Guest Editorial Preface

Special Issue on Technology Cases for Improving the University Third Mission

Francisco J. García-Peñalvo, Computer Science Department, University of Salamanca, Salamanca, Spain and School of Education, Humanities and Social Sciences, Monterrey Institute of Technology and Higher Education, Monterrey, Mexico

María Soledad Ramírez Montoya, School of Education, Humanities and Social Sciences, Monterrey Institute of Technology and Higher Education, Monterrey, Mexico

INTRODUCTION

In the late twentieth century a critical tendency arises about the role, mission and function of the University. As a result of this reflection process, University incorporates a third mission to the its two basic functions of higher education and research. This third mission is key for the society: "producing applicable knowledge and fostering innovation, training and retraining qualified professionals throughout life, appraising research and promoting entrepreneurial projects or conduct territorial development projects in collaboration with other agents in the economic system" (ACUP, 2008).

The third mission is related to many different tasks that are not easy to classify. They involve from professionals' lifelong learning, with a special emphasis on eLearning methodology (García-Peñalvo & Seoane-Pardo, 2015) to the creation of business projects and labour insertion of graduates and doctors, for example VALS European Project (García-Peñalvo, Cruz-Benito, Conde, & Griffiths, 2014; García-Peñalvo, Cruz-Benito, Griffiths, & Achilleos, 2015, 2016; García-Peñalvo, Griffiths, et al., 2016). The main axes of this third mission are entrepreneurship, innovation and social commitment (Bueno Campos & Casani, 2007). This is consistent with the concepts developed in the late nineties on the Entrepreneurial University (Clark, 1998) and the University as agent in the so known triple helix: university-business-administration (Etzkowitz & Leydesdorff, 1997).

The social commitment in the universities has to be also reflected in their bet by the improving the employability of their graduates and by the education transformation power over the people and community, because of it may serve as a means of social promotion to the individuals and impulse to the whole population (Michavila, Martínez, Martín-González et al., 2016; Portabella, 2016).

This special issue is linked to three international conferences that were held in 2015. These conferences are Technological Ecosystems for Enhancing Multiculturality (TEEM 2015) Conference (Alves & Felgueiras, 2015), III Congreso Internacional sobre Aprendizaje, Innovación y Competitividad. CINAIC 2015 (Fidalgo Blanco, Sein-Echaluce Lacleta, & García-Peñalvo, 2015) and 2015 International Symposium on Computers in Education (SIIE 2015) (Rodrigues, Llamas-Nistal, & Figueiredo, 2016). In order to define this special issue, twelve high quality papers related to the University Third Mission (García-Peñalvo, 2016) development were identified and invited for application. They represented, from different perspectives, the University-Business relationship, which is a key element for the Society development under the umbrella of the Knowledge Society (Bell,

1973) construction and the 21st core skills promotion (Ananiadou & Claro, 2009). Finally, after a highly rigorous peer reviewing process, five papers were selected for publication in this special issue.

The first paper (Guerra Guerra & Sánchez de Gómez, 2016) explores the possibilities of creating value in a university FabLab in order to subsequently use this value as a vehicle for practical education in values and technical abilities in relation to the management of 21st century organisations. This materialises in a teaching initiative experience in the University of Extremadura, Spain based on FabLab and that is suggested for computer engineering.

The second paper (Biel, Pérez, Rodrigo, & Serrano, 2016) presents a case that is framed within the context of Work by Modules taken during the first year-first semester of the Industrial Design and Product Development Engineering Degree at the University of Zaragoza, and its objective is to improve the processes involved in information management required to perform this work. For this purpose, the design of a personal learning environment (PLE) (Humanante-Ramos, García-Peñalvo, & Conde-González, 2015; Wilson et al., 2007) is proposed, using Symbaloo Edu. This tool provides methodological support to select and organize information sources, and its use favors collaborative work while helping to develop digital competencies, providing students with an environment that complements formal learning.

The third paper (Peres & Mesquita, 2016) is about Flip Teaching (García-Peñalvo, Fidalgo-Blanco, Sein-Echaluce Lacleta, & Conde-González, 2016; Ramírez-Montoya & Ramírez-Hernández, 2016). It introduces GainTime European project. The objectives of the project concern the development of professional and pedagogical competences among teachers and trainers. It intends to enhance learning through the use of Information and Communication Technologies and increase the access to Open Educational Resources (OER) (Ramírez Montoya & García-Peñalvo, 2015) with the aim to combine higher levels of excellence and attractiveness with increased opportunities for all.

The fourth paper (Sarasa Cabezuelo, 2016) tries to solve a common problem in teaching languages schools about the preliminary assessment of students' knowledge to assign a skill level in the language that they would like to learn. This article describes how has been automated the performance and management of level tests of the written kind in the specific case of teaching Spanish to foreigners at the University of Zaragoza, Spain.

The last paper (Duarte, Baptista, & Pinto, 2016) evaluates the importance that undergraduate engineering students attribute to short videos in engineering laboratory classes accessed by QR codes.

ACKNOWLEDGMENT

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Francisco J. García-Peñalvo holds a PhD in Computer Science (2000, University of Salamanca). He works as a Professor in Computer Science Department of the USAL. Also, he is Distinguished Professor of the Escuela de Educación, Humanidades y Ciencias Sociales, Tecnológico de Monterrey, México. 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. He has leaded MIH, TRAILER and VALS European projects. Now, he is the Editor-in-Chief of the International Journal of Information Technology Research and the Education in the Knowledge Society Journal. Besides he is the coordinator of the multidisciplinary PhD Programme on Education in the Knowledge Society.

María Soledad Ramírez Montoya is Director of the Research Chair in the Group of Innovation in Technology and Education in Tecnológico de Monterrey (ITESM). She majored in Elementary Education, earning a BSc in Education in the Technological Institute of Sonora in Mexico; and then graduating in Educational Technology with a PhD in Education and Educational Psychology: Curriculum and Instruction at the University of Salamanca (Spain), where she is currently a professor at the Graduate School of Education.