occurring depression. *Cognitive Therapy Resource*, 39, 153-161. doi: 10.1007/s10608-014-9643-7.
- Klinke, C. (1986). Gaze and eye contact: a research review. *Psychological bulletin*, 100(1), 78. doi: 10.1037/0033-2909.100.1.78.

- Köhler, W. (1925). Intelligence of apes. *The Journal of Genetic Psychology*, 32, 674-690.
- Langton, S., Watt, R., & Bruce, V. (2000). Do the eyes have it? Cues to the direction of social attention. *Trends in Cognitive Sciences*, 4, 50-58.
- Lysaker, P., Salvatore, G., Grant, M., Procacci, M., Olesek, K., Buck, K., ... Dimaggio, G. (2010). Deficits in theory of mind and social anxiety as independent paths to paranoid features in schizophrenia. *Schizophrenia Research*, 124, 81-85. doi: 10.1016/j.schres.2010.06.019.
- Machado-de-Sousa, J., Arrais, K., Alves, N., Chagas, M., Meneses-Gaya, C., Crippa, J., & Hallak, J. (2010). Facial affect processing in social anxiety: Tasks and stimuli. *Journal of Neuroscience Methods*, 193, 1-6.
- Marvin, R., Greenberg, M., & Mossler, D. (1976). The early development of conceptual perspective taking: Distinguishing among multiple perspectives. *Child Development*, 511-514.
- Merckelbach, H., van Hout, W., van den Hout, A., & Mersch, P. (1989). Psychophysiological and subjective reactions of social phobics and normal to facial stimuli. *Behaviour Research and Therapy*, 41, 1355-1371.
- Montgomery, C., Allison, C., Lai, M., Cassidy, S., Langdon, P., & Baron-Cohen, S. (2016). Do adults with high functioning autism or Asperger Syndrome differ in empathy and emotion recognition?. *Journal of autism and developmental disorders*, 46, 1931-1940.
- Oberman, M., & Ramachandran, S. (2007). The simulating social mind: the role of the mirror neuron system and simulation in the social and communicative deficits of autism spectrum disorders. *Psychological bulletin*, 133, 310.
- Perner, J., & Lang, B. (1999). Development of theory of mind and executive control. *Trends in cognitive sciences*, 3, 337-344.
- Perner, J., Leekam, S., & Wimmer, H. (1987). Three-year-olds' difficulty with false belief: The case for a conceptual deficit. *British Journal of Developmental Psychology*, 5, 125-137.
- Philippot, P., & Douilliez, C. (2005). Social phobics do not misinterpret facial expression of emotion. *Behaviour Research and Therapy*, 43, 639-652.
- Pinto-Gouveia, J. (2000). Ansiedade social: Da timidez à Fobia Social. Coimbra: Quarteto Editora.
- Pinto-Gouveia, J., Cunha, M., & Salvador M. (2003). Assessment of social phobia by self-report questionnaires: the social interaction and performance anxiety and avoidance scale and the social phobia safety behaviours scale. *Behavioural and Cognitive Psychotherapy*, 31, 291-311. doi: 10.1017/S1352465803003059.
- Premack, D., & Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *The behavioural and brain sciences*, 4, 515-526.
- Rapee, R., & Heimberg, R. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour research and therapy*, 35, 741-756.
- Raven, J. (1941). Standardization of progressive matrices, 1938. *British Journal of Medical Psychology*, 19, 137-150.
- Ribeiro, L., & Fearon, P. (2010) Theory of mind and attentional bias to facial emotional expressions: A preliminary study. *Scandinavian Journal of Psychology*, 51, 285-289.
- Samson, A., Lackner, H., Weiss, E., & Papousek, I. (2012). Perception of other people's mental states affects humor in social anxiety. *Journal of Behavior Therapy and Experimental Psychiatry*, 43, 625-631. doi: 10.1016/j.jbtep.2011.08.007
- Scholl, B., & Leslie, A. (1999). Modularity, development and 'theory of mind'. *Mind & Language*, 14, 131-153.
- Sodian, B., & Kristen, S. (2010). *Towards a Theory of Thinking*: Springer Berlin Heidelberg.
- Sousa, M. (2012). Teoria da Mente, Inteligência Emocional e Psicopatologia. *Revista Eletrônica de Psicologia, Educação e Saúde*, 1, 55-76.
- Steer, R., Ball, R., Ranieri, W., & Beck, A. (1999). Dimensions of the Beck Depression Inventory-II in Clinically Depressed Outpatients. *Journal of Clinical Psychology*, 55, 117-128.
- Stone, V., Baron-Cohen, S., & Knight, R. (1998). Frontal lobe contributions to theory of mind. *Journal of cognitive neuroscience*, 10, 640-656.
- Sutterby, S., Bedwell, J., Passler, J., Deptula, A., & Mesa, F. (2012). Social anxiety and social cognition: The influence of sex. *Psychiatry Research*, 197, 242-245. doi: 10.1016/j.psychres.2012.02.014.
- Tager-Flusberg, H., & Sullivan, K. (2000). A componential view of theory of mind: evidence from Williams syndrome. *Cognition*, 76, 59-89.
- Wang, Y., Wang, Y., Chen, S., Zhu, C., & Wang, K. (2008). Theory of mind disability in major depression with or without psychotic symptoms: a componential view. *Psychiatry research*, 161, 153-161.
- Washburn, D. (2012). Theory of mind decoding and reasoning abilities in depression, social phobia, and comorbid conditions. Dissertação de Mestrado. Universidade de Queen. Canadá.

- Washburn, D., Wilson, G., Roes, M., Rnic, K., & Harkness, K. (2016). Theory of mind in social anxiety disorder, depression and comorbid conditions. *Journal of Anxiety Disorders*, 37, 71-77.
- Wimmer, H., & Perner, J. (1983). Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children's understanding of deception. *Cognition*, 13, 103-128.
- Wolkenstein, L., Schönenberg, M., Schrim, E., & Hautzinger, M. (2011). I can see what you feel, but I can't deal with it: Impaired theory of mind in depression. *Journal of Affective Disorders*, 132, 104-111. doi: 10.1016/j.jad.2011.02.010
- Zaitchik, D. (1991). Is only seeing really believing?: Sources of the true belief in the false belief task. *Cognitive Development*, 6, 91-103.
- Zilbovicius, M., Meresse, I., Chabane, N., Brunelle, F., Samson, Y., & Baddaert, N. (2006). Autism, the superior temporal sulcus and social perception. *TRENDS in Neurosciences*, 29, 359-366. doi:10.1016/j.tins.2006.06.004.

A QUALIDADE E INTERNACIONALIZAÇÃO NO ENSINO SUPERIOR EM PORTUGAL: UM ESTUDO DE CASO NAS UNIVERSIDADES DO MINHO, AVEIRO E ALGARVE

Sofia Nunes

Doutoranda da Universidad de Huelva
(snluz@ualg.pt)

Carolina Sousa

Universidade do Algarve
(csousa@ualg.pt)

Angel Boza

Universidad de Huelva
(aboza@uhu.es)

RESUMO

Um dos principais desafios dos sistemas europeus de ensino superior é conseguir articular esquemas de acreditação que atendem a propósitos nacionais de fortalecimento de qualidade e aumento da competitividade e, também, a perspectivas de internacionalização derivadas da integração europeia.

Através deste estudo pretendia-se analisar se as três Instituições possuem uma política estruturada de qualidade assim como uma estratégia de internacionalização. Para tal foram aplicadas entrevistas institucionais assim como questionários a 475 estudantes, da área da educação, nas três Instituições. Os resultados demonstram que há estruturas definidas para a garantia da qualidade e uma preocupação em manter e reforçar os níveis de qualidade alcançando posições proeminentes em rankings internacionais como o U-Multirank nos principais indicadores: Ensino, Investigação, Cooperação com a Sociedade e Internacionalização. Os resultados demonstram, ainda, uma preocupação em prestar serviços de qualidade ao seu público internacional (recursos humanos e materiais), uma ativa participação em projetos de investigação e de cooperação internacionais, o aumento da mobilidade de estudantes e pessoal *incoming & outgoing* (docente e não docente), o que demonstra uma grande aposta destas Instituições em relação à sua Internacionalização. Por outro lado, os alunos mostraram alguma preocupação quanto ao seu papel efetivo na Garantia da Qualidade Institucional.

Palavras-chave: Educação, Instituições de Ensino Superior, Avaliação e Qualidade, Internacionalização.

JEL Classification: I23

1. INTRODUÇÃO

As instituições europeias de ensino superior aceitaram assumir o papel principal na construção do “Espaço Europeu do Ensino Superior”. Comprometeram-se a assumir a responsabilidade de coordenar políticas que permitam estabelecer e promover o sistema europeu do ensino superior em todo o mundo.

Um dos principais desafios dos sistemas europeus de ensino superior é conseguir articular esquemas de acreditação que, simultaneamente, atendem tanto a propósitos nacionais de fortalecimento de qualidade e aumento da competitividade, como também a perspectivas de internacionalização derivadas da integração europeia.

Considerando que a qualidade é essencial para o desenvolvimento da Área Europeia de Ensino Superior, é necessário apoiar medidas de certificação de qualidade a nível institucional, nacional e europeu, sendo imprescindível desenvolver critérios e metodologias comuns de certificação.

O estudo desenvolvido “*A Qualidade e Internacionalização no Ensino Superior em Portugal: um estudo de caso nas Universidades do Minho, Aveiro e Algarve*” surgiu da vontade de aprofundar estas questões, tão atuais, relacionadas com a Qualidade e a Internacionalização do Ensino Superior Europeu.

O processo de Bolonha teve, e continua a ter, um importante impacto sobre os sistemas de ensino superior dos países europeus. O mais visível é a reforma curricular, em cada país, para alcançar a implementação de créditos e ciclos acordada. A adoção de formas de garantia de qualidade académica e de sistemas de avaliação externa e de acreditação, são instrumentos essenciais de promoção da dimensão europeia de garantia de qualidade.

