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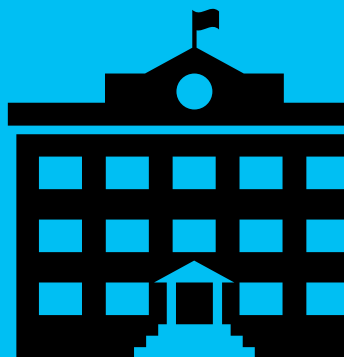
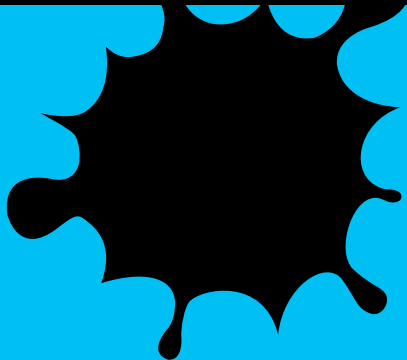
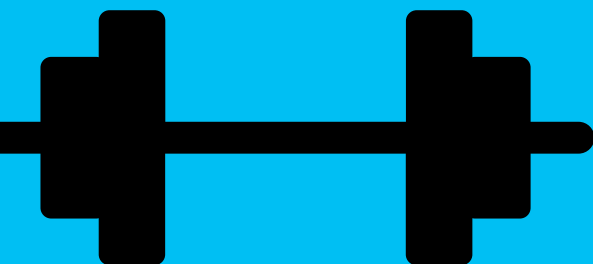
ESCOLA
SUPERIOR
DE EDUCAÇÃO
POLITÉCNICO
DO PORTO

issuEs'22

ISSUES IN EDUCATION

EDITORS

**MÁRIO CRUZ, ÂNGELA COUTO &
FÁTIMA LAMBERT**



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LAMBERT**

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Title: Issues'22 - Issues in Education

Editors: Mário Cruz, Ângela Couto & Fátima Lambert

ISBN: 978-972-8969-59-2

Design: Mário Cruz

Publication Date: 13/07/2022

Reviewers: Ana Gomes (Escola Superior de Educação de Paula Frassinetti), Ana Patrícia Ferreira (Escola Superior de Educação do Politécnico do Porto), Ana Pinheiro (Escola Superior de Educação de Paula Frassinetti), Ângela Couto (Escola Superior de Educação do Politécnico do Porto), Carla Queirós (Escola Superior de Educação do Politécnico do Porto), Cristina Pinto (Escola Superior de Educação do Politécnico do Porto), Daniela Mascarenhas (Escola Superior de Educação do Politécnico do Porto), Maria José Araújo (Escola Superior de Educação do Politécnico do Porto), Paula Medeiros (Escola Superior de Educação de Paula Frassinetti), Pedro Duarte (Escola Superior de Educação do Politécnico do Porto), Rafael Dias (Católica Porto Business School), Sara Araújo (Escola Superior de Educação do Politécnico do Porto).

Publisher: Politécnico do Porto, Escola Superior de Educação, Rua Dr. Roberto Frias, 602, 4200-465 Porto, PORTUGAL

The chapters were submitted to a double-blind peer review process undertaken by reviewers who belong to both national and international universities. The contents are the entire responsibility of its authors. This publication is funded by National Funds through the FCT - Fundação para a Ciência e a Tecnologia, I.P., under the scope of the project UIDB/05198/2020 (Centre for Research and Innovation in Education, inED).

INDEX

Prologue	5
TALIS 2018: a comparison between seven European Mediterranean countries	7
The effectiveness of cognitive tutoring programs In reducing Math anxiety	29
Pensar matematicamente no contexto de uma história: o modelling bar como estratégia inovadora na resolução de problemas	49
The effects of project-based learning using storytelling on enhancing efl young learners 21st century skills	67
Learning or acquisition? - English L2 in a CLIL Context at Primary Level	87
Demanda de formación para la mejora del uso de las TIC	105
La percepción de los estudiantes sobre los dispositivos móviles en el proceso formativo de la enseñanza superior	117
The Memory remains	131
A Arte ao serviço da fé: uma pedagogia catequética	141
A imaterialidade dos Jogos Tradicionais da Póvoa: identificação e problematização	159

PROLOGUE

In the scope of the INW22, an international scientific joint event organized by Politécnico do Porto – Escola Superior de Educação (International Relations Office) and inED – Centre for Research and Innovation in Education, teachers, researchers and staff working in the field of Education joined together to share, discuss, reflect on and develop their ideas on topics related to Networking in Education, with a focus on subtopics such as Culture, Arts and Heritage in Education.

This meeting offered good opportunities for intercultural exchange and both personal and academic development. Therefore, professionals who attended the INW22 Conference / International Week, including teaching staff, non-teaching staff, researchers and student-researchers, had the chance to get in touch with high quality presentations which portray the rich research projects that we, educational practitioners, have been undertaking.

Therefore, in order to make record of these presentations, a call for chapters has been promoted. In this way, *issuEs 21 – Issues in Education*, an e-Book, has been born.

The Editors.

1.

TALIS 2018: A COMPARISON BETWEEN SEVEN EUROPEAN MEDITERRANEAN COUNTRIES

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Abstract

Teaching and Learning International Survey (TALIS), promoted by Organisation for Economic Co-operation and Development (OECD) is based on the opinions and reflections of teachers and school principals at lower secondary, which main goal is to generate internationally comparable information relevant to developing and implementing educational policies. In this paper, using quantitative analysis, we compared the results obtained in the 61 quantified indicators of the two OECD reports on TALIS 2018, by the Mediterranean countries of the European Union that participated in it (Portugal, Spain, France, Italy, Malta, Slovenia and Croatia), crossing two criteria: (a) the value presented in each indicator for each country is statistically above than, below than, or not different from the OECD average; (b) the indicator is

favourable or unfavourable for improving the education quality from the perspective of OECD. We note that both concerning issues more directly linked to the learning environment or the status and work conditions of lower secondary education professionals: (1) teachers in all countries have an unfavourable or very unfavourable opinion while the principals' opinions are neither very favourable nor very unfavourable; (2) teachers' opinions in westernmost and Latin countries is worse than that of teachers in the easternmost countries; (3) the worst opinions of teachers are about teaching in multicultural environments and of diverse ability levels, student behaviour and classroom management, and initial and continuous training. These results tell us that the relevance of a factor in the quality of education is different for principals and teachers and that any new reform in education must take into account the opinions of these professionals, particularly on the issues related to the result (3).

Keywords: TALIS, Educational improvement, Quality education, Secondary school teachers, Principals.

Resumo

Teaching and Learning International Survey (TALIS), promovida pela Organização para a Cooperação e Desenvolvimento Económico (OCDE), baseia-se nas opiniões e reflexões de professores e diretores de escolas do ensino médio, cujo principal objetivo é gerar informações comparáveis internacionalmente relevantes para o desenvolvimento e implementação de políticas educacionais. Neste artigo, através de análise quantitativa, comparámos os resultados obtidos nos 61 indicadores quantificados dos dois relatórios da OCDE sobre o TALIS 2018 pelos países mediterrânicos da União Europeia que nele participaram (Portugal, Espanha, França, Itália, Malta, Eslovénia e Croácia), cruzando dois critérios: (a) o valor apresentado em cada indicador para cada país é estatisticamente superior, inferior ou não diferente da média da OCDE; e (b) o indicador é favorável ou desfavorável para melhorar a qualidade da educação na perspectiva da OCDE. Observamos que tanto em questões mais diretamente ligadas ao ambiente de aprendizagem quanto ao status e condições de trabalho dos profissionais do 3º. ciclo do ensino básico: 1) em todos os países, os professores têm uma opinião desfavorável ou muito desfavorável, enquanto as opiniões dos diretores não são muito favoráveis nem muito desfavoráveis; 2) a opinião dos professores nos países mais ocidentais e latinos é pior do que a dos professores nos países mais orientais; e 3) as piores opiniões dos professores são sobre o ensino em ambientes multiculturais e em turmas muito heterogêneas, sobre o comportamento dos alunos e a gestão da sala de aula e a formação inicial e contínua. Esses resultados dizem-nos que a relevância de um

fator na qualidade da educação é diferente para diretores e os professores e que qualquer nova reforma na educação deve ter em conta as opiniões destes profissionais, principalmente no que respeita as questões relacionadas ao resultado 3).

Palavras-chave: TALIS, Melhoria do ensino, Qualidade da educação, Professores do ensino básico e secundário, Diretores escolares.

1. INTRODUCTION

The Organisation for Economic Co-operation and Development (OECD) seeks to promote policies that improve economic and social well-being around the world and becomes one of the leading international organizations in the analysis of education, as is highlighted in several studies (Mahon & McBride, 2009; Sousa & Ferreira, 2019; Teodoro, 2020).

OECD promotes, since 2000, the Programme for International Students Assessment (PISA), dedicated to the assessment of 15-year-old students in three domains – Reading, Mathematics and Science –, on a three-yearly basis (Teodoro, 2022), and the Teaching and Learning International Survey (TALIS), starting in 2008 and running every five years. These two assessment instruments arise from the reflection that this organization makes on education policies and the identification of gaps in international data (OECD, 2009).

TALIS intends to assess the learning environments in schools and the work conditions of teachers and school principals and the participation of countries/economies has always been increasing: 24 (in 2008), 34 (in 2013) and 48 (in 2018). OECD (2019) says that the main goal of TALIS “is to generate internationally comparable information relevant to developing and implementing policies focused on school leaders, teachers and teaching, with an emphasis on those aspects that affect student learning” (p. 19) and that TALIS 2018 envisaged three types of analyses: “comparisons of indicators across countries; comparison of indicators over time, often referred to as trend analyses; and analyses of the relationships among indicators replicated across countries/economies to establish general patterns” (p. 46). Teachers and school principals at level 2 of the International Standard Classification of Education (ISCED) are the target population and it is through their voice that TALIS collects data. To complement the information, some countries have chosen to extend the assessment to ISCED level 1 and level 3 schools (Nilsen, Slot, Cigler & Chen, 2020; OECD, 2020b; UNESCO, 2012).

The OECD (2009, 2010, 2014, 2019, 2020a, 2020b) emphasises that teachers are at the heart of the school system and a wide variety of research has confirmed that their quality is essential in promoting student learning (Hanushek, 2020, 2021; Leigh, 2010; Rodrigues et al., 2018; Scheerens, 2010).

For each country, the sample includes at least 200 educational establishments and their principals and 4000 teachers, covering several themes: the training of teachers and principals and their professional development; the appreciation of teachers' work and the feedback received; the satisfaction and motivations of teachers; the learning environment; leadership in schools; and the pedagogical principles and practices of teachers. Two crosscutting themes have been added recently (2018): innovation and equity, and diversity. The data collected permit the comparison between education systems and policy development in certain areas, which allows countries to identify themselves with others similar challenges and to learn from different policy approaches (OECD, 2009, 2014, 2020a).

In this paper, based on the quantified indicators presented in the two reports on TALIS 2018 as a block or grouped by areas rather than each separately, we analyse and compare the results of the seven Mediterranean countries of the European Union that participated in TALIS 2018: Portugal, Spain, France, Italy, Malta, Slovenia, and Croatia.

Several scientific analyses have been made on TALIS, taking it as an isolated study object, or articulated with PISA (Fernández-Díaz, Rodríguez-Mantilla & Martínez-Zarzuelo, 2016; Le Donné, Fraser & Bousquet, 2016), putting into perspective the quality of teachers and different educational systems (Berkovich & Benoliel, 2018; Dogan & Yurtseven, 2018; Gumus & Bellibas, 2016; Liu & Liao, 2019; Sorensen, 2020; Zhang, Shi & Lin, 2019).

In general, the organizations in each country involved in the dissemination of the TALIS results present national data within the international context, but without making comparative analyses with other specific countries. Portugal and France are exceptions in the Mediterranean countries of the European Union. A department of the French Ministry of Education, Direction de l'évaluation, de la prospective et de la performance (Depp, 2019), in their periodical *Note d'information*, publish some partial analysis about TALIS 2018 results with comparisons between France and other countries, including Spain and Italy, about some items of TALIS (Depp, 2019). Portugal report (Rodrigues et al., 2020) presents several tables with the Portuguese data in parallel with those of Spain, France and Italy; however, there is no comparative analysis between the results of these countries. Our proposal is to make this comparative analysis, looking at all the parameters together, or grouped by areas, hoping to contribute to the reflection on this international assessment.

2. METHODOLOGY

Our work is based on the quantified indicators presented in the two TALIS 2018 reports published by the OECD: *TALIS 2018 Results (Volume I): Teachers and school leaders as lifelong learners* (2019) and *TALIS 2018 Results (Volume II): Teachers and school leaders as valued professionals* (2020). In these reports, TALIS defines teachers as those who provide instruction in programs at a given educational level” (OECD, 2019, p. 26), principals as heads of their schools and “teaching as a profession underpinned by five pillars” (OECD, 2019, p. 26):

1. Knowledge and skills base.
2. Status and standing of the profession.
3. Peer control.
4. Responsibility and autonomy.
5. Prestige and societal value of the profession.

The first volume “explores the first pillar of professionalism, the knowledge and skills dimension, as well as the changing contexts for teaching” (OECD, 2019, p. 27). It analyses the way in which teachers and principals acquired their knowledge and skills in initial and continuing training and apply them in the classroom, the teaching practices, the demography of professionals, the socio-cultural composition of classes, the environment and context of learning and how the principals carry out their leaderships. So, the indicators of this volume are primarily related to the learning environment, in particular to what goes on inside the classroom.

The second volume deals with the other four pillars, addressing status and position, peer control, responsibility and autonomy for teachers and principals. It focuses on work conditions and the levels of satisfaction and well-being related to the profession. It also discusses how schools promote learning environments that foster discussions among teachers about teaching and peer learning (OECD, 2020b). Therefore, the indicators of this volume are mainly related to the working conditions of teachers and school principals.

In the analysis of these five pillars of professionalism of teachers and principals, the TALIS set 13 objectives in Volume I and 17 objectives in Volume II, which are associated, respectively, to 26 and 43 policy pointers to consider in designing education policies. These policy pointers were connected to 61 quantified indicators

(50 on teachers and 11 on principals) that TALIS developed to capture how teachers and principals perceive and report their work (OECD, 2019). Some of these indicators are based on facts, such as kind of professional training, age and type of employment contract, others on more subjective factors such as the perception of self-efficacy, professional development needs, job satisfaction and levels and sources of stress (OECD, 2019). These indicators are grouped into ten areas, six in the first volume and four in the second. Each value is marked with a colour indicating if it is statistically not different from the OECD average or whether it is above or below that average, considering a 95% confidence interval.

Table 1 presents the areas of each volume, the corresponding pillars, and the number of indicators per area for teachers and principals. We assign a designation to each area: KSB for Volume I areas and SRP for Volume II areas.

In our study, we developed a quantitative analysis of a descriptive nature: for each of the seven countries above-mentioned, we organized the indicators described in the OECD reports on TALIS 2018 according to two criteria, crossed and classified the resulting groups and developed an interpretative analysis of the results of this classification (Babones, 2016; Westermann & Yanchar, 2011).

By the first criterion, we formed three groups of countries for each indicator: (i) those whose value is significantly higher than the average of OECD countries, in statistical terms; (ii) those where the value is significantly lower than that average; and (iii) those where this value is not statistically different from the aforementioned average.

By the second criterion, we divided the indicators into three groups too, taking into account the perspective of the OECD (2019, 2020b) and Schleicher (2016, 2020) about the influence of each indicator on improving the education quality. In fact, the OECD fits each indicator in a given pillar, relating it to student learning, innovation, the school context, the career of professionals or their autonomy, considering them as factors influencing the educational improvement. However, this influence can have a positive effect if the action expressed by the indicator promotes the improvement of that quality or a negative effect if it causes a regression. There are also indicators that do not correspond to a potential influence, positive or negative, on the education quality. So, this criterion divides the indicators into three groups: 1) those that are in favour of improving the quality of education; 2) those that are unfavourable to this improvement; and 3) those that are neutral on such improvement.

Table 1

Number of indicators in TALIS 2018, by volume, pillars, and area, underpinning the profession of teacher and school principal

VOLUME–Pillar	Area	No. of indicators	
		Teachers	Princ.
VOLUME I • Knowledge and skills base	KSB1 Information and communication technology (ICT) for teaching	5	1
	KSB2 Teaching in multicultural and multilingual settings	6	0
	KSB3 Teaching students with diverse ability levels and needs	5	1
	KSB4 Student behaviour and classroom management	6	0
	KSB5 Initial and continuous training	4	3
	KSB6 Socio-demographic and experience profiles of teachers and school leaders	3	3
Volume I – Total		29	8
VOLUME II • Status and standing of the profession • Peer control • Responsibility and autonomy • Prestige and societal value of the profession	SRP1 Supporting teaching professionals' growth through inducting, mentoring and collaboration	6	0
	SRP2 Empowering teaching professionals' growth through autonomy, leadership and opportunities for career progression	5	2
	SRP3 Teachers' and school leaders' satisfaction with their work	4	1
	SRP4 Retaining teaching professionals through fulfilling and rewarding work conditions, well-being and satisfactory jobs	6	0
Volume II – Total		21	3
Volumes I+II – Total		50	11

Note. The names of the pillars and areas are as per OECD (2019, 2020) and the authors define the acronyms.

Table 2

Indicators in TALIS 2018 and respective areas of the pillar “Knowledge and skills base” (Volume I) that the OECD considers to support the teaching profession

Indicator	Area
% of teachers for whom the “use of ICT for teaching” has been included in their formal education or training	I-1 F
% of teachers who felt “well prepared” or “very well prepared” for the use of ICT for teaching	I-2 F
% of teachers for whom “use of ICT for teaching” has been included in their recent professional development activities	I-3 F KSB1
% of teachers reporting a high level of need for professional development in ICT skills for teaching	I-4 U

% of teachers who “frequently” or “always” let students use ICT for projects or class work	I-5	F	
% of teachers teaching in classes with more than 10% of students whose first language is different from the language of instruction	I-6	N	
% of teachers for whom “teaching in a multicultural or multilingual setting” was included in their formal education or training	I-7	F	
% of teachers who felt “well prepared” or “very well prepared” for teaching in a multicultural or multilingual setting	I-8	F	
% of teachers for whom “teaching in a multicultural or multilingual setting” was included in their recent professional development activities	I-9	F	KSB2
% of teachers reporting a high level of need for professional development in teaching in a multicultural or multilingual setting	I-10	U	
% of teachers who feel they can cope with the challenges of a multicultural classroom “quite a bit” or “a lot” in teaching a culturally diverse class	I-11	F	
% of teachers teaching in classes with more than 10% of special needs students	I-12	N	
% of teachers for whom “teaching in a mixed-ability setting” has been included in their formal education or training	I-13	F	
% of teachers who felt “well prepared” or “very well prepared” for teaching in a mixed-ability setting	I-14	F	KSB3
% of teachers for whom “teaching students with special needs” was included in their recent professional development activities	I-15	F	
% of teachers reporting a high level of need for professional development in teaching students with special needs	I-16	U	
% of teachers for whom “student behaviour and classroom management” was included in their formal education or training	I-17	F	
% of teachers who felt “well prepared” or “very well prepared” for student behaviour and classroom management	I-18	F	
% of teachers for whom “student behaviour and classroom management” was included in their recent professional development activities	I-19	F	KSB4
% of teachers reporting a high level of need for professional development in student behaviour and classroom management	I-20	U	
% of teachers who feel that they can control disruptive behaviour in the classroom	I-21	F	
% of teachers who “agree” or “strongly agree” that they lose quite a lot of time because of students interrupting the lesson	I-22	U	
% of teachers for whom content, pedagogy and classroom practice in some or all subjects taught were included in their initial formal education or training	I-23	F	
% of teachers who did not take part in formal or informal induction activities at the current school	I-24	U	KSB5
% of novice teachers who have an assigned mentor at the current school	I-25	F	
% of teachers who participated in at least one professional development activity in the 12 months prior to the survey	I-26	F	
% of female teachers	I-27	N	
% of teachers age 50 and above	I-28	U	KSB6
teachers’ years of work experience (as a teacher)	I-29	F	

Note. The names of the indicators are as per OECD (2019, 2020) and the abbreviations are defined by the authors. The area designations correspond to the acronyms defined in Table 1. The letter associated with each indicator indicates that it is favourable (F), unfavourable (U) or neutral (N) relating to the improvement of the quality of education according to OECD (2019, 2020) and Schleicher (2016, 2020).

We crossed the groups and, for each country, we counted the indicators of each area that, from a perspective of improving the education quality, were at a level: (a) above the average of the OECD countries; (b) below the OECD average; and (c) not different

from this average. Finally, for each country, we compared the number of indicators type (a), (b) and (c), and interpreted the results concerning the teachers and principals.

Table 2 presents the indicators related to teachers included in Volume I (I-1 to I-29) and Table 3 presents those related to teachers included in Volume II (I-30 to I-50). Table 4 presents the indicators (I-51 to I-61) related to principals (in Volumes I and II). Note that two of the indicators display absolute values (I-29 and I-58) and the remaining 59 show the percentages of teachers or principals who verify a given condition. In these three tables, each indicator is framed in an area and is labelled with a letter, depending on whether it is favourable (the letter is F), unfavourable (the letter is U) or neutral (the letter is N) for improving the education quality, according to the OECD perspective (OECD, 2019, 2020; Schleicher, 2016, 2020).

Table 3

Indicators in TALIS 2018 and respective areas of the four pillars of Volume II that the OECD considers supporting the teaching profession

Indicator	Area
% of teachers who did not take part in formal or informal induction activities at the current school	I-30 U
% of novice teachers who have an assigned mentor at the current school	I-31 F
% of teachers who "agree" or "strongly agree" that there is a collaborative school culture that is characterised by mutual support	I-32 F
% of teachers who report participating in collaborative professional learning at least once a month	I-33 F SRP1
% of teachers who received feedback in the 12 months prior to the survey report that it had a positive impact on their teaching practice	I-34 F
% of teachers who received feedback at some point, based on at least four different methods	I-35 F
% of teachers whose school principals report that their teachers are never formally appraised	I-36 U
% of teachers who have control over determining course content	I-37 F
% of teachers who "agree" or "strongly agree" that their school provides staff with opportunities to actively participate in school decisions	I-38 F SRP2
% of teachers in schools where formal appraisal can result in salary increases, by school management's responsibility where management has no responsibility over salary	I-39 F
% of teachers in schools where formal appraisal can result in salary increases, by school management's responsibility where management has a responsibility over salary	I-40 F

% of teachers who think that their profession is valued in society	I-41	F	
% of teachers who, all in all, are satisfied with their job	I-42	F	
% of teachers who are satisfied with the salary they receive for their work	I-43	F	SRP ₃
% of teachers who are satisfied with the terms of their contract (apart from salary)	I-44	F	
% of teachers with permanent contracts	I-45	F	
% of teachers with fixed-term contracts (one school year or less)	I-46	U	
% of teachers who would like to change school if there were possible	I-47	U	
% of teachers who experience stress "a lot" in their work	I-48	U	SRP ₄
% of teachers reporting that too much administrative work is a source of stress "quite a bit" or "a lot"	I-49	U	
% of teachers age 50 or less wanting to leave teaching within the next five years	I-50	U	

Note. The names of the indicators are as per OECD (2019, 2020) and the abbreviations are defined by the authors. The area designations correspond to the acronyms defined in Table 1. The letter associated with each indicator indicates that it is favourable (F), unfavourable (U) or neutral (N) relating to the improvement of the quality of education according to OECD (2019, 2020) and Schleicher (2016, 2020).

For example, the indicator I-33 – % of teachers who report participating in collaborative professional learning at least once a month is marked with F because, it is positive for improving the education quality that a country has a high value, as this means that teachers in this country are interested in learning to work collaboratively with each other (Schleicher, 2020). On the other hand, the indicator I-20 – % of teachers reporting a high level of need for professional development in student behaviour and classroom management is marked with U because it is negative for the improvement of the education quality that a country has a high value, as this means that teachers in that country feel that they still have insufficient training in this area and therefore need to increase it (Schleicher, 2020). In turn, it is neither positive nor negative for the improvement of the teaching quality that a country has a high value in the indicator I-27 – % of female teachers, because it does not depend on teachers' gender (OECD, 2019); so this indicator is marked with N.

Table 4

Indicators in TALIS 2018 and respective areas of the five pillars of Volume I and Volume II that the OECD considers supporting the profession of principal

Indicator	Area		
% of principals reporting shortage or inadequacy of digital technology for instruction	I-51	U	KSB1
% of principals reporting a shortage of teachers with competence in teaching students with special needs	I-52	U	KSB3
% of principals for whom school administration or principal training programmes or course elements were never included in their initial formal education or training	I-53	U	
% of principals who have never received any instructional leadership training	I-54	U	KSB5
% of principals who participated in at least one professional development activity in the 12 months prior to the survey	I-55	F	
% of female principals	I-56	N	
% of principals age 60 and above	I-57	U	KSB6
principals' years of work experience (as a principal)	I-58	F	
% of principals who "often" or "very often" took actions to support co-operation among teachers to develop new teaching practices in the 12 months prior to the survey	I-59	F	SRP2
% of principals who report that their schools have autonomy in determining teachers' salary increases	I-60	F	
% of principals who, all in all, are satisfied with their job	I-61	F	SRP3

Note. The names of the indicators are as per OECD (2019, 2020) and their abbreviations are defined by the authors. The area designations correspond to the acronyms defined in Table 1. The letter associated with each indicator indicates that it is favourable (F), unfavourable (U) or neutral (N) relating to the improvement of the quality of education according to OECD (2019, 2020) and Schleicher (2016, 2020).

3. RESULTS

The numbers defining whether a country is in a good, weak, or neutral position regarding the quality of education come from questionnaires filled in by teachers and principals of lower secondary education in each country in TALIS 2018, i.e., they are the outcome of their opinions and perceptions about the learning environments and work conditions in their schools. This means that results achieved concern only the opinion of teachers and principals in a given country about that level of education in their country and do not represent an external analysis of education.

We analysed the number of each indicator of each country after the crossing of the two above-mentioned criteria. If, in an indicator favourable to the improvement of the quality of education, a country had a value that was statistically higher than the

OECD average, we classified this indicator with + (positive), and if it was statistically lower than the OECD average, we classified the indicator with – (negative). If, in an unfavourable indicator for improving education, a country had a value that was statistically higher than the OECD average, we classified that indicator with – and if it was statistically lower than the OECD average, we rated the indicator with +. If the indicator is neutral with respect to improving the education quality or it has a value statistically not different from the OECD average, we rated it with = (equal to).

In other words, with reference to improving the education quality in the perspective of OECD and taking into account the opinion of its teachers or principals about the learning environment and work conditions in schools, an indicator rated + means that the country is better placed than the average of the OECD countries for the corresponding parameter, an indicator rated – means that the country is worse placed than the OECD average for that parameter, and an indicator rated = means that the country is within the OECD average for that indicator or that the indicator is neutral concerning the education quality.

Table 5 shows, for the seven countries, the number of teacher-related indicators with +, –, or =, by area, the total of all areas in each volume, and the total of all areas in both volumes. It also shows the balance (number of positive indicators minus number of negative indicators) in Volume I, Volume II, and Volumes I + II.

Looking at the total of the Volume I (*Knowledge and skills base pillar*), we can see that:

1. There are two countries with a balance equal or close to zero (1 and 0) – Malta and Slovenia, two countries with an intermediate negative balance (–7 and –8) – Croatia and Italy, and three countries with a high negative balance (at least the double of the average of the intermediate group: –15, –16 and –21) – Spain, Portugal, and France, respectively. The teachers from these countries are who seem most dissatisfied with the work inside schools connected to the areas of this volume.
2. In the five countries with the weakest balance – Portugal, Spain, France, Italy and Croatia – there are only two cases out of 30 (= 6 areas x 5 countries) where the number of positive indicators is greater than the number of negative ones.
3. In the other two countries – Malta and Slovenia – there are six cases (out of 12) where the number of positive indicators is greater than the number of negative ones.

Considering that this pillar includes the six areas most strongly related to the classroom, these numbers seem to show an alarming situation regarding the

learning environment because the opinion of teachers in these countries is clearly unfavourable to improving education in five countries, or at least not favourable to it in the other two countries. We also find that, in teachers' view, the westernmost (and Latin) countries have weaker results than the easternmost ones.

Table 5

Number of Indicators of Portugal, Spain, France, Italy, Malta, Slovenia, and Croatia classified +, =, or -, by Area, with regard to improving the quality of education, concerning teachers

Volume	Area	Scores																							
		Portugal			Spain			France			Italy			Malta			Slovenia			Croatia					
		+	=	-	+	=	-	+	=	-	+	=	-	+	=	-	+	=	-	+	=	-			
I – Learning Environment	KSB1	2	0	3	2	1	2	0	0	5	1	1	3	3	0	2	3	1	1	1	0	4			
	KSB2	1	1	4	1	2	3	0	2	4	2	2	2	2	2	2	0	3	3	1	2	3			
	KSB3	0	1	4	0	1	4	0	1	4	1	1	3	0	3	2	2	2	1	1	1	3			
	KSB4	1	0	5	0	2	4	0	1	5	3	0	3	3	1	2	1	2	3	2	0	4			
	KSB5	0	0	4	0	0	4	0	0	4	0	0	4	2	1	1	3	0	1	3	0	1			
	KSB6	1	1	1	0	2	1	1	2	0	1	1	1	1	1	1	1	1	1	1	1	1			
	Total	5	3	21	3	8	18	1	6	22	8	5	16	11	8	10	10	9	10	9	4	16			
	Balance	-16			-15			-21			-8			1			0			-7					
II – Working Conditions	SRP1	0	0	6	0	1	5	0	0	6	0	1	5	1	3	2	4	1	1	3	2	1			
	SRP2	0	3	2	0	2	3	2	2	1	2	1	2	0	2	3	1	1	3	2	2	1			
	SRP3	1	0	3	2	0	2	1	0	3	1	0	3	0	0	4	1	0	3	0	1	3			
	SRP4	1	0	5	3	1	2	4	0	2	2	2	2	3	1	2	1	4	1	4	1	1			
	Total	2	3	16	5	4	12	7	2	12	5	4	12	4	6	11	7	6	8	9	6	6			
	Balance	-14			-7			-5			-7			-7			-1			3					
I+II	Total	7	6	37	8	12	30	8	8	34	13	9	28	15	14	21	17	15	18	18	10	22			
	Balance	-30			-22			-26			-15			-6			-1			-4					

Looking now at the results in each area of Volume I, we can point out that:

- (4) In the area *KSB2 – Teaching in multicultural and multilingual settings*, in no country, the number of positive indicators is greater than the number of negative indicators.
- (5) In the area *KSB3 – Teaching students with diverse ability levels and needs*, only in Slovenia the number of positive indicators is higher than the number of negative indicators; in all other countries the number of negative indicators is higher than the number of positive ones. In the three countries with the most negative balance (Portugal, Spain, and France) there are no positive indicators.
- (6) In the area *KSB4 – Student behaviour and classroom management*, only in Malta the number of positive indicators is greater than the number of negative indicators, and in the other countries the number of negative indicators is greater than or equal to the number of positive ones.
- (7) In the area *KSB5 – Initial and continuous training* all indicators are negative in the four Latin countries – Portugal, Spain, France and Italy.

This seems to point out that teachers in these countries see teaching in multicultural and diverse ability level environments as especially problematic and that classroom management is difficult. Teachers in Latin countries consider that the training they have had is far from adequate.

Looking at the four areas of Volume II, we can see that:

- (8) Only Croatia has a positive balance (3 indicators); the other countries have a negative balance: at Spain, France, Italy, Malta, and Slovenia the balance is between -1 and -7 and at Portugal is -14 .

We find that the westernmost countries, particularly Portugal, also have weaker results than the easternmost countries on this set of areas linked to the career and work conditions of teachers, showing that they are displeased with the working conditions in their countries.

Looking now at the results in each area of Volume II, we can highlight that:

- (9) In the area *SRP1 – Supporting teaching professionals' growth through inducting, mentoring and collaboration* there are no positive indicators in the four Latin countries – Portugal, Spain, France and Italy.
- (10) In the area *SRP3 – Teachers' and school leaders' satisfaction with their work*, in no country, the number of positive indicators is greater than the number of negative indicators.

- (11) In the area SRP4 – *Retaining teaching professionals through fulfilling and rewarding work conditions, well-being and satisfactory jobs*, only in Portugal the number of negative indicators is higher than the number of positive indicators.

These numbers show us that, relating the pillars about career, *status* and work conditions, only in Croatia teachers are satisfied, and Portuguese teachers are much more dissatisfied than those in the others countries.

Considering all the indicators in all areas of the two volumes, we can see that the seven countries present a negative balance, i.e., in none of these countries, the teachers of the lower secondary education are, globally, satisfied with the learning environment and work conditions in schools and, therefore, with the improvement of the education quality. However, there is a huge gap between the westernmost countries – Portugal, Spain, France and Italy – versus the others – Malta, Slovenia and Croatia. The first four countries have balances between –15 and –30, while the second ones have balances between –1 and –6. The most dissatisfied of all are the Portuguese teachers, who have only 7 positive indicators against 37 negative ones, with a negative balance of –30.

In summary, we can say that, according to the point of view of the teachers of the seven countries on learning environment and work conditions in schools, the panorama of education in the lower secondary is not favourable to an improvement of the education quality.

Table 6 shows, for the seven countries, the same data as Table 5, but with indicators for principals. Note that in this table, instead of the 50 indicators related to teachers, we have only 11 indicators related to principals: eight in Volume I and three in Volume II. It also should be noted that there are only indicators in six areas because there are no indicators associated to areas KSB2 and KSB4 in Volume I and SRP1 and SRP4 in Volume II. This smaller number of data reduces the number of conclusions we can draw and gives them less strength than those we drew from the indicators concerning teachers. Since there are only three indicators in Volume II, we will not draw any inferences regarding the working conditions of the principals.

