Experiences and perceptions of pedagogical practices with Game-Based Learning & Gamification

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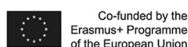
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Editors' Introduction

The book **Experiences and perceptions of pedagogical practices with Game-Based Learning & Gamification** is an intellectual output of the Erasmus+ Games2Learn&Gamification2Engage project funded by the Portuguese National Agency for the Erasmus Plus Programme. The *Agupamento de Escolas da Maia* (Portugal), the *Istituto Comprensivo di Sestu* (Italy) and *Szkola Podstawowa nr 41* (Poland) participated in this European project, with the partnership of researchers from the Research Centre on Education of the University of Minho (Portugal).

For the completion of the book, we invited experts who have been studying the use of games and gamification in education, and they have prepared papers with unquestionable merit. Thus, the book has fifteen chapters, including a preface by Nelson Zagalo, from the University of Aveiro (Portugal) who has ample research on videogame sciences and arts. Zagalo's preface reports the social relevance of games for learning, because, as he states: "bringing the game to the centre of education has become not only current but fundamental because it is from collaboration, cooperation and even competition that the learning social matrix needs".

Following the preface, there are five chapters by researchers and teachers directly involved in the project. The first chapter, written by researchers from the Research Centre on Education of the University of Minho - Bento Silva, José Alberto Lencastre, Marco Bento and António Osório - aimed to identify the perceptions and knowledge of the teachers involved in the project, regarding game-based learning (GBL) and gamification and their use as pedagogical innovation scenarios. The second chapter, authored by teachers of the Maia School Cluster (Portugal) - Luís Coutinho, Aline Santos, Sónia Lopes, Sónia Pinheiro and Helena Baptista - address teachers' perceptions on the training provided during the project implementation on the use of games and gamification in education. The third chapter, written by two teachers from the *Istituto Comprensivo di Sestu* (Italy) - Alessandra Patti and Flavio Orrù - presents experiences, in GBL and gamification learning strategies, at their school, a school strongly keen on digital technologies. The fourth chapter, written by teachers from the same

Italian school - Rossana Manca, Silvia Callai, Rita Concas, Sonia Maria Dessì and Luisa Fadda - discusses the Italian experiences with GBL and gamification to improve student learning and teacher skills. Finally, the fifth chapter, presented by the teachers of *Szkola Podstawowa nr 4*1 (Poland) - Aneta Brzezińska, Konrad Gonera, Ewa Mospinek, Katarzyna Pawlak and Zofia Cieślak-Pietrzak - addresses gamification at school, from the perspective of assessment tools, age of students and everyday work.

The next three chapters have used systematic reviews or meta-analysis strategies to give an overview of recent research on GBL and gamification. Thus, in the sixth chapter, Luís Coutinho and José Alberto Lencastre, authors already mentioned in this introduction, performed a systematic review using the ERIC (Education Resources Information Centre) database. In the seventh chapter Teresa Cardoso, from the Portuguese Open University, has guided herself by a multi-modal meta-analytical strategy and, based on publications from RCAAP (Scientific Repository of Open Access of Portugal), researched on games and gamification from the student's perspective. In chapter eighth Julio Cabero-Almenara and María del Carmen Llorente Cejudo (from the University of Seville, Spain) and Rubicelia Valencia Ortiz (from Macmillan Education, Mexico), also using a meta-analysis strategy, researched on videogames and gamification in Spanish scientific journals of education and social sciences.

In the ninth chapter, authored by Juline Santos and Dulce Cruz from the Federal University of Santa Catarina (Brazil), who followed a Design-Based Research methodology instead of a systematic review or meta-analysis, bring a perception of Brazilian pre-service teachers concerning pedagogical practices based on gamification.