O XVII Governo Constitucional de Portugal identificou, como objetivos para a política de ensino superior:

- 1) a garantia da qualificação dos portugueses no espaço europeu;
- 2) a melhoria da qualidade e da relevância das formações oferecidas;
- 3) o fomento da mobilidade e da internacionalização;
- 4) o incremento da autonomia das instituições;

- 5) o desenvolvimento de uma cultura de prestação de contas;
- 6) a valorização de parcerias entre instituições nacionais e estrangeiras;
- 7) a estruturação de um sistema de garantia da qualidade reconhecido internacionalmente organizado em torno de quatro eixos, identificados com:
 - a) O alargamento da avaliação ao desempenho das instituições;
 - b) A objetivação dos critérios da avaliação, a tradução dos resultados em apreciações qualitativas, dimensão a dimensão, comparáveis entre si, e a clarificação das consequências da avaliação, quer para o funcionamento dos cursos e das instituições de ensino superior, quer para o seu financiamento;
 - c) A internacionalização do processo de avaliação, designadamente na dimensão de avaliação institucional;
 - d) A exigência de concretização, pelas instituições de ensino superior, de sistemas próprios de garantia da qualidade, passíveis de certificação.

De realçar que a criação de um sistema de garantia da qualidade do ensino superior reconhecido internacionalmente supõe uma adesão aos princípios internacionalmente aceites na matéria. Neste particular, merecem especial atenção:

- a) Os *Standards and Guidelines for Quality Assurance in the European Higher Education Area*, constantes do relatório, de Fevereiro de 2005, preparado pela *European Association for Quality Assurance in Higher Education* (ENQA) a pedido dos ministros signatários da Declaração de Bolonha;
- b) O relatório, preparado pela ENQA, a pedido do Governo Português, sobre a garantia da qualidade do ensino superior em Portugal, de Novembro de 2006, que procedeu à avaliação das práticas neste domínio levadas a cabo no âmbito do Conselho Nacional de Avaliação do Ensino Superior e formulou recomendações ao Governo sobre a organização, método e processos de um novo sistema de acreditação, conforme aos *Standards and Guidelines*;
- c) O relatório de avaliação do sistema de ensino superior português, de Dezembro de 2006, preparado pela OCDE a pedido do Governo;
- d) Os *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (ESG), de Maio de 2015, apresentadas por um grupo de Instituições Europeias envolvidas nesta reformulação.

Em termos de documentos nacionais de importância para a temática abordada neste estudo apontam-se:

- e) Relatório do grupo de trabalho MADR/MEC “Uma estratégia para a Internacionalização do Ensino Superior Português: Fundamentação e Recomendações”, apresentado em Maio de 2014

Nos termos da Lei 38/2007, compete às instituições de ensino superior (IES) adotar uma política de garantia de qualidade e os procedimentos para a sua prossecução; desenvolver uma cultura de qualidade e da sua garantia e desenvolver e pôr em prática uma estratégia para a melhoria contínua da qualidade. A mesma Lei determina que os procedimentos da avaliação externa “*devem ter em conta a eficácia dos procedimentos de garantia interna da qualidade*”. Também no preâmbulo do Decreto-Lei 369/2007 define-se como um dos eixos do novo sistema de avaliação e acreditação “*A exigência de concretização, pelas instituições de ensino superior, de sistemas próprios de garantia da qualidade, passíveis de certificação*”.

A legislação reafirma, assim, que a responsabilidade pela qualidade de ensino cabe, em primeiro lugar, a cada instituição de ensino superior, à qual compete criar as estruturas e os procedimentos internos para garantir a qualidade de ensino. Competirá à A3ES apoiar as instituições na implementação dos seus sistemas internos de garantia da qualidade e proceder à realização de auditorias tendo em vista a certificação dos procedimentos internos de qualidade das instituições.

De extrema importância para este estudo foram os documentos elaborados pela A3ES, nomeadamente:

- a) Análise comparativa dos processos Europeus para a Avaliação e Certificação de Sistemas Internos de Garantia da Qualidade, 2011
- b) Sistemas Internos de Garantia da Qualidade nas Agências de Avaliação e Acreditação, 2011
- c) Manual para o processo de auditoria dos Sistemas Internos de Garantia da Qualidade nas Instituições de Ensino Superior, em regime experimental no ano letivo de 2012/2013

Para que se possa entender a internacionalização no contexto universitário, é imperativo perceber que ela não define um contexto de ação e de política que possamos assumir integralmente como novo. Antes de mais, a internacionalização integra-se no complexo processo de globalização que, juntamente com a penetração dos princípios neoliberais, tem conduzido as universidades para uma crescente tendência empreendedora e mercantilizada (Santos, 2008), a qual se encontra ligada à ideia de que o investimento em ciência e tecnologia reflete a emergência de uma sociedade do conhecimento, baseada na dependência de pessoal altamente qualificado, base do desenvolvimento económico e social (Altbach e Knight, 2007).

Ainda, de acordo com Altbach e Knight (2007), podemos argumentar que a postura global exigida às instituições é fruto das redes de interdependências que caracterizam a globalização. As universidades, cuja evolução histórica se alicerça na independência face à política e às pressões económicas, vêm-se agora equiparadas a uma empresa que gerem e procuram recursos materiais e simbólicos, capazes de sustentá-las no tempo.

Desta forma, a internacionalização, entendida como a ação de mostrar fora aquilo que é concebido internamente ou que se produz dentro de um sistema - o que não implica necessariamente envolvimento com o exterior - responde às exigências propostas por essa postura global.

A dimensão internacional do ensino e da investigação sempre foi algo presente ao longo da história (Miura, 2006; Morosini, 2006; Stallivieri, 2007), embora apenas recentemente se tenha dado atenção a este fenómeno. É possível perceber que a ideia de universidade com integração internacional, ou modelo mundial de universidade, não é nova (Knight, 1999; 2003; 2006; Knight e De Wit, 1995).

A internacionalização caracteriza presentemente grande parte das relações entre as universidades (Morosini, 2006), contribuindo para a mobilidade dos recursos humanos da ciência e tecnologia. Acima de tudo, ela é considerada como um mecanismo indispensável para o desenvolvimento das universidades (Soderqvist, 2002) e, numa escala maior, dos próprios países, pois promove a circulação de conhecimento e a cooperação, favorecendo a criação de redes.

Uma das dimensões importantes passa pelas inúmeras políticas que se constroem para a dinamização da dimensão internacional, sendo este um fator considerado na avaliação das universidades (Magalhães e Rodrigues, 2000).

A pressão para a internacionalização está, neste momento, a penetrar nos discursos e práticas dos atores envolvidos com o processo de trabalho nas universidades e suas formas de administração. Um dos mecanismos mais visíveis desta penetração consiste no incremento acelerado e detalhado dos sistemas de avaliação do desempenho institucional e individual, nos quais a internacionalização, definida de forma diversa e por vezes dispare, é um indicador fundamental.

De acordo com Sousa (2015) *“(...) repensar a educação desde a diversidade é uma necessidade e um imperativo na educação que concebemos orientada para o sucesso. A educação para a diversidade deverá reger-se por princípios que envolvam as pedagogias cooperativas, a implicação de todos na tomada de decisões, o desenvolvimento e a elaboração de projetos de trabalho e a importância dos interesses da comunidade académica.”*

Na opinião de Melero (1999), a cultura da diversidade consiste no incremento dela mesma em toda a cultura da instituição educativa. Ultrapassa a questão das adaptações curriculares, implica a procura de outro modelo, de outro sistema educativo e de outro currículo, que conheça que compreenda e respeite a diversidade. A instituição educativa da diversidade tem que ser uma instituição educativa que aprenda estratégias para a resolução de problemas da vida quotidiana de forma cooperativa e solidária.

Fernandes (2011) defende que há que admitir que o envolvimento dos estudantes nas aprendizagens não se concretiza sem a criação de condições por parte dos professores que os estimulem a interagir com os seus pares, e com eles próprios, e a refletirem sobre os conteúdos que estão a ser trabalhados, e os instigue a problematizar as situações e a sobre elas emitirem um pensamento crítico.

Ainda nesta linha de pensamento, Leite (2002b) refere que a atenção a estes aspetos pressupõe criar possibilidade para que todos possam ter as mesmas igualdades de oportunidades, e se concretize o princípio de equidade, aqui entendido como respeito pelas diferenças. Este é, em tempo de “crise económica” e de globalização da educação, um enorme desafio para os professores de todos os níveis de ensino e, de modo particular, para os que lecionam no ensino superior.

Como sublinha Cortesão (2002), *“(...) se a escola, os professores e o sistema admit (ir) em a possibilidade de que lhes cabe uma quota-parte de responsabilidade no tipo de resultados obtidos pelos alunos e portanto do êxito ou sucesso que eles têm, então o modo como se orienta o processo educativo e a avaliação adquirem outros significados”*.

Para Morosini a aprendizagem na Educação Superior precisa ser inserida em práticas voltadas ao desenvolvimento humano e social, baseadas em indicadores de qualidade. Entende-se por educação de qualidade aquela que: *“(...) considera o estudante um indivíduo, membro de uma família, de uma comunidade e cidadão do mundo, que aprende para se tornar competente em seus quatro papéis: defende e propaga os ideais de um mundo sustentável – um mundo justo, equitativo e pacífico no qual as pessoas se preocupam com o meio ambiente para contribuir a equidade intergeracional; leva em consideração o contexto social, económico e o meio ambiente e configura o currículo como o programa para refletir essas condições específicas”*. (Morosini, 2009).

De acordo com estudos feitos por Morosini (2009), a aprendizagem pautada em processos de natureza pedagógica e académica envolve qualidade do currículo, das práticas pedagógicas e da avaliação. Além disso, as discussões acerca do conceito de qualidade na Educação Superior indicam tendências enquadradas na conceção de isomorfismo, ligada à ideia de empregabilidade e à lógica do mercado global ou, de respeito à diversidade ou de equidade.

Para a Organização das Nações Unidas para a Educação, Ciência e Cultura (Unesco), a qualidade é norteadada por fatores-chave: extensão da educação, tratamento da diversidade, autonomia escolar, currículo/autonomia curricular, participação da comunidade educativa e gestão dos centros escolares, direção escolar, professorado, avaliação, inovação e investigações educativas (Morosini, 2012).