Looking at the *Knowledge and skills base* pillar (Volume I), we can see that:

1. There are four countries with positive balance – Spain, Italy, Malta, and Slovenia – and three with negative balance – Portugal, France and Croatia; the minimum balance is –2 (Portugal) and the maximum is 4 (Malta and Slovenia).
2. Malta and Slovenia have no negative indicators and Portugal has no positive indicators.

Considering the 11 indicators of Volumes I + II, we can see that only Portugal and Croatia have a negative balance (-2) and France has a null balance. The remaining countries have a positive balance, especially Slovenia with a balance of 5 and no negative indicator, which seems to show that their principals are satisfied with the learning environment and working conditions in their schools.

Table 6

Number of indicators of Portugal, Spain, France, Italy, Malta, Slovenia, and Croatia classified +, =, or -, by area, with regard to improving the quality of education, concerning principals

Volume	Area	Scores																							
		Portugal			Spain			France			Italy			Malta			Slovenia			Croatia					
		+	=	-	+	=	-	+	=	-	+	=	-	+	=	-	+	=	-	+	=	-			
I – Learning Environment	KSB1	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	1	0	0	0	1	0			
	KSB2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	KSB3	0	0	1	1	0	0	0	0	1	1	0	0	0	1	0	0	1	0	0	1	0			
	KSB4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2			
	KSB5	0	3	0	1	1	1	1	1	1	1	2	0	2	1	0	3	0	0	0	0	0			
	KSB6	0	3	0	1	1	1	0	3	0	1	1	1	1	2	0	0	3	0	0	3	0			
	Total	0	6	2	3	3	2	1	5	2	3	4	1	4	4	0	4	4	0	1	5	2			
	Balance	-2			1			-1			2			4			4			-1					
II – Working Conditions	SRP1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	SRP2	0	1	1	0	1	1	1	1	0	1	1	0	0	1	1	1	1	0	0	1	1			
	SRP3	1	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0			
	SRP4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Total	1	1	1	1	1	1	1	2	0	1	2	0	1	1	1	1	2	0	0	2	1			
	Balance	0			0			1			1			0			1			-1					
I+II	Total	1	7	3	4	4	3	2	7	2	4	6	1	5	5	1	5	6	0	1	7	3			
	Balance	-2			1			0			3			4			5			-2					

Comparing the figures in Tables 5 and 6, we see that there are two countries – Portugal and Croatia – where both teachers and principals have an overall negative opinion about the improvement of the quality of education in lower secondary education, one country – France – whose teachers at this level of education have a bad opinion about that improvement while their principals have a neutral opinion, and four countries – Spain, Italy, Malta, and Slovenia – where the opinion of teachers is negative and contrary to that of principals. We can also see that, regarding the quality of education in their country, it is the Portuguese teachers and principals who have the worst opinion and it is the Slovenian teachers and principals who have the best opinion.

4. CONCLUSIONS

The figures presented in TALIS 2018 come from opinions, perceptions, beliefs or reports from teachers and school principals where subjectivity exists. However, this information is important as it gives us an insider's view of the schools from those who work there and should be “at the center of any attempt to improve the quality of education” (OECD, 2019, p. 26).

Our results seem to tell us that, in general, teachers and principals of lower secondary education in the seven Mediterranean countries of the European Union do not have a very optimistic image of the education situation in their countries. But principals and teachers have different opinions. While the principals' opinion is at least not very unfavourable in either country regarding the learning environment and working conditions, the opinion of teachers is unfavourable or very unfavourable in the seven countries. The situation seems more problematic for teachers in the areas KSB2, KSB3, KSB4, and KSB5, which concern teaching in multicultural environments and of diverse ability levels, student behaviour and classroom management, and training, particularly in the Latin and most western countries. This negative opinion of teachers in all countries towards the learning environment and work conditions reminds us of what Schleicher (2020) wrote: “[we] need to look much more carefully at what makes the teaching profession attractive and productive, and this can only be done with and through the perspective of teachers” (p. 4).

Comparing the situation between the countries, we see that teachers in the westernmost countries – Portugal, Spain, France and Italy – have a much worse opinion than those in the easternmost countries – Malta, Slovenia and Croatia –, both in relation to the items most related to the classroom and to work conditions.

Regarding principals, there is no clear division between Western and Eastern countries.

These results may also derive from different levels of evolution of the education systems in the seven countries. Indeed, in countries where the education system is not yet stable, teachers and principals may view the quality of education in relation to both the learning environment and working conditions with less optimism than in countries where the education system has been stable for longer. The differences found may also result from different degrees of homogeneity in terms of language, ethnicity or culture among professionals in the countries studied. However, we do not have data that would allow us to analyse a potential influence that these factors may have had on the results presented.

We could not find any other studies where the results of the different countries in TALIS 2018 have been analysed and compared and so we could not confront our results with those of other authors. But we think it is worth highlight what Schleicher (2016) says it is important that policy makers do to build teachers' professionalism: "[to] establish clearly and concisely what teachers are expected to know and be able to do. Many of the key attributes and skills of successful teachers will only become evident once teachers begin working in the classroom" (p. 5).

As final conclusions, we can say that the differences of opinion between teachers and principals seem to show that it is different to manage a school and to teach in the classroom. The perceptions each kind of professional has about learning environment and work conditions are probably based on different factors, or at least these factors have a different impact on the two types of professionals. We can also say that this study seems to reinforce the idea that the opinion of teachers and principals should be taken into account in any reform to be implemented in education and that in the preparation of such reform special attention should be paid to the problems of teaching related to student behaviour and classroom management in multicultural environments and of diverse ability levels. These issues are more pressings in Western European Mediterranean countries than Eastern ones as their lower secondary teachers have a very much negative opinion about the learning environment and work conditions.

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2.

THE EFFECTIVENESS OF COGNITIVE TUTORING PROGRAMS IN REDUCING MATH ANXIETY

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Abstract

Math anxiety (MA) represents a widespread problem that affects people of all ages, and some of its effects can be identified as early as primary school. MA hinders academic performance and negatively impacts how children perceive math, which, in the long term, contributes to the avoidance of certain career paths. There are several individual and contextual factors that can be taken into account when looking at how MA develops. In order to address both directions, cognitive tutoring programs are usually employed in order to reduce MA and have two main purposes. On the one hand, to enable children to develop math skills, and on the other hand, through the therapeutical dimension, they focus on reducing one's anxiety levels. More recently, with the development of digital technologies, these programs have become more accessible and have shown promising results with children of different ages. Currently, there is a significant number of such programs that can be used both in teaching activities in the classroom as well as for individual training. We designed a cognitive tutoring program for reducing math anxiety, structured as a game for Romanian primary school children. The aim is to integrate math into a narrative where children can exercise their mathematical problem-solving abilities while they complete the training tasks in a child-friendly stimulating environment.

Keywords: math anxiety, cognitive tutoring, computerized programs, school-aged children, digital-based learning.

Resumo

A ansiedade matemática (MA) representa um problema generalizado que afeta pessoas de todas as idades, e alguns dos seus efeitos podem ser identificados logo desde a escola primária. A MA dificulta o desempenho acadêmico e tem um impacto negativo na forma como as crianças percebem a matemática, o que, a longo prazo, contribui para evitar certos percursos profissionais. Existem vários fatores individuais e contextuais que podem ser tidos em conta quando se analisa a forma como o MA se desenvolve. Para abordar ambos os sentidos, são geralmente utilizados programas de tutoria cognitiva para reduzir o MA, e têm dois objetivos principais. Por um lado, para permitir às crianças desenvolverem competências matemáticas, e por outro lado, através da dimensão terapêutica, concentram-se na redução dos níveis de ansiedade de cada um. Mais recentemente, com o desenvolvimento das tecnologias digitais, estes programas tornaram-se mais acessíveis e mostram resultados promissores com crianças de diferentes idades. Atualmente, existe um número significativo destes programas que podem ser utilizados tanto em atividades de ensino em sala de aula, como para formação

individual. Concebemos um programa de tutoria cognitiva para reduzir a ansiedade matemática, estruturado como um jogo para crianças da escola primária romena. O objetivo é integrar a matemática numa narrativa onde as crianças possam exercer as suas capacidades de resolução de problemas matemáticos, enquanto completam as tarefas de formação num ambiente estimulante favorável à criança.

Palavras-chave: Ansiedade matemática, Tutoria cognitiva, Programas computadorizados, Crianças em idade escolar, Aprendizagem com base digital.

1. INTRODUCTION

Mathematics is regarded as a core subject in the educational system, from primary school to college. Its utility is not limited to everyday uses, but it is also regarded as the fundament for learning other sciences (Liu et al., 2017). There is an increase in the interest in STEM and STEM-related professions, but choosing such a career path is dependent on a number of factors, out of which math anxiety stands out as a deterring one.

1.1. MATH ANXIETY. GENERAL CONSIDERATIONS

Math anxiety (MA) refers to feelings of fear, tension, and apprehension that many people experience when faced with math-related stimuli (Ashcraft, 2002). Considered to be a trait rather than state-anxiety or test anxiety (Ramirez et al., 2018), it is represented as a continuous variable, where different people can experience different levels of anxiety in situations that involve math. For instance, between 25% and 80% of college students in the USA report some degree of anxiety symptoms when solving math-related problems (Beilock & Willingham, 2014). Far from being an isolated concern, the Organization for Economic Co-operation and Development (OECD) analysed the results from the Program for International Student Assessment (PISA) in 2012 and found that there is an association between math performance and student math anxiety. Specifically, higher levels of math anxiety were reported in those countries where the pupils' math performance was lower than the average, whereas better performance in math was associated with lower reported feelings of anxiety (OECD, 2013). These results were reported within but also between the evaluated countries.

A number of studies sought to identify the potential *gender differences* in math anxiety, showing that it affects both genders (Ramirez et al., 2018). However, one important finding is that girls seem to be more affected than boys. One such study (Stoet et al., 2016) looked at PISA results from 68 countries and observed a cross-cultural trend, where girls generally reported higher levels of math anxiety than boys.

These results can be interpreted in more than one way, and by taking into account different factors, such as gender stereotypes ("math is a boys' thing", "girls are not good at math") (Cvencek et al., 2011), or even that girls are more willing to admit their negative feelings than boys (Ashcraft, 2002). One other explanation could reside in the differences in spatial processing between men and women, which could be translated into poorer math-solving abilities (Cheng & Mix, 2014; for a review, see Ramirez et al., 2018). Nonetheless, this discrepancy impacts not only how girls perform in math but also their self-confidence (Régner et al., 2016) and math identity (i.e., how they perceive math in a system of motivations and values for this topic) (Fernandez et al., 2022). This translates into a reluctance to pursue certain career paths (i.e., especially STEM-related), thus having a narrower professional perspective. However, recent studies pointed out that, in recent years, the overall gender gap in math anxiety decreased because of a decline in boys' performance (OECD, 2018), but girls are still more negatively impacted by negative stereotypes.

When looking at the onset of math anxiety, early childhood is considered to be the emerging point (Beilock & Willingham, 2014). If not adequately addressed during early development, math anxiety can have long-lasting pervasive effects. In the short and medium term, it impacts children's motivation and self-efficacy (Akin & Kurbanoglu, 2011), but in the long run, it can negatively impact one's career choices (Espino et al., 2017). Scarpello (2007) mentioned that, as adults, 75% of Americans who developed math anxiety during childhood admit to having stopped studying Maths and are less keen on pursuing a math-related career. During school years, higher levels of math anxiety are positively associated with overall lower math performance (Petruț & Visu-Petra, 2020). Children who are math anxious have lower involvement in math-related activities, and, in its turn, this can affect how they evaluate themselves and their abilities (Geist, 2010). Further, solving more complex exercises is shown to negatively impact the physiological response in children, who display higher levels of blood pressure (Hunt et al., 2017), and intrusive thoughts that appear during the math-solving process negatively impact their performance while increasing anxiety levels (Hunt et al., 2014).

One question that remains without a definitive answer is what actually makes our palms sweaty or our minds foggy when looking at an equation? There are several possible factors that concur with the emergence of math anxiety and can regard the individual or environmental dimension (Luttenberger et al., 2018).

Firstly, it seems that the **genetic** predisposition cannot be ruled out since research to date indicates a moderate (up to 40%) hereditary component in the development of math anxiety, with the rest of the variance explained by individual, child-related environmental factors (Malanchini et al., 2017; Wang et al., 2015). Nonetheless,

these findings need further support from additional studies since this specific area of research is only emerging. Secondly, there is an interrelation between math anxiety and **a predisposition for general anxiety**, which could be an explanation for why even young children develop math aversion despite being faced for the first time with this type of content (Carey et al., 2017). Further, gender could be an antecedent to developing math anxiety. On the one hand, girls are more susceptible to developing general anxiety, which, in its turn, could be a fertile ground for different types of math anxiety, such as testing anxiety, compared to boys (Szczygiel, 2020). On the other hand, as discussed above, in relation to stereotypes, each gender faces its own struggles: girls are usually regarded as „less capable” when it comes to learning Maths, while boys tend to be less open about their anxieties (Ashcraft, 2002).

Further, cognitive factors, such as working memory, attention, inhibition, and shifting, are well studied and are highlighted as explanatory mechanisms in the relationship between math anxiety and math achievement (Justicia-Galiano et al., 2017; Orbach et al., 2020). Regarded as essential in developing math abilities, deficits in executive functions impact children's performance (Zivkovic et al., 2022). This is explained by the increased cognitive load imposed by anxiety during math-solving tasks, which requires additional resources from the brain.

However, other individual factors, such as **poor math performance**, can exponentially increase the odds of developing math anxiety but are, in their turn, influenced by it (Ramirez et al., 2018). For instance, the lack of knowledge in regard to fundamental concepts or the inability to adequately operate with various concepts and operators creates a snowball effect. Once people evaluate their performance in Maths as bad (or get bad grades), they become reluctant to engage in essential activities that could help them understand better and improve their performance (i.e., skip classes, don't do additional exercises, don't ask for help, etc.) (see Luttenberger et al., 2018). Further, motivation seems to be a two-edged sword. On the one hand, disengagement and the lack of **motivation** to work on math tasks could deepen one's anxiety and make one reluctant to engage with math content. Getting bad grades can discourage a child and reduce their motivation to put extra effort into their homework. On the other hand, high achieving children, even though they can be initially discouraged by difficult content, remain motivated (even despite their high levels of MA) and push through. This can happen due to intrinsic motivation (Wang et al., 2018), but also, they can be motivated extrinsically by failing their class or not getting good grades anymore (Luttenberger et al., 2018). Even though research on this topic is scarce, the relationship between motivation and math performance is intriguing in terms of interactions.

When it comes to socio-environmental factors, the caregiver's own perceptions and attitudes regarding math are a great predictor of their children's math anxiety. Parents are some of the most significant people in a child's educational path by helping them with their homework, talking about values and goals, and thus shaping their day-to-day learning experiences. However, research points out that if parents are anxious or show distress when helping their children with their math homework, these attitudes could be assimilated by the child (Anbar & Visu-Petra, 2021). Similarly, parental attitudes toward Maths, put in terms of: "born with it" or "work to make things better", could shape children's perceptions about what dealing with math is a struggle, where you "have" certain abilities, or you don't, but you can't do anything about it or it teaches them that, in order to have results, you have to push forward. On the other hand, however, positive and constructive parental engagement in their child's homework reflects in better school performance and an overall positive approach to school (Petruț & Visu-Petra, 2022). At school, teachers and peers are the main actors in the class environment. Their own attitudes and beliefs can also shape one's perception of math. Math anxiety is prevalent in primary school teachers, and their uneasy or avoidant behaviour when it comes to explaining math negatively affects how they relate to the class content and how they relate to the children during these classes (see Ramirez et al., 2018 for a review).

1.2. MATH ANXIETY AND COGNITIVE TUTORING

Given the importance of reducing math anxiety, research focused on developing and adopting adequate strategies and programs. For this reason, tutoring programs are regarded as methods and strategies employed in order to develop mathematical knowledge, improve problem-solving abilities, and develop skills for identifying errors or shortcomings in mathematical thinking by using tutor-guided practice to increase efficiency (Fuchs et al., 2008). Cognitive tutoring aids the development of mathematical knowledge (including arithmetic fluency), improves thinking strategies, develops math-related skills, and promotes a positive approach to math, improving children's attitudes towards this domain (for a review see, Petruț & Visu-Petra, 2019). Thus, through math practice, children become less anxious and more confident in their abilities when solving exercises (Superkar et al., 2015). Another important characteristic is that cognitive tutoring emphasizes the repetition of the subject taught at school through practice conducted in a relaxed, friendly environment. One effective teaching component is enjoyment (Liu et al., 2017). Thus, the child learns how to deal with the information (i.e., learning addition or subtraction) and practice through increasingly difficult exercises and problems (Superkar et al., 2015) without feeling overwhelmed. Cognitive tutoring are adaptable programs and can vary in its duration (a few weeks or an entire school

year), frequency (daily, once every few days, weekly), the content provided (e.g., focuses on the entire curriculum or just on a certain content) and its difficulty (introductory level or increasingly difficult) (see Petruț & Visu-Petra, 2020). Moreover, the learning process can be organized as one-on-one or in small groups, and there is no overall difference in the results of the intervention (Petruț & Visu-Petra, 2020).

Research to date indicates promising results on their effectiveness in reducing math anxiety. Another aspect that varies is who the tutor is: a parent at home, a teacher, older peers at school, or a computer. For instance, Topping et al. (2007) sought to observe the effect of an 8-week program for primary school children who were tutored by their parents. Results indicated that children who were guided through mathematical games and learning activities had better outcomes in terms of performance at the post-test. Computerized cognitive tutoring is considered an intelligent system that enables feedback and "implementation-guided learning" (Anderson et al., 1995; Ritter et al., 2007). Similar to the human implemented tutoring, these programs are very varied in terms of topics and content covered, with the main goal of providing instructional support tailored to individual educational needs (Pai et al., 2021). Research points out their effectiveness in improving the mathematical performance of children of different ages (Pai et al., 2021) and even in college students, and they show robust improvement in developing learning skills in both genders (Li & Ma, 2010) and for different cultures.

1.3. DIGITAL-BASED LEARNING

An innovative adaptation of technology for the educational environment is digital game-based learning (DGBL). This term refers to all sorts of activities based on the school curriculum, where learning takes place through play, with the main goal of gaining knowledge and developing new skills (Erhel & Jamet, 2013). In line with a previous statement regarding the importance of creating an attractive and child-friendly learning context, it is essential for a computerized game to *„meet pedagogical criteria and be attractive in order to have a positive effect on students"* (Alanazi, 2020, p. 93). Games represent a useful tool in teaching and can be easily implemented in different forms in classroom activities (Zosh et al., 2017). As part of play, features such as progressing with the story, having your achievements recognized, or ultimately being able to win (or 'beat the game') represent valuable additions when embedded in the learning process and could be useful even for children who usually are less willing to engage during classes (Cagiltay et al., 2015; Alanazi, 2020). One way of promoting a positive perspective toward math in children while helping children develop their problem-solving skills is to actively involve them in math-related activities that are fun and educational

(Luttenberger et al., 2018). The development of new technologies: mathematics learning (Zosh et al., 2017), increasing student motivation and engagement (Hung et al., 2014), classroom interventions in reducing math anxiety (Vanbecelaere et al., 2021), and last but not least, developing a positive attitude towards mathematics (Ke, 2012; 2008). These are all possible through what is regarded as 'gamification', a component that enables children to learn and practice through game-like elements that have been adapted specifically for this purpose. For instance, children can play a computerized game that has a story (e.g., they have to help the hero of the game by solving math exercises). It keeps track of their progress and lets them know how well they played compared to other users (e.g., implemented through leaderboards and tops). Children are also motivated to progress when they receive in-game incentives (e.g., badges, coins, or can unlock certain features for their character). Also, being 'seen' through an avatar can make a game more interesting for a user; and being able to customize their appearance significantly increases the attractivity of the game (for a review, see Nah et al., 2014). To date, there have been identified a wide variety of computer games and mobile applications which differently employ gamification content (Byun & Joung, 2018; Cayton-Hodges et al., 2015). They are adapted for different domains (e.g., Math, English, Physics), components (e.g., the entire 3rd grade curriculum or focused exclusively on addition/subtraction), purposes (exercising, learning new content), and for different age groups (pre-schoolers, school-aged children, and even college students). However, there are differences: in the quality of mathematical content, the way feedback and scaffolding are provided, the variety of interactions, and the adaptability of the game (for a comprehensive overview see Byun & Joung, 2017; Cayton-Hodges et al., 2015). Firstly, not all the available contents follow a prescribed curriculum. Some are more well documented and researched than others, thus their real effectiveness is unknown. Secondly, in terms of the feedback and scaffolding provided, some provide immediate and adapted feedback for each user, while others only generally review the overall performance of the user. This, however, has an impact on how well a mistake can be corrected, for instance. Is it important to know where I did wrong and how I can improve that or is it more relevant to know how many correct answers I have provided overall? Thirdly, it depends on what the program is built to provide in terms of interactions: does it allow the user to redo certain exercises, or to come back to previous levels at a later point in time, or can the user only go through new exercises? Last but not least, the diversity of what a user can do and learn through a program/app greatly impacts its quality and attractivity of it. If they are focused exclusively on only one dimension (e.g., addition, fractions), after a while will always be the risk of the program becoming redundant. Additionally, it is helpful to have

different types of items (e.g., exercises, test items, or both) (Cayton-Hodges et al., 2015).

Nonetheless, there are several great examples of math tutoring games designed by researchers with the aid of an adapted curriculum. For instance, *Animal Watch* (Arroyo & Woolf, 2003) is a pioneer learning software that aids middle-school children learn pre-algebra problems. Its ingenuity resides not only in how the problems are structured (children learn to put math content into context as word problems instead of 'raw' exercises) but also in how these problems are presented (Arroyo & Woolf, 2003). They include trivia-like components, providing facts about different endangered species while also teaching children mathematical content. Another more recent example of good practices is *DigiGEMs* (Hwa, 2018), a program aimed at children in 1st to 3rd grade based on the mathematics syllabus of the Malaysian Ministry of Education. It includes 16 lessons that range from addition to fractions using different types of games and also provides useful tutoring by using visual prompting (i.e., children can look at images so that they can mentally represent the exercise). Children can get feedback throughout the lessons, being told when they have made mistakes or praised when they manage to solve an exercise. In terms of tutoring and scaffolding, *4Mality* (Maloy et al., 2010) represents another example of good practice. The game is designed to prepare primary and secondary school children for the Massachusetts Assessment System. Through a well-crafted feedback system of 4 animated tutors that explain how to solve an exercise using a step-by-step approach, children develop problem-solving skills and test-taking strategies. Of course, these are only a few examples of programs that proved to be effective in teaching math content to school-aged children. Even though so far, results are still mixed in terms of better results in computerized vs. classic tutoring (Dondio et al., 2022; Lo & Hew, 2021)), digital-based learning is a useful resource in creating adaptable and child-friendly resources for developing math skills. However, all these games are focused on cognitive tutoring for learning new content or exercising certain skills without taking into account math anxiety and what strategies could be employed to diminish it. The literature addressing this gap is emerging (Alanazi, 2020; Hung, 2014; Vanbecelaere et al., 2021) but shows promising results.

2. METODOLOGY

2.1. MATEMATROLLS (MATEMATROLII – RO)

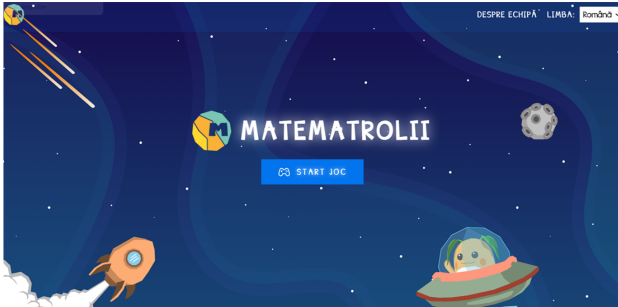
In what follows, we will describe the development and the piloting of a cognitive tutoring program for reducing math anxiety. "Matematrolls" is aimed at children in primary school (2nd and 3rd grade), and it is based on the Romanian educational curriculum. The main goal of the game is to help math-anxious children exercise and develop their problem-solving skills while using a gamification component. The game includes 6 types of math content: addition, subtraction, multiplication, division, fractions, and exercises with an unknown factor. There are exercises that can be solved by both 2nd and 3rd graders since they include simpler calculations, but there are also specific contents aimed exclusively at older children. The overall idea of the game is that the child-user becomes the hero of the galaxy, having to solve math problems in order to fight off the little robot invaders (the Matematrolls).

Six of the seven planets are composed of seven levels each: 6 levels include only exercises, and the 7th level is exclusively for math problems. Only one planet, Divisia (dealing with division), contains 6 levels. In order to be adapted to each grade, the last level is also structured into problems for the 2nd and 3rd grades, respectively. Each level has 3 sets of 6 exercises each; the main one and two additional sets. The first set is the 'to go' version, while the latter two appear when the child gives at least 3 wrong answers to the first exercises from the previous set. For each exercise children are asked to choose the correct answer from the 4 options displayed. The element of tutoring is included the way children can ask for help from a virtual tutor, who will show them the necessary steps in solving the problem. The first part of the feedback automatically appears when the child gives the wrong answer. The child can then look at images showing them how to solve the first part of the exercise, while a vocal message is heard repeating the feedback. The tutor's explanations are similar to those given by the teachers during classes, so children are already familiar with how the information is structured.

Another relevant feature of the game is the possibility of configuring the exercise packs depending on the content to be learned or practiced. The wide variety of exercises makes it possible to create personalized packages in which children can practice addition, or subtraction but can also learn about fractions or the order of operations. As the exercises gradually increase in difficulty, even children who are not yet used to a certain type of exercise can progress using instant feedback for guidance.

Figure 1

The front page of the game.



2.2. MATH CONTENT

The seven planets have thematic names: *Adendus* for learning addition, *Diminus* for subtraction, *Multiplis* for multiplication, *Divisia* for division, *Fracta* for learning fractions, *Questia* for solving complex exercises, and *Hybridia* for practicing combined sets. In what follows, we will briefly present the content of each of these planets.

Adendus, the planet where children practice addition, consists of 7 levels: the first 6 include exercises, and the last one is focused exclusively on problems. The last level has different sets for the 2nd grade and 3rd grade. Each of the 7 levels has 6 exercises that must be solved correctly in order to advance in the game. Children can exercise addition for numbers between 0 and 10 000 while also learning new strategies that can be later applied to the other sets of exercises.

The planet of subtraction, *Diminus*, follows the structure of the previous planet. The main goal is to accustom children to performing subtraction of natural numbers and to use specific terminology and mathematical symbols to solve problems requiring simple reasoning. At the same time, through the variety of exercises proposed, children can practice their already existing knowledge and improve their problem-solving strategies.

Planet *Multiplis* has 7 levels: 6 focused on exercises and 1 for solving problems. The proposed exercises help children to practice multiplication using the multiplication table, as well as by relying on the terminology and relevant mathematical symbols.

The Planet of *Divisia* has 6 levels. All exercises aim to practice divisions for numbers in the range 0 – 100, highlighting the association between multiplication and division.

Fracta comprises 7 levels: 6 for exercises and one for problem-solving. Only the first 3 levels can be solved by 2nd graders. Since the curriculum for the fractions chapter is narrow for 2nd grade, the aim of this planet was to help children to children to practice their knowledge and succeed in translating visual and written concepts into mathematical representations. More specifically, for the 2nd grade, the purpose of the exercises is to help children learn more about fractions in order to recognise equivalent fractions (e.g., $\frac{1}{2} = \frac{2}{4}$) and to understand the specific terminology (e.g., $\frac{1}{2}$ = a half; $\frac{1}{4}$ = a quarter). These exercises are meant for children to learn how to name, write, and read fractions, as well as to recognise different fractions from pictures. For the 3rd grade, children can also learn how to order and compare fractions.

The star of *Hybridia* is the unknown term. The first 3 levels include addition, subtraction, multiplication, division, and the unknown term problems accessible for 2nd grade. The following levels (4–7) are especially for 3rd graders, including exercises and problems with the unknown term, but with a higher level of complexity. The proposed objective of *Hybridia* is to teach children new ways of finding out the unknown term and to apply the rules learned in as many situations as possible.

Last but not least, planet *Questia* contains exercises (levels 1–6) and problems (level 7) that combine first and second-order operations with and without brackets. The difficulty of the exercises is increasing, but this relates to their complexity, not necessarily to the calculations. The objective is to help children get a better grasp of solving exercises where they have to understand the order of the operations, as well as to know what to do when the exercise includes parentheses of different types.

2.3. FEEDBACK

Children are asked to select the correct answer from 4 available options (see Figure 2.) When the correct answer is chosen, the child's answer is coloured green, and they move on. If wrong, the chosen answer will colour red and, they will receive further feedback ("Try again. At first, add the units, then the tens."). After that, children are allowed to answer one more time, and if they are wrong again, the second part of the explanation will follow ("Try again! I added the units, you still have to add the tens."). Each step is accompanied by a visual explanation. Thus, the feedback is provided step by step (for different stages of solving the exercise) in case of an incorrect answer.

Figure 2

Examples for when children select the correct answer and for when they choose the wrong one



2.4. GAMIFICATION

The cognitive tutoring component is embedded in a storyline with different gamification elements. The child/player, now a space hero, sets on a quest to free the galaxy from the Matematrolls, who are trying to deplete the entire universe of its colours. The hero's task is to solve (all) the exercises from each planet so that (s)he can land and fight off the Matematrolls, restoring the planet's colours. To his/her aid come two helpers, SEM and MEM, who, despite being kidnapped from the Matematrolls, provide the hero with cues (i.e., feedback) in solving the exercises. After all the 7 planets are colourful again, our hero can defeat the Matematrolls in an arcade-like final battle, freeing both his tutor-friends and the entire galaxy.

If children solve all the exercises from a planet, they can land and play a mini-game. They can collect gems from the planet that could afterward be used to customize their avatar and spaceship, and they can also fight off the Matematrolls, which frees the planet and allows them to move to the next one. Throughout the game, children can collect different badges for each planet, and they can monitor their progress from the main profile (see Figures 3 and 4).

Figure 3

Badges and avatars from the profile page

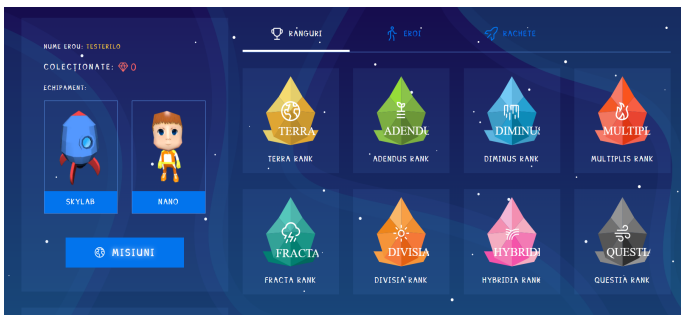
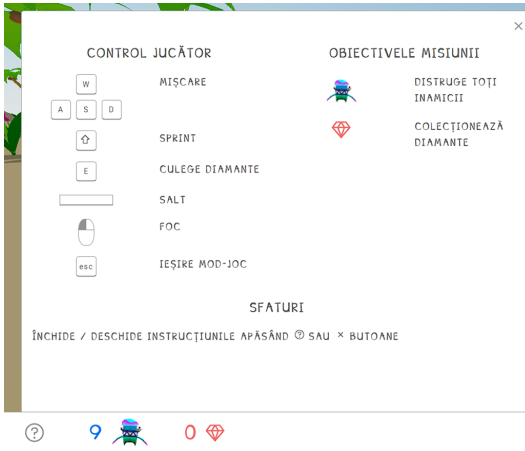


Figure 4

Game interface with the instructions



3. RESULTS

The data collection is ongoing, and a pilot phase of the game is currently being conducted. We recruited 42 children from the 2nd grade and 57 children from the 3rd grade enrolled in a Romanian school. Half of the children from each class are part of the intervention group. For 4 weeks, they participate weekly in 2 sessions of 30 minutes each, playing on one planet at a time, for 8 sessions in total. The other half are on a 'waiting list', considered the control group. Along with the cognitive tutoring program, we evaluated several math-related dimensions in order to accurately assess their progress, with measurement for pre-and post-intervention.

After obtaining informed consent from the parents, we asked all children and one of their caregivers to fill in a few questionnaires. For the pre-test measurements, we measured children's state anxiety using the **State-Trait Anxiety Inventory (STAI – C)** (Spielberger, 1973). It contains 20 items (e.g., "I feel unhappy." / "I have difficulties falling asleep at night.") evaluated on a 3-point Likert scale (1- rarely, 2 – sometimes, 3 – frequently). We evaluated children's mathematics anxiety using **The Abbreviated Mathematics Anxiety Scale (MAMAS)**, Carey et al., 2017), which includes 9 items evaluating children's ratings on how anxious they feel in different situations they have actually experienced ("Taking a Maths exam." / "Starting a new topic in Maths.") evaluated on a 5-point Likert scale (1- low anxiety, 5 – high anxiety). An additional math-related measurement was the scale for early math

anxiety measured with the **Scale for Assessing Early Mathematics Anxiety** (SEMA, Wu et al., 2012). It includes 20 hypothetical scenarios children have to rate based on how anxious they'd feel ("*Is this right? $9 + 7 = 18$.*" / "*You are in your math class and you do not understand something. You ask your teacher to help you.*") evaluated on a 5-point Likert scale (1- not anxious at all, 5 – very anxious). Last but not least, we asked parents to evaluate parental involvement in their children's homework ("*You check their homework when they're finished.*" / "*You answer their questions throughout solving the homework.*") rated based on frequency (never –more than once a day), as well as their own anxiety regarding math stimuli. This last dimension was evaluated using **Mathematics Anxiety Rating Scale** (MARS, Suinn et al., 1988) and addresses, throughout 30 items, parental responses to different math-related situations from their childhood, asking them to rate how anxious they have felt back then and in different hypothetical scenarios ("*During a math exam*" / "*Adding $976+777$ on paper.*") –evaluated on a 5-point Likert scale (1 –not stressed at all, 5 – very stressed). Along with these measurements, children were asked to solve a set of "training exercises", designed based on the curriculum and meant to evaluate their math-solving abilities before and after taking part in the cognitive tutoring sessions.

