Editorial: Learning systems and technologies
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Welcome to Volume 9 Issue 1 of the *International Journal of Education and Development using Information and Communication Technology (IJEDICT)* – the first issue for 2013. *IJEDICT* concentrates on articles concerned with the adoption and evaluation of knowledge tools and resources, especially in developing contexts. This issue brings articles from or about Australia, Brazil, China, Iran, Malaysia, Mauritius, Singapore, South Africa, Switzerland, Tanzania, Turkey and USA.

The first article of this issue is "Large-scale 1:1 computing initiatives: An open access database" by Jayson Richardson, Scott McLeod, Kevin Flora, Nick Sauers, Sathiamoorthy Kannan and Mehmet Sincar. The article provides a review of the existing literature around 1:1 programs followed by a description of the large-scale 1:1 database. Main findings include: 1) the XO and the Classmate PC dominate large-scale 1:1 initiatives; 2) if professional development was conducted within a 1:1 initiatives, it was done at the onset of the project by venders of the hardware; 3) funding for 1:1 initiatives appears to be provided initially but not as a reoccurring expense.

In their article, "Interactive whiteboard for primary schools in Mauritius: An effective tool or just another trend?" Goonesh Kumar Bahadur and Deorani Oogarah describe their research to determine teachers' and learners' perceptions of the potential benefits and drawbacks of using interactive whiteboards in their teaching and learning environments. In this research project, an educational resource was designed and mounted using XERTE which is an Open Source Authoring tool, to test whether interactive whiteboard can improve learning in schools.

Mehdi Karami, Zohreh Karami and Mohammad Attaran studied the effect of "Integrating problem-based learning with ICT for developing trainee teachers' content knowledge and teaching skill". The research design was a quasi-experimental one, and the participants were elementary education trainee teachers of Shahid Bahonar teacher training center of Hamadan, Iran. Two groups were given tests of theory and practice on teaching mathematical concepts at elementary school, and then a multivariate analysis of variance (MANOVA) was conducted to compare the pretest-posttest scores. There was a significant difference, in both multivariate and univariate analyses, in scores.

Over the course of medical education numerous technologies and methods have been used to deliver continuing medical education (CME) to health care professionals (HCPs). The emergence of the World Wide Web (WWW) in the early 1990s, coupled with increasing computer processing power, reduced computing costs and more creative content management systems have led to more CME materials and resources going 'online'. In his article "Doctors online: Learning using an Internet based content management system", Darren Pullen reports on a contemporary study that assessed the pedagogical and instructional design (e-pedagogy) effectiveness of online CME courses offered by one large Australasian continuing education provider.

Students entering universities in the 21st century have been described variously as digital natives, the millennial generation or the net generation. To date there has been little information specific to the Asian learner and their use of technology. In "'Digital natives': An Asian perspective

for using learning technologies", David Kennedy and Bob Fox describe a survey that examined the knowledge, skills and understanding of students entering first-year undergraduate studies at the University of Hong Kong. This description is followed by a discussion of the potential impact this has for the design of learning environments in higher education.

The conventional agricultural extension service in Tanzania is mainly provided by extension officers visiting farmers to provide agricultural advisory service. In their article "Building an agricultural extension services system supported by ICTs in Tanzania: Progress made, Challenges remain", C. Sanga, V. J. Kalungwizi, and C. P. Msuya assess the effectiveness of an impact-driven, radio-based extension service delivery system that has been introduced in some rural areas of Tanzania. The results indicate that farmers can adopt and practice easily what is aired by their fellow farmers in the community radio stations.

"Using Self-Efficacy to measure primary school teachers' perception of ICT: results from two studies", by F. Fanni, I. Rega and L. Cantoni, proposes the Self-Efficacy construct as a tool to measure how teachers' perception of being able to use technology (CSE - Computer Self-Efficacy) affects teachers' perception of being an effective teacher (TSE - Teacher Self-Efficacy). The article provides data gathered from two case studies in which the Self-Efficacy construct has been applied to measure the impact of ICT in teaching experiences. One out of four surveys confirmed the hypotheses of the abovementioned projects, namely, an increased CSE caused by the improvement of technological skills and a correlation between CSE and TSE.

In "ICT in Education: A Critical Literature Review and Its Implications", Jo Shan Fu summarizes the relevant research on the use of information and communication technology (ICT) in education. Specifically, the article reviews studies that have touched upon the merits of ICT integration in schools, barriers or challenges encountered in the use of ICT, factors influencing successful ICT integration, in-service and pre-service teachers' attitudes, perceptions, and confidence in using ICT as well as the importance of school culture in the use of ICT. This review discusses gaps in the literature and the directions that future studies may take to address them.

As always, the emphasis in IJEDICT is on providing a space for researchers, practitioners and theoreticians to jointly explore ideas using an eclectic mix of research methods and disciplines, and we welcome feedback and suggestions as to how the journal can better serve this community. The journal now has two sister publications in the form of an online newspaper – "IJEDICT Weekly News" – which is published every Thursday at: http://paper.li/f-1325685118, and a daily, magazine style "ICT for Education and Development" at: http://www.scoop.it/t/ict-for-education-and-development.

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