2. METODOLOGIA

2.1 Objetivos do estudo

No âmbito deste estudo foi feito um levantamento sobre as temáticas da Qualidade mas principalmente sobre o indicador da Internacionalização na medida da qualidade das Instituições de Ensino Superior.

Para tal foi necessário fazer um levantamento bibliográfico sobre as políticas e diretivas Europeias nestas matérias assim como as políticas, diretivas e legislação existentes em Portugal sobre as mesmas e fazer o seu enquadramento.

Foi feito um levantamento bibliográfico, assim como uma breve caracterização das três IES estudadas – Universidade do Minho (UM), Universidade de Aveiro (UA) e Universidade do Algarve (UALg) enquanto IES e a sua organização mas, também, enquanto Instituições que se regem pelas políticas europeias e nacionais no que respeita à Qualidade e de que modo a Internacionalização, enquanto indicador de medida da Qualidade no Ensino Superior, é efetivamente medida e que peso tem na estratégia destas Instituições.

Para a concretização deste estudo foram definidos três objetivos gerais:

- 1) Descrever as políticas europeias sobre a qualidade no ensino superior
- 2) Apresentar as políticas nacionais sobre a qualidade no ensino superior
- 3) Analisar se os indicadores de qualidade definidos pela A3ES estão presentes, ou não, na internacionalização praticada nas Universidades do Minho, Aveiro e Algarve

De modo a dar uma resposta mais completa ao terceiro objetivo geral foram definidos sete objetivos específicos:

- 1) Perceber se as IES têm definida uma política e objetivos de qualidade
- 2) Perceber de que modo as IES garantem a qualidade da sua oferta formativa e da aprendizagem dos seus estudantes
- 3) Perceber se as IES promovem, avaliam e melhoram a sua atividade científica, tecnológica e artística
- 4) Perceber se as IES estão munidas de recursos humanos que consigam responder às solicitações dos seus estudantes
- 5) Perceber se as IES estão munidas de recursos materiais adequados ao desenvolvimento das aprendizagens dos seus estudantes
- 6) Perceber se as IES dispõem de sistemas de recolha de informação e se publicitam os resultados dessa informação
- 7) Perceber de que modo as IES estabeleceram as suas estratégias de internacionalização e quais os principais indicadores de internacionalização

2.2 Instrumentos

Este estudo teve como base a análise bibliográfica de estudos já realizados sobre as temáticas do Ensino Superior, relatórios elaborados pela ENQA- *European Association for Quality Assurance in Higher Education*, legislação e diretrizes da Comissão Europeia sobre as temáticas da Qualidade e da Internacionalização na Europa, os *Standards and guidelines for quality assurance in the European Higher Education Area*, entre outra bibliografia de suporte à própria estrutura deste estudo.

Nos quadros abaixo pode-se ver sinteticamente a correlação entre os documentos de suporte à estrutura deste estudo e que estiveram na base da definição dos objetivos e dos instrumentos utilizados.

Quadro 1 – Correlação entre os *Standards and Guidelines for Quality Assurance in the Higher Education Area*, os Referenciais de Qualidade da A3ES e os Objetivos do estudo

<i>European Standards and Guidelines</i>	Referenciais A3ES	Objetivos do estudo
1.1. Política e procedimentos para garantia de qualidade	Referencial 1 - Definição da política e objetivos de qualidade	Objetivo 1 - Perceber se as IES têm definida uma política e objetivos de qualidade
1.2. Aprovação, acompanhamento e revisão periódica dos programas e prémios	Referencial 2 – Definição e garantia da qualidade da oferta formativa	Objetivo 2 - Perceber de que modo as IES garantem a qualidade da sua oferta formativa e da aprendizagem dos seus estudantes
1.3. Avaliação dos alunos	Referencial 3 – Garantia da qualidade das aprendizagens e apoio aos estudantes	
----	Referencial 4 – Investigação e desenvolvimento	Objetivo 3 - Perceber se as IES promovem, avaliam e melhoram a sua atividade científica, tecnológica e artística
----	<i>Referencial 5 – Relações com o exterior</i>	<i>Não se aplicaram questões neste ponto por não se ajustarem aos objetivos fundamentais do estudo</i>
1.4 Garantia de qualidade do corpo docente	Referencial 6 – Recursos humanos	Objetivo 4 - Perceber se as IES estão munidas de recursos humanos que consigam responder às solicitações dos seus estudantes
1.5. Recursos de aprendizagem e apoio aos alunos	Referencial 7 – Recursos materiais e serviços	Objetivo 5 - Perceber se as IES estão munidas de recursos materiais adequados ao desenvolvimento das aprendizagens dos seus estudantes
1.6. Sistemas de informação	Referencial 8 – Sistemas de informação	Objetivo 6 - Perceber se as IES dispõem de sistemas de recolha de informação e se publicitam os resultados dessa informação
1.7. Informação pública	Referencial 9 – Informação pública	
----	Referencial 10 – Internacionalização	Objetivo 7 - Perceber de que modo as IES estabeleceram as suas estratégias de internacionalização e quais os principais indicadores de internacionalização

Quadro 2 – Correlação entre os objetivos do estudo e os instrumentos usados na recolha de dados do estudo

Objetivos do estudo	Entrevista Qualidade	Entrevista Internacionalização	Questionário
Perceber se as IES têm definida uma política e objetivos de qualidade	Q1 Q24		Q1
Perceber de que modo as IES garantem a qualidade da sua oferta formativa e da aprendizagem dos seus estudantes	Q4 Q6 Q7		Q6 Q12 Q13 Q17
	Q5		Q10 Q11 Q14
Perceber se as IES promovem, avaliam e melhoram a sua atividade científica, tecnológica e artística	Q8 Q9 Q10 Q11 Q12		Q9
Não se aplicaram questões neste ponto por não se ajustarem aos objetivos fundamentais do estudo			
Perceber se as IES estão munidas de recursos humanos que consigam responder às solicitações dos seus estudantes	Q14 Q15 Q16 Q17		Q3
Perceber se as IES estão munidas de recursos materiais adequados ao desenvolvimento das aprendizagens dos seus estudantes	Q18 Q19		Q2 Q5 Q7 Q8
Perceber se as IES dispõem de sistemas de recolha de informação e se publicitam os resultados dessa informação	Q20 Q21 Q22		Q18
	Q23		Q4
Perceber de que modo as IES estabeleceram as suas estratégias de internacionalização e quais os principais indicadores de internacionalização	Q2 Q3 Q13	Todas as questões da entrevista	Q15 Q16

Como métodos de recolha de dados foram utilizados a análise documental, a entrevista e o questionário, ao passo que para o seu tratamento foram utilizadas a análise estatística e a análise de conteúdo.

2.3 Amostra

Por forma a complementar o levantamento bibliográfico e o enquadramento teórico feito sobre a temática foi necessário aferir as opiniões Institucionais sobre a mesma. Considerou-se que os órgãos que estão diretamente ligados às questões da Qualidade e da Internacionalização são os Vice-Reitores ou Pró-Reitores com esses pelouros assim como as pessoas responsáveis pelos Gabinetes de Qualidade e de Relações Internacionais, nas três Instituições.

Tal como referido anteriormente foram feitas duas entrevistas distintas neste estudo. Uma entrevista sobre a Qualidade no Ensino Superior mas aplicada ao contexto da Internacionalização, que consiste em vinte e quatro (24) questões, estruturadas de acordo com os indicadores de qualidade estabelecidos pela A3ES. Nesta entrevista foram recolhidos dois contributos da Universidade do Algarve e um da Universidade do Minho, não tendo sido possível recolher o contributo da Universidade de Aveiro. Na segunda entrevista, mais direcionada para a Internacionalização em si, composta por dezassete (17) questões, algumas delas subdivididas em sub-questões foi possível recolher um contributo em cada uma das três Instituições do estudo.

Foram, ainda, aplicados questionários aos 689 estudantes inscritos no ano letivo de 2016/2017, nos oito (8) cursos abaixo, todos eles na área da Educação, e que funcionassem nas três Instituições do estudo. Estes questionários foram aplicados presencialmente em sala de aula, aos estudantes dos cursos abaixo, num total de 475 respondentes, sendo 429 do sexo feminino e 46 do sexo masculino, encontrando-se maioritariamente na faixa etária dos 20 aos 25 anos (conforme se pode constatar pelos quadros nr. 3 e 4 e pelo gráfico nr. 1 abaixo):

- 1) Licenciatura em Educação Básica;
- 2) Mestrado em Educação e Formação;
- 3) Mestrado em Ciências da Educação;
- 4) Mestrado em Ciências da Educação e Formação;
- 5) Mestrado em Educação Pré-Escolar;
- 6) Mestrado em Educação Pré-Escolar e Ensino no 1º ciclo do Ensino Básico;
- 7) Mestrado em Ensino de Inglês no 1º ciclo do Ensino Básico;
- 8) Mestrado em Ensino do 1º ciclo do Ensino Básico e de Matemática e Ciências Naturais no 2º ciclo do Ensino Básico

Quadro 3– Número de estudantes que responderam ao questionário

Instituição	Nº total inscritos	Nº total respostas	% de respostas
Universidade do Algarve	115	76	66,09
Universidade de Aveiro	268	181	67,54
Universidade do Minho	306	218	71,24
Total	689	475	68,29

Quadro 4 – Género dos estudantes que responderam ao questionário

Género	Número de estudantes	%
Feminino	429	90,3
Masculino	46	9,7
Total	475	100

Gráfico 1 – Idade dos estudantes que responderam ao questionário



3. RESULTADOS

Tal como referido anteriormente foram definidos três objetivos gerais para este estudo e sete objetivos específicos. Para uma mais fácil compreensão a apresentação dos resultados será feita objetivo a objetivo do estudo.

No que diz respeito ao objetivo nr. 1 - *Perceber se as IES* têm definida uma política e objetivos de qualidade - os resultados obtidos da aplicação das entrevistas Institucionais assim como dos questionários aos estudantes mostram-nos que as três Instituições analisadas têm bem definidas as suas estruturas internas de garantia de qualidade, as quais se regem pelas diretivas europeias e nacionais. Uma das IES apresenta uma política interna de qualidade mais antiga e mais enraizada, sendo detentora da certificação da sua política interna de garantia de qualidade pela A3ES desde 2013, o que se pode comprovar pelas respostas obtidas às entrevistas mas também através das respostas dos seus estudantes, que se destacam pela positiva nas questões da qualidade e da internacionalização. As outras duas IES mostram que esta área é uma aposta mais recente e isso vê-se pela atualização dos Manuais de Qualidade, uns revistos no início de 2017 (UAlg) e outros recentemente elaborados e homologados, finais de 2016 (UA). Estas duas IES apresentaram os seus Sistemas Internos de Garantia de Qualidade a certificação pela A3ES em março de 2017.