At the end of the intervention, we asked children to fill in one more time 2 of the initial questionnaires: MAMAS, and SEMA, as well as to solve the training exercises one more time. Since the study is ongoing, our results are yet to be updated and discussed.

4. CONCLUSIONS

Math anxiety represents, without a doubt, an important educational challenge since primary school. The increasing interest in this research domain is raising interesting questions regarding what makes us vulnerable to math anxiety, how it affects us in both the short and long term, and, more importantly, how can we (as practitioners and researchers) help those who need support? One important direction is the through specialised tutoring programs adapted to each developmental stage. Even though there is no conclusive answer whether computerized training tutors are significantly better than the classic version, promising results from the field (e.g., Hwa et al., 2018; Vanbecelaere et al., 2021). Through our computerized tutoring program, we tried to add to the emerging literature on this topic and create a coherent narrative where children can exercise their mathematical problem-solving abilities while completing the training tasks in a child-friendly environment.

ACKNOWLEDGEMENTS

This work was supported by two grants from the Romanian national authority for scientific research, CNCS – UEFISCDI, project number PN-III-P1-1.1-TE-2016-2170 and PN-III-P1-1.1-TE-2019-1075. For further details regarding this project and the game, you can visit www.minimanx.com.

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3.

PENSAR MATEMATICAMENTE NO CONTEXTO DE UMA HISTÓRIA: O *MODELLING BAR* COMO ESTRATÉGIA INOVADORA NA RESOLUÇÃO DE PROBLEMAS

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Resumo

Esta investigação foi desenvolvida no âmbito da resolução de problemas em contexto, inspirados na história: “A ovelha que fazia múuuu” contada e dramatizada pela autora. Assim, foram criados problemas para serem resolvidos por alunos do 2.º ano de escolaridade, valorizando-se diferentes estratégias pessoais, com enfoque no *modelling bar*, usado no “Método de Singapura” (MS). A investigação procurou responder à seguinte questão problema: de que modo a estratégia *modelling bar* do MS influencia a capacidade de resolver problemas em contexto relacionados com a adição, a subtração e a multiplicação. Neste âmbito, o estudo procurou analisar e compreender de que modo a comunicação e o raciocínio matemático se desenvolvem neste ambiente de aprendizagem. O estudo baseou-se numa sequência didática, iniciada na dramatização da história que englobou sete situações formativas numa turma com 22 alunos, com idade média de 7 anos. A metodologia usada teve características de investigação-ação e de natureza interpretativa, usando diversos instrumentos de recolha de dados. Após implementação do projeto de investigação, verificou-se que os alunos revelaram uma motivação adicional para resolver problemas tendo por base a história lida e vivenciada pela turma, adquirindo e mobilizando estratégias pessoais de cálculo mental. No processo de aprendizagem incluíram facilmente a estratégia de resolução *modelling bar*, tentando compreender a mesma, com o levantamento de questões que denunciaram maiores destrezas na comunicação e no raciocínio matemático e, conseqüentemente, na resolução de problemas.

Palavras-chave: Matemática em contexto, Resolução de problemas, Modelling bar, “Método de Singapura” (MS).

Abstract

This investigation was developed in the context of problem solving in context, inspired by the story: “A ovelha que faz múuuu” told and dramatized by the author. Thus, problems were created to be solved by 2nd year students, valuing different personal strategies, with a focus on the modeling bar, used in the “Singapore Method” (MS). The investigation sought to answer the following problem question: how the MS modeling bar strategy influences the ability to solve problems in context related to addition, subtraction and multiplication. In this context, the study sought to analyze and understand how communication and mathematical reasoning develop in this learning environment. The study was based on a didactic sequence, initiated in the dramatization of the story, which included seven training situations in a class with 22 students, with an average age of 7 years. The methodology used was

action-research and interpretive in nature, using different data collection instruments. After implementing the research project, it was found that the students showed an additional motivation to solve problems based on the story read and experienced by the class, acquiring and mobilizing personal strategies of mental calculation. In the learning process, they easily included the modeling bar solving strategy, trying to understand it, with the raising of questions that denounced greater skills in communication and mathematical reasoning and, consequently, in problem solving.

Keywords: Mathematics in context, Problem solving, Modelling bar, "Singapore Method" (MS).

INTRODUÇÃO

A resolução de problemas possui um grande enfoque no ensino da Matemática, sendo este o "objetivo prioritário (...) e uma parte integral de toda a atividade matemática" (National Council of Teachers of Mathematics, citado por Fernandes, 1994, p. 37). Neste estudo, apostou-se em novos métodos de ensino e estratégias diversificadas, designadamente, a do *modelling bar* usado no "Método de Singapura" (MS) na resolução de problemas. Este processo de aprendizagem em contexto foi iniciado pela dramatização da história "A ovelha que fazia múuu", de Isabel Fernandes. Durante o mesmo, usaram-se ainda materiais manipuláveis: cubos encaixáveis, como forma de promover a passagem do concreto para o abstrato. Através desta manipulação e da apropriação à nova estratégia proposta – *modelling bar* –, procurou-se desenvolver capacidades de raciocínio, comunicação e metacognição, numa perspetiva integrada do conhecimento.

Importa mencionar que o presente artigo mobiliza, numa primeira parte, um enquadramento teórico, no qual estarão presentes a dimensão conceptual e pedagógica, com enfoque para a estratégia *modelling bar* do MS usada na resolução de problemas. Posteriormente, apresenta-se a metodologia implementada seguida de uma análise cuidada e detalhada dos dados recolhidos, no sentido de dar resposta à questão de investigação e aos objetivos delineados, terminando o artigo nas conclusões.

1. FUNDAMENTAÇÃO TEÓRICA: MATEMÁTICA EM CONTEXTO

A Matemática em Contexto (MiC), tem como objetivo desenvolver a compreensão matemática, através da aprendizagem em contextos reais ou imaginários, mas com sentido para os alunos. Deste modo, devem ser criadas sequências didáticas que partam de conceitos mais significativos e concretos, para os mais abstratos (Dickinson & Hough, 2012). Neste sentido, é de mencionar que os problemas propostos no MiC pretendem promover nos alunos a motivação e curiosidade, bem como capacidades de exploração de relações matemáticas, a investigação de novas estratégias de resolução e o trabalho cooperativo. No seguimento das ideias referidas pelo MiC é crucial promover a motivação e o interesse dos alunos, através da conexão de problemas reais com aprendizagens matemáticas (Boaler, 1993; Dickinson & Hough, 2012).

1.1. MÉTODO DE SINGAPURA" (MS)

O MS apoia-se no conhecimento aprofundado da Matemática, onde vigora uma intencionalidade na aprendizagem e uma sequencialidade dos conteúdos e dos conceitos tendo como suporte central a resolução de problemas (Fernandes, 2017; *Singapore Math Inc.*, 2020). Destaque-se que uma das características do MS tinha já sido defendida por Piaget (1975) e Bruner (1966) que são as fases do conhecimento matemático, designada, neste método, pela abordagem Concreta-Pictórico-Abstrata (CPA) (*Singapore Math Inc.*, 2020; Teixeira, 2015). Assim, os princípios desta abordagem CPA, encontram-se presentes em todo o currículo de Matemática, em Singapura, apoiando-se noutras estratégias, como o *modelling bar*, o pensamento matemático e o *"Number Bond"* (*Singapore Math Inc.*, 2020; Teixeira, 2015).

1.2. RESOLUÇÃO DE PROBLEMAS

Em pleno século XXI, a realidade é apresentada com um maior grau de complexidade, o que implica desafios igualmente mais complexos a que o ser humano tem de dar resposta. Neste sentido, Brandão (2005), revela ser fundamental a necessidade de ensinar os alunos a resolver problemas, como forma de os preparar e serem capazes de "lidar com a crescente complexidade, com as mudanças contínuas e com um conhecimento em rápida expansão" (pp. 35-36).

Numa aula de Matemática em Singapura, a resolução de problemas tem um enorme destaque, sendo considerada “o coração” da aprendizagem matemática (Fernandes, 2017). Assim, é de evidenciar a importância do Modelo Pentagonal do Currículo de Matemática de Singapura (Figura 1), onde a Resolução de Problemas é o ponto central neste modelo e está vinculada com a cinco componentes relacionadas entre si: os conceitos, os procedimentos, os processos, a metacognição e as atitudes (Fernandes, 2017; Teixeira, 2016).

Figura 1

A Resolução de Problemas no Centro da Aprendizagem Matemática no Método de Singapura (MS)



De acordo com os especialistas de Singapura, a escolha do problema apresenta-se como um processo fundamental sendo que este deve motivar e fazer sentido para a aluno.

1.3. MODELLING BAR – “MÉTODO DE SINGAPURA”

O *modelling bar* é uma estratégia, frequentemente, usada na resolução de problemas, no MS, que permite que os alunos transformem o enunciado de um problema numa representação mais visual, usando os dados identificados do mesmo para os relacionar e descobrir a(s) solução(ões) do problema (Fernandes, 2017; *Singapore Math Inc*, 2020). Uma das suas características é a utilização dos cubos encaixáveis de cores, num primeiro momento com a posterior passagem para uma barra, sendo que esta última representa o número total de cubinhos. Numa fase

posterior os dados são representados por retângulos de dimensão proporcional de acordo com a informação numérica do problema. Ao longo do uso deste modelo, os alunos desenvolvem competências, tais como, a abstração, na qual os alunos estão a concretizar, do mais simples para o mais complexo, o desenvolvimento do raciocínio proporcional e do pensamento algébrico (Fernandes, 2017), através das associações, representações, generalizações e abstrações que realizam.

2. METODOLOGIA DE INVESTIGAÇÃO

Esta investigação seguiu uma metodologia com características de investigação-ação que estimula o docente para a análise e para a reflexão sobre as suas ações e as estratégias implementadas, com vista a melhorar as suas práticas. Após a identificação da temática a aprofundar, formulou-se a seguinte questão de investigação: “De que modo a estratégia *modelling bar* do “Método de Singapura” (MS) influencia a capacidade de resolver problemas contextualizados relacionados com a adição, a subtração e a multiplicação, em alunos do 2ºano de escolaridade?”. Tendo por base esta problemática, delinearam-se três objetivos específicos para realizar a presente investigação: i) analisar as atitudes (motivação, curiosidade, atenção e o questionamento) dos alunos, na resolução de problemas, tendo por base uma nova estratégia pedagógico-didática; ii) compreender as potencialidades do uso do *modelling bar* na resolução de problemas; e iii) averiguar a influência da utilização do *modelling bar* na consolidação de operações lineares e no desenvolvimento do raciocínio pré-algébrico (Fernandes, 2006, 2017). O estudo em causa seguiu uma dimensão qualitativa e interpretativa, na medida em que se tentou perceber “a realidade no contexto natural”, interpretando “os fenómenos de acordo com os significados que eles têm para as pessoas envolvidas” (Gómez et al., 1996, p. 32). Refira-se ainda que a investigação desenvolvida é um estudo de caso, uma vez que se apresenta como um contexto único e irrepetível, com uma estrutura nas diferentes dimensões identificadas.

2.1. CARATERIZAÇÃO DA TURMA

A presente investigação realizou-se numa turma do 1º CEB, constituída por 22 alunos, dos quais 14 eram do sexo masculino e 8 do sexo feminino, com idades compreendidas entre os 7 e os 8 anos. É de referir, que um dos alunos que integrava a turma encontrava-se em processo de admissão nas medidas de suporte à aprendizagem e à inclusão, seletivas e adicionais, e onze alunos, incluindo o aluno mencionado, eram abrangidos pelo Decreto-Lei n.º 54/2018, usufruindo, deste

modo, de medidas universais. Na generalidade, os alunos da turma demonstravam-se bastante ativos, envolvidos e motivados no processo de ensino e aprendizagem, apresentando uma maior motivação aquando atividades mais lúdicas e dinâmicas. No entanto, as fragilidades eram notórias nas diversas áreas, uma vez que, grande parte do 1.º ano foi em regime de E@D.

2.2. SESSÕES DA SEQUÊNCIA DIDÁTICA

A sequência didática planificada e implementada pretendeu dar resposta à questão-problema e aos objetivos delineados. Deste modo, esta contemplou sete sessões de trabalho, das quais três foram destinadas à exploração da história “A ovelha que fazia múuu”, de Isabel Fernandes (Figura 2) e quatro à resolução de problemas, tendo como principal foco a exploração da estratégia *modelling bar*. Através desta dramatização e da presença da autora, existiu um despertar de sentimentos nos alunos, como a motivação, a felicidade, o entusiasmo e maior envolvência nas tarefas propostas, tornando-se crucial para a contextualização das aprendizagens, com especial destaque para as de Matemática.

Figura 2

Dramatização da História “A ovelha que fazia múuu”, por parte da autora, Isabel Fernandes



Posteriormente, como forma a prosseguir com a exploração didática da história, os alunos foram desafiados, através de uma das personagens da história, a pastora, a desvendar uma mensagem secreta. Para isso, os alunos tinham de resolver desafios que se encontravam num guião de exploração. À medida que os superavam

recebiam partes da mensagem da pastora, sendo esta desvendada pelos alunos até à construção do Bilhete de Identidade de uma ovelha. No final das três sessões foi proposto, como trabalho autónomo de férias da Páscoa, a realização de um desenho acompanhado por uma frase da parte da história que os alunos mais gostaram, de modo a criarem posteriormente um livro físico da história “A ovelha que fazia múuu”. Numa aula posterior foi construído o livro físico e de seguida o digital¹.

Numa fase posterior, iniciou-se a realização de uma missão especial, designada por: “à descoberta do labirinto da ovelha que fazia múuu”. Esta foi concretizada em quatro sessões de trabalho destinadas à exploração e à resolução de problemas, tendo como enfoque a exploração da estratégia *modelling bar* do MS, numa primeira fase, pela manipulação de cubos encaixáveis. A missão teve como orientação um labirinto e um mapa (Figura 3) com os desafios de cada etapa, sendo estas – 1ªetapa: *Adição em Ação*; 2ªetapa: *à descoberta da subtração*; 3ªetapa: *Subtração em ação*; 4ªetapa: *Problemas diversos*.

Figura 3

Labirinto da Missão e Mapa das Etapas: “À descoberta do labirinto da ovelha que fazia múuu”



A concretização destes desafios tinha como principal objetivo: fomentar o uso da nova estratégia na resolução de problemas e na promoção e desenvolvimento de estratégias de cálculo mental. No que concerne à 1ªetapa: *Adição em Ação*, esta era destinada à exploração de resolução de problemas de um e dois passos relativos à operação de adição, sendo aplicados os significados de *acrescentar* e *combinar*.

¹ <https://www.storyjumper.com/book/read/106398256/2F>

Nesta etapa, apresentou-se aos alunos a estratégia *modelling bar*, abordando-se um pouco da história do país do MS. Na 2ª etapa: *à descoberta da subtração* procedeu-se à exploração de problemas relativos à operação de adição e posteriormente ao início da subtração, através da apresentação da estratégia em estudo. A 3ª etapa: *Subtração em ação* foi relativa à resolução de problemas de subtração, onde foram abordados os distintos significados – *retirar, comparar e completar*. Na 4ª etapa (e última etapa): *Problemas diversos* resolveram-se diferentes problemas referentes à operação da multiplicação e ao dinheiro. O labirinto e o mapa estiveram presentes ao longo das quatro sessões, sendo que estes fechavam-se, no final de todas as aulas, dando assim por terminada aquela etapa da missão. Nesse momento era entregue à turma um desafio denominado por – *Desafia-te!* – que era proposto para trabalho autónomo, sendo este um dos momentos da aula do MS. Importa referir que todas as etapas eram constituídas por problemas matemáticos contextualizados com temas relacionados com a natureza e dramatizados na história referida de modo a promover a articulação de saberes entre o Português e a Matemática e uma envolvência especial da aprendizagem do aluno. Esta articulação também ocorreu com o Estudo do Meio e outras áreas, uma vez que ao longo das aulas, em momentos chave do labirinto encontravam-se imagens destinadas a diversas curiosidades. Os desafios propostos tiveram sempre um momento de trabalho autónomo e posteriormente uma exploração em grande grupo, com a partilha das diferentes estratégias de cálculo mental utilizadas pelos alunos. A manipulação de materiais, como os cubos encaixáveis e a partilha de conhecimentos foi constante, tanto pela escrita no quadro branco como pelo padlet² criado, que permitiu não só a envolvência de todos, designadamente, da família no processo de aprendizagem dos filhos, através da partilha do link da turma.

2.3. TÉCNICAS E INSTRUMENTOS DE RECOLHA DE DADOS

As técnicas e instrumentos de recolha de dados utilizados na investigação foram diversificados e tiveram em atenção a questão-problema e os objetivos elencados, pois uma investigação é uma “tentativa sistemática de atribuição de respostas às questões” (Tuckman, 2000, p. 5). Atendendo ao referido, a recolha de dados suportou-se na observação naturalista, participante e ativa, em reflexões contínuas de uma equipa multidisciplinar, bem como por uma análise documental cuidada, pela entrevista realizada à professora cooperante, por inquéritos por questionário aplicados aos alunos, pela realização de notas de campo, diários de bordo, registos

² <https://padlet.com/inespessoalarabessa/aovelha>

fotográficos e vídeos, assim como a análise das produções orais e escritas dos alunos. Desta forma, ao longo das sete aulas lecionadas, apontou-se, de forma objetiva, concisa e descritiva num bloco de notas, o registo dos momentos mais significativos da prática pedagógica (Gall et al., 1996). Também se recorreu ao uso de telemóveis, como forma a fotografar momentos cruciais das aulas e os registos produzidos pelos alunos, bem como a realização de gravações audiovisuais dos momentos mais pertinentes. Como complemento à observação, foram analisados alguns documentos, como os guiões de trabalho realizados pelos alunos nas aulas lecionadas. A entrevista à professora cooperante e os inquéritos por questionário aos alunos foram ainda dois dos instrumentos utilizados na recolha de dados. Assim, recorreu-se a distintas técnicas e instrumentos de recolha de dados que permitissem uma posterior triangulação dos mesmos de modo a construir evidências objetivas e fiáveis deste estudo de caso.

3. ANÁLISE E DISCUSSÃO DOS RESULTADOS

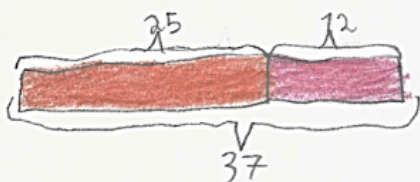
Na primeira situação formativa foram propostos cinco problemas relativos à operação da adição, tendo sido introduzida a estratégia *modelling bar*, logo na resolução do primeiro problema. Ao longo desta situação formativa, os alunos exploraram os problemas, aplicando a nova estratégia pedagógico-didática, com a ajuda da manipulação dos cubos encaixáveis, num primeiro momento, com a concretização da aprendizagem, como preconiza o modelo CPA do MS. Os alunos demonstraram facilidade na compreensão dos enunciados dos problemas e da estratégia proposta, através da exploração e manuseamento do material, como se pode entender nos comentários realizados “Com os cubos encaixáveis é mais fácil.”; “Professora esta estratégia ajuda-me bastante a entender o problema”.

Neste momento, torna-se importante analisar as distintas estratégias utilizadas pelos alunos, em dois problemas relativos a esta aula, como forma de perceber como foram prosseguidos os objetivos da investigação. No desafio três, (Figura 4), percebe-se que a estratégia adotada pelos alunos, no terceiro problema, foi a decomposição de parcelas. Nestes dois problemas pode-se concluir que os alunos usaram também o conceito de “*Number bond*”, explorado no desenvolvimento do cálculo mental, uma aposta forte no MS. Os alunos souberam conciliar a nova estratégia de *modelling bar* com processos de cálculo mental muito relevantes na descoberta da solução do problema.

Figura 4

1ª Etapa: Adição em ação – Desafio 3: Resoluções dos alunos D e M

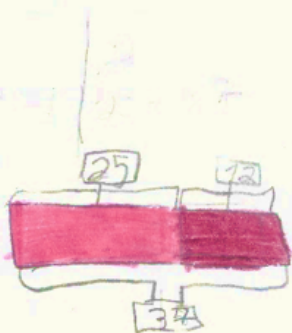
3. O Senhor Joaquim tem 25 ovelhas e a Dona Rosa ofereceu-lhe 12 ovelhas.
Com quantas ovelhas ficou o Senhor Joaquim, no total?



$$25 + 12$$
$$\begin{array}{r} 10 \quad 2 \\ 25 + 10 + 2 = 37 \end{array}$$

R: O Senhor Joaquim tem no total 37 ovelhas.

3. O Senhor Joaquim tem 25 ovelhas e a Dona Rosa ofereceu-lhe 12 ovelhas.
Com quantas ovelhas ficou o Senhor Joaquim, no total?



$$25 + 12$$
$$25 + 5 + 5 + 2$$
$$30 + 7$$
$$37$$

R: Ficou com 37 ovelhas.

Relativamente ao desafio cinco (Figura 5), consegue-se perceber que a aluno decompôs uma das parcelas em ordens e de seguida adicionou a primeira parcela com as duas dezenas representadas, e por fim as unidades, obtendo o resultado final.

Figura 5

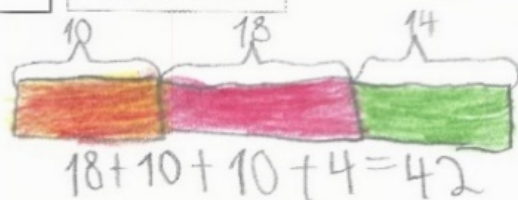
1ª Etapa: Adição em Ação – Desafio 5: Resolução do aluno P

5. A pastora tem uma dezena de ovelhas de cor branca. O Senhor José tem 18 ovelhas de cor preta. A Dona Rosa tem 14 ovelhas de cor castanha. Quantas ovelhas têm os três pastores, destas três cores, ao todo?
Selecione a opção correta.

40 ovelhas

42 ovelhas

43 ovelhas

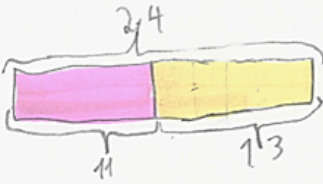


Na segunda aula, consolidou-se a operação da adição, sendo de seguida explorados problemas relativos à operação da subtração, tal como é sugerido no MS, isto é, a subtração é lecionada com base no conceito de ser a operação inversa da adição e numa perspetiva do *Fact Family Basic*. Através da análise da Figura 6, observa-se que a aluno decompôs ambos os números em ordens para obter o resultado.

Figura 6

3ª Etapa: Subtração em Ação – Resoluções dos alunos D e J

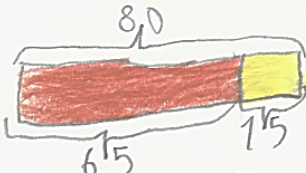
O rebanho do Senhor Joaquim tem 24 borregos. E o rebanho do Senhor José tem 13 borregos.
Quantos borregos tem de comprar o Senhor José para ficar com tantos borregos como o Senhor Joaquim?



$$24 - 13 = (20 + 4) - (10 + 3) =$$
$$20 - 10 = 10$$
$$4 - 3 = 1$$
$$10 + 1 = 11$$

R: O senhor José tem de comprar 11 borregos.

1. A ovelha que fazia múuu “pesava” 80 kg, depois de ir à tosquia perdeu 15 Kg.
Quanto “pesa” agora a ovelha que fazia múuu?



$$80 - 10 - 5 = 65$$

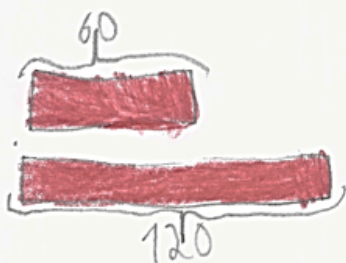
R: Agora pesa 65 kg.

Na última situação formativa, foram explorados três problemas, relativos à multiplicação e um dos exercícios também estava ligado ao conteúdo do dinheiro. Deste modo, relativamente ao desafio onze (Figura 7), é possível visualizar estratégias diferentes e um aluno refere: “Professora conseguimos atingir o *clever day*, somos muito inteligentes”, sendo esta uma das motivações adicionais no processo de resolução de problemas do MS.

Figura 7

Desafio 11

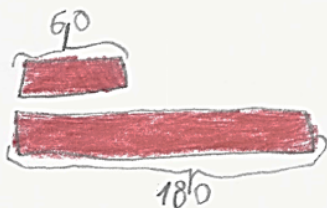
2. A pastora comprou uma ovelha por €60. A Dona Maria comprou 3 ovelhas pelo dobro do preço.
Quanto pagou a Dona Maria por 3 ovelhas?



$$60 \times 2 = 120$$
$$2 \times 60 = 120$$
$$60 + 60 = 120$$

R: A dona Maria gastou €120.

3. O Senhor Hugo na sua carteira, tem o dinheiro que vê na imagem.
Ele quer comprar 3 ovelhas e sabe que uma ovelha custa €60.
Será que o dinheiro do Senhor Hugo chega para comprar as 3 ovelhas?
Se sim, quanto dinheiro sobra ao Senhor Hugo?



$$3 \times 60 = 180$$
$$60 \times 3 = 180$$
$$60 + 60 + 60 = 180$$

R: Sim, sobra €35 ao Senhor Hugo.

Através das resoluções acima referidas e analisadas, consegue-se visualizar o rigor matemático, a importância dada aos pormenores, através da cuidada pintura das barras, das chavetas rigorosas, bem como a proporcionalidade do comprimento das barras em relação ao valor a indicar. Tudo isto, foi alcançado pela perseverança,

repetição de ideias, argumentos e representações, dando-se tempo para explorar de forma cuidada todas as características do *modelling bar*. Esta aprendizagem em espiral e de paciência formativa, revela dificuldades iniciais que são naturais, pois há necessidade de se insistir no rigor das diferentes representações: visuais e simbólicas.

Deste modo, através da análise cuidada da implementação da sequência didática, da observação e dos guiões de trabalho realizados apurou-se que nas diferentes sessões existiu uma compreensão ativa e progressiva dos problemas. Tudo indica que a estratégia *modelling bar* facilitou esse processo, sobretudo pelo estabelecimento visual de relações entre os dados, como se pode comprovar no livro digital³, onde constam as resoluções dos alunos. Por outro lado, neste processo foi possível promover potencialidades concetuais importantes, como a da capacidade de visualização na resolução de um problema, ao representar iconograficamente os dados, tendo também originado o desenvolvimento de estratégias de cálculo mental pelo uso do “*Number Bond*”.

Ao longo da investigação, através da observação e do auxílio de grelhas de observação, construídas antes da ação, averiguou-se um notório desenvolvimento de estratégias de cálculo mental, bem como uma maior motivação, participação e envolvimento dos alunos no processo de aprendizagem. Algo possível de constatar através dos comentários dos alunos: “Hoje vamos continuar o labirinto? Eu quero muito!”, “As barrinhas ajudam-me muito professora, porque assim já consigo fazer.”; “Professora se eu decompuser o número é mais fácil para mim.” e “Como é a subtração, eu coloquei o 13 na minha cabeça e fui adicionando mais um até chegar ao 24.”.

De modo que, ao analisar-se as respostas à primeira parte do questionário aplicado aos alunos, conseguiu-se apurar que, de uma forma global, compreenderam o conteúdo da história explorada, a dramatização desta, assim como a articulação de saberes, fatores decisivos para a construção ativa de novos conhecimentos. No que diz respeito à segunda parte do questionário sobre a resolução de problemas através da estratégia *modelling bar* do MS, foi possível compreender que a maioria dos alunos demonstrou um elevado grau de concordância com as afirmações apresentadas, considerando uma mais-valia da utilização da estratégia *modelling bar* do MS na resolução e na compreensão dos problemas propostos.

A entrevista realizada à professora cooperante permitiu também ampliar a informação já obtida com os alunos, tendo referido que as sete sessões de trabalho despertaram o interesse da turma, tanto pela dramatização da história por parte da autora, que promoveu uma aprendizagem cultural e holística dos alunos, como

³ <https://www.calameo.com/read/00630993162a022287a9a>

também pelo uso da estratégia *modelling bar* que influenciou positivamente a resolução de problemas. Aliada a esta circunstância, a professora cooperante referiu ainda que “a dramatização da história correu muito bem, tal como o uso de diferentes estratégias, do labirinto, do *clever day*, do *modelling bar*. Todo o percurso que fizeste com a história foi fantástico e muito significativo.”. Acrescentou que só tem pontos fortes a apontar às situações formativas, sendo estes: “A forma como as aulas foram dinamizadas, trabalhadas e o tempo destinado para cada tarefa. Todo o percurso foi muito bem feito, pois o labirinto (este tipo de gamificação) também resultou muito bem, pois os alunos ficavam sempre muito curiosas e despertas para o retirar o cadeado e avançar para outros desafios.”. Considerou ainda que: “Tenho a ideia que esta estratégia do *modelling bar* fez despertar uma outra curiosidade na resolução de problemas, pois os alunos verificaram que usando uns simples retângulos podem desenhar e encontrar soluções para os problemas”. A professora cooperante mencionou ainda que, esta nova estratégia pedagógico-didática fomentou a motivação, a participação e o envolvimento dos alunos na resolução dos diversos problemas, salientando que “o uso dos cubos encaixáveis foi também fundamental para a passagem do concreto para o abstrato”.

Assim, tudo indica que a estratégia *modelling bar* do MS, aliada à articulação de saberes e à contextualização das aprendizagens, foram determinantes na promoção de uma aprendizagem holística, com resultados positivos na aprendizagem matemática dos alunos, como é possível verificar ainda nestes comentários dos alunos: “Quando é que vem outra vez a ovelha que fazia múuu?”; “Professora estes problemas falam da história, assim é mais divertido!”.

CONCLUSÕES

Nesta investigação, desenvolvida no âmbito da Matemática em Contexto foi possível pesquisar sobre a influência do uso de material manipulável e da utilização da estratégia *modelling bar* do MS no desenvolvimento da comunicação e do raciocínio matemático no processo de resolução de problemas. Pela dramatização de uma história conseguiu-se promover um maior envolvimento, motivação, interesse e empenho dos alunos, tornando a aprendizagem mais profunda, holística e significativa. Pela análise e discussão dos resultados obtidos foi possível registar algumas conclusões que a seguir se elencam, relacionadas com os objetivos traçados para a investigação. De facto, pela triangulação dos diferentes instrumentos de recolha de dados constatou-se uma maior curiosidade, questionamento, motivação, atenção e envolvimento dos alunos no processo de aprendizagem. Com a análise dos inquéritos por questionário aos alunos, foi possível ainda recolher dados sobre as três dimensões deste estudo, sendo que os 22 alunos

da turma apresentaram alto grau de acordo com as seguintes afirmações: “A estratégia *modelling bar* do MS foi essencial para a compreensão e resolução de problemas” e “os recursos e as estratégias utilizados pela professora estagiária foram fulcrais para a aquisição de novas estratégias de cálculo mental e consolidação das operações lineares”.

Por outro lado, pela observação participante e pela entrevista realizada à professora cooperante concluiu-se que a nova estratégia usada de *modelling bar*, do MS, foi promotora de resultados muito positivos na resolução de problemas, pela representação pictórica ou iconográfica das quantidades numéricas, relacionando-as entre si. Por outro lado, os alunos tornaram-se mais questionadoras, desenvolvendo, assim, mais a comunicação e o raciocínio matemático. Na entrevista à professora também se concluiu que a resolução de problemas contextualizados, utilizando a estratégia *modelling bar* do MS, teve impacto positivo no desenvolvimento do cálculo mental e no conhecimento mais profundo das operações lineares.

Através de um ambiente estimulante de resolução de problemas, os alunos adquiriram e mobilizaram estratégias de cálculo mental, revelando melhorias na aprendizagem e novas capacidades para resolver, com êxito, diversos problemas matemáticos, humanizando mais a Matemática (Fernandes, 2020) de modo que esta ciência esteja sempre ao alcance de todos (Caraça, 1989).

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4.

THE EFFECTS OF PROJECT-BASED LEARNING USING STORYTELLING ON ENHANCING EFL YOUNG LEARNERS 21ST CENTURY SKILLS

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Abstract

It goes without saying that the education provided must lead learners to develop knowledge and skills, which help them thrive in the fast-changing world (Yimwilai, 2020). Hence, as a learner-centered approach, project-based learning (PBL) is seen as an alternative for infusing 21st century skills and competencies into the English as a Foreign Language (EFL) classrooms (Fandiño, 2013; Scott, 2015).

Therefore, this chapter discusses the application of PBL using storytelling and analyzes its effects on enhancing EFL young learners' 21st century skills. The chapter provides insights for teachers who would consider implementing PBL into young learner EFL classrooms using storytelling, with the aim of enhancing 21st

century skills, among others, and transforming traditional EFL teaching classrooms into an active learning environment through PBL.

By undertaking an ethnographical methodological approach of both qualitative and quantitative nature and with action research outlines, we carried out a PBL-based project with a group of fourth year primary pupils. Pupils were encouraged to actively participate in the project which was entitled 'Water Project' enhanced by a picture book called 'The Water Princess' by Susan Verde. The project aimed at providing pupils with an authentic experience by focusing on a real-world problem. By having been challenged to think critically on the issue, which was the lack of clean freshwater, pupils were stimulated to work collaboratively and come up with solutions to save water.

The results show that PBL can foster effective learning experiences and enhance learners' 21st century skills, mainly: collaboration, critical thinking, creativity, communication, problem-solving, social skills, and research and ICT⁴ skills using storytelling.

Keywords: Project-based learning, Storytelling, EFL young learners, 21st Century skills.

Resumo

Escusado será dizer que a educação fornecida deve levar os alunos a desenvolver conhecimentos e competências, que os ajudem a prosperar no mundo em rápida mudança (Yimwilai, 2020). Assim, como uma abordagem centrada no aluno, a "Aprendizagem baseada em projetos" ("PBL" em inglês) é vista como uma alternativa para incorporar habilidades e competências do século XXI nas salas de aula de Inglês Língua Estrangeira (ILE) para crianças (Fandiño, 2013; Scott, 2015).

