Educational Innovation
Successful Cases:
Part 2

Francisco J. García-Peñalvo, Computer Science Department, University of Salamanca, Salamanca, Spain

ABSTRACT

Educational innovation is a key factor to improve educational goals and learning outcomes. There are very good practices in different contexts that may be reused and adapted in other ones, however these good practices are difficult to find and share, this means teachers repeat again and again the same “innovative” practices with local results and an overall idea of reinventing the wheel than produce a valuable improvement or adaptation of an existing practice. This is the second part of a special issue that is devoted to share some interesting teaching practices that may be adopted and adapted in other different contexts and subjects. In this second part of the special aspects as metaverses, entrepreneurship practices, portfolios and gamification issues are going to be presented.

Keywords: Educational Innovation, Teaching Cases, Technology and Education

1. INTRODUCTION

Current special issue is organized into two different parts gathering eight good practices of educational innovation that have been selected from two different International Conferences, CINAIC 2013 (Fidalgo Blanco & Sein-Echaluce Lacleta, 2013) and TEEM 2013 (García-Peñalvo, 2013; García-Peñalvo, García-Holgado, & Cruz-Benito, 2013), extended and, after a new reviewed, included in this monograph. The first part of the special was published in the Journal of Cases on Information Technology Volume 16, Issue 3 (García-Peñalvo, 2014) including the firsts four papers and now we complete the monograph with other four papers involving interesting themes such as metaverses, entrepreneurship practices, portfolios or gamification, which are topics very relevant in order to build up a new Higher Education orientation (Berlanga, García-Peñalvo, & Sloep, 2010; García-Peñalvo, 2008, 2011), based on an Open Knowledge philosophy (García-Peñalvo, García de Figuerola, & Merlo, 2010a, 2010b) and more integrated with a lifelong learning (García-Peñalvo, 2007) and informal learning (García-Peñalvo, Colomo-Palacios, & Lytras, 2012) approaches.

Metaverse term was coined by Neal Stephenson in his science fiction novel entitled Snow Crash (Stephenson, 1992) but it has similar roots into other concepts that have appeared under a variety of names in previous cyberpunk genre novels. Metaverses are related to virtual
worlds, 3D environments for user interaction, allowing both users interacting between them or users interacting with the virtual scenarios in the system (García-Peñalvo, Cruz-Benito, & Therón, 2014). In education (Allison & Miller, 2012; Baker, Wentz, & Woods, 2009; García-Peñalvo, Cruz-Benito, Maderuelo, Pérez-Blanco, & Martin-Suárez, 2014), the main difference with a typical Learning Management System (LMS) is that in these virtual worlds is possible to understand the users’ behaviors in the environment through the tracking of different kind of actions, such as movements, conversations, etc., offering a more immersive space for the users (Schmidt & Laffey, 2012).

Entrepreneurship skills should be present in the competence catalog of every student within a Knowledge Society context (Gomes Pires, García-Peñalvo, Marinho Sampaio, & Martínez Vázquez, 2013). The always-difficult relationship between Academia and Business should be managed inside the higher education degrees both within the scope of specific subjects and also building bridges that allow students’ access to the real practice (García-Peñalvo, Álvarez Navia, et al., 2013). The entrepreneurship competences and other ones must be collected in the student’s personal portfolio as a base of evidences that gather the real student’s knowledge moreover the degree marks. The portfolio is a key element to build the students’ presentation card to the companies and also the way to link the formal education with the informal learning and continuous learning in their professional lives (García-Peñalvo, Conde, et al., 2013; García-Peñalvo, Zangrando, et al., 2012).

Gamification is the use of game thinking and game mechanics in non-game contexts to engage users in solving problems (Deterding, Dixon, Khaled, & Nacke, 2011). It is being used in different contexts with positive effects (Hamari, Koivisto, & Sarsa, 2014). Gamification is attracting much interest in education and training sectors, due to today’s education world face major problems around student motivation and engagement. To understand the potential of gamification in education, three major areas in which gamification serves as an intervention are identified: cognitive, emotional and social (Lee & Hammer, 2011).

2. SPECIAL ISSUE CONTENTS

Ramírez Masferrer et al. present in the next article, entitled “Experiences complementing classroom teaching with distance seminars in metaverses and videos”, an experience about reinforcing classroom-based lessons, especially for continuous evaluation, with remote conferences and tutoring. They have used different platforms for computer-assisted learning and with teaching through metaverses (Second Life and Open Sims).

Next contribution by María José Peset Gonzalez and César Ullastres García is entitled “Formation of managers of biotechnology companies: A ‘presential’ (presential and virtual) environment for learning”. These authors introduces an advanced learning environment with the goal of organizing and taking advantage of all the available knowledge, and especially that which the students themselves have built in each edition, so that the following edition participants can profit from it.

Sixth paper by Villalonga et al. is entitled “The electronic portfolio as a teaching complement for technical skills in Health Sciences”. It is devoted to present the implantation of an electronic portfolio (e-portfolio), based on authors’ previous experience with portfolios, in some subjects within Medicine and Dentistry. Satisfaction surveys have showed a high level of acceptance by the students. This allows the authors to conclude that the e-portfolio has proven to be a good teaching tool, presenting a high degree of compliance and satisfaction among students, encouraging student-teacher relationships.

Gamification is presented in the Villagrasa et al. article, entitled “Teaching case of gamification and visual technologies for education”. This study adds learning methodologies like Learning by Doing to students’ collaborative work, and mixes teacher support with new, ac-
cessible technology, such as virtual reality and visualization 3D on the web thanks to webGL. In this way, authors have created a new management tool, called GLABS, to assist in the gamification of the classroom. Understanding the role of gamification and the technology in education means understanding under what circumstances game elements can drive a student’s learning behavior so that he or she may achieve better results in the learning process.

The set of papers in this issue show the importance of the educational innovation in Higher Education. Guest editor hopes that readers find the papers of this volume useful and innovative.

ACKNOWLEDGMENT

Guest editor would like to take this opportunity to thank authors who have contributed to this special issue. We would also like to acknowledge the help provided by the reviewers.

REFERENCES


Francisco J. García-Peñalvo holds a PhD in Computer Science (2000, University of Salamanca - USAL). He works as a Professor in Computer Science Department of the USAL. He is the GRIAL Group head. He was Technology and Innovation pro-Chancellor of the USAL in charge of the definition, planning and development of the USAL technical management strategy based on Open Source solutions. Now he is the Coordinator of the Education in Knowledge Society PhD Programme in the USAL. He is the Editor-in-Chief of the Education in Knowledge Society Journal and the Journal of Information Technology Research (JITR). He is member of the EFQUEL. He has leaded MIH, TRAILER and VALS European projects.