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Editorial: Evaluation of ICT in education for development

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Welcome to Volume 7 Issue 1 of the International Journal of Education and Development using Information and Communication Technology (IJEDICT), the first of three issues for 2011.

IJEDICT concentrates on articles concerned with using information and communication technologies (ICT) to transform education, especially in developing contexts. This issue brings articles from or about Barbados, Ethiopia, Ghana, India, Indonesia, Malaysia, Sweden and Turkey.

"An Early-Stage ICT Maturity Model derived from Ethiopian education institutions" by Julian Bass, presents an ICT Maturity Model that has been derived from documentary sources and an analysis of selected schools, colleges and universities in Ethiopia. The Model defines the ICT infrastructure resource levels required to achieve primary organisational objectives expressed in the form of student learning outcomes. The Model shows management, teaching and technical staff, as well as donors how to make most efficient use of ICT resources by maximising opportunities for student learning.

The article "Video as a tool for agricultural extension in Africa: a case study from Ghana" by Soniia David and Christopher Asamoah, explores the effectiveness of video viewing clubs as a training method based on a formal survey of 32 Ghanaian women farmers who were trained on cocoa integrated crop and pest management using this method. Results suggests that the video viewing club is effective as a relatively low cost, interactive training method for providing low literacy populations with skills, information and knowledge on complex technical topics. The paper concludes by discussing the challenges of scaling up video viewing clubs and identifying issues for further research.

In their article "The development of a Microcomputer-Based Laboratory (MBL) system for gas pressure law experiment via open source software", Siew Wei Tho and Baseri Hussain describe their research to develop a Microcomputer-Based Laboratory (MBL) system for gas pressure law experiment used in physics education. The low cost developed package can be used as laboratory exercise and demonstration kit for teaching and learning process.

"The need for ICT education for managers or agri-businessmen for increasing farm income: Study of factor influences on computer adoption in East Java farm agribusiness" by Sudaryanto, describes research to investigate the factor influences on computer adoption in East Java On-Farm Agribusiness (EJOFA) and the implications on sustainable agricultural development. The findings indicate that providing computers and other ICTs for managers or agribusiness-man is important. Considering that most progressive managers or business-man are young graduates from tertiary education, therefore, it is suggested that the additional subject on ICTs Education is a must. The final main objective is, of course, increasing farm income.

In the article “Assessment of technology integration in vocational education and training schools”, M. Semih Summak and Mustafa Samancıoğlu describe their research to determine the technology integration level of vocational K-12 teachers and effects of gender and age on teachers’ technology integration level. Data were collected through a questionnaire, which assesses three dimensions: Level of Technology Implementation (LoTI), Personal Computer Use (PCU) and Current Instructional Practices (CIP). Their research revealed that participant teachers had higher LoTI, PCU and CIP Levels. This study also showed that there was a significant difference between gender in LoTI and PCU scores.

In “ICT in universities of the Western Himalayan Region in India: Performance analysis”, Dhirendra Sharma and Vikram Singh present their comparative analysis of a case study carried out to understand the performance and impact of ICT initiatives taken by universities. The findings of the study are (i) a dynamic academic leadership and a properly trained skilled human resource yield better performance and impact leading to effective problem solving capability, research output and actual placements; (ii) a positive ICT- based performance in the universities (iii) the universities act as nuclei towards creating skilled professionals with enhanced core competence.

Ela Goyal, Seema Purohit and Manju Bhaga, in their article “Study of satisfaction and usability of the Internet on student’s performance”, use the extended task-technology fit (TTF) model to examine satisfaction and usability of internet usage on students’ assignment completion tasks and their performance. The results indicate that technology satisfaction and the internet usage significantly explains the variance on students’ performance. Task-technology fit is the predictor for internet usage, whereas it is not a predictor for technology resistance. Technology Satisfaction is the predictor of Technology resistance, student’s performance and internet usage. Internet usage is the predictor of Technology satisfaction and student’s performance. Since these factors are found to have significant relationship with students’ performance, the management and decision makers in universities and institutes need to give higher importance as to how students could use the internet efficiently and effectively.

In “Self Regulatory Behaviour and Minimally Invasive (MIE) Education: A Case study in the Indian Context”, Ritu Dangwal and Minerva Thounaojam describe the process of self-regulatory learners. It has been observed that children, if exposed to a situation where learning is not induced, actively construct their own knowledge and develop critical insights into how they think. These traits of self-regulation allows a child to consciously reflect on what might be the most effective way to master the learning goal and chooses an appropriate strategy to accomplish the goal. MIE captures the curiosity and self-organizing behavioural traits of the children, and this drives their interest towards further education. Hence, schools are not the only privileged sites of learning.

In their article “LiveUSB Mediated Education (LUME)”, Ramón Garrote Jurado and Tomas Pettersson describe the packaging of a complete set of course material together with the software necessary to access the material on a portable memory device. It is argued that the method offers a convenient tool to utilize Open Educational Resources (OER) and can significantly improve the availability of education worldwide. The article gives a description of the design and implementation of a course within the project USo+I: Universidad, Sociedad e Innovación financed by the European Union, within the ALFA III program. The course uses only OER and all material is available from USB-memory sticks to meet any problems of limited access to computers or Internet.

This issue finishes with a book review by Vivienne Roberts. The book - *Mega-Schools, Technology and Teachers: Achieving Education for All*, by Sir John Daniel - presents a macroscopic view of education from a geographical, historical and sociological perspective. It harks back to Adam Smith's division of labour, specialization and equipment and uses this model to take a bold step forward reaching to the establishment of integrating mega-schools, open schools and mass in-service training of teachers using distance methodologies.

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.

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Original article at: http://ijedict.dec.uwi.edu//viewarticle.php?id=1329