Por isso, este capítulo discute a aplicação da abordagem PBL usando a narração de histórias e analise os seus efeitos no desenvolvimento de competências do século XXI, relativamente a jovens alunos de ILE. O capítulo fornece ideias para professores que equacionem a implementação da abordagem PBL nas salas de aula de ILE para crianças, usando a narração de histórias com o objetivo de fomentar as competências acima referidas, entre outras e transformar as salas de aula de ensino de inglês tradicional num ambiente ativo de aprendizagem através do PBL.

⁴ Information and Communications Technology

Ao levarmos a cabo uma abordagem metodológica etnográfica de natureza qualitativa e quantitativa e com contornos de investigação-ação, realizámos um projeto baseado em PBL com um grupo de alunos do quarto ano. Os alunos foram encorajados a participar ativamente no projeto intitulado 'Water Project', aprofundado por um álbum ("picture book" em inglês) chamado 'The Water Princess' por Susan Verde. O projeto visou apresentar aos estudantes uma experiência autêntica, focando-se num problema real. Por terem sido desafiados a pensar criticamente no assunto, que era a falta de água limpa e fresca, os alunos foram estimulados a trabalhar colaborativamente e encontrar soluções para poupar água.

Os resultados demonstram que "Aprendizagem baseada em projetos" ("PBL" em inglês) podem produzir experiências de aprendizagem efetiva e melhorar as competências do século XXI das crianças, principalmente: colaboração, pensamento crítico, criatividade, comunicação, resolução de problemas, competências sociais, de investigação e de TIC⁵, usando a narração de histórias.

Palavras-chave: Aprendizagem baseada em projetos, Narração de histórias, Jovens alunos de ILE, Competências do século XXI.

1. INTRODUCTION

In today's world one of the most critical issues in teacher-centered EFL classrooms is the emphasis on language accuracy or competency in grammar rather than language proficiency which helps pupils have useful strategies to use the language for not only academic but social purposes. As Chen (2019, p.1) states, "rote-drilling and teacher-led instruction are still exercised in the EFL classrooms in several countries".

It is stated that the foreign language curriculum in Portugal, which is mostly defined by the national government, used to emphasize the conventional subject-matter content instead of meaningful real-life tasks and contents (Cabral & Nobre, 2015). The authors go on to say that the EFL curriculum values the learning outcomes instead of the pupils' learning process, and the focus of the curriculum is on the language content, in other words on grammar points instead of focusing on the language tasks. Despite this, EFL teachers, nowadays, are encouraged to focus on pupils' learning process, create a contextualized learning environment, and plan their lessons with the aim of developing learners' communicative competence. However,

⁵ Tecnologias de Informação e Comunicação

teachers' freedom in planning their lesson topics and tasks is limited, and they value final evaluation rather than student collaboration and negotiation of tasks to be taught. Nevertheless, an official document, 'Aprendizagens Essenciais | Articulação com perfil dos alunos' (Ministério da Educação, 2018) seems to value student-centeredness more, as it highlights the importance and necessity of critical and creative thinking, personal development, and autonomy, and it promotes intercultural competence/communication as well.

We shall consider that the 21st century learners are dynamic and more informed as they can access vast resources easily no matter where they are and whenever they want. Thus, in our ever-changing world, educators should rethink the teaching and learning strategies as well as the competencies they aim to improve in the classroom. In this regard, learners should be equipped with such skills to tackle the challenges of new era and hence, modern teaching approaches must be incorporated into language teaching classrooms.

Although incorporating learner-centered approaches such as task-based learning (TBL) approach in EFL classrooms has finally started to gain popularity, the application of PBL, which shares some common characteristics with TBL, is still not very popular in Portugal. By having analyzed previous research studies regarding PBL, and its effects, we concluded that most of the studies have been carried out with university and high school pupils. Considering Portuguese schools and English teaching, we could not find any research studies regarding this approach, unlike other innovative approaches. Therefore, we decided that applying PBL into an EFL young learner classroom needed further research.

Based on the idea that adopting a learner-centered approach would have a great impact on EFL teaching, we introduced PBL by using a picture book as an effective tool to build the project around it in attempt to gain a better understanding of the possibilities and effects of implementing this approach in the 1st Cycle Basic Education (CEB) in Portugal. It was also aimed with this work to encourage EFL teachers, who would like to make efforts to integrate an innovative approach to turn traditional EFL classrooms into an engaging active learning environment and provide pupils with meaningful learning experiences.

2. THEORETICAL FRAMEWORK

2.1. BASIC CHARACTERISTICS AND STAGES OF PBL

It is believed that PBL is not something new and the origins of this approach date back to the mid-1800s, and it was first created by David Snedden to teach science in

the United States (Beckett, 2002). PBL was later developed by John Dewey's student and gained some popularity among educators in the early 1900s.

Despite various definitions and approaches, some authors have provided key characteristics of PBL activities. For instance, Harmer and Stokes (2014), along with Stoller (2002), reveal the features of PBL, namely: a) PBL focuses on real-world subject-matter; b) PBL is a learner-centered teaching method and the teacher acts as a facilitator; c) learners can work individually or collaboratively; d) pupils learn by doing and engage in the project cognitively; e) PBL provides pupils with an authentic learning experience and is often interdisciplinary; f) PBL values not only the final product but also the process; and g) PBL is motivating, engaging and stimulating, which also works on building pupils' skills. Moreover, the authors from The Buck Institute for Education, a non-profit organization that aims to provide an efficient and detail-oriented curriculum along with being committed to scientific development, created a new 'Gold PBL Model' (Figure 1).

Figure 1

Gold PBL Model



Note: The model was adapted from Larmer (2020).

While incorporating project work into a language classroom, Stoller (2002; 2013) recommends that teachers consider 4 stages of PBL along with their steps at each stage.

The preparation stage is logically divided into key steps which mostly focus on giving pupils' voice and choice (Larmer & Mergendoller, 2010). These key areas are: a) creating teams; b) determining the topic and/or choosing the driving question; c) figuring out the educational goal; d) choosing the final outcome; e) creating the structure of the project work; and f) producing a framework for the language demands of information gathering. One of the most essential steps in this stage is asking a 'driving question'. PBL projects can be built around pre-defined units or interdisciplinary topics, but it must focus on a question that drives pupils to find the central concepts of the subject and make use of their time while being occupied with an intellectual purpose (Thomas, 2000).

The second stage of PBL is the realization stage. Stoller (2002; 2013) focuses on two main cycles in this stage: a) soliciting information; and b) processing information. The instructor first plans the activities for each information-gathering task to scaffold the process considering pupils' levels. Once pupils collect information from different sources, the instructor trains the pupils by planning training sessions in which they organize the materials, "compile, analyze and synthesize the information" on their own (Alan & Stoller, 2005, p. 12).

The third stage is the presentation stage. Before pupils present the final product, the instructor prepares activities to improve pupils' language. Taking an oral presentation as an example, the instructor mostly gives feedback on pronunciation, intonation, and word choice and helps with addressing an audience. The last stage is the evaluation stage. Pupils are evaluated throughout the process, especially during the preparation stage when they have check-ins. Lastly, there are four different ways of assessing the final project, such as self-assessment, peer assessment, teacher assessment and outside expert/audience (Patton, 2012).

2.2. BENEFITS OF PBL

There are numerous research studies and reviews on the effectiveness and advantages of PBL when implemented in the classroom. Due to their emphasis on student-driven learning, PBL designs are seen to maximize pupils' confidence and autonomy, which leads to several other benefits such as motivation and meaningful learning as learners are "wholly engaged in the learning task" (Lam, 2011, p. 142). Several researchers in their studies concluded that pupils' curiosity was sparked and

even the low performance pupils developed intrinsic motivation and became more willing to participate in comparison with conventional teaching methods (Castañeda, 2014; Giri, 2016; Gultekin, 2005; Tsiplakides & Fragoulis, 2009). The effectiveness of PBL can also be assessed considering "gains in student achievement" (Thomas, 2000, p. 9). It is concluded that project-based pupils enhanced their academic achievement compared to the non-PBL-pupils (Chua, 2014, as cited in Harmer & Stokes, 2014; Gultekin, 2005). Furthermore, in PBL-based projects, learners take part in authentic activities in which they get meaningful communication opportunities. Also, a variety of language skills are integrated naturally, such as reading, writing, listening, speaking, and these skills are improved during the project work (Stoller, 2002; Tsiplakides & Fragoulis, 2009). Furthermore, there is a consensus on the benefits of PBL on enhancing a wide set of skills (Harmer & Stokes, 2014). The importance of these skills and the effects of PBL on such skills will be analyzed in the following section.

2.3. MASTERING THE 21ST CENTURY SKILLS THROUGH PBL

We believe education must be transformed to allow new learning approaches to cope with the challenges pupils will face in work and life. As Scott (2015, p. 2) states, "there are a number of effective, research-based curriculum models capable of guiding 21st Century learning" unlike textbook based teacher-centered approaches which have been found ineffective to reassure pupils' 21st century skills (Giri, 2016). Also, Yimwilai (2020, p. 2016) points out that many scholars share the same idea, and highlights that "PBL can be a good alternative for instructors" to incorporate these skills into the classroom.

Collaboration is one of the most frequently mentioned 21st century skill and it lies in the heart of PBL since the project work is mostly realized in groups. When pupils work in teams to share ideas and come up with a solution or a plan, they have the chance to improve both communication and collaborative skills at the same time (Bell, 2010; Giri, 2016). Ultimately, they develop social skills while collaborating with colleagues from a wide range of cultural backgrounds. PBL also helps pupils enhance their creativity and creative thinking (Yimwilai, 2020). It is because pupils are given more responsibility in the process of project development, and teachers facilitate the progress of reaching the end-product, which is the set goal. Also, as stated by Bell (2010, p. 42), "students learn through collaboration and employ critical thinking skills as they engage in projects". Critical thinking and problem-solving skills seem to be correlated. During the projects, pupils understand the problem, design a plan with strategies to solve it, think about the strategies before implementing them and ultimately carry out their plan of action (Moursund, 1999). This is further

stressed by Dewi (2016, p. 348) when it is stated that "by participating in both independent work and collaboration, learners improve their problem-solving skills thereby developing their critical thinking skills". Thus, we can conclude that PBL helps pupils enhance their "creactical skills", mainly fostering creativity and critical thinking while taking part in the learning process, i.e., solving a problem (Cruz, 2019). PBL also supports the development of research and ICT skills, which is considered essential in today's world as learners of this generation are "growing up digital" (Metiri Group, 2002, p. 5). To gather data, pupils can use various technological tools innovatively including Web 2.0 and 3.0, create podcasts, videos, digital posters, benefit from effective Webquests, etc. (Bell, 2010; Chen, 2019).

2.4. PICTUREBOOKS AND STORYTELLING: A BRIDGE TO PBL-BASED PROJECTS

The reason why we chose picture books as a bridge to our PBL-based project is that storytelling has been seen as powerful and appealing in classroom practices (Ellis & Brewster, 2014). Listening to stories is a natural, fun, and engaging activity for children. It goes without saying that there are plenty of important reasons and benefits for using picture books, which would grab pupils' attention in a project as well. Learners can also increase their language skills since they acquire a rich diversity of linguistic items such as vocabulary and sound patterns along with different contexts naturally in the classroom environment (Ghosn, 2002). Furthermore, stories are a useful tool to build social cohesion as they provide a shared social experience as well. In other words, in a story-based lesson or project, pupils can work together to reflect on a story and have "a shared response of laughter, sadness, excitement and anticipation" (Ellis & Brewster, 2014, p. 7). Another reason is that stories promote a link among other disciplines (Ellis & Brewster, 2014). Both story-based curriculum and PBL can be centered on a topic with several related cross-curricular activities (Povey, 2019). Additionally, storytelling activities promote diversity and intercultural understanding. The PBL approach is authentic, and it brings real-world problems into the classroom (Harmer & Stokes, 2014). Thus, many picture books which offer examples from real-life situations can be used to build a project and they would provide an understanding of those issues (Crawford et al., 2018). PBL-based projects combined with such powerful picture books would help pupils to think critically and develop empathy towards those who are facing these problems.

3. THE STUDY: RESEARCH METHODOLOGY AND ITS CONTEXT

The present study takes on an ethnographic research methodology since the research is conducted in a natural real-life environment (Khindri, 2021). The study intends to integrate both qualitative and quantitative research methods. Therefore, a methodological triangulation strategy, which promotes the use of different data collection tools i.e., interviews, questionnaires, and observations, as well as different techniques, is used to provide more comprehensive information (Denzin, 2017). Considering the effects of PBL on fostering 21st century skills, the document analysis method is also used as they provide insights and a deeper understanding of the issue.

We attempted to gain a better understanding of the possibilities and effects of implementing this approach in the 1st Cycle Basic Education (CEB) in Portugal by posing the following research questions: a) to what extent PBL can be implemented in the Portuguese young learner EFL classrooms using storytelling?; b) what challenges do the teachers encounter while implementing PBL in the Portuguese young learner EFL classrooms?; c) what are teachers' and pupils' perceptions of PBL and storytelling?; d) which 21st century skills may pupils develop through undertaking a PBL approach enhanced by storytelling?; and e) which sort of activities and resources cater for an effective PBL approach using storytelling?

Findings which allowed us to answer our research questions were provided by multiple data collection types: a) one-on-one interviews; b) pre- and post-project questionnaires with pupils; c) field notes; d) unit plans; e) photos and films from the lessons; f) teacher questionnaires; g) document analysis on PBL, storytelling and 21st century skills; and h) projects and pupils' products. Data-gathering tools were spoken and/or written both in English and Portuguese. The study was carried out at a private primary school located in Oporto, Portugal with the 4th year pupils. The school has three educational levels: Nursery, Pre-School, and 1st Basic Cycle (CEB) which consists of the 1st, 2nd, 3rd, and 4th year. By considering the schools' Educational Project, we can state that the school values the development of cultural and artistic creativity by defending the importance of collaborative dynamic in this aspect.

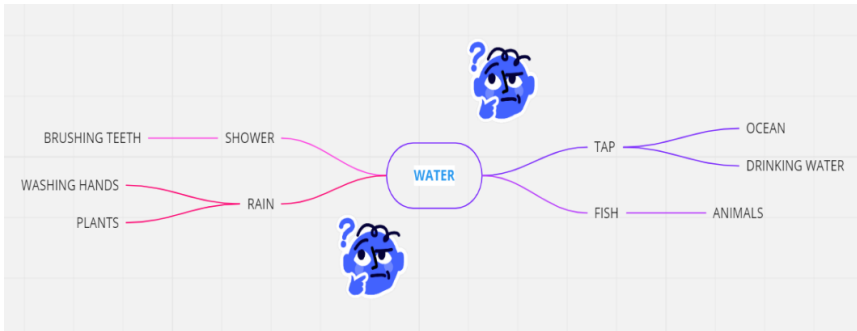
3.1. PBL IN ACTION: THE WATER PROJECT

This section sets out to demonstrate the implementation of PBL using storytelling, which laid the foundations for the present study. The Water Project was centered on the picture book "The Water Princess" by Susan Verde, which is based on a childhood of a supermodel and activist Georgie Badiel, a young girl who dreams of

finding and bringing clean freshwater to her African village. As a pre-reading activity, we completed a digital mind map about "water". As it can be seen in Figure 2, whilst pupils were sharing their ideas, the mind map was filled in.

Figure 2

Digital mind map (from Mind Meister)



Then, unlike repetition, we had a little conversation focusing on unknown vocabulary/pictures, which were shown on the interactive board. We also introduced Georgie Badiel to make it clear that the picture book is based on a true story. During reading, we used gestures, showed the pages on the picture book as well as some printed pictures on the wall i.e., home, a well, a pot.

As a post-reading activity, pupils worked collaboratively to create their story maps. At this step, we can see that pupils' thinking was activated according to the first and second levels of Bloom's taxonomy, which are the level of Knowledge and the level of Comprehension. They gained new insights regarding the water problem, recalled what happened in the story, and presented it (Erkaya, 2005; Scott, 2015). Pupils then were distributed a worksheet to think critically and build intellectual empathy towards Gie Gie, and others who are facing the water problem around the world (Crawford et al., 2018). They drew themselves with Princess Gie Gie and her mother walking to get some water and reflected on how they would feel.

3.2. DEVELOPMENT OF THE PROJECT

PBL was implemented by considering its stages and key steps (Stoller, 2002, 2013). Starting with the preparation stage, pupils were engaged with an entry event which was the picture book to stimulate their interest (Larmer & Mergendoller, 2010). At the next step, pupils were given responsibility as 'Water Heroes/Heroines' and they

discussed how they use water and why saving water is important in groups. Keeping in mind the importance of giving pupils voice and choice (Larmer & Mergendoller, 2010), pupils were proposed two questions to choose the 'driving question' to work on. By asking challenging questions, we aimed at bringing real-life challenges into the classroom, which made the project more authentic since pupils were given a real-world problem to solve (Harmer and Stokes, 2014; Larmer, 2020). Each group was distributed the questions and were given time to vote: a) what can you do to save water at home/ in the school/ city?; and b) why is saving water important?. The option a was the most voted option and was chosen as our essential question for the project. Pupils were then given the opportunity to decide on their final product of the project (Stoller, 2002; 2013). They were given 5 options: a) a poster; b) a video; c) a letter; d) an oral presentation; and e) a theatrical play. Surprisingly, two groups opted for a theatrical play while one group chose to create a poster. As one of the groups had even votes for a theatrical play and a video, we decided to work on a theatrical play and record it as a video, instead of making one. After having defined their end-product, pupil created their project framework with their names, responsibilities, project dates and the driving question.

Then, pupils embarked on the realization stage in which they gathered and processed information (Stoller, 2002, 2013). During this stage, they had the opportunity to discuss the given problem to find solutions creatively, reflect on their knowledge and share their ideas (Figure 3). Considering the third level of Bloom's taxonomy, the level of Application, we can state that pupils could start applying the information they had gained through discussions with their team and family members, research, and the story itself (Erkaya, 2005; Scott, 2015). Being more autonomous, the groups then worked on their scripts and poster. By analyzing the problem and questioning the ways to solve it, the fourth level of Bloom's taxonomy was integrated. Pupils implemented both creativity and critical thinking skills to solve the given problem (Cruz, 2021). Therefore, we can say that pupils' high-order thinking was activated considering the fifth level of Bloom's taxonomy, which is the level of Synthesis (Erkaya, 2005; Scott, 2015).

Pupils received feedback throughout the process. We had a training session to practice pupils' pronunciation, intonation, and language use for the last time before the presentation stage.

The first group worked on how to save water in the school. The main idea of the play was to warn some pupils who were wasting water in the school's bathroom and explaining the importance of saving water to them. By questioning why and how they can save water, pupils then were convinced by the other pupil who is responsible. Ultimately, they would promise to save water. The play was displayed in

the classroom. The second group worked on saving water in the city. The main idea of the play was to convince a girl, who does not like to save water, by explaining the problem and giving her suggestions. Getting more curious, the girl wanted to know more about how to save water. The third group thought about some ways to save water at home. Pupils would also convince a grandmother who does not like water by telling her how we use water, why, and how to save water. Even the fish would explain to her that water is essential. The grandmother then also decides to save water (Figure 4).

Figure 3

Pupils coming up with solutions



Figure 4

Saving Water at Home



The fourth group worked on a poster (Figure 5). The group drew the water cycle and did some research on the topic using the class computer. They also added some slogans to their poster. The poster was presented and displayed.

Figure 5

"Save water!" poster



4. RESULTS AND DISCUSSION

In this section of the chapter, the research questions of the study are answered by considering the data gathered during the research.

Regarding our first question, we can say that although it is believed by some authors that PBL should be the curriculum itself, for the time being it can be considered as a complementary teaching method in the Portuguese EFL young learner classrooms. Due to the challenges such as the inflexibility of the curriculum and some schools as well as lack of materials and time, it might not be easy to fully implement it. Although it might be demanding to entirely implement this approach, we shall highlight that it is an engaging, appealing, and motivating approach and it can be designed considering the curricular requirements and the schools' policies.

Regarding the second research question, we focused on our practice along with in-service teachers' and researchers' experiences. It is evident that PBL might pose some challenges which might appear before and during the implementation of the project. In our teacher-questionnaire, one of the questions was designed as a Likert

Scale (1-5) question and focused on the extent to which teachers can rate PBL regarding the challenges it poses. 12 in-service teachers (37.5%) revealed that PBL is very challenging (5), 25% stated it is challenging (4), 31.3% chose (3), while 6.3% chose (1). However, two of the participants who chose the options (1) and (3) also stated that they had never implemented PBL. The most common challenges which are mentioned by the in-service teachers that responded to the questionnaire and the researchers from our document analysis are: a) curricular requirements; b) time-management; c) teamwork; d) motivation; e) pupils' attitude; f) unexpected situations; g) shifting roles; h) lack of resources; i) preparation; and j) assessment (Condliffe et al., 2017; Harmer & Stokes, 2014; Kalabzová, 2015; Thomas, 2000).

The findings for our third research question revealed that most of the in-service teachers and researchers enjoyed incorporating PBL despite the challenges it posed. They also believed that PBL and storytelling improved pupils' language skills along with their 21st century skills. 27 participants (81.8%) acknowledged that PBL was effective in enhancing such skills by choosing "Yes", while 6 participants (18.2%) chose "Maybe". Another question was structured to find out which 21st century skills were improved during the implementation of PBL regarding the in-service teachers' experiences and the examples of such skills were given in parenthesis: a) collaboration; b) creativity; c) critical thinking; d) communication; e) problem-solving; and f) ICT skills. 6 participants stated: "all of them", and "all of the above". The rest of the participants chose specific skills among the ones we mentioned, and these skills according to how many times they are mentioned by the participants are as following: communication (10), critical thinking (9), problem-solving (9), collaboration (8), creativity (7), ICT skills (3). It implies that PBL not only does have a substantial positive impact on the skills recommended by the curriculum, but it also provides benefits beyond the classroom. To investigate pupils' perceptions, we decided to find out which activity was the most favourable throughout our practice. Among 20 pupils, 5 (25%) pupils revealed that they liked everything including the Water Project, 11 (55%) pupils either mentioned what they have done during the project as the activity they liked the most or they stated that it was definitely the *Water Project*. Furthermore, regarding pupils' perceptions of storytelling and picture books, the study revealed saliently positive results. During our interview, 16 pupils (84%) said that they liked it and some of them even said they liked it very much/loved it and it was cool: P2: "I liked it. It was interesting and real."

On the other hand, 3 pupils (15%) said they did not like it very much as one stated that he prefers cooler adventure stories, the other pupil believed in the story the characters had some difficulties and he did not like it, while the third pupil had personal reasons. We could also observe that even less engaged pupils showed

great enthusiasm and participation during the storytelling activities. Thus, we can say that the findings provided us with enough evidence to claim that pupils' views on PBL and storytelling is very positive.

Regarding our fourth research question, the study showed that PBL has a substantial positive impact on pupils' 21st century skills. Focusing on the given challenge, applying in-depth thinking, and drawing connections between the real-world and the projects pupils improved their critical thinking skills. Most of the pupils (94.7%) had mentioned that the story, which was the first step of our project, helped them think about the ways to save water. Furthermore, in response to the question about what the most important thing they learned was in this project, most of the pupils wrote about saving water in short or long sentences:

"The most important thing I learned on this project was that water is valuable and important for our planet." (P2)

"I learned that saving water is more important than it seems." (P5)

In one of the questions in our post-project questionnaire attempted to figure out whether pupils found out different ways of solving the problem, 22 pupils (91.6%) said "yes" while 1 pupil did not answer, and 1 pupil said "no". In relation to another question, which aimed to analyze if the project was effective to make pupils think about ways of saving water, all pupils (100%) said "yes". Since the project was student-driven, pupils were inspired to think outside the box and be creative instead of being transferred the knowledge. Hence, pupils' creativity and problem-solving skills were enhanced. While 18 pupils (94.7%) stated that they thought deeply about the problem, 1 pupil said, "more or less". Pupils would also share their ideas regarding the issue:

P1: "I thought about various ways to save water. Each can do more to save water."

P2: "I thought that to save water we can have a clock which gives us 'one' minute. If we waste more, we break the rule."

Pupils also needed to communicate both to share their ideas, find solutions to the given problem and to the issues they faced during group work. Thus, this helped them improve their communication, collaboration, and social skills too. 22 pupils (95%) said they collaborated and communicated during the project. The one-on-one interview has also contributed greatly to understanding how pupils collaborated during the project work as they stated how they collaborated such as helping make the script, encouraging their team members, giving ideas, drawing, and painting, etc.

We can interpret this as collaboration being comparative. Each pupil is unique and so is the way they collaborate. In addition, 21 pupils (87.5%) believed that they became more effective team members during this project by circling the option "yes", while 3 pupils said "no". Pupils were also eager to share their opinions about their and their team members' performance:

P1: "Some did not participate much but they helped a little bit. It affected me a lot. We could have done better."

We would like to note that though we concluded that PBL fosters collaboration, some challenges might emerge with the implementation of teamwork. For instance, some group members might not be eager enough to collaborate, or some pupils might not want to work with some others when the groups change due to unexpected situations such as Covid-19 isolations. Moreover, we can ensure that PBL positively impacted such skills as pupils also revealed that they became predominantly motivated to think and come up with solutions to the problem by carrying out research and working collaboratively. In addition, although we did not have enough time to continue nurturing pupils' research and ICT skills during the study, we believe PBL would be effective in enhancing these skills when implemented well based on our document analysis and in-service teachers' experiences.

Considering our last question, we sought to foster pupils' 21st century skills by applying effective resources and activities which could cater for an effective PBL-based project. We aimed at creating excitement for the project using these resources. In this account, we concluded that the picture book was quite appealing, and pupils were quite interested throughout the storytelling and pre-/post-activities. Thus, we can say that picture books can be great entry events for PBL-based projects. Real-world tasks such as finding solutions to the water problem also caught pupils' attention. In addition, group work activities also interested most of the pupils and they liked it although it was also problematic for some. However, discussions and autonomy proved to be effective in engaging them.

5. CONCLUSIONS

Results showed an overall positive view towards PBL. We can conclude that PBL is a motivating approach which develops pupils' 21st century skills and allows them to become active learners, among other benefits. Additionally, traditional EFL classrooms can be turned into a more dynamic learning environment by encouraging pupils to explore, giving them autonomy, and igniting their passion to be creative.

There is no doubt that PBL is an effective approach, yet it can be demanding to apply it. We reckon that it requires careful planning and effort while employing it in young learner classrooms. Thus, teachers should spare some time for research to successfully implement this approach by putting its characteristics and principles into practice. It is important, nonetheless, to note that the challenges of PBL in the literature do not necessarily mean that teachers would face those in their practice. These challenges would always depend on the situations and are avoidable.

It should also be mentioned that this research study was carried out only in one primary school classroom and therefore, it focuses on the experience of a limited number of pupils. We should emphasize that it was a private school, and we were given the flexibility to incorporate the PBL approach. If given the opportunity, we would like to take the current study further by conducting a long-term project with different groups of pupils. An interesting line of research would be to carry out a more detailed study in a public school as well to analyze the overall results of PBL. Another improvement we would consider is to widen the scope of activities to give more autonomy to the pupils. We would start doing that by allowing pupils to determine the topic of the project. Indeed, it might motivate pupils even more. Another suggestion for the further study would be to make pupils' work more authentic by displaying them to the public. Although we pondered on the possibility and efficacy of this, as it is also one of the key elements of PBL, we did not have the chance to do so.

Finally, we would like to highlight that the Water Project was our first PBL-based project and we gained understandings of this approach throughout its implementation as well. Despite some of the challenges we faced, it was a rewarding and wonderful experience. We hope to continue our research, seek ways to foster our knowledge regarding this approach and make our pupils' learning more authentic and autonomous.

ACKNOWLEDGEMENTS

This work is funded by National Funds through the FCT - Fundação para a Ciência e a Tecnologia, I.P., under the scope of the project UIDB/05198/2020 (Centre for Research and Innovation in Education, inED).

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5.

LEARNING OR ACQUISITION? - ENGLISH L2 IN A CLIL CONTEXT AT PRIMARY LEVEL

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Abstract

The concepts 'learning' and 'acquisition' are many times used as synonyms. For some researchers, 'acquisition' consists of the spontaneous process of rule internalization that results from natural language use, while 'learning' is the development of conscious L2 knowledge through formal study. Synonyms, or not, acquisition of a L2 is often used for primary school levels, while learning is associated with higher levels and learning rules. Within L2 primary learning, some researchers see learning as valuable, but subordinate to acquisition, while others believe that the trick is to present an optimal balance of acquisition and learning activities (Lewis, 1993). In this context, Content and Language Integrated Learning (CLIL) may act as a key approach, as it draws on second language acquisition theories relating to exposure to language through comprehensible input and opportunities for interpreting meaning and use in risk-free, naturalistic contexts (Ellison, 2019). Bearing all this in mind, this paper proposal focuses on the acquisition vs learning paradigm regarding English as Foreign Language (EFL) at primary school contexts. By following an ethnographical methodological approach, we have

resorted to documental analysis on lesson plans, which have been created during a one-semester practicum undertaken at a local school in Oporto, focusing on pupils' representations on motivational and effectiveness of strategies/resources. Results show that CLIL in the primary context can support holistic and interdisciplinary learning when there is a combined focus on content, communication, cognition and culture, all of which make it compatible with the default integrationist ethos of L2 learning in primary education.

Keywords: Learning, Acquisition, CLIL, English, Context

Resumo

Os conceitos 'aprendizagem' e 'aquisição' são usados, muitas vezes, como sinónimos. Para alguns investigadores, 'aquisição' consiste no processo espontâneo de interiorização das regras que resultam do uso natural da língua, enquanto que 'aprendizagem' é o desenvolvimento consciente de uma L2 através do estudo formal da mesma. Sinónimos, ou não, aquisição de uma L2 é um termo frequentemente usado em níveis de ensino primário, enquanto que aprendizagem está associada a níveis escolares mais avançados e à aprendizagem de regras. Dentro da aprendizagem primária de uma L2, alguns investigadores vêem a aprendizagem como útil, mas subordinada à aquisição, enquanto que outros crêem que o truque está em apresentar um ótimo equilíbrio de atividades de aquisição e aprendizagem (M. Lewis, 1993). Neste contexto, *Content and Language Integrated Learning (CLIL)* pode funcionar como abordagem fundamental, uma vez que recorre a teorias de aquisição de uma segunda língua, no que diz respeito à exposição à língua através da receção de conteúdos perceptíveis e de oportunidades para interpretar o significado e usar em contextos livres de risco e naturais (Ellison, 2019). Tendo tudo isto presente em mente, esta proposta de artigo foca-se no paradigma aquisição vs aprendizagem relativamente ao Inglês como Língua Estrangeira (ILE) em contextos do 1.º CEB. Seguindo uma abordagem metodológica de índole etnográfica, recorreremos a análise documental em planificações de aula, as quais foram criadas durante um estágio de um semestre, numa escola do Porto, com foco nas representações motivacionais dos alunos e em estratégias/recursos eficazes. Os resultados mostram que CLIL, no contexto de ensino do 1.º CEB, consegue sustentar uma aprendizagem holística e interdisciplinar, quando existe um foco combinado de conteúdo, comunicação, cognição e cultura, os quais tornam se tornam compatíveis com carácter integracionista predefinido na aprendizagem de uma L2 ao nível do 1.º CEB.

Palavras-chave: Aprendizagem, Aquisição, CLIL, Inglês, Contexto

1. INTRODUCTION

This paper is based on the study of teaching English as Foreign Language (EFL) and as Second Language (L2) to pupils at primary school levels. A 'L2 acquisition' can be defined as the way in which people learn a language other than their mother tongue, inside or outside a classroom, and 'Second Language Acquisition' (SLA) as the study of this (Ellis, 1997). During our research, the dichotomy *learning/acquiring* a second language stood out in our readings for several times. Also, the amount of *input/output* pupils are faced with is far from being a consent one.

In this research, the CLIL methodology sustained our lessons' planification and proved to be the best methodology, especially when we aimed to integrate the pupils' wide and diverse cultural backgrounds in our lesson plans and practicum. There was always the concern of motivating the pupils and, therefore, to develop strategies and activities that promoted the pupils' interest in learning and becoming part of each lesson, instead of being a mere receptor of contents.

Further on, there will be a more detailed analysis of our readings and research and a description of the strategies and activities of our practicum.

2. THEORETICAL SECTION

The term 'acquisition' is used to refer to picking up a second language through exposure, whereas the term 'learning' is used to refer to the conscious study of a second language (Ellis, 1985). The terms 'learning' and acquisition' are made distinct by Krashen (Lewis, 1993). Krashen (1988), referring to adult second language acquisition, says adults have two independent systems for developing ability in second languages, being one system subconscious language *acquisition* and the other system conscious language *learning*, and these two systems are interrelated in a definite way: subconscious acquisition appears to be far more important, as he states that language acquisition is very similar to the process children use in acquiring first and second languages (Krashen, 1988).

We can begin with the hypothesis that L2 acquisition involves different kinds of learning. On one hand, learners internalize chunks of language structure. On the other hand, they acquire rules (Ellis, 1997). Also, one thing is sure: adult and child SLA are not the same (Ellis, 1985), but the question of whether second languages are acquired in the same way as mother tongue is a contentious one but it seems more reasonable to assume that the two processes are in some ways similar than to assume they are totally different (Lewis, 1993). According to contemporary cognitive

theories of language acquisition, children acquiring their first language (L1) start out by recording pieces of language encountered during their day-to-day interaction (Selivan, 2018) and the issue known as the L2 = L1 hypothesis states that the processes of SLA and L1 acquisition are very similar as a result of the strategies learners employ (Ellis, 1985).

