Foreword

As a technologist and as a researcher in serious games, it is my pleasure to write the foreword for this book, because from my work in the GALA Network of Excellence on Serious Games, I know the editors and many of the authors and their work and because I consider this book a great work in providing a novel and coherent approach to advancing our understanding of serious games. It could be surprising that a computer scientist was selected to write a foreword for a book that addresses psychology, pedagogy, and assessment in serious games, but I think that this reflects the editors’ own diversity and their comprehensive view of serious games as a multifaceted and multidisciplinary topic.

This book provides an inclusive and multidisciplinary discussion of serious games that tries to provide a more holistic and coherent understanding of this emerging and fast-moving area of the educational applications of games. The aim is to try to better understand how interactive gaming technology can be utilised to enhance teaching and learning. This journey goes from the psychological theories of human behaviours, cognition, motives, and emotions that comprise the supporting body of knowledge necessary for understanding why and how serious games work to the actual application of games in real settings. While the relevance of theory and research in psychology to the design, development, and evaluation of serious games is recognised by computer scientists and technologists, it is not always clearly understood.

The pedagogical principles underlying serious games are also addressed, including the role of the teachers when using games and the new educational scenarios appearing (e.g. social interactions in games). Serious games have the potential to be at their most useful in supporting higher-level skills such as critical thinking and soft skills such as interpersonal and intrapersonal skills that are very difficult to acquire with more traditional educational approaches. Moreover, in this multidisciplinary topic, it is also necessary to examine new technological developments such as the application of artificial intelligence techniques to designing non-player characters in games or the use of players’ brain signals (e.g. neurofeedback, brain computer interface) that have the potential to enhance the current applications of serious games.

However, this journey would not be complete without considering that the assessment of the learning experience is a key part of any learning process, allowing instructors to track the performance of students. Therefore, a crucial aspect for adoption of serious games in education is to incorporate or facilitate assessment and evaluation processes that can track effective learning while maintaining engagement. To address the practitioner’s point of view, several examples and case studies covering different areas of serious games application are also provided.
This book was originally conceived within the framework of the EU-funded GALA Network of Excellence on Serious Games, but to increase coverage, the editors made an open call for contributions from external researchers from different parts of the world. GALA is composed of 30 research groups from universities, companies, and institutions from 14 European countries. This book reflects the efforts of GALA partners in articulating European research in this topic, identifying best practices, and combining different approaches and viewpoints.

Hopefully, this book will help you to better understand serious games and to provide new ideas about how and when serious games can be used to address educational problems in an innovative way. Enjoy the reading!

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