Quando questionados sobre os indicadores de qualidade que as três IES consideram mais importantes quando se mede a qualidade de uma IES, as respostas dadas foram:

- os resultados dos principais rankings, nos indicadores considerados mais relevantes — Ensino, Investigação, Cooperação com a Sociedade, Internacionalização — e ao seu posicionamento relativamente às restantes IES nacionais e internacionais;
- o número de vagas preenchidas na primeira fase de acesso;
- o número de diplomados por ano/sucesso escolar;
- a integração dos estudantes na investigação e nas atividades de extensão/ a capacidade que uma Instituição tem de fazer transferência de conhecimento para a sociedade;

- a produção científica;
- a própria percepção dos estudantes com a qualidade do seu ensino;
- a capacidade de captação de estudantes internacionais;
- o percurso profissional dos nossos *alumni* que espelha a qualidade da instituição.

No que diz respeito ao objetivo nr. 2 - *garantia da qualidade da oferta formativa e da aprendizagem dos estudantes* - podemos constatar que todas as IES têm procedimentos estruturados e definidos para recolher e analisar os resultados da avaliação da qualidade do ensino aprendizagem dos seus estudantes internacionais. São aplicados questionários aos estudantes referentes aos processos de ensino-aprendizagem, sempre que finaliza uma unidade curricular, sendo que estes questionários avaliam sempre as cinco vertentes: autoavaliação do estudante; aquisição de competências; percepção dos estudantes sobre a aquisição de competências da unidade curricular em si; funcionamento em si da unidade curricular; os docentes; os recursos que teve de aprendizagem (infraestruturas e os recursos materiais). Há, para além dos questionários de avaliação da qualidade, outros procedimentos, tais como os questionários passados aos estudantes internacionais, por parte dos Gabinetes de Relações Internacionais que são questionários globais que medem o grau de satisfação dos estudantes. Outro aspeto importante a retirar desta análise é que todos os alunos, quer nacionais quer internacionais, preenchem estes questionários de avaliação pois os mesmos encontram-se traduzidos para inglês, seja em papel ou online.

Fazendo, também, uma análise global às respostas dadas pelos estudantes, estes demonstram ter conhecimento generalizado sobre os objetivos dos seus cursos e consideram que os seus professores têm competência académica para o desempenho das suas funções no âmbito do curso. Para além disso também manifestam que os seus cursos oferecem unidades curriculares numa língua estrangeira e que tanto os estudantes nacionais como os internacionais estão envolvidos no processo de garantia da qualidade dos seus cursos, ainda que as respostas dadas a estas duas últimas questões sejam um pouco neutras, como se poderá constatar pelos gráficos nr. 2, 3 e 4 abaixo):

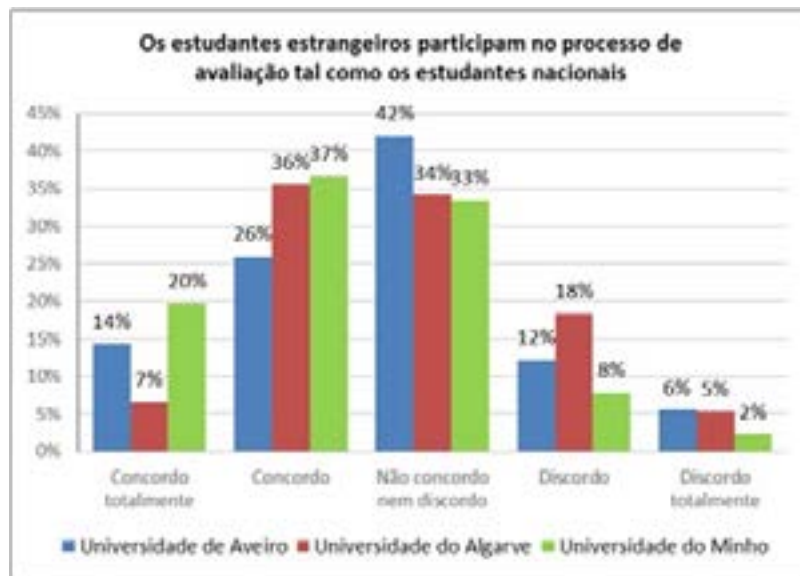
Gráfico 2 – Respostas obtidas à Questão nr. 12 - Os estudantes têm uma participação ativa nos processos de decisão no que diz respeito ao ensino e a sua qualidade



Gráfico 3 – Respostas obtidas à Questão nr. 13 - Os resultados dos inquéritos de satisfação aplicados aos estudantes são usados para melhorar o ensino



Gráfico 4 – Respostas obtidas à Questão nr. 17 - Os estudantes estrangeiros participam no processo de avaliação tal como os estudantes nacionais



Na prossecução dos resultados ao objetivo nr. 3 - *Perceber se as IES promovem, avaliam e melhoram a sua atividade científica, tecnológica e artística* - verificou-se que as três IES são Instituições muito ativas no que diz respeito à investigação internacional e à participação em projetos de mobilidade e cooperação sendo a sua promoção e monitorização feita nos seus planos de atividades, planos estratégicos, Manuais e Planos de Qualidade, documentos que se encontram publicitados nos respetivos sites das IES. Para além disso esta promoção é feita também através dos repositórios institucionais e dos próprios docentes e investigadores.

A participação em projetos de investigação nas três IES é extensa sendo que a grande maioria coordena projetos de investigação europeus e integra Centros de Investigação Internacionais de renome.

Os estudantes mantiveram uma posição neutra no que diz respeito aos períodos de investigação existentes nos seus planos curriculares ser ou não suficiente, à exceção da Universidade do Minho. Uma vez que o questionário foi passado a cursos nas áreas da educação estas respostas podem estar justificadas por si só dado que estes cursos não contemplam períodos de investigação como um curso mais científico.

Concluimos, ainda, que no âmbito do objetivo nr. 4 - *Perceber se as IES estão munidas de recursos humanos que consigam responder às solicitações dos seus estudantes* - as três IES responderam positivamente ainda que manifestando que estão mais capacitados os docentes na medida em que há aulas que são dadas em inglês, mas que também os funcionários estão devidamente identificados, ou seja, aqueles que conseguem dar resposta às solicitações em inglês. Para além disso as IES contam com o auxílio dos centros de línguas que estão sempre disponíveis e em colaboração com as IES para providenciar formação neste sentido. Há, contudo, noção de que é uma área em que devem continuar a apostar para fortalecer e providenciar cada vez mais um serviço de excelência ao seu público internacional.

Por sua vez, os estudantes são muito neutros nas suas respostas e, uma vez mais, a Universidade do Minho se destaca positivamente. As respostas dos estudantes levam-nos a questionar se efetivamente as IES têm os recursos humanos suficientes ou se as respostas provêm apenas do desconhecimento dos estudantes relativamente a esta questão.

Ainda na linha dos recursos, através do objetivo nr. 5 pretendia-se *perceber se as IES estão munidas de recursos materiais adequados ao desenvolvimento das aprendizagens dos seus estudantes*. Há, efetivamente, uma preocupação em proporcionar serviços de qualidade ao seu público internacional que é visível no que diz respeito às estruturas e recursos materiais que se encontram disponíveis para dar resposta às necessidades destes públicos (site, informação, serviços de apoio, materiais, relatórios de atividades) assim como os materiais que são produzidos para promover as IES em feiras e eventos internacionais e que promovem os cursos, a IES e a sua produção científica através dos Gabinetes de Comunicação, Relações Internacionais mas também através do próprio site e dos seus docentes e investigadores.

Numa análise global das respostas dadas pelos estudantes destas três IES às quatro questões que lhes foram colocadas no âmbito deste objetivo, podemos perceber que na generalidade as respostas foram positivas, o que demonstra uma preocupação das IES em fornecer recursos adequados aos seus estudantes.

No âmbito do objetivo nr. 6 - *Perceber se as IES dispõem de sistemas de recolha de informação e se publicitam os resultados dessa informação* - constatou-se que os sites das IES se encontram em inglês, onde os estudantes podem encontrar toda a informação que necessitam (menus, conteúdos, oferta formativa, etc). Há IES que estão mais desenvolvidas na questão da apresentação da sinalética, site e conteúdos em língua inglesa enquanto que as outras IES estão em processo de concretização desse objetivo.

Os estudantes responderam de forma positiva no que diz respeito à disponibilização no sites das suas IES dos conteúdos (informação, notícias, planos curriculares, programas, etc) numa língua estrangeira, sendo apenas de destacar as respostas mais neutras dos estudantes da Universidade do Algarve.

No que diz respeito à questão colocada sobre a taxa de empregabilidade dos seus cursos, os estudantes demonstraram não ter uma opinião muito positiva sobre esta matéria à exceção dos estudantes da Universidade do Minho.

Por fim, apresentam-se as conclusões ao objetivo nr 7 - *Perceber de que modo as IES estabeleceram as suas estratégias de internacionalização e quais os principais indicadores de internacionalização*, que era um dos objetivos chave deste estudo.

Assim, verificou-se que as três IES têm definida uma política e uma estratégia de internacionalização e que estas se encontram publicitadas mas não traduzidas numa língua estrangeira. Duas das IES são detentoras dos selos de qualidade ECTS e DS Label sendo que apenas a Universidade do Algarve não detém estes selos de qualidade. As IES fazem uma monitorização dos seus protocolos de cooperação mas não de forma sistemática.

Há uma grande aposta na mobilidade dos estudantes e pessoal *incoming* assim como *outgoing*, havendo medidas e estruturas de apoio definidas para auxiliar em ambas as situações.