Apart from the designation that might be used, being it 'learning' or 'acquisition' or defining it as being more or less conscious or unconscious, SLA is dependent on other factors – besides L1 transfer to L2 (Ellis, 1985, 1997) –, such as: contextual factors (Singleton & Pfenninger, 2019), age (Ellis, 1985; Singleton & Pfenninger, 2019), aptitude, cognitive style, personality (Ellis, 1985) and motivation (Ellis, 1985; Mewis, 1993; Pinter, 2017). Researchers have suggested that motivation is predominantly of two kind: integrative or instrumental. 'Instrumental' motivation applies to those students who see the usefulness, perhaps even necessity of learning the target language, but see it only as a means to an end. 'Integrative' motivation involves a positive attitude to the culture and background of the target language, and perhaps even in its extreme form an urge to 'become' a member of the speech community of the target language. On a more mundane level, particularly for school students, it involves liking English, and thinking it is fun to use it (Lewis, 1993). Krashen (1988) states that we acquire language when we obtain comprehensible input, when we understand what we hear or read in another language, being input the language presented to students through reading and listening (Lewis, 1993), but this statement forgets the fact that clearly the value of reading and listening may differ for different groups of students depending on facts such as their age or learning purpose (Lewis, 1993). Most modern theorists would now agree that large quantities of diverse input are highly desirable, and a real aid to second language acquisition (Lewis, 1993). It is clear, however, that not all input is equally useful to the learner, that not all input will result in intake (Lewis, 1993), and that is related with a wide combination of contexts and factors that direct or indirectly have a major influence on the individuals, their motivation, attitudes and behaviour and in their learning process of a L2. Other factors – besides motivation – are even pointed out, factors like tiredness, interest level, attention to influence the relationship between input and intake (Lewis, 1993).

While motivation is also related to wanting to fit in with children in their new community, when children move to another country and have to learn a new language, in formal foreign language learning contexts, the main source of motivation for children is usually their teacher and the enjoyable activities they experience in the English classes (Pinter, 2019). However, Ellis (1994, 1997) considers not only motivation, but also language aptitude as general factors that influence the rate and level of L2 achievement, as they affect the nature and the

frequency with which individual learners use learning strategies and defines learning strategies as the particular approaches or techniques that learners employ to try to learn an L2. If learners of EFL use learning strategies, teachers must develop teaching strategies to motivate learners. Some authors defend, that learners are motivated by the use of authentic materials (Lewis, 1993; Pinter, 2019). As this study is about teaching EFL to young children, no doubt that motivation is key in learning other languages (Pinter, 2019) and the materials selected and used by teachers must be a factor of motivation.

As it has been referred previously, adult and child language acquisition are different. Therefore, the strategies used must be different and adapted to each learning group. Wilkins and Van Ek' original work was largely concerned with the content of courses for adults in continuing education, but it remained a surprise that so much of the work was used – or mis-used – to influence textbooks intended for schoolchildren (Lewis, 1993). The prescription for adult SLA has to – and needs to – be different, when the topic is about children's SLA. However, SLA at primary levels is made around coursebooks/textbooks and their content. In some contexts, teachers follow a set coursebook very closely, lesson by lesson and exercise by exercise (Pinter, 2019, p. 127). First of all, no coursebook designed for a general market will be absolutely ideal for your particular group of learners, but if one has to be chosen, the aim is to find the best possible fit, together with potential for adapting or supplementing parts of the material where it is inadequate or unsuitable and, we as teachers, must primarily be concerned with teaching the language and not the textbook (Cunningsworth, 1995).

One must not forget, that teaching EFL to young children is not the same as teaching EFL at secondary levels. Up to the age of seven or eight, play dominates in the child's thought (Piaget, 1986). Hence, the strategies and activities used in the classroom to engage children must rely on motivating materials; authentic and real materials (Lewis, 1993; Pinter, 2019), such as games (Lewis & Bedson, 2018; Phillips, 2016), songs (Lewis, 1993; Phillips, 2016), story/picture books (Pinter, 2019; Wright, 2015), as well as activities and strategies that embed the pupils, such as simple, repetitive stories, and simple repetitive speaking activities that have an obvious communicative value (Phillips, 2016), as well as total physical response (TPR) activities, i.e. tasks that involve colouring, cutting, and sticking (Phillips, 2016, p.5) and even following the choreography of a song.

3. METHODOLOGY

The outcome of the literature research led to the adoption of the Content and Language Integrated Learning (CLIL) Methodology, which complies with the recommendation of the Education and Science Ministry, the European Union (EU) and European Council (EC), which strongly advise the usage of strategies that favour the language usage within a context, such as the so called CLIL, consisting of the integrated study of a foreign language with contents from other subjects. In addition to that, CLIL methodology offers students the opportunity to use a foreign language (FL) in a natural context (Cruz et al., 2019).

As far as the research methodology is concerned, it was adopted a research methodology of ethnographic nature, mostly qualitative, in which an investigation-action study was developed and data collection methods such as applied questionnaires to the pupils, worksheets/projects and self-assessment questionnaires were implemented.

As the goal of ethnography is to learn about a culture from the people who actually live in that culture and a culture can be defined not only as an ethnic population but also as a society, a community, an organisation, a spatial location, or a social world (Ploeg, 1999) being the essential data collection methods of participant observation and in-depth interviewing, which permit the researcher to learn about the meanings that informants attach to their knowledge, behaviours, and activities, and the context (social, political, and economic) of the culture assumes an important part of an ethnographic study, unlike a phenomenological study (Ploeg, 1999). As this research takes place in a school context, investigation-action boundaries are also present in this study, as investigation-action uses a cyclic process, which varies between action and reflection and that the essential in I-A is the reflective exploration that a teacher does of its own practice (Coutinho et al., 2009).

4. RESULTS

Reminding the above-mentioned reasons – and taking into consideration that CLIL was already one of the projects of the school where our practicum took place –, the CLIL Methodology was the one that, in our opinion, best suited our research. We could, obviously, have chosen another methodology, but CLIL shown to be the most suitable one, as we intended to integrate our pupils' diverse cultural and linguistic contexts and backgrounds with the national program contents. In addition to the general CLIL goal of improving institutional language learning, CLIL education experts have formulated an array of additional goals that CLIL is said to support,

such as cultural awareness, Foreign Language (FL) sensitization, cognitive advantages, deeper content learning, internationalization, self-confidence, motivation, pluriliteracy, learner autonomy and several others (Singleton & Pfenninger, 2019). CLIL is also a methodology that embraces the learners' multiple features, multiple skills and learnings, allowing us teachers to integrate them in our lessons and making these motivating to the pupils, so they can feel their diverse experiences are an asset and something they can and shall all share and learn with, at the same time they feel and can experience, that the learning is centred on them. For these and many other reasons, CLIL was the best methodology choice, as CLIL always allows for a wide range of educational practices, providing for these practices to be conducted through the medium of an additional language and that they integrate both language and the subject and full CLIL instruction (Singleton & Pfenninger, 2019).

The results obtained will be presented in two parts. First, there will be a brief analysis of the questionnaires applied to the pupils during the lessons, which were used in the lesson plans allowing us to decide and chose on the activities, strategies and resources. Then, there will be a global appreciation of the pupils' answers about the English L2 learning and how some of the issues that were introduced in the theoretical section are represented in the results we obtained.

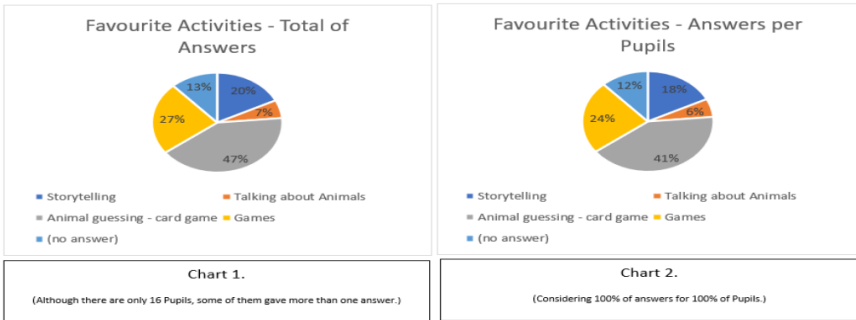
4.1. STRATEGIES IMPLEMENTED IN LESSON PLANNING

Due to a previous observation of the pupils' performance in class, the pupils' multiple contexts, and based on some of the literature about the subject by distinguished authors, the first strategy was the CLIL methodology adoption, as CLIL is flexible and there is no formula for organising a CLIL programme nor a template for planning CLIL lessons; it is the context and the discipline that determines them (Piacentini, 2021). Hence, in each of every lesson plan of ours, the choice for this methodology was properly justified with our literature revisions.

Another strategy implemented was the pupils' favourite activities for learning English questionnaire. When asked about the it, the most common answer amongst the pupils was games and then picture books (Figure 1). Therefore, respecting the pupils' choice and preference, we used mostly games and picture books to teach the contents established for our lessons, by creating games and activities around the pupils' preferences.

Figure 1

Pupils' answers about their favourite activities



Note: Chart 1 shows the total of answers, as some pupils gave more than one answer. Chart 2 shows the answers per pupils.

4.2. PUPILS' OPINIONS

As it was alleged here before, this research was made during a semester of teaching practicum in a school in Porto. The class consisted of 17 pupils – 9 girls and 8 boys – with ages between 9 and 10 years old.

Since we developed games and activities according to the pupils' preferences, and implemented them in class activities, we asked the pupils' their opinion about the materials and resources used in the activities. One cannot forget the outcome of the literature research, which led us to factors, such as motivation, that influence pupils' acquisition and learning of a L2. Hence, in 4.2.1 we will comment on the results of the questionnaire about the resources used in the lesson activities and in 4.2.2 we will tackle on the pupils' answers about the factors that might influence SLA.

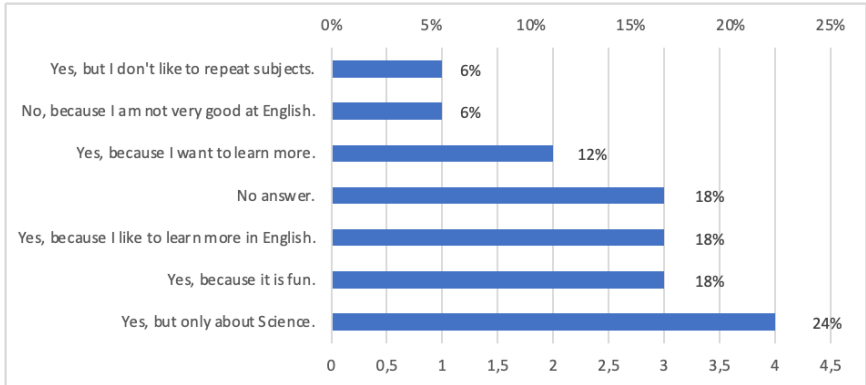
4.2.1. CLIL & English Language Learning

It was important to understand, if our choice of having the CLIL methodology implemented in our lesson plans was meaningful for the pupils and their learning. Hence, we have asked them, first, if they liked to talk and learn, in the English classes, about topics from other subjects. It was obtained a various range of answers (Figure 2). Some pupils answered "Yes, because they want to learn more" (18%), or "Yes, I want to learn more in English" (18%), or "Yes, because it is fun" (18%). However, the most given answer (24%) was "Yes, but only regarding Science", which

is not far from the answer “Yes, but I don’t like to repeat subjects” (6%). There is only an answer (6%), where it is said “No, because I am not very good at English”.

Figure 2

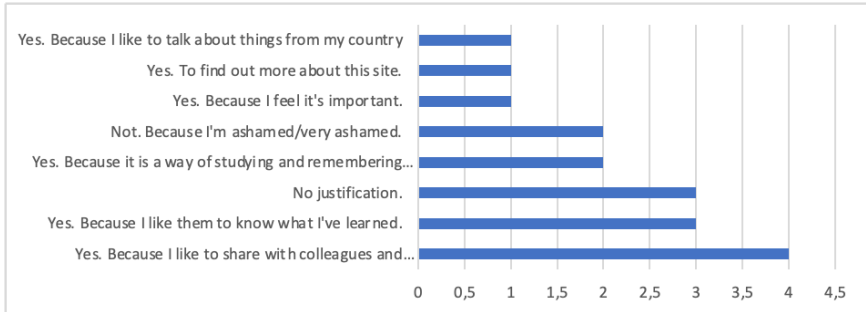
Do you like to learn and talk in English, in the English classes, about topics you have learnt in other subjects?



Second, we have asked the pupils, if they liked to talk and share with their classmates and teachers what they already know/learnt/visited in their experiences outside school (Figure 3). The majority of the pupils said “YES” (88%) and only a few said “NO” (12%). When checking the pupils’ justification for their answers, those saying “NO” (12%) referred, that they “were ashamed/very ashamed”, meaning these pupils’ confidence in exposing their ideas/opinions before their classmates is something that must be worked out with teachers and parents, so these pupils gain confidence and share what they know/learnt/visited with their classmates and teachers in the future. The fact that the majority enjoys sharing what they know/learnt/visited proves that the CLIL methodology was an excellent choice for these lessons, so pupils can bring to the class and talk about subjects of their interest and knowledge, integrating them in the class and increasing their interest in the learning of the language and subjects. Having so many pupils from other cultures than the Portuguese one, this sharing is a mean of integrate these pupils and sharing with others is a mean of enrich everyone’s leaning.

Figure 3

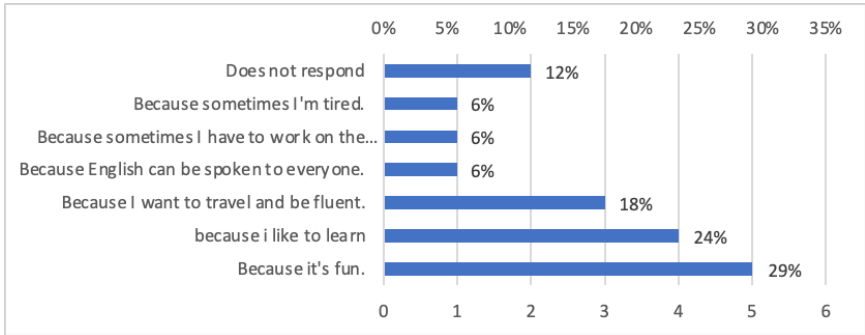
Do you like to talk and share with your colleagues and teachers what you already know / learned / visited in your experiences outside of school? Because?



When asked if they like to learn English, the majority of the pupils said “YES” (88%), and the others said “Sometimes” (12%). When asked “Why do you like to learn English?”, as we can check bellow (Figure 4), the reasons some pupils pointed out are: the importance of learning English “to communicate with others” (6%), or because they “enjoy travelling and want to be able to speak the language fluently” (18%). Others referred that they “enjoy learning” (24%) and others because “it is fun” (29%). These answers fit what authors like Pinter (2017) and Lewis (1993) said about motivation in learning a new language, either being it the willing to communicate with others, or knowing more about “that” culture, or because it is simply fun. However, two justifications given by the pupils caught our attention: the first reason is the fact, that sometimes pupils have to practice on the coursebook, and they do not like it – which reminds us of what Lewis (1993) said, that the strategies and activities used in the classroom to engage children must rely on motivating materials. Second reason is the fact of some pupils “being sometimes tired”, which responds to what Lewis (1993) presented before, that, like motivation, tiredness influences the relationship between input and intake. If a pupil is tired, his/her attention and capacity to learn will be reduced. It is important that teachers are aware of these factors, so they can help avoid them and help the pupils.

Figure 4

Answers to the question "Why do you like to learn English?"



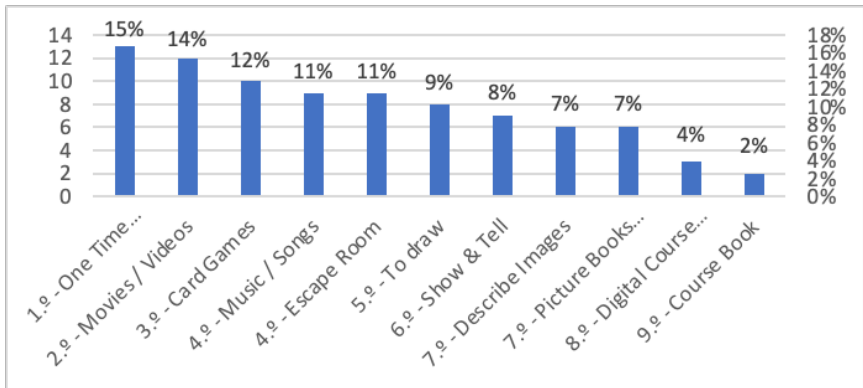
Trying to reduce or stop situations like this, will not be an easy task, as this goes beyond the classroom. And that is why a close work of collaboration between teachers and parents/child tutors is mandatory. In situations like this, it is necessary to understand, why a child feels tired, and why this tiredness is affecting his/her learning.

4.2.2. Resources and Activities

In the final questionnaire presented to the pupils, other of the questions they were asked was about their favourite classroom activities when learning English (Figure 5). The pupils' favourite activity was "taking turn" games (15%) followed by videos/movies (14%). "Card games" (12%) is the pupils third favourite activity and "music/songs" (11%) and "escape room" (11%) are their fourth favourite activity. From the pupils' answers, one can deduce, that activities related with the "digital coursebook" (4%) and the "coursebook" (2%) are the activities that gather least favoritism among the pupils.

Figure 5

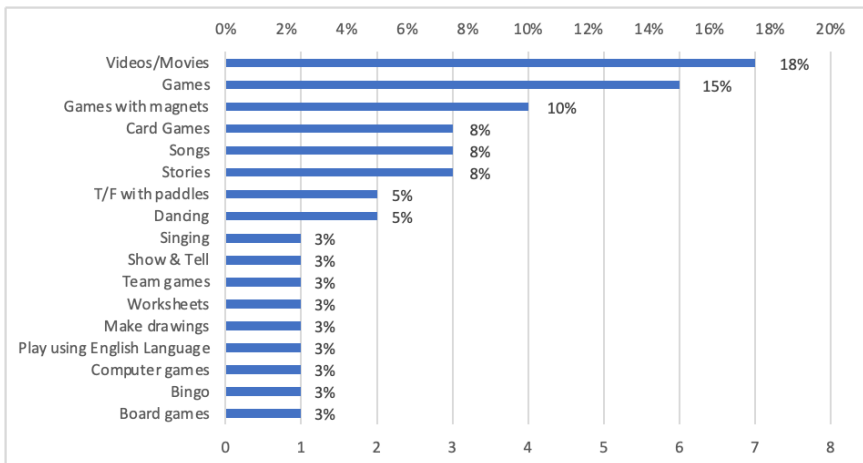
Pupils' Favourite Activities to undertake in the Classroom



When asked about the activities they enjoy the most, the pupils answered, that their favourite activity was “watching videos/movies” (18%) and the following three answers were “games” (13%), “games with magnetic figures” (10%) and “games with cards” (8%). This last answer, “games with cards” had the same votes as “songs” (8%) and “stories” (8%) (Figure 6).

Figure 6

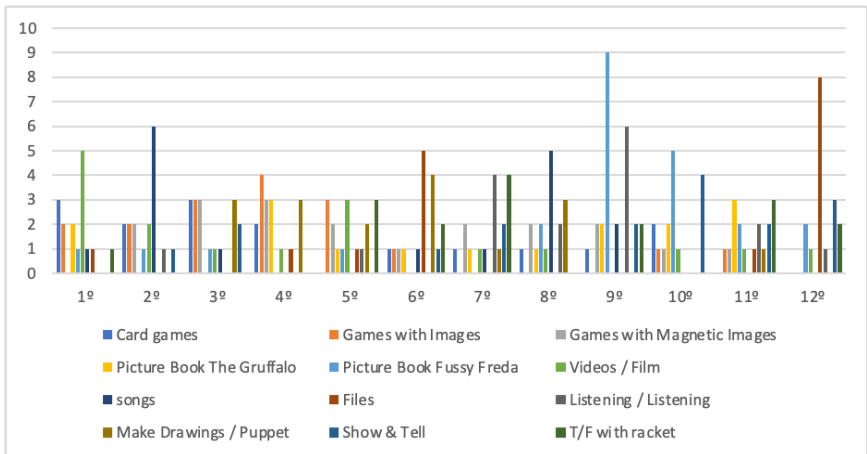
Pupils' Favourite Activities



To the last question of the questionnaire, the pupils had to indicate their preference by ordering all the activities implemented in this practicum. If the different game activities hadn't been specified, games (general) would be the pupils' favourite first activity. But all the activities were separately identified (Figure 7), and the activity pupils chose in first place that gathered more votes was "videos/movie" (5 votes) followed by "games with cards" (3 votes). In second place, the activity that gathered more votes was "music/songs" (6 votes). In the 12th position, the most voted activity was "worksheets" (8 votes). Although these worksheets were not mandatory – but a way for pupils to keep a record of what had been made in each class, a way of reviewing later the subjects approached in the class –, these worksheets allowed pupils to practice reading and writing skills, besides having tasks that worked other skills, like painting and cutting. These worksheets were also made for pupils that finished class activities faster and need to be challenged and busy.

Figure 7

Favourite Activities through Preference Order



5. CONCLUSIONS

CLIL is a methodology that allows and favours cross-curricular teaching and learning by using a L2 to communicate. Pupils build the new learning on knowledge they already have from their outside school life experiences and from other school subjects – scaffolding –, and always using this new vehicular language, which, in this case, is the English language. However, some pupils don't like to learn the same

subjects in both languages. Using the L2 as vehicular language, the new learning can be built on what pupils already know from other subjects, but without repeating it. Also, Science is the pupils' favourite subject to learn in English and through English. From the perspective of a simultaneous process of "learning language" and "learning through language" (Halliday, 1993), language is a "central mediator" of Science learning and Science classes are, as Espinet, Izquierdo, Bonil and Ramos-de Robles (2012) maintain, interactional spaces where scientific explanations of natural phenomena are constructed using the resource of language (Piacentini, 2022). CLIL also allows combining language learning and acquisition with classroom strategies and activities that integrate what pupils already know, because they do know things they have learnt outside school and outside the classroom, and, at the same time, defy the pupils as they learn a FL and contents. For example, in one of the lessons a Venn Diagram was displayed on the board for pupils to complete it by identifying the elements of a food chain – producer, prey, predator. The pupils were not explained what a Venn Diagram was, because they already knew it from Math classes, but its use for learning in English about a food chain was meaningful for the pupils. CLIL also allows us to integrate the pupils and the pupils' diverse cultures and cultural features and background as these differences are shared with the classmates and teachers. At the end, everyone knows more about everyone's culture, and everyone learns.

Another aspect of this work is that it is a fact, that Pupils enjoy learning when the activities are varied and dynamic. The pupils, indeed, need to feel motivated with the strategies and activities designed for each lesson and the variety and authenticity of the materials presented and given to the pupils really matter, complying with what, for example, Pinter (2019) and Lewis (1993) state. The motivation brought in by the classroom activities also comply with what Phillips (2016) says, that the kinds of activities that work well with young learners (YL) are games and songs with actions, total physical response activities, tasks that involve colouring, cutting, and sticking, simple, repetitive stories, and simple repetitive speaking activities that have an obvious communicative value.

Many authentic materials such as picture books can be used in English classes without any adaptation (Pinter, 2017). In fact, the picture books used in these lessons worked well and the pupils easily understood the stories, and the content, and could easily use the contents learnt in new contexts and situations. However, reading stories from picture books is not a normal practice with this class, as pupils are used to listen only to very short stories from their coursebook/textbook. There is not a reading routine besides what is in the coursebook/textbook. Another aspect of this research is a certain kind of prejudice against tasks presented in the worksheets. The worksheets may also not gather the pupils' preference, because pupils might

have been relating them with English written evaluation tests – which are a stress factor for many pupils and a dull task –, instead of relating the worksheets with a continuum learning activity.

It is necessary, if not mandatory, to motivate YL when learning/acquiring a new language and part of the motivation is provided by authentic, real materials, tailor-made, or adapted, for them. At the same time, it is important to integrate these materials in meaningful activities for the pupils. It is hard to motivate YL with materials that were not specifically designed for them, becoming as meaningless as the unnatural activities, in which these “general made” materials are inserted.

If acquiring an L2 is an unconscious process and learning is a conscient one, because rules have to be learnt, so, at these primary levels, YL must acquire the L2. Memorizing grammar rules and distinguish grammar from vocabulary is not essential at these levels. Rules must be implied in the speech of classroom language usage. At these levels, it is more important to have YL understanding and using language in context, than having them explained the grammar rules. For example, if looking at an image of a girl running, pupils understand that “She is running.”, and that if someone asks them “Is she jumping?”, the pupils understand the question and know the answer is “No, she isn’t.”, and then know how to use this structure in other contexts, then, the grammar rule explanation of the *Present Continuous* in its affirmative, negative and interrogative forms is not important for the understanding and use of the L2. When we acquire our L1, we are not aware of the grammar rules in it. That is something we learn when we go to school. But a very important and huge difference between L1 and L2 acquiring/learning, is that when we go to school, we already know how to communicate in our L1 and learning the rules in it is then a continuum of the L1 learning process. When these YL go to primary school, they don’t use the L2 at home, nor in their proximal contexts with family and friends (at least most of them). Therefore, starting to learn an L2 by learning rules, instead of learning it in naturalistic contexts that teachers must create/provide, might not be motivating for these YL. Hence, another important conclusion from our research is that school, at primary levels, must provide the means and create as much as possible, the contexts that allow these YL at primary levels to have an environment for SLA that approaches the L1 acquisition.

ACKNOWLEDGEMENTS

This work is funded by National Funds through the FCT – Fundação para a Ciência e a 660 Tecnologia, I.P., under the scope of the project UIDB/05198/2020 (Centre for Research and Innovation in Education, inED).

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6.

DEMANDA DE FORMACIÓN PARA LA MEJORA DEL USO DE LAS TIC

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Resumen

La integración de los recursos tecnológicos en la enseñanza superior y su incidencia sobre la metodología e innovación pedagógica es una de las temáticas emergentes en la investigación educativa internacional. Al mismo tiempo, el desarrollo de competencias digitales permite una mejor adecuación a las competencias profesionales del siglo XXI. El estudio que aquí se presenta indaga acerca de las necesidades de formación que se detectan sobre el uso pedagógico de la tecnología por parte de los futuros docentes que se encuentran realizando o han realizado el Prácticum de su titulación. Dicho estudio se enmarca en el proyecto “IFITIC – Inovar com TIC na Formação Inicial Docente para Promover a Renovação Metodológica na Educação Pré-escolar e nos 1º e 2º CEB”. Los datos fueron obtenidos utilizando un cuestionario elaborado a tal efecto, que en la Universidade de Vigo fue contestado por 40 estudiantes de los grados de Educación. Los resultados muestran que la mayoría de los participantes demanda una mayor formación en “metodologías activas innovadoras con recursos TIC” y “aplicaciones TIC en educación”. Se

concluye que las TIC son poderosos recursos educativos, pero exigen de una formación y actualización permanente, así como de una reflexión sobre los distintos modos de integrarlas en el proceso de enseñanza-aprendizaje para que generen una auténtica renovación metodológica e innovación educativa.

Palabras clave: TIC, Prácticum, Enseñanza superior, Universidad, Formación.

Resumo

A integração de recursos tecnológicos no ensino superior e seu impacto na metodologia pedagógica e na inovação é um dos temas emergentes na pesquisa educacional internacional. Ao mesmo tempo, o desenvolvimento de competências digitais permite uma melhor adaptação às competências profissionais do século XXI. O estudo aqui apresentado investiga as necessidades de formação que são detetadas sobre o uso pedagógico da tecnologia por futuros professores que estão a fazer ou já fizeram o estágio na sua licenciatura. Este estudo faz parte do projeto "IFITIC – Inovar com as TIC na Formação Inicial de Professores para Promover a Renovação Metodológica na Educação Pré-Escolar no 1º e 2º CEB". Os dados foram obtidos através de um questionário elaborado para o efeito, que foi respondido por 40 alunos dos cursos de Pedagogia da Universidade de Vigo. Os resultados mostram que a maioria dos participantes demanda mais formação em "metodologias ativas inovadoras com recursos de TIC" e "aplicações de TIC na educação". Conclui-se que as TIC são recursos educativos potentes, mas requerem formação e atualização permanentes, bem como a reflexão sobre as diferentes formas de integrá-las no processo de ensino-aprendizagem para que gerem auténtica renovação metodológica e inovação educativa.

Palavras-chave: TIC, Estágio, Ensino superior, Universidade, Formação

1. INTRODUCCIÓN

La pandemia de la COVID-19, que tuvo como resultado el cierre de escuelas y universidades, puso en valor más que nunca la necesidad de crear entornos de aprendizaje mediados por la tecnología, no sólo para los estudiantes, sino también para la formación de los docentes. La rápida y forzada transición a la enseñanza a distancia supuso un gran desafío, pero también un espacio lleno de oportunidades para desarrollar nuevas estrategias de formación e innovación en el que las Tecnologías de la Comunicación y la Información (TIC) se presentan como un actor principal. Esto, sumado al constante desarrollo tecnológico está generando fuertes cambios en todos los ámbitos de la sociedad y un impacto más que evidente en la

educación, siendo la integración de las TIC en todos los ámbitos educativos y su efecto en los procesos de enseñanza-aprendizaje, una de las temáticas emergentes en investigación (González-Valiente, 2015).

En este escenario, las TIC se presentan como poderosos instrumentos en el ámbito educativo, pero exigen una fuerte reflexión sobre la manera de insertarlas en los procesos de enseñanza-aprendizaje, para que realmente se produzcan cambios y mejoras en las metodologías (Quadros-Flores & Raposo-Rivas, 2017). En el ámbito de la educación superior, numerosas investigaciones avalan la necesidad de insertar las TIC en la formación inicial del profesorado, promoviendo no sólo la competencia digital, sino también las competencias pedagógicas relacionadas con dicha inserción (Graça, Quadros-Flores, Raposo-Rivas & Ramos, 2021). Estamos asistiendo a la transformación de la manera en la que se produce y circula el conocimiento, siendo especialmente el alumnado universitario el que aporta un escenario educativo en el que prima la multiplicidad y la concentración de las tecnologías de la información y la comunicación (Mangisch & Spinelli, 2020). Investigaciones recientes recogen que el 75% de los estudiantes universitarios utilizan las TIC en actividades relacionadas con los estudios (López & Silva, 2016), en tareas como consultar el correo, buscar información o consultar las páginas institucionales (García-Fuentes, Fernández & Martínez-Figueira, 2021).

Por otro lado, hace más de una década que Zabalza (2011) destacaba la importancia de evidenciar el potencial de las TIC y la necesidad de que el futuro profesorado experimente con ellas durante su formación inicial, especialmente en las prácticas externas o el Prácticum, pues este espacio formativo es uno de los momentos más importantes en la formación de cualquier profesional. En este sentido, la reflexión sobre para qué debemos formar y cuál es la función que deseamos que desarrolle en la sociedad el personal docente son dos aspectos centrales. Para responder a estas dos cuestiones es imprescindible contemplar las áreas de profesionalización docente, es decir, tanto en el aprendizaje inicial como en la formación preprofesional, deberían contemplarse los tres grandes tipos de alfabetizaciones: lectoescritura, científica y digital (Tedesco, 2011).

Para Raposo-Rivas (2011) durante el Prácticum, el estudiante está vinculado a un futuro escenario profesional donde se manifiestan y ejercitan las diferentes competencias y habilidades abordadas durante la titulación, siendo así el marco ideal de un aprendizaje vinculado al mundo laboral, donde se produce el cometido de aprender a enseñar. Así, los principales argumentos a favor del uso de las TIC se relacionan principalmente con la facilidad para crear otros escenarios formativos y nuevos sistemas de aprendizaje prácticos en la formación de los futuras maestras y maestros (Díaz, 2011). Por otro lado, Muñoz, Barrio, Britto, Torres y Rebaque (2015)

recalcan la necesidad de promover una actitud positiva en relación a las TIC durante la formación inicial, con la finalidad de desarrollar tanto las competencias prácticas como las teóricas, construyendo así conocimiento que ayude a desarrollar prácticas innovadoras en el aula. Para Raposo-Rivas, Quadros-Flores, Martínez-Figueira, Pereira da Silva y Tellado (2020), las TIC en el Prácticum pueden apoyar el desarrollo de competencias genéricas como la gestión de información, la autonomía en el aprendizaje o la responsabilidad y la ética profesional.

Así, utilizar las tecnologías para ofrecer al alumnado y futuros docentes las herramientas y habilidades necesarias para la era actual, es uno de los grandes desafíos de la educación superior. Es necesario impulsar el uso didáctico de las tecnologías, pero para eso, es imprescindible detectar las posibles lagunas formativas actuales. Este estudio busca conocer las necesidades de formación sobre el uso pedagógico de la tecnología por parte de los futuros docentes que se encuentran realizando o han realizado el Prácticum de su titulación. Dicho estudio se enmarca en la fase inicial del proyecto "IFITIC – Inovar com TIC na Formação Inicial Docente para Promover a Renovação Metodológica na Educação Pré-escolar e nos 1º e 2º CEB", coordinado por la Doutora Paula Flores y desarrollado en la Escola Superior de Educação (Porto, Portugal), las Facultades de Educación de la Universidade de Vigo (España) y la Universidade do Minho (Portugal).

2. METODOLOGÍA

Como se recoge anteriormente, el estudio que aquí se presenta está enmarcado dentro del proyecto de investigación IFITIC cuyo objetivo principal es "repensar la práctica educativa con TIC en la formación inicial docente para promover la renovación metodológica en la Educación Preescolar y en el primer y segundo Ciclo de la Educación Básica". Una de sus finalidades es conocer datos sobre la relación (conocimiento, uso, creencias...) que poseen los futuros docentes con los recursos tecnológicos. Se plantea este estudio como una investigación de tipo no experimental descriptiva, cuya finalidad es recoger y describir la impresión que tiene el alumnado universitario que está realizando sus prácticas curriculares al utilizar las tecnologías en su futura vida profesional.