Following are five chapters that refer to pedagogical experiences using GBL and gamification. In this group of manuscripts, the tenth chapter was written by Lynn Alves (Federal University of Bahia, Brazil), Jessica Vieira, Maria de Fátima Dórea and Larissa Cerqueira (Estate University of Bahia, Brazil), and presents a case study using the Gamebook Guardians of the Forest. The eleventh chapter, written by Edméa Santos (Federal Rural University of Rio de Janeiro, Brazil) and

Vivian Martins (State University of Rio de Janeiro, Brazil), brings a contribution about the mediation of the COMENIUS game in Online Education, reflecting on the teachers training to use games in cyberculture. The twelfth chapter, written by Adelina Moura (member of the Games, Interaction and Learning Technologies Research Group and teacher at Carlos Amarante Secondary School, Portugal) and Idalina Santos (teacher at Dr. Joaquim Gomes Ferreira Alves Secondary School, Portugal), bring results from pedagogical experiences with the "Escape Room" game to engage and improve students' learning in Mathematics and Language subjects. The thirteenth chapter was written by Maria João Ferreira and Fernando Moreira (Portucalense University, Portugal) and David Fonseca Escudero (Ramon Llull University, Spain) and discusses the learning of gamification in higher education, and the potential of gamification experiences within the Moodle Learning Platform. Concluding the texts of this group of pedagogical experiences, in the fourteenth chapter Carlos Santos, Joana Beja and Ana Raquel Carvalho from the University of Aveiro (Portugal) bring the results of an experience with the game "El DeCA de Papel", based on the television series "La Casa de Papel". The authors focus the advantages to pedagogical innovation when students assume the role of mentors, guiding other students in the learning process. The last chapter of the book - the fifteenth chapter - is authored by Fernando Albuquerque Costa from the University of Lisbon (Portugal) and reflects on the pedagogical value of gamification. This author considers that gamification represents an excellent opportunity for exploration as an object of study under curriculum theory.

At the back of the book, the reader can find a set of author biographies that identify the experience that each of them brings to this book through their contributions.

As well as thanking everyone who has contributed to this book, we would like to add some special acknowledgement for the additional support we have received.

First, from our colleagues within the Games2Learn&Gamification2Engage project. Among the contributors, Aline Santos, Luis Coutinho, Sónia Lopes, Sónia Pinheiro and Helena Baptista from Portugal, Alessandra Patti, Flavio Orrù, Rossana Manca, Silvia Callai, Rita Concas, Sonia Maria Dessì and Luisa Fadda

from Italy, as well as Marzanna Topolska, Tomasz Piotrowski, Aneta Brzezińska, Konrad Gonera, Ewa Mospinek, Katarzyna Pawlak and Zofia Cieślak-Pietrzak from Poland, have all been a part of the Games2Learn&Gamification2Engage project. We want to acknowledge their work in the project as well as thanking them for their contributions here.

Then, to Maia School Cluster (Portugal), to its Director - Rui Manuel Oliveira Duarte – and to the coordinator of this European project - Aline Santos - for the unrestricted support in the production of the book. Without them, this would not have been possible, and we want to express our gratitude.

We also want to thank the Portuguese National Agency for their assistance throughout the Games2Learn&Gamification2Engage project, and the European Commission for their sponsorship of the Erasmus Plus Programme 2017–2019.

As final words of this introduction, we would like to highlight the importance of the possibility of disseminating these reflections and experiences for the consolidation of pedagogical practices with Game-Based Learning & Gamification committed to quality education, in tune with contemporary challenges. We believe that this book, although intended primarily for teachers and researchers, may also please the general public interested in reflecting on the potential and pedagogical value of Games and Gamification in education. This book, for its themes and narratives of pedagogical experiences, can be an estimable source of inspiration for teachers to make innovative use of Games and Gamification in the educational process.

The editors:

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For the completion of the book, we invited experts (from Portugal, Spain and Brazil) who have been studying the use of games and gamification in education, and they have prepared papers with unquestionable merit. Thus, the book comprises fifteen chapters that present experiences conducted by the schools involved in the project and by those experts. Topics covered in this book range from a systematic literature review (in Portugal and Spain) to pedagogical experiences with games and gamification, concluding with a reflection article on the pedagogical value of gamification.

We believe that this book, although intended primarily for teachers and researchers, may also please the general public interested in reflecting on the potential and pedagogical value of Games and Gamification in education. This book, for its themes and narratives of pedagogical experiences, can be an estimable source of inspiration for teachers to make innovative use of Games and Gamification in the educational process.