As IES oferecem cursos em língua estrangeiras a nível de 2º e 3º ciclos ou seja, Mestrados e Doutoramentos e todas elas oferecem cursos em rede ou cursos conjuntos, principalmente no âmbito do Programa Erasmus Mundus. Para além disso, participam em projetos de investigação internacionais na qualidade de coordenadores, à exceção da Universidade do Algarve, e como parceiras e no que diz respeito à área da cooperação as três IES são muito ativas, participando em diversas redes e fóruns internacionais e em inúmeros projetos de mobilidade e cooperação, sejam eles nacionais, europeus ou internacionais, que estão em constante atualização e submissão de novos projetos. Há uma preocupação em manter os seus níveis de qualidade e atingir metas e objetivos para reforçar essa qualidade, alcançando posições de destaque em rankings internacionais tais como o U-Multirank.

As áreas em que as IES estão a apostar, no que diz respeito às novas candidaturas, divergem na medida em que a Universidade do Minho diz que uma vez que as suas unidades são muito ativas apresentam candidaturas em todas as áreas, a Universidade de Aveiro aposta na área do empreendedorismo e Desenvolvimento Curricular e por fim, a Universidade do Algarve aposta nas suas áreas de excelência – Mar, Turismo, Saúde e Bem-Estar e o Património Mediterrânico.

No que diz respeito aos indicadores que as IES consideram mais importantes quando se mede a internacionalização, as respostas foram:

- 1) número de pessoas/cidadãos estrangeiros, quer se trate de pessoal estudantil, quer de pessoal docente e não docente / número de estudantes internacionais em relação ao número total de estudantes e que a proveniência seja de diversos contextos e países;
- 2) número de estudantes e pessoal docente (e não docente) que beneficia da mobilidade de estudos no estrangeiro / o número de estudantes, docentes e não docentes in e out;
- 3) número de diplomados internacionais;
- 4) número de protocolos de cooperação e acordos bilaterais celebrados/ o número de parcerias com instituições estrangeiras;
- 5) a transferência de conhecimento para multinacionais;
- 6) número de projetos de mobilidade e de investigação internacional / colaboração científica entre os nossos docentes e os docentes de outras Instituições/ internacionalização da investigação.

Este estudo também nos demonstra que há IES com áreas mais desenvolvidas do que outras, que as apostas de internacionalização, investigação e cooperação são visíveis e crescentes, um pouco divergentes em termos de áreas mas, o facto é, que todas elas já dispõem de estratégias para a sua internacionalização, se estas são mais institucionalizadas ou se se ajustam no decorrer do tempo consoante os planos de atividades anuais, se são públicas ou do domínio privados das próprias IES, pouco interessa, desde que estas existam e deem resposta à política de qualidade e internacionalização da Instituição.

As IES devem, e esta é também uma preocupação da Comissão Europeia, saber aproveitar as suas potencialidades individuais na educação, na investigação e, também, na inovação ou estabelecimento de parcerias, dentro e fora da Europa, que reforcem e complementem os perfis das IES, tendo sempre presente a ideia de que estabelecer ou renovar a cooperação com IES dos países em desenvolvimento deve ser um elemento importante das estratégias de internacionalização nacionais e institucionais.

Seguindo, ainda, as considerações feitas pela Comissão Europeia, as IES Europeias devem definir estratégias globais de internacionalização e nelas deverão ser incluídas ações prioritárias, que não deverão ser consideradas isoladamente mas sim como elementos integrantes de uma estratégia global, e que passem por promover a internacionalização, a mobilidade internacional dos alunos e do pessoal, o desenvolvimento dos currículos e a aprendizagem digital e, ainda, incentivar a cooperação estratégica, as parcerias e o reforço das capacidades.

No amplo sentido, desenvolver uma estratégia global de internacionalização significa posicionar as IES, os seus estudantes, investigadores e pessoal, bem como os respetivos sistemas nacionais, num plano mundial, de acordo com o seu perfil individual, as necessidades do mercado de trabalho e a estratégia de desenvolvimento do próprio país.

Em suma, podemos constatar, que da análise feita aos diversos materiais Institucionais, pelas entrevistas realizadas e questionários aplicados, há uma forte aposta na Qualidade e na Internacionalização por parte destas três IES. Aposta na captação de estudantes, principalmente oriundos dos Países Oficiais de Língua Portuguesa e da América Latina, de crescimento do número de parcerias e projetos de investigação mas, também, da oferta de cursos conjuntos.

Muito trabalho tem sido feito nos últimos anos nestas matérias mas, muito há a fazer. Assim, estas IES deverão prosseguir a sua aposta na concretização dos seus objetivos de prossecução de uma política de qualidade e de aposta na sua Internacionalização definindo as suas próprias estratégias de internacionalização e seguindo as diretivas europeias que pretendem conseguir implementar um Ensino Superior Internacional de Qualidade e Globalizado, aberto ao mundo, e de fácil acesso.

4. LIMITAÇÕES E RECOMENDAÇÕES

4.1 Limitações do estudo

Como em qualquer estudo foram encontradas algumas limitações que, sem dúvida, influenciaram os resultados obtidos.

Em primeiro lugar a inexistência de estudos semelhantes feitos em IES nacionais. Em segundo lugar, o facto de o estudo estar grandemente dependente das entrevistas Institucionais, e nesse sentido, dependente da disponibilidade das agendas das pessoas a entrevistar e da investigadora também (o facto de que duas das Instituições estudadas estarem geograficamente afastadas do local de residência e trabalho da investigadora dificultou a articulação das disponibilidades das agendas).

Outra limitação esteve interligada à aplicação dos questionários aos estudantes e que, uma vez mais, teve a ver com a disponibilidade da investigadora em ir pessoalmente às salas de aula dos cursos onde foram aplicados os questionários. As dificuldades sentidas passaram por:

- a) a dificuldade em obter as necessárias autorizações dos diretores dos cursos;
- b) a dificuldade em obter as necessárias autorizações por parte dos docentes para poder aplicar os questionários na suas aulas;
- c) as mudanças de salas de aulas e de horários

Estas dificuldades limitaram também as amostras de estudantes respondentes, ainda que a percentagem de respondentes tenha sido muito positiva.

Também o número de respostas neutras (não concordo nem discordo) dadas pelos estudantes (oito questões em dezoito com esta opção de resposta) merecem aprofundar melhor o motivo destas respostas. As questões às quais se obtiveram respostas neutras foram relacionadas com a participação dos estudantes nacionais e estrangeiros nos processos de decisão no que diz respeito ao ensino e a sua qualidade e saber se os resultados dos inquéritos de satisfação aplicados aos estudantes são usados para melhorar o ensino. Ainda, no que diz respeito a haver unidades curriculares lecionadas numa língua estrangeira e se o curso tem professores visitantes estrangeiros a lecionar. Duas questões que também obtiveram respostas neutras foram a questão de o plano de estudos do curso contemplar suficientes períodos de investigação e o curso ter uma boa taxa de empregabilidade. Por último, os estudantes de duas IES manifestaram não concordar nem discordar com a questão de que as suas Universidades dispõem de recursos humanos suficientes (professores e funcionários) para apoiar os estudantes estrangeiros.

Outra limitação foi o facto de os temas escolhidos para este estudo serem temas em constante atualização pelo que as alterações afetam o estudo em curso para além de serem temas sensíveis e internos às próprias IES não tendo sido possível obter algumas informações relevantes para este estudo e que teriam a ver com as estratégias de internacionalização das IES.

4.2 Algumas recomendações para trabalho futuro...

Considerando as limitações com que nos deparámos no decurso deste estudo gostaríamos de poder alargar o estudo a outras IES de modo a poder obter mais elementos de comparação sobre as temáticas abordadas.

Gostaríamos, também, de aplicar os questionários a áreas não direccionadas à educação por forma a ver se os resultados divergem. Ainda na questão dos questionários, tentar aplicar o questionário com a escala invertida (1 – discordo totalmente e 5 – concordo totalmente) pois aquando da passagem dos questionários pelos estudantes e, muito embora se tenha feito uma explicação da escala e a mesma constasse no corpo do questionário, verificou-se na análise que haviam nitidamente respostas inversas.

Seria necessário adaptar os instrumentos de recolha de dados deste estudo aos recém aprovados (2015) *Standards and Guidelines for Quality Assurance in the Higher Education Area* que deram origem a uma reavaliação por parte da A3ES sobre os seus referenciais, tendo sido em outubro de 2016, aprovados os novos Referenciais para os Sistemas Internos de Garantia da Qualidade nas IES pela A3ES. Estes referenciais referem que as IES devem assegurar que existem estruturas e procedimentos de garantia da qualidade abrangentes e eficazes no âmbito de cada uma das vertentes nucleares da missão da instituição e das áreas transversais que as suportam, a saber: o ensino e aprendizagem; a investigação e desenvolvimento (ensino universitário) ou a investigação orientada e desenvolvimento profissional de alto nível (ensino politécnico); a colaboração interinstitucional e com a comunidade – incluindo a internacionalização; a gestão dos recursos humanos e dos recursos materiais e serviços de apoio; a gestão e publicitação da informação e a avaliação externa periódica (A3ES, 2016). Assim, seria importante fazer um reajuste dos instrumentos utilizados neste estudo de acordo com estes novos referenciais e ver se os dados sofriam alterações consideráveis.

Para terminar e a título de recomendação, seria importante que as IES nacionais se debruce sobre os últimos estudos, relatórios e recomendações da Comissão Europeia sobre as questões do Ensino Superior e as prioridades para Portugal no que diz respeito a esta questão. Mas, também, que analisem as suas forças internas e as suas melhores capacidades e que as reforcem de modo a irem de encontro à tão mencionada “estratégia global de internacionalização”, não esquecendo os mercados emergentes nesta área, apontados pelos últimos estudos realizados pela Comissão Europeia.

A maior força de qualquer Instituição de Ensino Superior são os seus colaboradores e os seus alunos...só neles está o poder para mudar e criar algo!