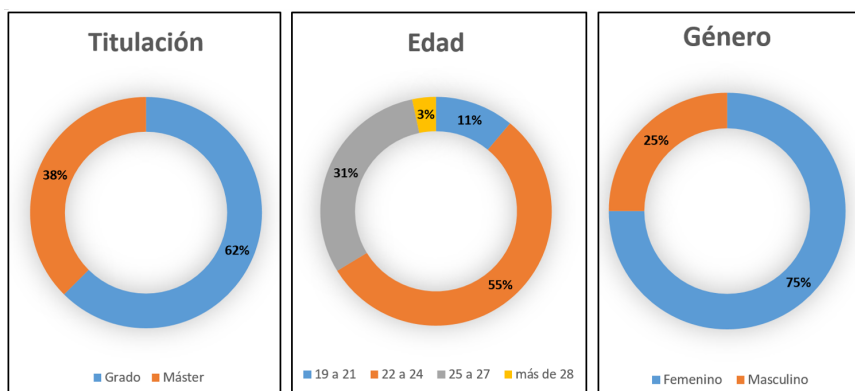
2.1. PARTICIPANTES

Los participantes de la Universidade de Vigo configuran una muestra formada por un total de 40 estudiantes universitarios del área educativa. En concreto, como se aprecia en la Figura 1, el 62% está cursando los grados de Educación Infantil y

Primaria, mientras que el 38% los estudios de máster (Máster de Secundaria; Máster en Dificultades de Aprendizaje y Procesos Cognitivos; Máster en Necesidades Específicas de Apoyo Educativo). El 86%, en coherencia con el hecho de que se ubican en los últimos cursos de grado y en máster, tiene una edad comprendida entre los 22 y los 27 años. Atendiendo al género nos encontramos con una muestra mayoritariamente femenina, con el 75% de mujeres frente al 25% de hombres.

Figura 1

Caracterización de la muestra



Fuente: elaboración propia

2.2. INSTRUMENTO

Para la obtención de los datos se ha diseñado, validado y utilizado un cuestionario (Raposo et al., 2020) que, con un total de 30 preguntas de tipo abierto y cerrado, recoge información sobre el conocimiento, el uso y las creencias que posee el actual alumnado de Prácticum (futuros docentes) en relación con las TIC. En este trabajo se analizan los datos resultantes en torno a dos de las preguntas formuladas:

- La primera, se centra en conocer las percepciones sobre algunos beneficios o ventajas asociadas al uso de las TIC, así como los sentimientos que inspira en los futuros docentes. Está compuesta por un total de 15 ítems cuya opción de respuesta se concreta en una escala de cuatro valores para manifestar el grado de acuerdo o desacuerdo sobre ellos (totalmente en desacuerdo, en desacuerdo, de acuerdo, totalmente de acuerdo).

- La segunda, gira en torno a la demanda de formación sobre el uso de las tecnologías en el aula. Esta pregunta está compuesta por un total de 7 ítems cuya opción de respuesta se concreta en una escala de cuatro valores relativos a la frecuencia: nada, poco, suficiente, mucho.

3. RESULTADOS

3.1. BENEFICIOS Y SENTIMIENTOS ASOCIADOS AL USO DE LAS TIC

En relación con los posibles beneficios que el uso de las TIC puede reportar según los futuros docentes, como se aprecia en la Tabla 1, el 95% de los participantes manifiesta su acuerdo con que utilizar las TIC en el aula las convierte en motivadoras y que "ayudan a encontrar mejor la información". En segundo lugar, se destaca que "facilitan el trabajo colaborativo" (92,5% de acuerdo o totalmente de acuerdo) y que "ayudan a su alumnado a construir conocimientos nuevos y efectivos", así como que "favorecen el desarrollo de rutinas" (90% cada uno). Por último, se coincide en que "mejoran el manejo de la información" (78% de acuerdo o muy de acuerdo).

Tabla 1

Beneficios del uso de las TIC

	Totalmente en desacuerdo N (%)	En desacuerdo N (%)	De acuerdo N (%)	Totalmente de acuerdo N (%)
Las TIC aumentan la motivación en las aulas	1(2,5%)	1(2,5%)	17(42,5%)	21(52,5%)
Las TIC mejoran el manejo de la información	2(5%)	7(17,5%)	22(55%)	9(22,5%)
Las TIC ayudan a encontrar mejor la información	1(2,5%)	1(2,5%)	10(25%)	28(70%)
Las TIC favorecen el desarrollo de mis rutinas	3(7,5%)	1(0,4%)	18(45%)	18(45%)
Las TIC ayudan a los alumnos a construir conocimientos nuevos y efectivos	-	4(10%)	18(45%)	18(45%)
Las TIC facilitan el trabajo colaborativo	-	13(32,5%)	19(47,5%)	18(45%)

Fuente: elaboración propia.

Atendiendo al sentir del alumnado de Prácticum sobre las TIC, como se aprecia en la Tabla 2, el 62,5% muestra su desacuerdo con que "no se siente motivado para usar

las TIC", por lo que se deduce una predisposición positiva hacia la utilización de estos recursos. En relación con esto, el 42,5% de ellos afirma "sentirse apoyado" al emplear las TIC.

Por otro lado, el 55% afirma estar en desacuerdo con que el "alumnado domina mejor las TIC" en comparación con ellos mismos, por lo que no se reconoce una brecha digital entre ambas generaciones. Asimismo, el 52,5% está en desacuerdo con "no conocer las ventajas pedagógicas derivadas del uso de las TIC", lo que puede interpretarse en la vertiente positiva de reconocer ciertas bondades a estos recursos.

Tabla 2

Sentimientos sobre el uso de las TIC en el aula

	Totalmente en desacuerdo N (%)	En desacuerdo N (%)	De acuerdo N (%)	Totalmente de acuerdo N (%)
Me siento apoyado al usar las TIC	1(2,5%)	11(27,5%)	17(42,5%)	11(27,5%)
No me siento motivado para usar las TIC	25(62,5%)	13(32,5%)	2(5%)	-
Mis alumnos dominan las TIC mejor que yo	15(37,5%)	22(55%)	3(7,5%)	-
No conozco ventajas efectivas pedagógicas del uso de las TIC con mis alumnos	21(52,5%)	15(37,5%)	1(2,5%)	3(7,5%)

Fuente: elaboración propia.

3.2. DEMANDA DE FORMACIÓN Y CONTENIDOS ESPECÍFICOS PARA MEJORAR EL USO DE LA TECNOLOGÍA EN EL AULA

En relación con las demandas de formación para el uso de las TIC, tal como se recoge en la Tabla 3, el 97,5% está de acuerdo o totalmente de acuerdo con que "le gustaría saber más sobre las TIC", aunque un 92% manifiesta su desacuerdo con que "las TIC exigen competencias que aún no han desarrollado", por lo que, aunque reconocen poseer competencias tecnológicas les gustaría seguir aprendiendo sobre el tema.

Además, un 75% está en desacuerdo con que "uso las TIC en mi beneficio, pero que no sé cómo enseñar a los alumnos a usarlas" y que "nunca recibí información sobre las TIC y desconoce sus potencialidades". Así que, los futuros docentes poseen

información, conocen las potencialidades de estos recursos y las habilidades desarrolladas sobre esta temática son compartidas.

Por último, el 67,5% se muestra en desacuerdo con que "mi escuela no dispone de condiciones para usar recursos digitales", lo que viene a sugerir que la dotación y la institución no son limitantes para el empleo de TIC en el aula.

Tabla 3

Demanda de formación en el uso de las TIC

	Totalmente en desacuerdo N (%)	En desacuerdo N (%)	De acuerdo N (%)	Totalmente de acuerdo N (%)
Me gustaría saber más de las TIC	1(2,5%)	-	11(27,5%)	28(70%)
Uso las TIC en mi beneficio, pero no sé cómo enseñar a los alumnos a usarlas	11(27,5%)	19(47,5%)	9(22,5%)	1(2,5%)
Las TIC exigen competencias que aún no he desarrollado	19(47,5%)	18(45%)	2(5%)	1(2,5%)
Mi escuela no dispone de condiciones para usar recursos digitales en el aula	8(20%)	19(47,5%)	11(27,5%)	2(5%)
Nunca recibí información sobre las TIC y desconozco su potencialidades	15(37,5%)	15(37,5%)	8(20%)	2(5%)

Fuente: elaboración propia.

Una vez que se constata la demanda de formación, en la Tabla 4 se recogen los resultados obtenidos en relación a diferentes aspectos en los que a los futuros docentes le gustaría profundizar para mejorar el uso de la tecnología en el aula. Así, valoraron su percepción en torno a diferentes técnicas, metodologías, recursos y cuestiones relacionadas con la evaluación o aspectos éticos. En este sentido, el 87,5% afirma que le gustaría mucho profundizar en "metodologías innovadoras con TIC", el 72,5% en "las aplicaciones en educación", el 55% en "cuestiones de evaluación" y el 50% en "cuestiones de seguridad".

En menor medida se demanda indagar sobre "técnicas de búsqueda de información con TIC" (mucho= 35,4%), "técnicas elementales del uso del PC" (suficiente=35%) y "cuestiones de ética" (suficiente=45%)

Tabla 4

Temáticas para profundizar sobre el uso de la tecnología en el aula

	Nada N (%)	Poco N (%)	Suficiente N (%)	Mucho N (%)
Técnicas elementales de uso del PC	3(7,5%)	12(30%)	14(35%)	11(27,5%)
Técnicas de búsqueda de información	-	12(30%)	11(27,5%)	17(35,4%)
Metodologías innovadoras con TIC	-	1(2,5%)	4(10%)	35(87,5%)
Aplicaciones en educación	-	1(2,5%)	10(25%)	29(72,5%)
Cuestiones de ética	2(5%)	9(22,5%)	18(45%)	11(27,5%)
Cuestiones de seguridad	2(5%)	4(10%)	14(35%)	20(50%)
Cuestiones de evaluación	1(2,5%)	3(7,5%)	14(35%)	22(55%)

Fuente: elaboración propia.

4. CONCLUSIONES

Los datos obtenidos en esta investigación muestran una panorámica muy interesante en relación a las percepciones que tiene el alumnado de Prácticum sobre las TIC. Atendiendo al objetivo de investigación, nos encontramos con que 70% del alumnado afirma estar totalmente de acuerdo en que las TIC le ayudan a encontrar mejor la información, y el 55% que le ayudan a manejarla. Más de la mitad considera tener mejor dominio de las TIC que su propio alumnado, además de considerarlas un recurso que ayuda a construir conocimientos nuevos y efectivos y que facilita el trabajo colaborativo.

Un alto porcentaje de participantes (un 62,5%) afirma sentirse motivado para usar las TIC, datos que refuerzan los aportados por Yot y Marcelo (2015) que justifican la necesidad de adaptar la formación al contexto, desarrollando actividades que se ajusten a los hábitos de las personas para así potenciar y mejorar la inserción de la tecnología en los procesos formativos.

En relación con la demanda de formación, las metodologías innovadoras (87,5%), las aplicaciones en educación (72,5%) y las técnicas de búsqueda de información (34,4%) se presentan como las temáticas más valoradas los futuros docentes. Estos

datos permiten determinar que el actual alumnado de Prácticum posee una buena percepción de su propio dominio de las TIC, pero sigue demandando más formación coincidiendo, así con investigaciones previas que recogen la necesidad de apostar en los planes de estudios por metodologías que incluyan de manera coherente, eficaz y práctica el uso de las TIC (García-Fuentes et al., 2021).

Además, los datos aquí presentados refuerzan la necesidad de seguir investigando sobre las TIC y sobre todo, resulta fundamental, contar con el punto de vista específico y el nivel de competencia del alumnado con el que se va a trabajar en las aulas, con la finalidad de adaptar el proceso formativo a las necesidades detectadas, tanto de los futuros docentes como a las características de los estudiantes que se están formando.

Es importante resaltar el avance imparable de la tecnología y su inserción en los procesos de enseñanza aprendizaje, que casi con total certeza acabará siendo absoluta tanto dentro como fuera del aula, lo que sitúa a esta investigación y al Proyecto IFITIC como elementos potenciadores de la aplicación de buenas prácticas con TIC en la formación de los futuros docentes.

Por último, entre las principales limitaciones de este trabajo se encuentra el reducido tamaño de la muestra. Para futuras vías de investigación se plantea seguir aumentando el tamaño de la misma no sólo en número, sino en la variedad de titulaciones y poder establecer así correlaciones entre diferentes variables. Además, se podría analizar el impacto del uso de las TIC en el rendimiento académico o las principales desventajas de introducir las TIC en las aulas universitarias, particularmente en la formación de futuros docentes.

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7.

LA PERCEPCIÓN DE LOS ESTUDIANTES SOBRE LOS DISPOSITIVOS MÓVILES EN EL PROCESO FORMATIVO DE LA ENSEÑANZA SUPERIOR

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Resumen

La evolución de los dispositivos móviles está transformando la sociedad, y con ello, el campo educativo. Su integración en la realidad escolar está suponiendo una transformación a nivel metodológico, principalmente porque el acceso permanente a diferentes contenidos y plataformas virtuales. En el caso del alumnado universitario, la mayoría cuenta con un dispositivo móvil con el que accede a las diferentes plataformas virtuales de las instituciones en las que se forma. Pero a la hora de

introducirlos como recurso en el proceso de enseñanza-aprendizaje, es necesaria la convergencia de cinco elementos: el docente, el contenido, el espacio, la evaluación y el estudiante. Por este motivo, el objetivo de este trabajo es averiguar qué uso realizan los estudiantes universitarios de titulaciones de educación de sus dispositivos móviles y la percepción que tienen de ellos en relación con los procesos de enseñanza aprendizaje, tanto en su rol como estudiantes como en su futura función docente. Para ello, se ha realizado un estudio longitudinal, no experimental descriptivo, con un enfoque cuantitativo, en el que participaron 490 estudiantes. Los resultados obtenidos permiten concluir que, pese a ser un recurso poco utilizado en los procesos de enseñanza aprendizaje, al menos, con fines formativos, si existe un deseo por parte del alumnado de que se use el móvil como recurso para el aprendizaje en su formación reglada.

Palabras clave: Aprendizaje móvil, Dispositivos móviles, M-learning, Universidad.

Resumo

A evolução dos dispositivos móveis está transformando a sociedade e, com ela, o campo educacional. A sua integração na realidade escolar está a assumir uma transformação a nível metodológico, sobretudo pelo acesso permanente a diferentes conteúdos e plataformas virtuais. No caso dos universitários, a maioria possui um dispositivo móvel com o qual acedem às diferentes plataformas virtuais das instituições em que são formados. Mas ao introduzi-los como recurso no processo de ensino-aprendizagem, é necessária a convergência de cinco elementos: o professor, o conteúdo, o espaço, a avaliação e o aluno. Por isso, o objetivo deste trabalho é descobrir qual o uso que estudantes universitários de licenciatura fazem de seus dispositivos móveis e a percepção que eles têm deles em relação aos processos de ensino-aprendizagem, tanto em seu papel como estudantes quanto em suas atividades. futuro papel docente. Para isso, foi realizado um estudo descritivo longitudinal, não experimental, com abordagem quantitativa, do qual participaram 490 alunos. Os resultados obtidos permitem concluir que, apesar de ser um recurso pouco utilizado nos processos de ensino-aprendizagem, pelo menos para fins de formação, existe um desejo por parte dos alunos de utilizar o telemóvel como recurso para a aprendizagem durante a sua formação.

Palavras-chave: Aprendizagem móvel, Dispositivos móveis, M-learning, Universidade.

1. INTRODUCCIÓN

La evolución constante de los dispositivos móviles ha cambiado no solo la manera de acceso a la información, sino también al conocimiento. Hoy nos resulta casi impensable nuestro día a día sin consultar el correo electrónico, las aplicaciones móviles o las redes sociales. Esta integración plena en la vida de las personas, así como los avances de las redes inalámbricas, han sido claves para la aparición y desarrollo de nuevos contextos en los que este tipo de dispositivos están muy presentes (Yot & Marcelo, 2015). Su implantación en las relaciones sociales, culturales, económicas y formativas ha permitido eliminar las barreras espacio temporales, facilitando la comunicación y la formación en cualquier momento y lugar.

En el ámbito educativo, el impacto de las tecnologías móviles, se está revirtiendo principalmente en la aparición e implementación de metodologías de enseñanza-aprendizaje como el *m-learning* (mobile learning), que como afirman Korucu y Alkan (2011) permite la conexión del estudiante a todo tipo de información, con independencia del tiempo y el contexto gracias al uso de dispositivos móviles. La adaptabilidad, la conectividad, la portabilidad y la interactividad, son para Cabero y Castaño (2013) características intrínsecas del *m-learning*, lo que ayuda a situar esta metodología en el epicentro de los procesos educativos. Además, la movilidad que proporciona el *m-learning* afecta al espacio físico, a la tecnología y al campo conceptual y social. Esto implica que para poner en marcha este tipo de estrategias deben ponerse en valor las circunstancias, necesidades y capacidades del alumnado (Yot & Marcelo, 2015). Algunos autores determinan que las principales ventajas y beneficios del uso de los dispositivos móviles están relacionadas con la ausencia de límites espaciotemporales en el aprendizaje (Romero-Rodríguez, 2020), la mejora de la motivación y la actitud hacia los aprendizajes (Al-Emran et al., 2018), la adquisición de un papel protagonista por parte del estudiante (Fuentes et al., 2019) y la facilidad para favorecer la cooperación y el intercambio de experiencias e ideas de manera bidireccional (Cochrane y Narayan, 2018).

Del mismo modo, el desarrollo de las aplicaciones móviles que están integradas en los dispositivos, que en la actualidad ya abarcan todas las esferas de la vida (Sales, 2015), además de ser muy versátiles y disponibles, están resultando muy fructíferas para el profesorado y el alumnado, pues en muchas ocasiones hacen más frecuente y fluida la comunicación entre todos los actores del proceso educativo, aumentando las posibilidades de éxito (López & Silva, 2016), llegando a garantizar como afirman Artal et al. (2017), el éxito en las experiencias que utilizan este tipo de dispositivos. Investigaciones recientes sostienen que la tecnología está generando un cambio de paradigma, en el que la organización del conocimiento dejará de ser por contenidos y

pasará a ser por problemas o temáticas, modificándose también los exámenes y libros, que serán sustituidos por desempeños, páginas webs o redes sociales (Aguilar et al., 2019).

Es más que evidente que estamos asistiendo a una transformación en la manera en la que se genera el conocimiento, siendo la generación actual que se forma en la universidad, una de la que aporta un escenario educativo que se caracteriza por la concentración y multiplicidad de tecnologías de la comunicación y la información (Mangisch & Spinelli, 2020). Los estudiantes universitarios utilizan los dispositivos móviles en actividades relacionadas con los estudios, contribuyendo así estos dispositivos a la mejora de los procesos de enseñanza-aprendizaje, proporcionando nuevas herramientas a los docentes que ayudan a la adquisición de conceptos entre los estudiantes, especialmente entre los nativos digitales (Artal et al, 2017; Bennett et al, 2008; Wang et al, 2016)). Navegar por la red, buscar información o consultar Whastapp son algunas de las actividades que más realiza el alumnado universitario con sus dispositivos (García-Fuentes et al., 2021).

Este escenario, en el que los servicios de datos y los dispositivos móviles están cambiando la forma en la que el alumnado se comporta, se presenta como un desafío para las universidades de todo el mundo. El alumnado universitario de hoy es una generación que piensa y aprende de manera interactiva, explorando de manera activa todo lo que está a su alcance, en constante movimiento y comunicación, ya sea física o virtualmente (Ramos et al., 2010). Por este motivo, debe impulsarse el uso didáctico de las tecnologías móviles, pues ofrecen un mayor alcance, facilitan el aprendizaje personalizado y permite la respuesta y evaluación inmediata, más aún si tenemos en cuenta que la mayoría del alumnado universitario posee un dispositivo móvil que le permite acceder a los contenidos y a las plataformas virtuales de las instituciones en cualquier momento (Mora, 2013). Además la inserción de los dispositivos móviles en la enseñanza universitaria es cada vez más común, puesto que no se establecen las restricciones que presentan otras etapas educativas como la Educación Primaria o Secundaria.

Por este motivo es de vital importancia conocer y entender cómo el alumnado universitario se relaciona con los dispositivos móviles, para así poder desarrollar y aplicar procesos de enseñanza-aprendizaje en los que se saque el máximo partido a estos dispositivos. Repensar las tecnologías móviles como un recurso didáctico debe ser una prioridad en el ámbito educativo, pero para esto es necesario conocer información sobre los usos y hábitos de los estudiantes. Este trabajo tiene por objetivo conocer qué uso con fines formativos realiza el alumnado universitario de los dispositivos móviles, además de conocer su opinión como futuros docentes sobre el uso del teléfono móvil para la enseñanza.

2. METODOLOGÍA

En este trabajo se presenta un estudio de tipo no experimental descriptivo, con un enfoque mixto, cuya finalidad es recoger la percepción que tienen estudiantes universitarios del área de Educación sobre el uso de los dispositivos móviles en relación con los procesos de enseñanza y aprendizaje.

2.1. PARTICIPANTES

La muestra está configurada por un total de 490 estudiantes universitarios de Educación. En concreto, pertenecen a los grados de Educación Infantil, Educación Primaria y máster de Secundaria, de la Universidad de Vigo, una universidad pública de tamaño ubicada en Galicia (noroeste español). Las características de la muestra en relación con el género, la edad y la posesión de dispositivos móviles se recoge en la Tabla 1.

Tabla 1

Caracterización de los participantes.

Categoría		%
Género	Masculino	27,5
	Femenino	72,5
Edad	18 a 20	67,6
	21 a 26	24,4
	Más de 27	10
Nº de dispositivos	3 o menos	24,1
	4	24,7
	5 o más	51,2

Nota. Elaboración propia.

Como se observa en la tabla anterior, más del 70% de la muestra está formada por mujeres frente a un 27,5% de hombres. Atendiendo a la edad, más de la mitad (67,6%) tiene entre 18 y 20 años, lo que indica que están estudiando en los primeros cursos del grado. El 24,4 % tiene entre 21 y 26 años y el 8,1% más de 27 años. Por último, en relación a la posesión de dispositivos móviles destaca que el 51,20% afirma haber tenido 5 o más terminales.

2.2. INSTRUMENTO

El instrumento empleado para la recogida de datos ha sido un cuestionario inspirado en estudios previos (Rivera et al., 2013) en el que se incluyen un total de 24 preguntas de tipo abierto y cerrado. La organización de las preguntas se realizó en tres grandes bloques: información de tipo contextual, información relacionada con los dispositivos y usos móviles, e información relacionada con los hábitos y mejoras con los dispositivos móviles. Es importante resaltar que la confiabilidad del cuestionario se estableció por medio de la prueba alfa de Cronbach, obteniendo un resultado de 0,968, por lo que en palabras de Hernández et al (2014), se trata de un instrumento sumamente fiable.

Para este trabajo se analizará la información recogida en torno a estas tres preguntas:

1. *¿Utilizas el móvil para estudiar?*
2. *¿Te gustaría que se usase el móvil como recurso para el aprendizaje en tus clases?*
3. *Como futuro docente, ¿cuál es tu grado de acuerdo con respecto al uso del teléfono móvil para la enseñanza de contenido?*

2.2. PROCESAMIENTO Y ANÁLISIS DE DATOS

El análisis de los datos de tipo descriptivo y correlacional, considerando las variables contextuales, se realizó utilizando para ello el software estadístico SPSS 15.0. Además el análisis de contenido de las preguntas abiertas se apoyó en el software cualitativo ATLAS.ti 7, siguiendo el proceso propuesto por Strauss y Corbin (2002) en el que la codificación de los datos se realiza de forma inductiva e interpretativa a través de las categorías que emergen de los datos, tomando como referencia el marco teórico y los objetivos del estudio. Posteriormente, se procedió a la discusión de resultados, para obtener las conclusiones finales de la investigación.

3. RESULTADOS

3.1. USO DEL MÓVIL EN LAS ACTIVIDADES ACADÉMICAS

En la Tabla 1 se recogen los resultados obtenidos en relación al uso que el estudiantado hace del teléfono móvil en relación a diferentes actividades académicas. Así se valoró su uso en: la ampliación y revisión de información; la de preparación y seguimiento de los asuntos tratados en clase; la preparación del examen y otras actividades.

Tabla 1

Uso del móvil en relación con actividades académicas

	Nada	Poco	Bastante	Mucho
Ampliar información	128 (26,4%)	162 (33,4%)	133 (27,4%)	62 (12,8%)
Revisar información	68 (14%)	114 (23,4%)	197 (40,5%)	108 (22,2%)
Preparar clases	164 (33,9%)	171 (35,3%)	99 (20,5%)	50 (10,3%)
Seguir clases	144 (29,9%)	164 (34%)	118 (24,5%)	56 (11,6%)
Preparar exámenes	102 (21%)	127 (26,2%)	147 (30,3%)	109 (22,5%)
Otras tareas	206 (70,2%)	56 (19,2%)	23 (7,9%)	7 (2,4%)

Fuente: elaboración propia.

Atendiendo a la *ampliación de información*, el 33% afirma que lo usa poco, en contraposición del de 12,8 % que dice usarlo mucho. En lo referente a *la revisión de información* un 40,5% afirma utilizarlo bastante y sólo un 14% señala nada. Además, en relación con la *preparación de las clases* el 35,3% utiliza poco este recurso, en contraposición del 10,3% que afirma utilizarlo mucho. Atendiendo al uso del móvil para el *seguimiento de las sesiones de clase*, el 34% reconoce utilizarlo poco y solo un 11,6% asegura usarlo mucho. Por último, *preparar el examen*, es una actividad que el 30,3% afirma emplearlo bastante y el 21% indica nada. En relación con *otras tareas*, se aprecia que el 70,2% del alumnado afirma utilizar el móvil nada y que únicamente el 2,4% afirma utilizarlo mucho. Destaca así la tendencia al alza de actividades relacionadas con la ampliación de información, en contraposición a la tendencia a la baja de actividades como revisar información y preparar exámenes, destacando aún más esta tendencia en actividades relacionadas con la preparación y el seguimiento de las clases.

3.2. PERCEPCIÓN DEL ALUMNADO SOBRE EL USO DEL MÓVIL EN SU FORMACIÓN

Vinculado al deseo que tiene el alumnado por usar el móvil como recurso para el aprendizaje en sus clases, el 71,3% afirma que le gustaría que si se emplease, frente 28,7% que considera que no le gustaría. En la justificación de estos resultados, tras el análisis de contenido realizado a las respuestas del alumnado las categorías emergentes principales se recogen en la Tabla 3.

Tabla 3

Argumentos a favor y en contra del uso del móvil

	Categoría	Significado	n*
Argumentos a favor	Accesible, cómodo y práctico	Fragmentos que aluden a la accesibilidad al dispositivo, la comodidad o la practicidad de los dispositivos	162
	Facilidad para acceder a información	Contenido que hace referencia a la simplicidad de acceder a información a través del dispositivo	39
	Elemento motivador	Fragmentos o frases que aluden o argumentan el uso del dispositivo	24
			222
Argumentos en contra	Distracción	Frases o palabras que reflejan la desatención con estos dispositivos	87
	Otros dispositivos son mejores	Contenido o frases que destacan las características de otros dispositivos	45
	Necesidad de mejoras estructurales	Frases o fragmento que aluden la necesidad de mejoras estructurales	18
	Demasiado pequeño	Fragmentos o frases que aluden al tamaño de los dispositivos	15
	Necesidad de más formación	Contenido o frases que aluden o demandan la necesidad de formación específica	9
			174

Fuente: elaboración propia. Nota: n*= número de veces que aparece la categoría

Como se puede apreciar en la tabla anterior, en relación con el número de veces que está presente una categoría (n*), nos encontramos con que los principales argumentos a favor que expresa el alumnado sobre el uso del móvil, giran principalmente en torno a la accesibilidad y la comodidad que tiene para el alumnado. Además es considerado por ellos mismos como un elemento motivador y que les ayuda a acceder a mucha información. Por el contrario, el propio alumnado lo considera también un elemento de distracción o demasiado pequeño para las actividades académicas, destacando la preferencia por otros dispositivos como el ordenador portátil. Se refleja además la necesidad de más formación específica en torno al cómo usar el móvil en procesos formativos o mejoras estructurales en la universidad como más enchufes o mejoras en la red wifi.

3.3. PERCEPCIÓN COMO FUTURO DOCENTE SOBRE EL USO DEL TELÉFONO MÓVIL

En la Tabla 4 se recogen los resultados obtenidos en relación a cómo percibe el estudiantado el uso del móvil en los procesos de enseñanza aprendizaje como futuros docentes, es decir en su futura práctica profesional.

Tabla 4

Percepción del uso como futuros docentes

Uso del móvil para	Nada	Poco	Bastante	Mucho
Estudiar	21(4,3 %)	130 (26,8%)	222 (45,5%)	114(23,4 %)
Preparar materias	17(3,5%)	131(26,8%)	236(48,4 %)	101(27,7 %)
Mejora del rendimiento escolar	69(14,1%)	190(38,9%)	177(36,3%)	48(9,8%)
Abarcar más contenidos	30(6,1%)	117(24%)	239(49%)	99(20,3 %)
Aumentar el interés por aprender	23(4,7%)	99(20,3%)	205(42,3 %)	158(32,4 %)

Fuente: elaboración propia.

Como futuros docentes, el 45,5% del alumnado considera bastante útil el uso para *estudiar*, frente al 4,3% que lo considera nada. Algo similar ocurre con la *preparación de las materias*, 48,4% lo valora bastante útil, frente al 3,5% que lo valora como nada útil. Atendiendo a la mejora del rendimiento escolar destaca que el 36,3% lo considera un elemento bastante útil frente al 24% que lo considera poco. Por último destaca que estos dispositivos son considerados por 42,3% del alumnado un elemento que ayuda a *aumentar el interés por aprender*. De manera general se aprecia una tendencia al alza en la percepción del uso del móvil para tareas como estudiar, preparara materias y aumentar el interés por aprender, por el contrario se produce una tendencia a la baja en la percepción sobre las tareas relacionadas con la mejora del rendimiento escolar y la de ocupar más contenidos.

4. CONCLUSIONES

Atendiendo al objetivo principal de este trabajo, se puede concluir que respecto a la pertenencia de dispositivos más del 50% del alumnado afirma que tiene o ha tenido en los últimos años dispositivos móviles, coincidiendo así con los datos aportados por Mora (2013).

En relación con las principales actividades que el alumnado realiza con sus dispositivos, destacan la revisión de información, pues un 40,5% afirma utilizarlo bastante. Vinculado al deseo que tiene el alumnado por usar el móvil como recurso para el aprendizaje en sus clases, el 71,3% del alumnado afirma que le gustaría que si se emplease. Estos resultados ayudan a constatar algunas investigaciones previas que resaltaban la motivación intrínseca que sienten los estudiantes con respecto al uso de la tecnología con carácter didáctico (Pedrana, 2015). Los principales argumentos a favor que expresa el alumnado sobre el uso del móvil, giran principalmente en torno a la accesibilidad y la comodidad que tiene para ellos mismos. Por el contrario, el propio alumnado lo considera también un elemento de distracción o demasiado pequeño para las actividades académicas, destacando la preferencia por otros dispositivos como el ordenador portátil.

De manera general, en relación con el uso que el alumnado hace de sus dispositivos para tareas académicas destaca una tendencia al alza de actividades relacionadas con la ampliación de información, en contraposición a una tendencia a la baja de actividades como revisar información y preparar exámenes, siendo esta tendencia aún más baja en actividades relacionadas con la preparación y el seguimiento de las clases. Por el contrario, cuando se le pregunta sobre su valoración para su futura actividad docente se aprecia una tendencia al alza en la percepción del uso del móvil para tareas como estudiar, preparara materias y aumentar el interés por aprender, presentando una tendencia a la baja en la percepción sobre las tareas relacionadas con la mejora del rendimiento escolar.

Los datos obtenidos muestran en este trabajo muestran una panorámica muy interesante sobre el uso de los móviles en el ámbito de la educación superior. A pesar de que los estudiantes valoran su integración positivamente, los datos aportados presentan ciertas diferencias entre su percepción y uso actual como estudiantes, y su percepción como futuros docentes. Estudios como el aquí presentado ponen de relevancia el papel del docente, pues este debería propiciar el uso de estas herramientas, pero para ello es necesaria su formación continua sobre la inclusión y uso del *m-learning* (Lagos, 2018). Sobre esta cuestión, vinculado al deseo que tiene el alumnado por usar el móvil como recurso para el aprendizaje en sus clases, el 71,3% del alumnado afirma que le gustaría que si se emplease, frente 28,7% que considera que no le gustaría.

Una de las limitaciones de este trabajo es la configuración de la muestra, pues todos los participantes pertenecen a la misma universidad, pero este hecho también da lugar a nuevas vías de investigación, pues una posible vía futura de investigación podría ser el aumento de la muestra. Así aplicar este estudio a otras universidades o

a otras titulaciones que no están relacionadas con el campo de la educación permitiría realizar un análisis comparativo.

Es importante no confundir el *m-learning* con la mera digitalización de las aulas. Las experiencias que se han realizado hasta ahora, en relación con el *m-learning*, reflejan casos particulares, y muchas veces el profesorado tiene dificultades para formarse o para poner en práctica estas iniciativas. No se debe olvidar el desafío constante que se le presenta al docente ante la incorporación de los recursos *m-learning*, no diseñados inicialmente para el aprendizaje (Fombona & Pascual, 2013).

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8.

THE MEMORY REMAINS

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Abstract

Children's literature can become a vehicle for cultural transmission that allows children to discover cultures and societies distant in time and space, while exploring their own cultural heritage. In a broad perspective, through diversified strategies, the English classroom can also be the stage for the discovery of shared memories, the construction of identity and a profile of citizenship. Seeking to consolidate a foundation based on a growing sense of belonging, the English teachers might also be able to lead their students to discover the "Other", to question and debate the cultural heritage common to Humanity.

As Sandis (2014, web) says, "The acknowledgment of heritage forms part of the ethics of remembering, and it is important to remember both the good and the bad, atrocities as well as achievements."

With the present work, we seek to establish a bridge between reflection and theoretical knowledge and practice in the classroom, sharing structuring concepts, questions, ideas, resources and strategies in order to promote the use of literature for children in the context of approaching themes related to the cultural heritage of our young learners.

Keywords: Children's literature, Cultural Heritage, English, Young learners.

