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Future Trends in Computing Technology in Education

J.UCS Special Issue

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Education has traditionally been a field of continuous evolution since the beginning of times. As part of this evolution, technology has recently taken up a significant place in education. However, while technology today seems to refer to computers, limiting ourselves to them may not be adequate. Computer use in education serves to obtain information, analyze student reactions and analytics, potentiate student learning and help develop their autonomous abilities. Technology in general also serves to achieve better assessments [García Laborda et al., 10], facilitate content delivery and maximize the potential of all the different educational stakeholders. Technology alone, however, does not lead to better opportunities for learning if it does not evolve in the way we understand both learning and technology and their common interaction. Nobody can foresee how technology will re-conceptualize future students and teachers. Still, in the future computers will have to serve to engage in meaningful and experiential learning and eventually become invisible as blackboards, pens or books have done over time [Giménez López, 09]. Computers will also have to help to effectively assess and facilitate learning [Inan et al., 10]. Nevertheless, the ways in which they will facilitate learning cannot be foreseen just as teachers and students thirty years ago could not predict how they would affect their work in the present day and age.

Ubiquitous devices seem to be shaping the near future for many teachers [García Laborda, 09; Uzunboylu & Caves, 09; Karahoca, Karahoca & Kurnaz or Ozcinar, Ekizoglu & Kanbul both in this issue]. However, tablet PCs cannot be viewed only as a delivery means; they must still acquire a productive role and serve as potential interfaces between content and students (Ozdamli & Tavukcu; Uzunboylu & Tugun, in this issue) as well as a source of better ubiquitous assessments particularly in underprivileged contexts (García Laborda, Magal Royo & Bakieva (in this issue). Technology in general must also serve to enhance the way in which students network with one another in team and cooperative work. It will also have to serve to develop

repositories where learning objects can be utilized to enhance learning (Gluz et al., in this issue), which will use new concepts for improving media literacy (Hergueta-Covacho et al., in this issue). These repositories will be best developed if supported by adequate mining models (Cechinel et al., in this issue) to develop complete grids of learning analytics. Additionally, assessment will empower the washback effect on teaching, leading to better instructional practices through the application of adequate assessment methods. In this way, not only online learning mode such as MOOCs (Sanchez-Gordon & Luján Mora, in this issue) and blended learning will have a significant impact on instruction, but they will also serve to prepare students for the future as well as today's unexpected changes.

These realities have been illustrated in this monographic issue that we dare to call "Future trends in computing technology for education". The open call of this volume attracted a total of 42 papers, of which only four were finally accepted. Additionally, a total of six submissions were accepted for publication from over 25 articles submitted for revision from the 5th World Conference on Educational Researches held in Nicosia in October 2015 and the 6th World Conference on Information Technology (Las Vegas, USA, August 2015). Thus, the number of reviewers and researchers involved in this volume exceeds by far the number of those implicated in other similar volumes. For this reason, we would like to send out a special appreciation to Associate Professor Dr. Fezile Ogdamli and Huseyin Bicen from Near East University, Alejandro Curado from Universidad de Extremadura, Elena Barcena from UNED and Dr. Ana Gimeno Sanz from Universitat Politecnica de Valencia for serving as the most important members of the scientific committee. At the same time, we wish to express our gratitude to all the authors who submitted a paper in response to the call and very specially to the full team of scientific committee members (Appendix).

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