BIBLIOGRAFIA

- Altbach, P., Knight, J. (2007). *The Internationalization of Higher Education: Motivations and Realities*. Journal of Studies in International Education, Vol. 11 N°. 3/4, Fall/Winter, pp. 290-305.
- A3ES (2011). *Auditoria dos Sistemas Internos de Garantia da Qualidade nas Instituições de Ensino Superior: Manual para o Processo de Auditoria*. Lisboa
- Cardoso, S. (2010). *Participação dos Estudantes na Avaliação das Instituições de Ensino Superior Portuguesas: Um Contributo para a sua Definição*. Gabinete de Estudos e Análise da A3ES. Lisboa.
- Comissão Europeia (2012). Comunicado de imprensa: A Comissão apresenta nova estratégia «Repensar a Educação». Bruxelas/Estrasburgo, 20 de novembro de 2012. Consultado a 22 de março de 2015 em http://europa.eu/rapid/press-release_IP-12-1233_pt.htm
- Comissão Europeia (2013). Comunicação da Comissão ao Parlamento Europeu, ao Conselho, ao Comité Económico e Social Europeu e ao Comité das Regiões - O Ensino Superior Europeu no Mundo. Consultado a 22 de março de 2015 em <http://ec.europa.eu/transparency/regdoc/rep/1/2013/PT/1-2013-499-PT-F1-1.Pdf>
- Comissão Europeia (2013). A estratégia Europa 2020. Consultado a 23 de março de 2015 em http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/index_pt.htm
- Cortesão, L., Correia, J. A. (orgs.) (2001). *Transnacionalização da educação: Da crise da educação à educação da crise*. Porto: Afrontamento.
- Cortesão, L. (2002). *Formas de ensinar, formas de avaliar, breve análise de práticas correntes de avaliação*. In: Abrantes, P.; Araújo, F. (Coords.). *Avaliação das aprendizagens, das concepções às práticas*. Lisboa: DEB ME, pp. 35-42.
- De Wit, H. (2009a). *Measuring success in the internationalization of higher education: an introduction*. Em H. De Wit (Ed.), *Measuring Success in the Internationalization of Higher Education*. EAIE - European Association of International Education. ISBN: 978-90-74721-30-1.
- ENQA (2006). *Quality Assurance of Higher Education in Portugal*. Helsinki
- ENQA (2007). *Standards and guidelines for quality assurance in the european higher education area*. Helsinki.
- European Association for Quality Assurance in Higher Education (ENQA)(2014). Consultado a 12 de outubro de 2014 em www.enqa.eu
- Fernandes, P. (2011). *Pode a avaliação melhorar ou prejudicar a aprendizagem? Uma reflexão a partir do ponto de vista de um grupo de estudantes*. In: LEITE, C. et al. *Políticas, fundamentos e práticas do currículo*. Porto: Porto Editora, p. 252-263.
- Jornal Oficial da União Europeia (2013). Resolução do Parlamento Europeu, de 20 de abril de 2012 sobre Modernização dos Sistemas de Ensino Superior da Europa. Consultado a 23 de março de 2015 em http://www.igfse.pt/upload/docs/2013/2013_C_258E_08.pdf
- Knight, J., e De Wit, H. (1995). *Strategies for Internationalization of Higher Education: historical and conceptual perspectives. Strategies for Internationalization of Higher Education: a comparative study of Australia, Canada, Europe and the United States of America* (pp. 5-33). Amsterdam: European Association for International Education.
- Knight, J. (2010). *Internationalization: Key Concepts. Internationalization of European Higher Education*. Raabe. ISBN: 978-3-8183-0543-7.
- Knight, J. (2011). *Five Myths about Internationalization*. International Higher Education, (62), pp. 14-15.
- Leite, C. (2014). *Avaliação, Qualidade e Equidade*. Avaliação, Campinas; Sorocaba, SP, v. 19, n. 2, pp. 421-438.
- MCTES (2006). *O Relatório da OCDE –A Avaliação do Sistema de Ensino Superior em Portugal*. Lisboa.
- Melero, M. (1999). *Ideologia, diversidad y cultura: una nueva escuela para una nueva civilización*. In: RIVERA, E. e RUMAYOR, L. (Org.). *Repensar la enseñanza desde la diversidad*. Sevilla: Mórón Grafidós.
- Morosini, M. C. (2009). *Qualidade da educação superior: tendências deste século*. Estudos em avaliação educacional. São Paulo: v. 20, n. 43, maio/ago. pp. 165 – 185.
- Morosini, M. C. (2012). *Qualidade da educação superior e internacionalização: estado de conhecimento sobre indicadores*. In: Cunha, M. I.; Broilo, C. (Orgs.). *Qualidade na educação superior: grupos investigativos internacionais em diálogo*. São Paulo: Marin e Junqueira, pp. 29-62.
- Morosini, M. C., Cleoni, M. B., Fernandes, D. N. et al (2016). *A qualidade da educação superior e o complexo exercício de propor indicadores*. Revista Brasileira de Educação v. 21 n. 64 jan.-mar. (Consultado a 01/12/2016). Disponível em http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-24782016000100013&lng=pt&tlng=pt
- Qiang, Z. (2003). *Internationalization of Higher Education: toward a conceptual framework*. Policy Futures in International Education, Ontario Institute for Studies in Education, University of Toronto.
- Santos, S. M. (2011). *Avaliação Global do Ensino Superior. Seminário 2º Painel Internacionalização*. (Consultado em 05/10/2014). Disponível em: <http://www.fclb.uminho.pt/uploads/Artigo37-Abr00.pdf>

- Santos, S. M. (2011). *Análise comparativa dos processos europeus para a avaliação e certificação de sistemas internos de garantia da qualidade*. Lisboa: A3ES.
- Santos, S. M. (2011). *Sistemas Internos de Garantia de Qualidade nas Agências de Avaliação e Acreditação*. Lisboa: A3ES.
- Seixas, A. M. (2001). *Políticas educativas para o ensino superior: a globalização neoliberal e a emergência de novas formas de regulação estatal*, in S. R. Stoer e outros (orgs.) (2001), *A Transnacionalização da Educação: Da Crise da Educação à Educação da Crise*. Porto: Afrontamento, pp. 211-239.
- Stallivieri, L. (2007). *O processo de internacionalização nas instituições de ensino superior: avaliação, qualidade e pertinência da cooperação internacional*. (Consultado em 10/06/2015). Disponível em <http://iglu.paginas.ufsc.br/files/2014/08/SLIDES-LUCIANE.pdf>
- Soderqvist, M. (2002). *Internationalization and Its Management at Higher Education Institutions: Applying Conceptual, Content and Discourse Analysis*. Helsinki: Helsinki School of Economics.
- Sousa, C. S. (2015). *Profissão Docente, diversidade e resiliência* (pp.115-127) IN: Educação superior e aprendizagem = Higher education and learning [recurso eletrônico] / orgs. Maria Emília Amaral Engers, Marília Costa Morosini, Vera Lucia Felicetti. – Dados eletrônicos. – Porto Alegre : EDIPUCRS, 2015. 400 p. – (RIES/PRONEX); ISBN 978-85-397-0629-7.
- Taylor, J. (2010). *The Management of Internationalization in Higher Education*. Internationalization of European Higher Education. Raabe. ISBN: 978-3-8183-0543-7.
- Yang, R. (2002). *University internationalization: its meanings, rationales and implications*. Intercultural Education, 13, pp. 81–96.
- Yin, R. K. (2005) (editor). *Introducing the world of education. A case study reader*. Thousand Oaks: Sage Publications.

EFFECT OF ULTRASOUND IN BIOACTIVE COMPOUNDS AND ANTIOXIDANT ACTIVITY IN DURING THE STORAGE OF A MONOFLORAL HONEY

R. Solis-Silva

Instituto de Ciencias Agropecuarias de la Universidad
Autónoma del Estado de Hidalgo
(ruloshifu@gmail.com)

A. C. Figueira

CIEO, Centro de Investigação sobre o Espaço e
Organizações; Departamento de Engenharia Alimentar,
Universidade do Algarve
(afiguei@ualg.pt)

I. Almaraz-Buendia

Instituto de Ciencias Agropecuarias de la Universidad
Autónoma del Estado de Hidalgo
(almaraz73@hotmail)

A. Quintero-Lira

Instituto de Ciencias Agropecuarias de la Universidad
Autónoma del Estado de Hidalgo
(auroraql@yahoo.com.mx)

O.E. Del Razo Rodríguez

Instituto de Ciencias Agropecuarias de la Universidad
Autónoma del Estado de Hidalgo
(oscardelrazo@hotmail.com)

R.G. Campos-Montiel

Instituto de Ciencias Agropecuarias de la Universidad
Autónoma del Estado de Hidalgo
(ragcamposm@gmail.com)

ABSTRACT

In this research was analysed the effect of ultrasounds in the content of phenols, hydroxymethylfurfural (HMF) and antioxidant activity (ABTS) present in a monofloral honey after 120 days of storage. The monofloral honey was obtained from the nectar of *Citrus sinensis* and was harvested in May from the municipality of San Felipe Orizatlan in the state of Hidalgo, Mexico. The ultrasound treatment was performed using a Branson 3510 ultrasonic bath with a frequency of 42 kHz and 5, 10 and 15 minutes at a controlled temperature of 20 ° C. After the ultrasound treatment, significant differences ($p < 0.05$) were found in the content of HMF and antioxidant activity (ABTS). In the 15-minute ultrasound treatment, the highest content HMF and antioxidant activity was found with increases of 4.3% and 24.6%, respectively. In phenols no significant differences ($p > 0.05$) were observed between the treatments. At 120 days of storage, significant difference ($p < 0.05$) were observed in the treatments with an increase in phenols, HMF and antioxidant activity. During storage it was found that the increase in HMF in the ultrasound treatments was 58% lower than those found for the control treatment (without ultrasound). The results suggest that the use of ultrasounds is an alternative method to increase the antioxidant properties of honey and decrease the production of HMF during storage.

Keywords: *Citrus Sinensis*, Ultrasounds Treatments, Bioactive Compounds, Antioxidant Activity, Hydroxymethylfurfural (HMF).

1. INTRODUCTION

Since ancient times, honey has been used in the treatment of multiple diseases, due to its natural characteristics with great potential for therapeutic use, which are related to its antimicrobial and antioxidant properties (Bueno-Costa *et al.*, 2016). These properties are related to the active compounds which depend on the floral source, from which it is obtained, as well as the climatic conditions and (Baltrusaityte *et al.*, 2007).