Resumo

A literatura para a infância poderá funcionar como um veículo de transmissão cultural que permite às crianças descobrir culturas e sociedades distantes no tempo e no espaço, ao mesmo tempo que exploram a sua própria herança cultural. Num olhar amplo, através de estratégias diversificadas, a sala de aula de Inglês pode ser também palco da descoberta de memórias comuns, da construção da identidade e de um perfil de cidadania. Procurando consolidar uma fundação assente numa crescente noção de pertença, o professor de Inglês poderá também levar os seus alunos à descoberta do “Outro”, à questionação e debate acerca do património cultural comum à Humanidade.

Como refere Sandis (2014, web), the acknowledgment of heritage forms part of the ethics of remembering, and it is important to remember both the good and the bad, atrocities as well as achievements.”

Com o presente trabalho, procuramos estabelecer uma ponte entre a reflexão e fundamentação teórica e a prática em sala de aula, partilhando conceitos estruturantes, questões, ideias, recursos e estratégias para a promoção do uso da literatura para a infância no contexto da abordagem de temas relacionados com a herança cultural dos nossos jovens alunos.

Palavras-chave: Literatura para a infância, Herança cultural, Inglês, Jovens aprendentes.

1. INTRODUCTION

The symbiosis between cultural heritage, the evolution of social ethics and the role of teachers as educational agents lies in the core of the proposal that we hereby present for reflection and debate, since we consider that the practice that takes place in English as a Foreign Language classes, especially in the work carried out with young learners, must be one filled with intentionality and meaning.

We argue that children’s literature can become a powerful ally to all of those who wish to teach under such a perspective, not underestimating it by merely placing it under the Horatian perspective of delighting and teaching, as customary as Juan Mata (2014, p. 107) points out but allowing it to become a true vehicle of critical thinking, questioning and intercultural dialogue. We believe this can be done if a certain number of challenging but also age-appropriate strategies and resources are included in the lessons. Cultural Heritage will accompany this practice as children will be “learning from books a strange data-rich out-of-date version of what it means to be human”. (Solnit, 2018, p. 37)

2. THEORETICAL SECTION

Acknowledging the difficulties of dealing at once with ethical and sociocultural concepts, we too, as Solnit (2018), recognize the role of children's literature as refuge, a site and source of solace, and a shield, but also as a ship, a bridge, a pathway. Herein lies its fundamental complexity when used in the classroom: whilst wanting to shield our students from harm and reinforce those which we take to be *positive* values, we are also aware that said ascription stems from choice, rather than any ontological essence. In addition, even while owning our ethical decisions, we will still seek out literature's potential to expose vicariously and, thus, require its imperfections. When furthering our students' potential for critical thinking, we will even use literature's license to interpret and allow for debate and duality. For that, we are particularly attuned with Mata Anaya's rejection of the (ab)use of children's literature (and overall literature) used as either vitamins or viruses (cf. Mata, 2014), something external to be inoculated. Whether perceived as strategically aimed content designed to make the reader stronger and more resilient to the world (vitamin), or as a potential hazard (virus) to be repressed or, if given under controlled exposure, to be used as a means of future protection (vaccine), literature can, indeed, become instrumental in education, and thus deprived of its empowering and liberating potential.

In an educational setting, there is exponential increment to the position of power which is part of the *Aetonormativity* that authors like Nikolajeva (2009, p. 13) refer to: "children's literature is a unique art and communication form, deliberately created by those in power for the powerless". When teaching, we add ourselves as interpreters to the list of adults controlling the text: authors, illustrators, publishers, and even educational experts listing recommended reading. If the text is itself considered, or deals with, heritage, more questions will arise, including our sense of authority to pick and choose, and a sense of historical responsibility. However, we cannot leave that position of power, and may even want to use it as a benefit to our students. Our deepest challenge, then, is how to use these materials and bring about ethical questioning in a responsible, trauma-free way that is not a mere vehicle for established truths and shared ideological heritage.

A look at some of the traditions brought into the classroom and perceived as innocuous shows how embedded our sense of both ownership and liability is when addressing those materials and references in an educational context. A good example is how widespread the use of Halloween is in English Language Teaching

(ELT) worldwide and how rarely (if ever) one encounters activities around it that deal with death, mourning, or begging, or even bargaining and threatening – Halloween’s core elements hidden beneath the PG-rated, post-1920 version of the festivities. The sheer fact that we define such elements as non-PG-rated involves an act of choice and of decision-making, however unanimous. Such decisions are influenced by chosen values, but also by shared historical periods. We are, after all, time embedded (even in not determined) creatures. When using Easter in the classroom few would consider self-scourging as an interesting tradition to share, but yearly celebrations in the Philippines prove that it cannot be considered an outdated habit or a lost and abandoned heritage. And yet we choose to reject it.

Educational purposes and intentions are not enough for us to include into the traditions and values to share customs such as the centenary use of the scold’s bridle and its corrective intent to normalize accepted behaviour. Yet, we often embrace redacted, cleansed versions of rites absorbed into meaningless ritual. Podence’s world heritage Caretos in Portugal is one such case where the festive overrides the debatable and ignores the sexist undercurrent of the event and its underlying male initiation and female corrective intents, as fully displayed in the World Heritage official website <https://www.caretosdepodence.pt/ritual>.

Identity is never neutral, nor inherent, and neither is heritage, as explained by Amartya Sen:

The neglect of the plurality of our affiliations and of the need for choice and reasoning obscures the world in which we live. (...) A sense of identity can be a source not merely of pride and joy, but also of strength and confidence. It is not surprising that the idea of identity receives such widespread admiration, from popular advocacy of loving your neighbour to high theories of social capital and of communitarian self-definition.

And yet identity can also kill—and kill with abandon. A strong—and exclusive—sense of belonging to one group can in many cases carry with it the perception of distance and divergence from other groups. Within-group solidarity can help to feed between-group discord. We may suddenly be informed that we are not just Rwandans but specifically Hutus (“we hate Tutsis”), or that we are not really mere Yugoslavs but actually Serbs (“we absolutely don’t like Muslims”) (Sen, 2006, pp. 1-2).

It must be, thus, recognizing our power in defining our own role and the limitations to it that we must strive to generate our own discomfort, resorting to Zembylas and Boler’s (2002, web) fortunate expression:

We argue that a pedagogy of discomfort, unlike critical media literacy, offers direction for emancipatory education through its recognition that effective analysis of ideology requires not only rational inquiry and dialogue but also excavation of the emotional investments that underlie any ideological commitment such as patriotism. A pedagogy of discomfort invites students to leave behind learned beliefs and habits, and enter the risky areas of contradictory and ambiguous ethical and moral differences.

That is only possible where there is freedom, and it is in embracing and promoting that freedom that we may use heritage, tradition, and identity for truly educational purposes: "All liberal democracies face a tension between fostering citizenship and a degree of social cohesion, and fostering critical thinking skills and allowing dissent" (Merry, 2009, p. 378)

3. METHODOLOGY

The topics that we bring to discussion arise from our experience both as teachers and as trainee teachers' supervisors as it leads us to continuously question the classroom practice and debate the roles of all educational agents, adopting a culturally sustaining pedagogy. Finding our own voices as teachers is not always an easy thing to do, especially when one feels that society expects teachers to tone down or even mute their own perspectives, to remain neutral, while, at the same time, asks them to make room for the voices of the children, the families, the voices of heritage.

One is often faced with the dilemma of embracing continuity or breakthrough, catering for the perpetuation of cultural heritage or promoting societal transformation, empowering collective or social identity or individual beliefs and attitudes.

As previously stated, children's literature can help us regain a sense of balance between these entities, namely when teachers select a set of books and strategies that truly promote dialogue, discovery, empathy and critical thinking. As Ward and Warren (2019, web) pointed out, "when selecting texts, we should ask ourselves two questions: Is this text educative, engaging, and appropriate? Who is it appropriate for, and who is telling the story?"

We invite you to get to know three examples of children's books that focus on some of our societal and cultural failures such as war, the constraints refugees are forced to face or even climate issues.

We argue that these books may provide students with memorable experiences that will “ensure deep learning, critical thinking, and engaged participation” (Ward and Warren, 2020), allowing them to create stronger bonds within the rope that binds us all together as human beings.

The first book is *Welcome*, by Barroux (2016). It offers us the opportunity to discuss themes such as cultural representations or the situation of migrants and refugees with young children, as we see Polar Bear and his friends being swept away from their home and trying to find refuge in a new land.

In order to help our students to develop a broader understanding of an inclusive society we need to let them see what they might not have noticed before. These moments encourage readers to pause and reflect on their own cultural heritage, by focusing on the representation of characters, setting, and events in the books they read. They can compare, contrast, and develop a connection to their own culture, while taking a deeper look at the representation of others.

Some of the practical proposals for students and teachers alike that we would like to share are:

- Find out what the words ‘refugee’, ‘immigrant’ and ‘migrant’ mean.
- Discuss whether these words describe the polar bears in the story.
- Discuss how each group of animals in the story exhibits commonly held beliefs and attitudes regarding people seeking refuge and debate opposing viewpoints.
- Discuss what one can do to be more welcoming.
- Write a welcome guide for someone moving to one’s country/city/school.

The second book that we would like to mention is Kate Milner’s *My name is not refugee* (2017), as the story poses age-appropriate questions addressed to the children reading the book and invites us to think about what would it feel like to leave behind everything that one knows and loves.

Suddenly, a mother tells her young son that they must say goodbye to their friends, leave their home and walk a very long way. Along the journey the little boy sees new things, hears different languages he cannot understand, everything around him is new. The places where he sleeps change and so does the food. All the cultural references this boy is familiar with are suddenly far away from him. The bond between cultural heritage and personal identity can be discussed, particularly if one pays special attention to the book’s name itself. There are also other activities that teachers and students can try in the English classroom:

- Write the word ‘Refugee’ on the board. Ask who refugees are today and where are they.
- Ask students why they think the boy’s mother told him his name is not refugee.

- Ask the children what they would feel if this happened to them, using examples from the book of the stages of the journey.
- Introduce the idea of forced movements of people whether economically motivated or due to conflict.
- Ask students to consider what it must be like to find yourself in a new place where you cannot understand what is happening.
- Ask children to suggest what people around refugees in new countries should do to help.
- Create a joyful piece of artwork using students' names.

The third book we bring to you is Nicola Davis' *The Day the war came* (2016). In 2016, this book and a subsequent Twitter campaign resonated with British people concerned about the UK government's decision of not taking in 3,000 unaccompanied Syrian children. People began drawing, painting, knitting, etc, empty chairs to symbolise the extreme hardships that those children were enduring.

According to Dawn O'Porter, co-founder of Help Refugees, "The Day War Came reminds us of the intimate human impact of the refugee crisis on children. This story of loss, solidarity, and hope suggests how we can each make a difference in the lives of the most vulnerable among us" (<https://authorfy.com/masterclasses/nicoladavies/>).

The methodological approach to this book might include some of the following activities:

- Compare and contrast the images of the little girl at home and at school with the image from the title page.
- Ask the children to think about whether they think this comes before or after the image on the title page. What tells them this?
- Explore what aspects of the illustrations indicate a sense of routine, stability and normality, belonging...
- Consider the colour choices in the image as and reflect on how this makes the class feel. What sense does this give your students as readers? How do they feel looking at these images? Are they worried about what might happen to these characters? Why?
- Ask students about the inscription at the beginning of the book "To children who are lost and alone". What does it mean to feel lost and alone? What can cause such feelings?
- Remove the teacher's chair from the classroom and ask students to give him/her one of theirs. They must ignore this request. Ask them about what that makes the teacher feel. Why is it important for everyone to have a chair in the classroom?

It can be difficult to know how to bring such issues into the classroom in an appropriate way for school aged children, but this methodological approach, based on critical questioning, thinking and speaking skills might help teachers and educators to explore ways to teach their learners about complex topics in a classroom or group setting.

By following it, one can create a safe space for children and young people to ask questions and discuss, with a focus on protecting their wellbeing and offering a balanced view on complex situations.

4. CONCLUSIONS

Focusing on the intangible aspects of culture that are part of our cultural heritage (such as values, traditions, language, and knowledge) we invite teachers and educators to let an ethical perspective shine on their lessons. Education for peace, for resilience, for understanding and empathy can only take place if we feel willing to embrace the challenges, if we truly understand that “the acknowledgment of heritage forms part of the ethics of remembering, and it is important to remember both the good and the bad, atrocities as well as achievements.” (Sandis, 2014, p. 13).

Thus, the memory will remain.

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9.

A ARTE AO SERVIÇO DA FÉ: UMA PEDAGOGIA CATEQUÉTICA

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Abstract

Culture, Arts and Heritage in Education are the reason why we chose to present this conference, specifically addressing the themes of religion and art. On the one hand, because we think that both have always walked hand in hand, despite some less happy and more troubled periods and, on the other hand, because art has always served the purposes of the Church, and therefore, since the beginnings of Christianity, a pedagogical and catechetical aspect. However, we do not intend to encompass so many centuries of history, but only to focus on a time, a man and his work, Dom Frei Feliciano de Nossa Senhora, bishop of Lamego in the 18th century and to whom many of the great and wonderful works that the city and the bishopric can attest to today. A cultured man, aware of the vital role of art in the education of believers and aware of all the news that then appeared on the international and national scene, it is to him those countless artists came to Lamego and the introduction of a new aesthetic in the diocese, the rococo, evidenced, above all, in the numerous altarpieces in gilded carving that are scattered throughout the bishopric.

It is important not to forget the relevance of this cultural heritage and the way in which it must be preserved, protected, and disseminated. Unfortunately, all over the country, we still find serious gaps in this area of safeguarding. Heritage education emerges as a fundamental tool in its understanding, study, protection, and dissemination.

Keywords: Diocese, Lamego, Altarpiece, Rococo, Gilded carving.

Resumo

A Cultura, as Artes e o Património na Educação são o motivo pelo qual optamos por apresentar esta conferência, abordando especificamente os temas da religião e da arte. Por um lado, por acharmos que ambas sempre caminharam de mãos dadas, apesar de alguns períodos menos felizes e mais conturbados e, por outro lado, porque a arte sempre serviu os propósitos da Igreja, tendo, por isso, desde os primórdios do cristianismo, uma vertente pedagógica e catequética. Não pretendemos, contudo, abarcar tantos séculos de história, mas apenas focarmo-nos numa época, num homem e na sua obra, Dom Frei Feliciano de Nossa Senhora, bispo de Lamego no século XVIII e ao qual se devem muitas das grandes e maravilhosas obras que a cidade e o bispado ainda hoje podem atestar. Homem culto, consciente do papel vital da arte na educação dos crentes e a par de todas as novidades que então surgiam no panorama internacional e nacional, a ele se deve a vinda para Lamego de inúmeros artistas e a introdução de uma nova estética na diocese, o rococó, evidenciado, sobretudo, nos inúmeros retábulos em talha dourada que existem dispersos por todo o bispado.

É importante não esquecermos a relevância deste património cultural e a forma como ele deve ser preservado, protegido e divulgado. Infelizmente, um pouco por todo o lado, ainda encontramos graves lacunas nesta área da salvaguarda. A educação patrimonial surge como uma ferramenta fundamental na sua compreensão, estudo, proteção e divulgação.

Palavras-chave: Diocese, Lamego, Retábulo, Rococó, Talha dourada.

1. INTRODUÇÃO

A partir dos finais da primeira metade do século XVIII, em plena época de D. João V, surge em Portugal uma nova estética: o rococó. Identificando-se quase na totalidade com o reinado de D. José I e estendendo-se até ao final do século XVIII, já sob a governação de D. Maria I, o novo estilo assume um papel significativo na diocese de Lamego, impondo aos interiores sacros uma nova interpretação e dinâmica.

Não negando, jamais, a sua existência como estilo autónomo do barroco, o rococó ocupa, sem margem para dúvida, um lugar de destaque na arte portuguesa, quadro este que se reflete na diocese de Lamego, sufragânea da Arquidiocese de Braga.

Na segunda metade do século XVIII, a diocese lamecense assiste a um novo surto de talha dourada e policromada. Os espaços sacros enchem-se desta nova estética, de gosto mais refinado e requintado, cujas influências francesa e alemã se fazem sentir, fruto da circulação de estampas e gravuras. Atingindo uma nova graciosidade e delicadeza, a talha rococó espalha-se por toda a diocese, irradiando da cidade de Lamego para todos os cantos do bispado.

2. OS ARTISTAS DE BRAGA AO SERVIÇO DA DIOCESE LAMECENSE E A LINGUAGEM ROCOCÓ

Quando, em 1743, o bispo Dom Frei Feliciano de Nossa Senhora toma posse da cátedra lamecense, dá início a uma enérgica campanha de reconstrução de templos na cidade e fora dela. Sem descuidar a sua casa, a catedral, torna-se o principal responsável pelas obras de reedificação da Sé, iniciadas em período de Sede Vacante e concluídas no seu governo, não se poupando a esforços no sentido de enaltecer a sua igreja e, para isso, mandando chamar os mais conceituados artistas que trabalhavam na área da talha.

Fazendo-se valer das suas mais sugestivas investidas, Dom Frei Feliciano chama para a renovação da sua casa, a partir de 1756, um dos mais brilhantes arquitetos da época, André Soares, bracarense, a quem encomenda, julga-se, a traça ou risco do retábulo da sacristia e dos dois grandes retábulos do transepto da Sé, determinante na entrada desta nova estética na diocese.

Duzentos e cinquenta e três anos após a sua morte seria, certamente, imperdoável não abordar este personagem, a sua obra e a influência que exerceu, direta ou indiretamente, na diocese de Lamego, concretamente, no que concerne à sede do bispado para onde teria sido chamado. Personagem incontornável do panorama artístico português, o seu nome encontra-se para sempre ligado à sua cidade, Braga, e às inúmeras obras que lá deixou, cenário que se repete pela região do Alto Minho e que atesta a sua qualidade artística, não só na área da arquitetura, mas também nos muitos riscos que elaborou para a talha dourada. A sua estética, o rococó, é indissociável da época em que surge.

Em pleno período de desenvolvimento do rococó que teve a sua maior expressão em Braga, mais do que em qualquer outro edifício, a catedral lamecense como centro da vida diocesana regista, nesta época, a maior concentração de artistas oriundos da região do Entre-Douro-e-Minho que se inicia entre 1756-58 com o arquiteto André

Soares e os riscos (atribuição) do retábulo da sacristia (Figura 1) e dos dois do transepto (Figura 2) a que se juntaram, entre outros (Queirós, 2014, pp. 86–88), os entalhadores vimaranenses João Correia Monteiro e Timóteo Correia Monteiro, pai e filho, responsáveis pela execução destes riscos entre 1757–59.

A par de André Soares e na década seguinte, a influência de Frei José de Santo António Ferreira Vilaça, bracarense e residente à época no Mosteiro beneditino de São Martinho de Tibães, é indiscutível. Após assinar o risco do retábulo-mor da Igreja do Santuário de Nossa Senhora dos Remédios, em 1764 (Figura 3), o monge beneditino, pelas mãos do entalhador bracarense Luís Manuel da Silva, espalha a sua linguagem pela diocese de Lamego, sendo atribuídos aos mesmos a conceção do risco e a execução dos retábulos colaterais do mesmo santuário. São inúmeras as estruturas rococós por toda a diocese onde a linguagem ornamental de Frei Vilaça está presente.

Já João Correia Monteiro, mestre conceituado em várias artes (Queirós, 2012, p. XL), teria chegado à diocese de Lamego por volta de 1744, ano a partir do qual a sua atividade está documentada até 1778. Por aqui ficou e estabeleceu uma oficina a funcionar na sua quinta de Ferreirim, perto de Lamego. A partir de 1752 já tinha aprendizes (Queirós, 2014, p. 86) que se deslocavam à sua oficina, vindos da área de residência do mestre entalhador para aprender com ele a sua arte. Embora as suas primeiras obras sejam de traça joanina, o que é certo é que na segunda metade de setecentos, o mesmo mestre vai executar retábulos e outras obras que se enquadram dentro do espírito e estética rococós, tanto na cidade de Lamego como em outras paróquias à volta, nomeadamente, Cambres (Figura 4) e Castro Daire. Com ele trabalhavam os dois filhos, Timóteo Correia Monteiro (Queirós, 2014, p. XLII) e Manuel Correia Monteiro (Queirós, 2014, XLI).

A variedade de estilos regionais que podemos observar no rococó português, permite-nos dizer, tal como já tinha sido observado por Robert Smith que, mais do que em qualquer época, estes regionalismos acabaram por criar "profundas diferenças estilísticas dentro de cada uma das regiões" (Smith, 1963, p. 129). Ora, é o que constatamos na diocese de Lamego, onde estas diferenças se fizeram sentir, muito dependendo da proximidade ou afastamento da sede do bispado e de outros bispados.

Figura 1

Lamego. Igreja de Nossa Senhora da Assunção (Catedral), Sé. Retábulo da sacristia



Nota: Autoria própria.

Figura 2

Lamego. Igreja de Nossa Senhora da Assunção (Catedral), Sé. Retábulo do transepto do lado do Evangelho



Nota: Autoria própria.

Figura 3

Lamego. Igreja do Santuário de Nossa Senhora dos Remédios. Retábulo-mor



Nota: Autoria própria.

Figura 4

Lamego. Igreja de São Martinho, Cambres. Retábulo-mor



Nota: Autoria própria.

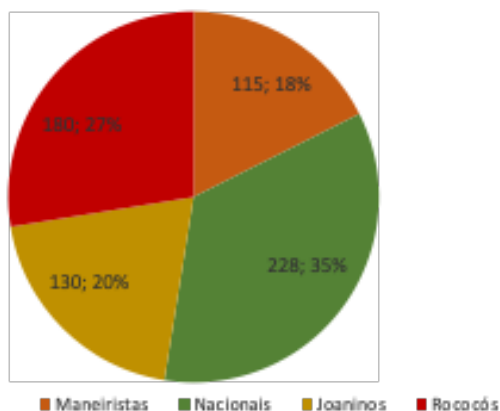
3. DE CINFÃES A VILA NOVA DE FOZ CÔA

Definidas as fronteiras após vicissitudes várias (Queirós, 2014, pp. 21–23), a diocese de Lamego conta, atualmente, com duzentas e vinte e três paróquias distribuídas por catorze arceprestados.

Para entendermos a importância do rococó na diocese de Lamego, teremos de olhar para o gráfico que se segue:

Gráfico 1

Retábulos na diocese de Lamego



Nota: Autoria própria.

Na contagem total de retábulos da diocese somente tivemos em conta aqueles que se encontram nas igrejas paroquiais, o que não nos permite avançar com uma visão global e totalizante, já que as capelas públicas e privadas não foram contabilizadas, constituindo estas uma parte considerável do património edificado do bispado, assim como os conventos e mosteiros que ainda possuem, alguns, belíssimos espécimes retabulares de épocas distintas como é o caso daqueles que se situam dentro da cidade de Lamego. Da totalidade das estruturas retabulares presentes na diocese, aquelas que se enquadram no estilo rococó ocupam o segundo lugar, logo atrás do estilo nacional. No que concerne à distribuição do rococó nos espaços sacros, podemos aferir que este estilo se encontra presente nos distintos retábulos,

desde a capela-mor aos retábulos colaterais, laterais e também aos retábulos de sacristia (Queirós, 2014, p. 29-31).

Constatámos, porém, que é no arciprestado de Lamego que se verifica o maior número de retábulos rococós, sem contar com aqueles dos conventos, mosteiros e capelas da cidade sede do bispado, o que faria crescer este número.

Do apuramento global dos retábulos aferimos que os da capela-mor ocupam o terceiro lugar, com vinte e três exemplares, sendo no arciprestado de Lamego onde se regista maior número, metade.

Quanto aos arciprestados que fazem parte da região oriental do bispado (Queirós, 2014, p. 34), a que compreende o maior número de circunscrições eclesiásticas – Armamar, Méda, Moimenta da Beira, Penedono, São João da Pesqueira, Sernancelhe, Tabuaço e Vila Nova de Foz Côa – os exemplares rococós aqui detetados são poucos, não refletindo a existência de qualquer escola ou tendência inovadora imposta pela nova estética.

A região a sul do arciprestado de Lamego que compreende apenas duas circunscrições eclesiásticas, Tarouca e Vila Nova de Paiva, embora sendo a mais pequena, o panorama segue a região oriental.

Já no que concerne aos arciprestados da região ocidental, Cinfães, Resende e Castro Daire, o primeiro, o mais ocidental da diocese, depois de desanexados os de Arouca e Castelo de Paiva ainda no final do terceiro quartel do século XVIII, para além de ser um dos que mais modificações registou nos seus retábulos é, tal como o de Lamego, o que revela a maior quantidade de estruturas rococós.

A maior proximidade à diocese do Porto e às grandes vias de comunicação, os rios Douro e Paiva que facilitavam a circulação de artistas, bem como à cidade de Lamego onde ainda decorriam as obras de renovação da catedral, foi decisiva no desabrochar do rococó nesta região, justificada, estamos em crer, pela ação direta de artistas portuenses e bracarenses, e por meio da observação direta do que se fazia nos arciprestados de Arouca e Castelo de Paiva, desmembrados da diocese de Lamego, em 1770.

4. A ESTRUTURA E A DECORAÇÃO ROCAILLE

Distinguindo-se da cenografia, teatralidade e exuberância do estilo joanino, de influência italiana, o rococó impõe-se pelas assimetrias, remates sinuosos, formas chamejantes que parecem labaredas e ornatos requintados que caracterizam todas as superfícies ondulantes e orgânicas.

A talha rocaille faz da concha o seu emblema, mas não procura uma cópia fiel do real, preferindo antes uma concha orgânica, viva, assimétrica que se adapta a todas as superfícies e materiais, de grande plasticidade, conjugada com outros motivos decorativos retirados da natureza, entre os quais assumem especial importância as folhas de acanto, as grinaldas e as rosas, acabando por gerar um ambiente naturalista, repleto de graciosidade, com um certo toque de feminilidade, onde se vislumbram curvas e contracurvas.

Já em 1953, na sua obra *Morphologie du retable portugais*, Germain Bazin dizia que "Sauf dans le Minho-Douro, l'ornement rocaille tend à perdre son relief et se greffe en surface" (p. 24).

Foi, de facto, na região minhota, concretamente em Braga, que o concheado característico deste período mais se desenvolveu, onde encontramos as soluções mais originais e exuberantes que caracterizam a talha do norte do país. Aqui, mais do que em qualquer outro local, o movimento, a turgidez das formas e a ondulação das linhas atingiu uma plasticidade imensa, tendo sido apelidada de talha «gorda». Se esta talha bracarense foi determinante na conceção de muitas estruturas retabulares disseminadas por todo o país e nas colónias, sobretudo, no Brasil, pela migração contínua que se fez sentir dos seus artistas à procura de novas condições de vida e novas encomendas, também em Lamego esta influência e presença bracarense e minhota é evidente em várias épocas e, sobretudo, no que toca à talha rococó presente nos três retábulos da Igreja do Santuário de Nossa Senhora dos Remédios e na quase totalidade dos retábulos da catedral lamecense (braços do transepto, colaterais, Capela do Santíssimo Sacramento, laterais e no retábulo da sacristia). Assumindo uma importância vital, a ornamentação rococó acabou por relegar para um plano secundário e até excluir a imaginária e os relevos figurativos de todas as composições. É a concha o ornato principal, adaptando-se a todas as superfícies. Nada mais importa.

Normalmente, estes retábulos apresentam uma planta da estrutura marcada pela convexidade e decoração espalmada, exibindo colunas de fuste liso decoradas com enrolamentos de flores e conchas em espiral, com pintura a imitar o mármore que não existia no norte do país. O trono eucarístico desaparece ou encontra-se disfarçado por detrás de uma pintura, só descoberto em ocasiões especiais.

A diversidade de exemplares rococós que existem no bispado de Lamego, permite-nos organizá-los em diferentes tipologias consoante as plantas da estrutura e da tribuna no que toca aos retábulos-mores, e a planta da estrutura no referente aos restantes retábulos (colaterais, laterais e de sacristia), mas também nos mostra como é que este estilo se impôs de forma determinante na diocese.

À semelhança do que acontece um pouco por todo o país, os retábulos rococós que se encontram espalhados pela diocese de Lamego exibem estruturas de planta convexa, a mais utilizada, à qual se associam as linhas ondulantes e a turgidez das formas, tão típicas da talha 'gorda' rococó bracarense adotada por André Soares e pelo seu grande seguidor, Frei José Vilaça, particularidades estas a que se junta a decoração das estruturas, onde se tornam evidentes as influências que se fizeram sentir das estampas e gravuras francesas e alemãs, e que conferem leveza e graciosidade a estes retábulos. A gramática decorativa 'rocaille' é uma constante: formas chamejantes, assimétricas, de ornatos requintados e de remates de grande flexibilidade, orgânicos, invadem as estruturas entalhadas a partir da segunda metade do século XVIII. Estas gravuras e estampas foram, certamente, a inspiração de muitos artistas que a elas recorreram para a realização das suas obras, como é o caso do típico medalhão circular ou óculo, formado por duas volutas afrontadas, que remata uma grande parte dos retábulos da segunda fase de Frei José de Santo António Ferreira Vilaça, já utilizado nos retábulos colaterais da Igreja do Santuário de Nossa Senhora dos Remédios, em Lamego, e que podemos constatar em outros locais da diocese, certamente por influência destes.

Uma cuidada análise estrutural e decorativa dos retábulos lamecenses (Queirós, 2014, p. 151), permite-nos verificar que a grande maioria dos remates cumpre um gosto uniformizado, representativo e divulgado em muitas das estruturas da capital do chamado estilo pombalino, de influência italiana, sobretudo, em Borromini, também utilizados por André Soares e Frei José Vilaça e visível no emprego generalizado de segmentos de frontões dispostos de forma convexa e na sobreposição de frontões triangulares e curvos. Na maioria das estruturas, o remate é coroado por uma concha flamejante. Verificámos, ainda, que em alguns retábulos já há uma tendência para o despontar do neoclassicismo, onde a decoração é quase nula, o que nos permite uma leitura menos ritmada e movimentada dos áticos que se caracterizam unicamente pela sobreposição dos frontões e pela introdução de anjos que se encontram tranquilamente sentados em concheados. Não podemos, porém, deixar de salientar a presença do resplendor em grande parte das estruturas retabulares da diocese de Lamego, característica presente em quase toda a região diocesana.

Relativamente aos troncos, componente estrutural de grande impacto visual, possuem uma planta retangular chanfrada, exibindo um traçado linear, cuja decoração nos mostra quer motivos vegetalistas, dispostos em forma ascendente ou descendente, quer naturalistas que permitem definir os perfis lineares. Recorrem à ornamentação dos concheados serpentiformes e flamejantes, enrolados em volutas e folhagem túrgida e estilizada que preenchem, na totalidade, os degraus,

sendo esta decoração a responsável por todo o movimento, ondulação e assimetria que nos evidenciam.

Já os sacrários, de configuração plana, por norma encontram-se integrados na banqueta, constituindo uma unidade só e, em regra, adotam a decoração da estrutura em que estão inseridos, exibindo sempre a típica decoração de concheados flamejantes, volutas entrelaçadas ou cortadas por agrafes e rematados por frontões curvos e triangulares coroados por enrolamentos de folhagem que envolvem pequenas conchas, cuja principal diferença entre eles reside na maior ou menor flexibilidade dos ornatos.

No que concerne aos elementos de suporte, as colunas, verificámos estruturas retabulares que possuem colunas torsas decoradas com grinaldas, características da talha joanina, embora em número pouco expressivo se comparadas com a maioria dos retábulos da diocese de Lamego que apresenta colunas de fuste liso e com pintura a imitar o marmoreado, cuja decoração exhibe enrolamentos de flores, folhas e conchas, ornatos verticais de concheados e flores e cartelas formadas por concheados, grinaldas e festões.

Por último, e quase sempre adotando com a mesma forma, destacamos as peanhas cujo vértice surge ligeiramente inclinado, acentuado pela plasticidade dos concheados ondulantes, vieiras, volutas e folhas de acanto que se adaptam à estrutura.

Todos estes retábulos evidenciam afinidades com os primeiros concebidos para a Sé de Lamego, assim como com aqueles que foram desenhados para a igreja do santuário mariano da cidade.

As reformas frequentes a que estiveram sujeitas as casas conventuais e monásticas durante todo o século XVIII também foram determinantes na aceitação desta nova linguagem, encomendando aos artistas mais conceituados desta praça e de outras, certamente, as suas obras. Não é de admirar, portanto, a grande concentração de retábulos rococós nos arceprestados de Lamego e Tarouca, nomeadamente, na Igreja e Mosteiro das Chagas (Lamego), na Igreja do Convento de Santa Cruz (Lamego) e na Igreja do Mosteiro de Santa Maria de Salzedas (Tarouca) que foram alvo desta renovação estética, a partir dos meados da centúria de setecentos.

Quanto aos retábulos-mores pela sua exuberância destacamos o da matriz de São Cristóvão de Nogueira, em Cinfães (Fig. 5), o da matriz de Cabril, em Castro Daire (Fig. 6) e o da matriz de Penude, em Lamego (Fig. 7).

Em grande número no que concerne às estruturas retabulares colaterais (oitenta e dois), a região com maior concentração é a oriental, seguida da ocidental, do

arciprestado de Lamego e, finalmente, da região sul. Destacamos os retábulos da matriz de Rabaçal, em Mêda (Fig. 8) e os da matriz de Vilarouco, em São João da Pesqueira (Fig. 9).

No que toca aos retábulos laterais, a maior parte localiza-se na região oriental do bispado (vinte e três dos setenta e um apurados em toda a diocese), também por esta ser a zona onde se concentra o maior número de arciprestados, seguida das regiões ocidental (dezasseis), sul (dezasseis) e arciprestado de Lamego (dezasseis). Se atentarmos à distribuição de exemplares por região, atendendo ao número de arciprestados, então é a região sul a que lidera, apenas com dois arciprestados, sendo que destes, dez exemplares localizam-se na Igreja do Mosteiro de Santa Maria de Salzedas, em Tarouca, que atualmente funciona como paroquial de Salzedas (Fig. 10). Entre muitos outros, destacamos o retábulo da matriz de Cimbres, em Armamar (Fig. 11) que pertenceu à matriz de Almacave, em Lamego, e que fruto de uma longa história veio parar aqui (Queirós, 2002, pp. 140-146).