From the point of view of processing of honey, the phenomenon of crystallization is an undesirable property that causes complications in the handling process, affecting the quality due to the humidity change of this phenomenon, which can generate fermentation in the product (Yao *et al.*, 2003). While for the consumer, crystallized honey does not meet the quality standards demanded such as fluidity, scalability and appearance (Kabbani *et al.*, 2011).

In order to solve the phenomenon of crystallization and ensure safety in honey, the processing most used practice is to heat around 80 ° C to increase it is commercial life (Escriche *et al.*, 2008). In general, heat treatments increase the concentration of HMF which is a quality and freshness indicator compound, which is not present in fresh or unheated honeys (Tosi *et al.*, 2004). However a warming may increase phenolic compounds and their antioxidant activity (Pimentel *et al.*, 2015).

The use of emerging technologies also called clean technologies is an alternative for the treatment of honey as a crystallization retardant process. Specifically, ultrasound, with frequencies above 320 kHz, has been reported as an effective method to decrease crystallization, without compromising the functional properties that would be affected by a thermal treatment (Robles & Ochoa, 2012). As it has been observed that in crystallized honeys in addition to the lack of acceptance by the majority of the consumers due to the appearance, the phenolic compounds directly related to the antioxidant activity, are less available, being able to increase this availability by ultrasound (Quintero-Lira *et al.*, 2016).

The objective was to determine the effect of ultrasound on a monofloral honey in its bioactive compounds and its antioxidant properties in storage of 120 days.

2. METHODOLOGY

2.1 Honey

The fresh honey was collected in the month of June of the municipality of San Felipe Orizatlan located in the northern region of the state of Hidalgo with monofloral *Citrus sinensis* nectar and stored in amber bottles to protect it from light.

2.2 Ultrasound treatment

The freshly harvested honey was distributed in test tubes with 15 g of honey each and then exposed to ultrasound using a Branson 3510 ultrasonic bath with a frequency of 42 kHz in times of 5, 10 and 15 minutes at 20 ° C. Tubes were protected from light and stored for further analysis in the following months after treatment.

2.3 Total phenolic

The phenolic content was assessed using the Folin-Ciocalteu method described by Singleton *et al.* (1999). A total of 5 g of sample was diluted into 50 mL of distilled water and filtered through Whatman No. 1 filter paper. A volume of 0.3 mL of the solution as then mixed with 1.5 mL of 0.2 N Folin-Ciocalteu reagent (Sigma–Aldrich, Toluca, Mexico) for 5 minutes and further homogenized with 1.2 mL (0.7 M) of Na₂CO₃. The resulting mixture was measured at 765 nm against a blank solution using a spectrophotometer. The total phenolic content was determined from a standard curve prepared using gallic acid (Sigma–Aldrich, Toluca, Mexico) standard solutions and ranged from 0-200 mg/L. The amount of total phenols is expressed in mg of gallic acid equivalents in 100 g of honey (mg GAE/100 g of honey).

2.4 Antioxidant activity

The antioxidant activity was determined using the chromogenic compound 2, 2'-azino-bis (3-ethylbenzothiazoline-6-sulphonic acid) (ABTS) according Re *et al.* (1999) with some minor modifications. The ABTS was combined with potassium persulphate to generate the ABTS⁺ radical, which was used to determine the antioxidant activity with two readings per sample. The first measurement was performed at minute one and the second measurement was performed at minute six at a wavelength of 740 nm and the results were calculated as ascorbic acid equivalents in 100 g of honey (mg AAE/100 g honey).

2.5 Hydroxymethylfurfural

The 5-hydroxymethylfurfural (HMF) was determined by Carrez (AOAC980.23, 2005). First, 5 g of honey was weighed and dissolved in 25 mL of distilled water. The solution was mixed with potassium ferrocyanide, and then zinc acetate was added and the solution homogenized. The mixture was placed in a 50 mL volumetric flask and filtered, and the first 10 mL was eliminated. Then, 5 mL of the filtered solution was added to each of two test tubes, one with 5 mL distilled water and the other 5 mL of sodium bisulphite 2 %. The tube with water was measured at 284 nm and the tube with sodium bisulphite at 336 nm. Results were expressed as (mg HMF/kg of honey).

3. RESULTS

In the total phenol content, no significant differences ($p < 0.05$) were found between control and ultrasound treatments. (Table 1). For the control the total phenol content was 32.46 mg EAG / 100 g of honey these results was similar to report by Ferreira *et al.* (2009) in monofloral honey from Portugal with 22.6 mg / 100 g and Pimentel *et al.* (2017) in a monofloral honey from the state of Hidalgo obtained from complex flowers with values of 42.08 mgEAG / 100 g of honey.

Table 1. Effect of ultrasound on total phenol content, antioxidant activity and HMF

	Phenols mgEAG/100g of honey	ABTS mgEAA/100g of honey	HMF mg/Kg of honey
Control	32.028 ± 0.146 ^a	61.47 ± 2.852 ^a	4.57 ± 0.022 ^d
U5	31.62 ± 0.772 ^a	71.53 ± 3.254 ^b	4.49 ± 0.025 ^c
U10	31.92 ± 0.48 ^a	72.35 ± 0.819 ^b	4.38 ± 0.031 ^a
U15	32.46 ± 1.368 ^a	76.52 ± 2.112 ^c	4.41 ± 0.019 ^b

Different lowercase letters represent a significant difference ($p < 0.05$) within the column between ultrasound treatments as determined by Tukey comparison of average

U5 treatment of 5 minutes of ultrasound, U10 treatment of 10 minutes of ultrasound, U15 treatment of 15 minutes of ultrasound

Significant differences ($p < 0.05$) were observed between the treatments with ultrasound finding an increase in the antioxidant activity (Table 1). The highest antioxidant activity was found in the 15-minute ultrasound treatment with 76.52 mgEAA / 100 g. These results are similar to those reported by Rodríguez *et al.* (2012) with different samples of commercial honeys in Mexico and higher than those reported by Pimentel *et al.* (2015) in a monofloral citrus honey.

HMF concentration showed significant differences ($p < 0.05$) between treatments. Ultrasound treatment did not increase HMF content. Untreated honey contained 4.57 mg / kg of HMF, this value is similar to report by Pimentel *et al.* (2015) with a multifloral honey subjected to heat treatment, but lower than those reported by Thuran *et al.* (2008) in samples of pine honey from Turkey.

A significant increase ($p < 0.05$) in storage time was found (Figure 1), with an increase in total phenol content up to day 120. Results different from those of Saric *et al.* (2012) who found a decrease in total phenol content during a 360 day storage of a multifloral honey without receiving any treatment. Spanos *et al.* (1990) found an increase of phenolic compounds in the pasteurisation of apple juice.

Figure 1. Effect of storage on total phenol content

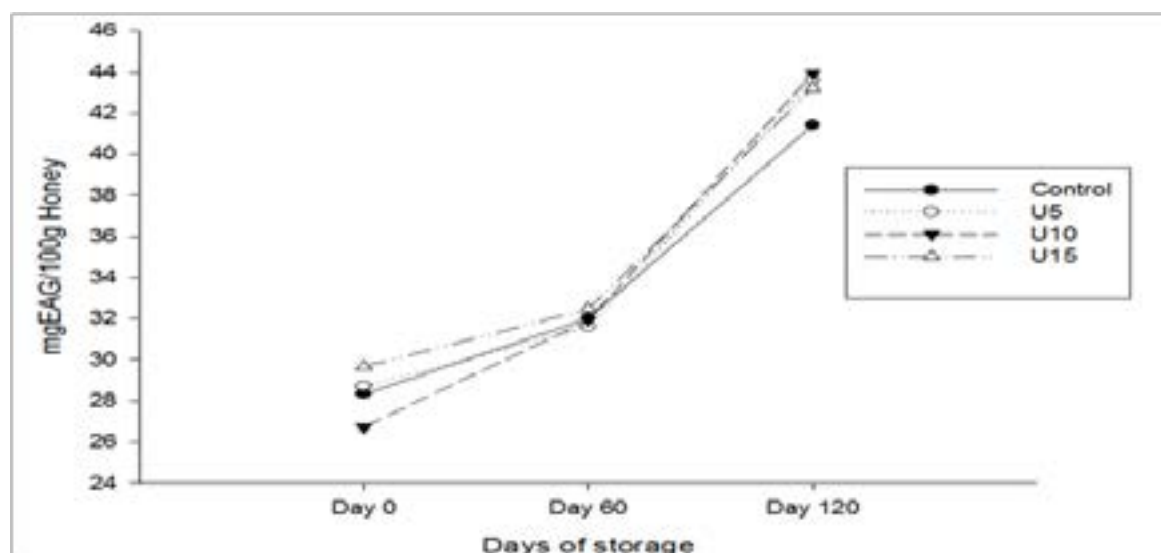
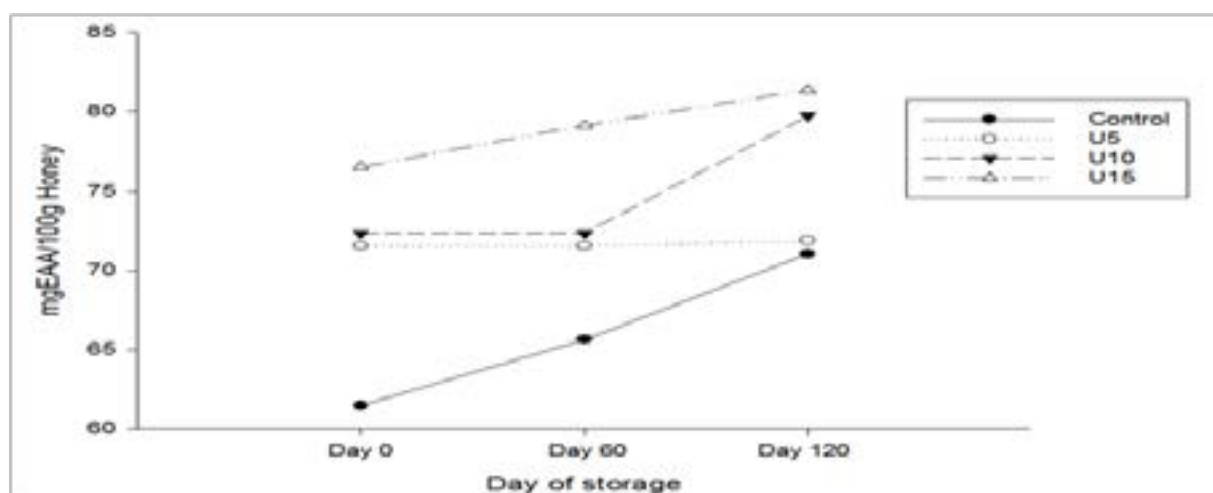


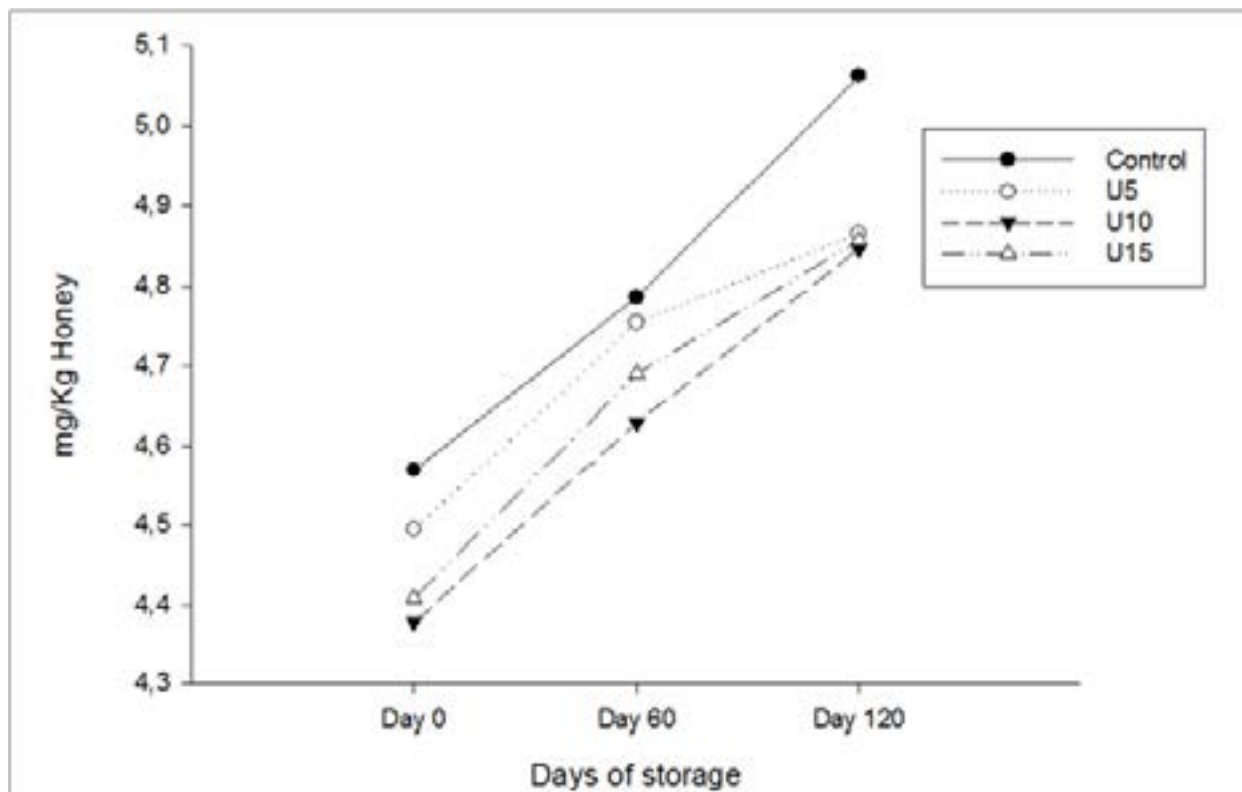
Figure 2. Effect of storage on antioxidant activity by ABTS



In Figure 2, it was observed that there were no significant differences ($p > 0.05$) between days 0 and 60 in all treatments in antioxidant activity. At 120 days if significant differences were observed ($P < 0.05$) found in all treatments with an increment. Kahoun *et al.* (2017) found no significant differences in the first 90 days of storage in a drink water of honey with Czech Republic in the antioxidant activity.

As regards the content of hydroxymethylfurfural in figure 3 it is shown that there are significant differences ($p < 0.05$) between storage time. All treatments increased the HMF, but values were still below the established standards (AOAC980.23, 2005). The 10-minute ultrasound treatment showed the smallest increase, results comparable to those found by Quintero *et al.* (2016), the behaviour of HMF concentration with respect to time agrees with that described by Wang *et al.* (2004) finding increases in HMF in raw clover honey during 6 months of storage at room temperature.

Figure 3. Effect of storage on the content of hydroxymethylfurfural



4. CONCLUSIONS

The use of ultrasound is an effective alternative to preserve the quality of honey by not showing an increase in HMF content due to its application, increase total phenols and improve antioxidant activity during the storage period.

REFERENCES

- AOAC 980.23. (2005). Hydroxymethylfurfural in Honey, spectrophotometric method AOAC Official Methods 80.23 (18th edition ed., Vol. "Hydroxymethylfurfural in Honey, spectrophotometric method", Chapter 44, pag. 32; AOAC 18th edition 2005., pp. 44).
- Baltrušaitytė, V., Venskutonis, P. R., & Čeksterytė, V. (2007). Radical scavenging activity of different floral origin honey and beebread phenolic extracts. *Food Chemistry*, 101(2), 502-514.
- Bueno-Costa, F. M., Zambiasi, R. C., Bohmer, B. W., Chaves, F. C., da Silva, W. P., Zanusso, J. T., & Dutra, I. (2016). Antibacterial and antioxidant activity of honeys from the state of Rio Grande do Sul, Brazil. *LWT-Food Science and Technology*, 65, 333-340.
- Escriche, I., Visquert, M., Carot, J. M., Domenech, E., & Fito, P. (2008). Effect of honey thermal conditions on hydroxymethylfurfural content prior to pasteurization. *Food Science and Technology International*, 14(5 suppl), 29-35.
- Ferreira, I. C., Aires, E., Barreira, J. C., & Estevinho, L. M. (2009). Antioxidant activity of Portuguese honey samples: Different contributions of the entire honey and phenolic extract. *Food Chemistry*, 114(4), 1438-1443.
- Kabbani, D., Sepulcre, F., & Wedekind, J. (2011). Ultrasound-assisted liquefaction of rosemary honey: *Influence on rheology and crystal content*. *Journal of Food Engineering*, 107(2), 173-178.
- Kahoun, D., Řezková, S., & Královský, J. (2017). Effect of heat treatment and storage conditions on mead composition. *Food Chemistry*, 219, 357-363.
- Pimentel-González, D. J., Basilio-Cortes, U. A., Hernández-Fuentes, A. D., Figueira, A. C., Quintero-Lira, A., & Campos-Montiel, R. G. (2017). Effect of Thermal Processing on Antibacterial Activity of Multifloral Honeys. *Journal of Food Process Engineering*. 40, 1-8.
- Pimentel-González, D. J., Jiménez-Alvarado, R., Hernández-Fuentes, A. D., Figueira, A. C., Suarez-Vargas, A., & Campos-Montiel, R. G. (2015). Potentiation of bioactive compounds and antioxidant activity in artisanal honeys using specific heat treatments. *Journal of Food Biochemistry*, 40(1), 47-52.

- Quintero-Lira, A., Santos, A. Á., Aguirre-Álvarez, G., Reyes-Munguía, A., Almaraz-Buendía, I., & Campos-Montiel, R. G. (2016). Effects of liquefying crystallized honey by ultrasound on crystal size, 5-hydroxymethylfurfural, colour, phenolic compounds and antioxidant activity. *European Food Research and Technology*, 1-8.
- Re. R., Pellegrini. N., Proteggente. A., Pannala. A., & Evans., Yang. M. Rice. (1999). Antioxidant activity applying an improved ABTS radical action decolonization assay free Radical Biology and Medicine, 26, 1231-1337.
- Robles-Ozuna, L. E., & Ochoa-Martínez, L. A. (2012). Ultrasonido y sus aplicaciones en el procesamiento de alimentos. *Revista Iberoamericana de Tecnología Postcosecha*, 13(2), 109-122.
- Rodriguez, B. A., Mendoza, S., Iturriga, M. H., & Castaño-Tostado, E. (2012). Quality parameters and antioxidant and antibacterial properties of some Mexican honeys. *Journal of food science*, 77(1), C121-C127.
- Šarić, G., Marković, K., Major, N., Krpan, M., Uršulin-Trstenjak, N., Hruškar, M., & Vahčić, N. (2012). Changes of antioxidant activity and phenolic content in acacia and multifloral honey during storage. *Food Technology and Biotechnology*, 50(4), 434-441.
- Singleton, V. L., Orthofer, R., & Lamuela-Raventós, R. M. (1999). [14] Analysis of total phenols and other oxidation substrates and antioxidants by means of folin-ciocalteu reagent. *Methods in enzymology*, 299, 152-178.
- Spanos, G. A., Wrolstad, R. E., & Heatherbell, D. A. (1990). Influence of processing and storage on the phenolic composition of apple juice. *Journal of Agricultural and Food Chemistry*, 38(7), 1572-1579.
- Tosi, E. A., Ré, E., Lucero, H., & Bulacio, L. (2004). Effect of honey high-temperature short-time heating on parameters related to quality, crystallisation phenomena and fungal inhibition. *LWT - Food Science and Technology*, 37(6), 669-678.
- Turhan, I., Tetik, N., Karhan, M., Gurel, F., & Tavukcuoglu, H. R. (2008). Quality of honeys influenced by thermal treatment. *LWT-Food Science and Technology*, 41(8), 1396-1399.
- Wang, X. H., Gheldof, N., & Engeseth, N. J. (2004). Effect of processing and storage on antioxidant capacity of honey. *Journal of Food Science*, 69(2).
- Yao, L., Bhandari, B. R., Datta, N., Singanusong, R., & D'Arcy, B. R. (2003). Crystallisation and moisture sorption properties of selected Australian unifloral honeys. *Journal of the Science of Food and Agriculture*, 83(9), 884-888.