Já nos retábulos de sacristia, para além do belíssimo exemplar da Sé de Lamego, já referido, junta-se-lhe o da matriz de São Pedro, em Castro Daire (Fig. 12).

Figura 5

Cinfães. Igreja de São Cristóvão, São Cristóvão de Nogueira. Retábulo-mor



Nota: Autoria própria.

Figura 6

Castro Daire. Igreja de Santa Maria, Cabril. Retábulo-mor



Nota: Autoria própria.

Figura 7

Lamego. Igreja de São Pedro, Penude. Retábulo-mor



Nota: Autoria própria.

Figura 8

Mêda. Igreja de São Paulo, Rabaçal. Retábulo colateral do Evangelho.



Nota: Autoria própria.

Figura 9

São João da Pesqueira. Igreja de São Bartolomeu, Vilarouco. Retábulo colateral do Evangelho



Nota: Autoria própria.

Figura 10

Tarouca. Igreja do Santíssimo Nome de Jesus, Salzedas.

(igreja do Mosteiro de Santa Maria).

Retábulo lateral do Evangelho



Nota: Autoria própria.

Figura 11

Resende. Igreja de São João Baptista, São João de Fontoura.

Retábulo Lateral da Epístola



Nota: Autoria própria.

Figura 12

Castro Daire. Igreja de São Pedro, Castro Daire. Retábulo da sacristia



Nota: Autoria própria.

5. A EDUCAÇÃO PATRIMONIAL COMO INSTRUMENTO DE SENSIBILIZAÇÃO E DEFESA DO PATRIMÓNIO RETABULAR

É incontestável a riqueza do património retabular. Na verdade, para além da sua função aparente como 'altar', o significado dos retábulos vai muito para lá desta atribuição. Concebidos para prender a atenção dos crentes, seduzindo-os, foram pensados para servir de enquadramento ou cenário às imagens sagradas, numa época em que as lutas entre católicos e protestantes ganhavam força e se travavam por toda a Europa. Cumprindo escrupulosamente as normas saídas do Concílio de Trento, estrategicamente colocados no interior sacro, com decoração simbólica alusiva à Eucaristia e explicada pelos párocos durante o sermão, a que se juntava o trono para a exposição do Santíssimo Sacramento, os retábulos deram corpo a estas apertadas diretrizes e tornaram-se no elemento fundamental do cerimonial litúrgico imposto pelo rito tridentino. Indo de encontro a estas regras pós-Trento, o dourado é a sua característica mais marcante. Para além da imediata simbologia do ouro como o mais precioso dos metais, a Igreja Triunfante contrarreformista utilizou o dourado como símbolo da Luz Divina, do sol, da perfeição. Cenários dinâmicos, pensados e

criados para exercer uma função pedagógica, catequética e evangelizadora, por meio dos sentidos.

Obedecendo ao mesmo critério de outros tempos, explicar por meio das imagens para convencer, é fundamental para dar a conhecer esta arte, esclarecendo a razão pela qual estas estruturas foram realizadas e procurando sensibilizar as populações para a sua preservação e defesa.

Nos últimos anos, temos procurado colmatar algumas destas lacunas, através de ações de sensibilização aos paroquianos sempre que nos deslocamos às igrejas e capelas. Porém, continuamos a verificar que, apesar de mais bem informadas, as pessoas mantêm em dar aos retábulos uma relativa importância, somente, como 'altares' em ouro. Os constantes alertas para a sua manutenção, enquanto estruturas artísticas e únicas que devem ser preservadas, em muitos locais, não têm sido respeitados. Confirmámos a continuidade de alguns comportamentos nocivos como a colocação de vasos com plantas, jarros com água e flores e, ainda, velas em cima das mesas de altar ou nos degraus dos tronos e nos nichos e tribunas, para além da limpeza permanente, recorrendo a esfregões, água, detergentes, lixívia e amoníaco, sem o conhecimento dos párocos e dos bispos.

É urgente dar a conhecer os perigos que ações desta natureza exercem sobre a talha dourada para que comportamentos idênticos não continuem a repetir-se, não só nas igrejas e capelas mais afastadas dos grandes centros urbanos, mas também em alguns locais bem à vista de todos, nas grandes cidades. Um pouco por todo o lado, o património retabular continua a ser alvo de esquecimento, descuido e más práticas ou por ignorância ou falta de conhecimento por parte das autoridades competentes. É pertinente e imperioso que se multipliquem as ações de sensibilização e salvaguarda e que sejam mais continuadas no tempo e direcionadas para um público específico, as comunidades que acolhem e 'cuidam' deste património.

A formação e a educação patrimonial são fundamentais, tornando-se urgente repensar os currículos pedagógicos. Educar pela arte ou pelo património, em geral, deveria tornar-se numa disciplina obrigatória, desde os primeiros anos de aprendizagem.

6. CONCLUSÃO

Apesar da estética requintada do rococó não ter sido acolhida de forma igual por todo o país, é inquestionável a sua aceitação na diocese de Lamego, tornando-se dominante nos interiores das igrejas e capelas, a que não foi alheia a intervenção direta ou indireta do Bispo Dom Frei Feliciano de Nossa Senhora.

Verificamos a maior concentração de retábulos deste estilo na região ocidental da diocese e no arcebispo de Lamego pelas razões que se prendem com a proximidade da sede do bispado como centro difusor desta nova corrente, mas também com a relativa proximidade a outros bispados e aos rios, fundamentais no vaivém de artistas de outras dioceses. Já na região oriental, apesar de ser aquela que mais circunscrições eclesiásticas tem, o rococó, embora seja significativo, não é tão relevante. Certamente, a resistência deve-se não só ao maior afastamento dos grandes centros produtores de talha, mas também do núcleo de Lamego, ao isolamento a que estão votadas algumas paróquias, ao gosto dos encomendadores e à sua capacidade empreendedora que dependia do seu poder económico e ao poder da tradição. Por estas razões, as novidades tardavam a chegar, mantendo-se as estruturas fiéis ao tradicional estilo maneirista e barroco nacional.

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10.

A IMATERIALIDADE DOS JOGOS TRADICIONAIS DA PÓVOA: IDENTIFICAÇÃO E PROBLEMATIZAÇÃO

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Abstract

The main objective of this text is to alert to the immateriality of the Portuguese cultural heritage. Being the object of study the traditional games of Póvoa de Varzim, specifically the game of Péla, which comes from distant times, such as the French Revolutions of 1789, because high society individuals mostly played it. This object of study has an impact on the identification and problematization of the same nowadays. This investigation about this topic is mostly to understand the relevance of the representativeness of popular culture within the vast Portuguese culture, as well as establish a critical awareness about its problems and values in Portugal.

Also, to understand the problems and changes of traditional games, which have an impact on their immateriality due to the cultural diversity and singularities of Portuguese popular culture, which is customs and family and community life, which naturally, with the passing of generations, these practices of community face transformations being reflected in the local community.

So, this understanding becomes possible through the research and selection and organization of information, fundamentally ethnographic, to transform this learning into mobilized knowledge to not only make known Portuguese popular culture and its immateriality, but also the risk that runs from being progressively lost or forgotten, being one of the main perceptible results throughout the study. It is also necessary to know how to value, disseminate and protect this immaterial expression, to suppress problems and changes, allowing the longevity of the game in contemporary society.

Keywords: Culture, Immateriality, Heritage, Singularity, Values.

Resumo

O presente texto tem como principal objetivo alertar para a imaterialidade do património cultural português. Sendo o objeto de estudo os jogos tradicionais da Póvoa de Varzim, especificamente o jogo da Péla, que já provém de tempos longínquos, como a Revolução Francesa de 1789, pois era jogado maioritariamente por indivíduos da alta sociedade. Este objeto de estudo tem incidência na identificação e problematização do mesmo na atualidade. Deste modo, a investigação sobre este tópico é, essencialmente, realizada para compreender a relevância da representatividade da cultura popular dentro da vasta cultura portuguesa, bem como, estabelecer uma consciência crítica sobre os problemas e valores da mesma em Portugal. Também, para entender os problemas e mudanças dos jogos tradicionais, que têm impacto na sua imaterialidade devido à diversidade cultural e singularidades da cultura popular portuguesa, isto é, os costumes e a vida familiar e em comunidade, que naturalmente, com o passar de gerações, estas práticas de encontro comunitário sofrem transformações, sendo refletidas na comunidade local. Assim, esta compreensão torna-se possível através da pesquisa, seleção e organização de informação, fundamentalmente etnográfica, com o intuito de transformar esta aprendizagem em conhecimento mobilizável para, não só dar a conhecer a cultura popular portuguesa e a sua imaterialidade, mas também o risco que corre de ser progressivamente perdida ou esquecida, sendo um dos principais resultados perceptíveis ao longo do estudo.

É igualmente necessário saber valorizar, divulgar e proteger esta expressão imaterial, de modo a suprimir os problemas e mudanças, permitindo a longevidade do jogo na sociedade contemporânea.

Palavras-chave: Cultura, Imaterialidade, Património, Singularidade, Valores.

1. INTRODUÇÃO

O desenvolvimento do estudo realizado no âmbito da unidade curricular de Estudos de Etnografia Portuguesa, lecionada pela docente Carla Queirós, tem como objetivo principal alertar para a imaterialidade do património cultural português. Como mencionado anteriormente, o objeto de estudo neste trabalho foram os jogos tradicionais da Póvoa de Varzim, especificamente, o jogo da Péla. Através deste estudo de caso, foi possível explorar os principais problemas que existem no património imaterial e a sua salvaguarda e proteção.

Ao longo deste estudo foi essencial a recolha de documentos para compreender e aprender sobre o Jogo da Péla e sucessivas transformações ao longo das várias gerações, bem como, em que regiões este é praticado, quais as regras e elementos que constituem este jogo tradicional. A metodologia é, essencialmente, uma revisão bibliográfica, do livro *Festividades Cíclicas* de Ernesto Veiga Oliveira. Também, o meio digital foi essencial para a recolha e posterior seleção de informação, como revistas científicas, vídeos que documentam esta prática, apesar de ser algo breve, e o Museu Virtual da Lusofonia.

No entanto, para compreender a relevância da representatividade da cultura popular na vasta cultura portuguesa, assim como, estabelecer uma consciência crítica sobre os problemas e valores da mesma em Portugal, neste caso o Jogo da Péla como uma expressão da imaterialidade portuguesa, é necessário determinar o enquadramento histórico e geográfico da cidade como do jogo. Posteriormente, é igualmente relevante caracterizar o objeto de estudo de modo que se estabeleça uma comparação para verificar se, efetivamente, houve uma regressão ou progressão da sua imaterialidade, isto é, que elementos identitários mudaram ou adaptaram-se ao longo das várias gerações. Após a aprendizagem sobre o jogo e os elementos que o caracterizam, é feita uma análise dos problemas e mudanças que surgem e de que maneira estes podem afetar a continuidade do jogo na sociedade do século XXI.

A construção e desenvolvimento de uma consciência crítica acerca do jogo, dos problemas que surgem e mudanças de que este é alvo, bem como, de que maneira estes problemas à 'priori' mínimos podem afetar a sua continuidade numa maior escala, assim como, encontrar soluções aplicáveis a longo prazo para a conservação, preservação e divulgação da sua imaterialidade, é um elemento fundamental para saber como podemos dar a conhecer a cultura popular portuguesa e a sua imaterialidade. Mas também do risco que estes elementos etnográficos são alvos, pois, facilmente podem ser perdidos ou esquecidos.

Desta forma, torna-se necessário ensinar e informar os cidadãos e diferentes organismos quer públicos, quer privados, como podem valorizar, divulgar e proteger esta expressão imaterial da cultura popular portuguesa, de modo a apaziguar os problemas e mudanças, apesar de estas serem normais, por fatores de ordem natural como o tempo e o passar de geração em geração e mesmo o desenvolvimento da sociedade.

O jogo da Péla e o seu estudo, apela sobretudo à comunidade para prestarem atenção ao seu meio envolvente, pois, há uma imensa imaterialidade na cultura portuguesa, onde estes elementos etnográficos facilmente sofrem alterações ou esquecem-se. Sobretudo porque não há registos dos mesmos e quando existe é insuficiente. Mas também, por serem tomados como garantidos. Deve-se, pois, valorizar e proteger expressões como esta, para que as futuras gerações, possam conhecer e mesmo estudar.

2. SECÇÃO TEÓRICA

2.1. ENQUADRAMENTO HISTÓRICO E GEOGRÁFICO

Pelo enquadramento histórico e geográfico, é possível conhecer a essência dos jogos tradicionais, especialmente, na zona da Póvoa de Varzim. Aprender sobre a história de uma cidade é significativo para compreender os seus valores, crenças, e também perceber de que modo esta tradição começou.

A Póvoa de Varzim é um concelho que pertence ao distrito do Porto, dividindo-se em doze freguesias, localizada na Região Norte, ou seja, na NUT II e no 'grande Porto' a NUT III. Esta zona, encontra-se limitada pelos concelhos de Esposende, Barcelos, Vila Nova de Famalicão e Vila do Conde. O crescente desenvolvimento da cidade refletiu-se na morfologia da mesma, assumindo características bastante urbanas, como exemplo, a 'linha' de apartamentos próxima da linha da costa, sendo, pois, a área de maior densidade populacional. Um dos fatores que contribuiu para este

desenvolvimento foi, efetivamente, a construção da estrada paralela à extensa faixa arenosa.

Num contexto histórico, foi concedida à Póvoa a categoria de vila em 1308 através do foral de D. Dinis. No ano de 1514 assume, então, o estatuto de município. Até ao século XIX, esta cidade manteve-se como um pequeno centro piscatório, no entanto, com a construção da ligação ferroviária à cidade do Porto, esta fortaleceu o desenvolvimento do concelho no que respeita às relações económicas. Tal como qualquer cidade, a Póvoa de Varzim é constituída pelo património cultural e, para salvaguardar parte da sua diversidade cultural foi erguido o Museu Etnográfico da Póvoa de Varzim, adquirindo certa importância para a cidade. Não só salvaguarda o património como expõem, divulga e dá a conhecer o mesmo.

O Jogo da Péla, Péla ou Pella encontra-se referenciado diversas vezes a nível histórico e literário, na medida em que, especula-se que teve participantes de vários países, embora demonstrando algumas diferenças. Enquanto, por exemplo, em Inglaterra era *um jogo praticado por senhoras nos vastos jardins, em França, no séc. XIII, era um jogo de elites, praticado por membros do Clero e Fidalgos, em salões próprios* (Câmara Municipal da Póvoa de Varzim, 2010). Este jogo, é uma modalidade desportiva antiga precursora do ténis, no final do século XVI, o Jogo da Péla, era visto como *um dos exercícios mais habituais da fidalguia da corte, como demonstra o facto de haver um juiz especial encarregado de manter a sua boa ordenança; era jogado por seis parceiros, estando três em cada lado, com péla de couro que se enchia de ar com uma seringa* (Museu Virtual da Lusofonia, s.d.). No entanto, existe um episódio histórico que demonstra a passagem de um jogo somente para a elite para um jogo que pertence a todos.

Os arqueólogos do INRAP (*Institut National de Recherches Archéologiques Préventives*- Instituto Nacional de Pesquisas Arqueológicas Preventivas), referem que o marco inicial da Revolução Francesa ocorreu a 20 de junho de 1789, pelos membros do terceiro estado que decidiram permanecer reunidos até a formação da Constituição. Após a corte ter impedido a reunião da Assembleia na sala usual, fruto da política de oposição ao Terceiro Estado, os deputados reuniram-se na Sala do Jogo da Péla, onde *segundo uma proposta de um deputado do Delfinado [...] os deputados juraram jamais se separarem e reunirem-se sob que circunstâncias fossem até que a Constituição do reino estivesse firme nos seus fundamentos (Juramento do Jogo da Pela na Infopédia. Porto: Porto Editora)*. A Revolução Francesa acaba por ser uma analogia à passagem do jogo de elites, realizado na Sala do Jogo da Péla, para um de cariz popular.

Figura 1

Visão Esférica da Salle du Jeu de Paume, Sala do Jogo da Péla, em Versalhes.



Fonte: <https://earth.google.com/web/@48.8010133,2.1238315,137.04511948a,0d,90y,174.70509071h,86.58400606t,0r/data=CiQSIhIlgNTMyMTgxNGE2NDYwMTFIOGJINDc4MWWVjOTU1ZGRiYTIiMAosQUYxUWlwTkRRZGozd1MzRGJlOXF1F1Zm5iWmgyRVdLamh1RjVFOUhFbHp4dlcQBQ?hl=pt-BR>.

Como refere Oliveira Marques em *A Sociedade Medieval Portuguesa*, o Jogo da Péla na Idade Média, era considerado um jogo de cariz violento, e ainda segundo Oliveira Marques, D. Duarte, referenciava-se a este como algo que entretinha a mocidade da época, em detrimento dos exercícios de cavalaria, por outro lado, D. João I encarava o jogo da Péla, como uma ferramenta útil para o treino das armas. Ainda, Fortunado de Almeida, refere que ao nível de costumes e aspetos sociais o jogo da Péla era realizado Nas ruas e outros lugares públicos concorriam muitos eclesiásticos e seculares a jogar e a ver jogar a 'bola ou mancaes' (Vaz, 2004). Mais tarde, no século XVIII ao jogo da Péla chamava-se o jogo dos paus, "Mancais" era o nome que no século XVI se dava aos paus destinados a ser derrubados com a bola. Em Lisboa, jogava-se a "pela" num pátio descoberto (Vaz, 2004). No início o jogo era jogado com a palpa, já no início do século XVIII, introduz-se em Portugal o hábito francês de jogar com a raquete, observamos, pois, que o Ténis é o precursor do jogo da Péla que ao longo dos séculos foi sofrendo alterações. Também, o jogo francês Jeu de Paume, assemelha-se ao jogo da Péla que consiste em bater a bola com a mão.

No entanto, na cidade poveira, este era um jogo praticado ciclicamente, isto é, um jogo particular da Quadra Pascal. Segundo o Vereador do Pelouro da Cultura, Luís Diamantino, o Jogo da Péla era um evento comunitário, pois, a vizinhança reunia-se toda na rua após a passagem do Compasso para jogar, assim o número de jogadores

de cada equipa era elevado com tendência a aldrabar a contagem de pontos, como refere *quanto maior era a confusão, melhor* (Câmara Municipal da Póvoa de Varzim, 2010).

Este jogo, inicia-se com a distribuição de elementos por duas equipas, sendo que, a bola utilizada é feita com meias de senhora e uma *cachola (banco ou cadeira que servia de ponto de mira)*, dois simples materiais para pôr o jogo a decorrer. Relativamente às regras, estas são complicadas, mas por mais complicadas que sejam no início de cada jogo instaurava-se confusão, pois, cada jogo começava sempre com a *“negociação” sobre quem era a equipa de cima, a de baixo, os pontos...* Em muitos casos, os próprios jogadores faziam apostas a dinheiro, repartindo depois pela equipa vencedora (Câmara Municipal da Póvoa de Varzim, 2010). Uma curiosidade acerca do Jogo da Péla, na Póvoa de Varzim, e como este era encarado pelos participantes, para dar azar à equipa adversária durante as suas jogadas, as mulheres passavam uma perna sob a cachola enquanto diziam uma ladainha.

2.2. CARACTERIZAÇÃO DO OBJETO DE ESTUDO

Figura 2

Prática do Jogo da Péla.



Fonte: Bing.

Como produção cultural, os jogos tradicionais expressam a passagem do tempo, valores, crenças e costumes de uma comunidade. Sendo esta uma das principais razões pelo qual devemos proteger e divulgar esta imaterialidade, pois, se for

esquecida ou perdida, leva também consigo uma fração de vida da comunidade local, não permitindo a futuras gerações conhecer o seu passado ou mesmo herdá-lo e usufruir do mesmo. Cada vez mais o sentido espiritual e ritual deste jogo perde-se, atualmente quando jogado é apenas pela sua tradição, não pela especificidade de uma festa religiosa e cíclica.

Naturalmente, por força do ser humano, quando um jogo é praticado é sobretudo pela convivência e entretenimento que promove. Porém, não refletimos sobre a importância que adquire para a evolução da sociedade e relações sociais formadas a partir deste meio. Este jogo tradicional bem como outros, tem características singulares como as competições que existe, o número de equipas e respetivos elementos, ou ainda se estes são somente femininos, masculinos ou mistos. Outra característica particular do jogo tradicional, é a flexibilidade de regras, nomes e mesmo a imaginação utilizada no desenvolvimento do jogo ou ainda das futuras alterações, sendo algo natural, pois, este jogo é transmitido geracionalmente.

Os jogos populares cada vez são mais relevantes e merecem destaque não só pela sua imaterialidade e o risco que correm de a perder se não for salvaguardada, mas também por aquilo que oferecem. Também, é uma forma de transmitir os conhecimentos e práticas deste jogo de geração em geração, seja num contexto mais privado, a nível familiar, seja num contexto social, onde toda a comunidade convive. Outra característica que alude à sua imaterialidade, são os elementos que constituem o jogo, isto é, a péla e a cachola, mas especialmente a péla, pois, não é um objeto industrial, é uma bola feita pelos indivíduos da comunidade dispendo essencialmente de objetos que tenham em casa ou no meio envolvente.

A sociedade ao longo do seu desenvolvimento e conhecimento cultural procura saber mais sobre a sua história, sendo que o reflexo da imaterialidade do jogo na comunidade, é um modo de descobrir parte da sua identidade. Curiosamente, pouco antes do início da pandemia do Covid-19, o jogo da Péla ganhou novamente destaque na comunidade local. Num sentido figurativo renasceu do passado para tentar ingressar no torneio de jogos tradicionais em Verona. Note-se que, um dos principais aspetos observados durante esta tentativa de reacender a luz do passado, foi que quem iria participar eram somente pessoas mais velhas. A conclusão que retiramos daqui é que parte da geração do século XXI não conhece o jogo ou se conhece não o sabe jogar, pois, está inundada por 'atividades' no meio digital, acabando por não experienciar parte da sua cultura e mesmo identidade.

Como foi mencionado este jogo é praticado com uma bola feita de trapos, a péla, tendo como objetivo acertar num banco de madeira, a cachola. Duas equipas são divididas pelos 'chefes das famílias', os líderes de cada grupo, *vai ou num vai era o grito* dado antes do lançamento da bola, arremessada pelo ar para a equipa

adversária, que de onde apanhasse a bola era de onde tentava acertar no banco. As regras deste jogo são complicadas, pelo que, é natural que para quem não tenha prática não entenda o jogo e perca a motivação para o praticar, sendo um dos fatores que afeta a sua imaterialidade e continuidade, pelo mesmo fator as regras podem ser alteradas, o que aconteceu em outros tempos, no entanto, até agora, não existem registos que o demonstrem.

Figura 3

O Jogo da Péla na Póvoa de Varzim



Fonte: Oliveira, Ernesto Veiga de. (1984). Festividades Cíclicas em Portugal.

Também, uma das principais diferenças estabelecidas entre o jogo no passado e presente, é que antigamente as ruas da cidade eram cheias de folia e cor na tarde de Páscoa, após o 'Senhor passar', atualmente, pode ser ainda jogado, mas não com a mesma emoção.

2.2 IDENTIFICAÇÃO E PROBLEMATIZAÇÃO

Desde o momento da realização das pélas podemos falar nos elementos imateriais deste jogo, visto que são os jogadores que as 'fabricam'. Contudo, não existem registos sobre este processo, logo não sabemos se durante este procedimento existe, por exemplo, uma canção ou melodia a acompanhar. Também, não existe

nenhum registo de vídeo ou áudio das ladainhas ditas pelas mulheres quando querem dar azar à equipa adversária, apesar de estar documentado no livro de Ernesto Veiga Oliveira, não sabemos quais são ou mesmo como são pronunciadas.

Com as alterações das regras pela passagem geracional, também não podemos efetuar uma comparação como o jogo era e como se encontra atualmente. Mas porquê? Reforçando a ideia exposta, não existe um registo específico para preservar e salvaguardar a imaterialidade do jogo que está em constante alteração, ora alterando as regras, ora sofrendo outras mudanças.

E mesmo os registos de vídeo que existem e demonstram o jogo a ser praticado são escassos e muitas das vezes de curta duração, não se vendo o jogo e as suas regras ou mesmo as ladainhas num plano geral. São estes pequenos fatores que interferem nos problemas e mudanças que surgem no passado e presente, que se fazem sentir no futuro. Novamente, é essencial preservar, salvaguardar e divulgar esta expressão imaterial para permitir a longevidade do jogo tradicional.

Quando refletimos sobre os problemas dos jogos tradicionais, automaticamente a nossa mente direciona-nos para o esquecimento, isto porque é verdade. A maioria das pessoas toma como garantido aquilo que é o jogo tradicional, não se lembrando que no futuro poderão esquecer-se deles ou então não sabem como o jogar. Desta forma, não permitem a transmissão de geração em geração, pois muitas das vezes gostavam de ensinar aos filhos, sobrinhos ou netos o jogo 'da sua juventude', mas não o conseguem fazer, pois, não só não se lembram como não há registos dos mesmos, especialmente em vídeo ou áudio.

Alguns dos problemas mais comuns que existem são lentamente este jogo e a sua prática cair no esquecimento, por simplesmente não haver um registo do mesmo e como este se pratica. Sendo crucial haver mais registos além daqueles que já provém dos anos 80 do século XX. O mesmo acontece no ato de transmissão geracional, onde é fácil colocar de lado os elementos característicos do jogo por puro esquecimento. Os jovens, podem ouvir, falar ou mesmo conhecer o jogo, ou nenhuma das opções e, apesar de poderem conhecer o jogo dificilmente sabem jogar. Isto porque ou não sabem as regras, ou ninguém lhes mostrou como jogar, mas também pelo simples facto da maior parte da geração do século XXI ter um maior interesse no meio digital.

Outros problemas que podemos observar é na transmissão e conhecimento desta fração da cultura popular portuguesa. Um exemplo que retrata esta situação são os alunos das escolas, crianças e jovens, que poderiam aprender e mesmo conhecer este jogo tradicional ou ainda praticá-lo, no entanto, como é um jogo complexo

devido às regras, optam por jogos mais fáceis e de melhor compreensão como o mata ou o jogo do lencinho.

O Jogo da Péla da Póvoa do Varzim, define-se como um jogo tradicional que perpetua no tempo e é típico de uma região, desenvolvido sem a utilização de qualquer conhecimento tecnológico. O conhecimento deste jogo possibilita às crianças, jovens e mesmo adultos, aprender sobre as suas raízes da sua região, desenvolvendo também capacidades cognitivas, emocionais e sociais. Este jogo sobrevive essencialmente pela memória de gerações passadas sendo ele transmitido verbalmente, acabando por sofrer alterações no futuro.

Referindo o desenvolvimento tecnológico, este tem um papel fundamental no desviar da atenção das crianças e dos mais jovens dos jogos tradicionais, direcionando-os exclusivamente para o meio digital. Com o maior uso da tecnologia, a procura em conhecer e aprender mais sobre esta categoria de jogos lentamente regride. Esta regressão pode, pois, levar à queda da transmissão do jogo geracionalmente. Por estes motivos, um etnógrafo e gestor do património cultural assumem uma função crucial, sendo ela informar, sensibilizar e divulgar esta expressão cultural imaterial da cultura popular portuguesa à comunidade, explicando primeiro o porquê da imaterialidade ter de ser valorizada e protegida.

Outra mudança que se estabeleceu nesta zona, neste jogo e na sua prática, é que inicialmente era um jogo exclusivo da comunidade piscatória. Gradualmente, mas com alguma resistência, deixaram entrar os 'terrineiros', as pessoas de fora, participar, tornando-se, rapidamente um jogo tradicional da comunidade da Póvoa.

As mudanças têm várias origens, contudo pouco se pode fazer para impedir a alteração do jogo, pois, é um processo natural da evolução da sociedade. No entanto, podemos apaziguar a mudança mais preocupante que é o Jogo da Péla cair no esquecimento e deixar de ser praticado. Deste modo, para manter vivo o espírito do jogo e da comunidade, a Câmara Municipal da Póvoa de Varzim organiza pequenas feiras onde este jogo pode ser demonstrado e mesmo jogado é, pois, uma medida que permite às gerações mais novas conhecer parte do seu passado. É um modo também, de promover a cultura popular portuguesa e o património imaterial da mesma.

A continuidade do jogo é, de facto, afetada pelos problemas e mudanças. Mudanças estas que tanto podem ser por fatores sociais, demográficos ou económicos, que inevitavelmente, afetam o jogo e a sua prática. Para manter e prolongar a longevidade deste jogo tradicional da cultura popular portuguesa, é necessário encontrar e explorar medidas e soluções que a longo prazo, possibilitem a

conservação, salvaguarda e divulgação desta pequena fração do património imaterial, na vasta cultura popular.

Algumas das soluções e mesmo sugestões para maximizar a sua preservação, proteção e divulgação desta expressão, passa desde no progresso escolar haver um dia dedicado a conhecer a cultura popular portuguesa nas suas variedades vertentes ou em certas unidades curriculares para a divulgação da imaterialidade englobando também a comunidade na sua gestão; a utilização da matriz PCI (Património Cultural Imaterial) para um registo extenso e exaustivo, das regras, a maneira como o jogo é praticado e por quem, isto é, o número de equipas e respetivos elementos, ladainhas entre outros componentes, para que este não se esqueça tão facilmente, usufruindo de ferramentas que usem o áudio, vídeo e fotografias, para se poder estabelecer também uma comparação do jogo entre a antiguidade, a atualidade e a posterioridade; e a transmissão é também um elemento essencial, sobretudo, de geração em geração, de maneira a não se perder no tempo ou dentro da nossa cultura portuguesa.

CONCLUSÃO

Desde o princípio entende-se que o Jogo da Péla sofreu adaptações e alterações ao longo dos seus séculos de existência. Parte destas modificações e transformações devem-se sobretudo a fatores sociais, demográficos e mesmo económicos, que de certa forma acabaram por segregar a sociedade em comunidades. A verdade é que, apesar das mudanças que este jogo sofreu, continua a ser lembrado e mesmo jogado, no entanto, não o suficiente como gostaríamos.

Deste modo, ao longo do desenvolvimento deste estudo de caso, foram focadas questões que permitissem chegar a uma conclusão: seja qual forem os problemas e mudanças, é necessário salvaguardar e divulgar o Património Imaterial da cultura popular portuguesa, de maneira que seja possível a longevidade do mesmo diante das futuras gerações. Mas também, através das questões abordadas conseguiu-se compreender a história por detrás deste jogo tradicional e qual a sua relação com a cultura popular.

Assim, os principais resultados obtidos ao longo deste estudo, refletem-se na facilidade com que este jogo pode ser perdido ou mesmo esquecido, mas também quais são os fatores de 'ameaça', no fundo, os problemas e mudanças que esta expressão cultural imaterial enfrenta. Também, adquirimos uma consciência crítica sobre a necessidade e importância do registo, por áudio ou vídeo, para preservar, proteger, valorizar e divulgar os jogos tradicionais. Pois, apesar de haver informações e registos sobre o mesmo é algo bastante escasso e superficial. Torna-

se, então, importante criar medidas e soluções que suprimam estes problemas, sendo o registo uma das soluções com maior impacto na continuidade da presença deste jogo na comunidade e na cultura popular portuguesa.

A continuidade dos jogos tradicionais, mais especificamente, o Jogo da Péla, define-se pela valorização do jogo tradicional enquanto Património identitário de um território, fundamental para podermos acreditar na continuidade deste jogo. Desta forma, é necessário atrair e cativar os mais jovens e fazer com que este Património renasça de uma forma concisa e harmónica. Apesar de se verificar um gradual abandono da sua prática, não é impossível voltar a fazer com que a valorização e importância do Jogo volte a ser como era, não só porque existem ainda alguns registos de como se iniciou, como também de como se pratica.

Após uma análise aos problemas, mudanças e a continuidade deste Jogo, pode-se concluir que existe uma relação cíclica entre estes três conceitos. O conjunto de problemas que surge no passado, intervém no presente, faz-se sentir no futuro. Em palavras simplistas, a mudança da sociedade e das sucessivas adaptações às suas necessidades, traz consigo um impacto cultural, perdendo muitas vezes elementos culturais caracterizados pela autenticidade e individualidade, pois, normalmente, estas práticas são transmitidas geracionalmente. Problemas estes, que tanto surgem com as mudanças como são provenientes das mesmas.

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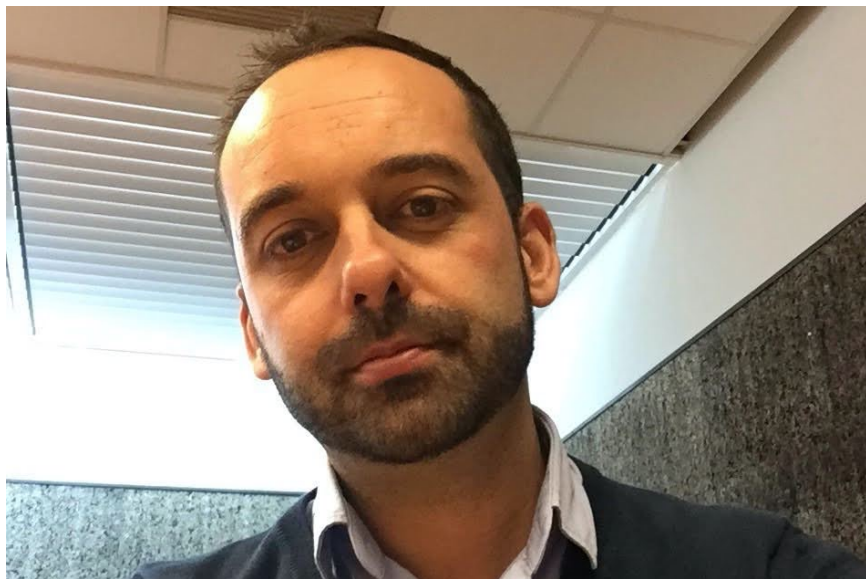
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IN EDUCATION

This book entails a collection of chapters which focuses on different topics related to the education fields, in which educational practitioners share, discuss, reflect on and develop their ideas on topics related to Networking in Education.



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