

Editorial: ICT integration and effective use in education

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Welcome to Volume 8 Issue 2 of the International Journal of Education and Development using Information and Communication Technology (IJEDICT) – the second of three issues for 2012. 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 Egypt, Greece, India, Malawi, Netherlands, South Africa, Switzerland, Uganda, USA and Zimbabwe.

The article by Assan and Thomas reports on “Information and communication technology Integration into teaching and learning: Opportunities and challenges for commerce educators in South Africa. The authors administered questionnaires, interviews and observation tools to selected educators, School Governing Body members, and school managers in the North West Province of South Africa. The findings of the study identified some major opportunities and challenges in integrating ICT into teaching and learning activities.

The practical work component offers unique challenges for the Bindura University distance learning science courses. The article “Science practical work instructional technologies and open distance learning in science teacher training: A case study in Zimbabwe” by Bhukuvhani, Mupa, Mhishi and Dziva, evaluates the use of instructional technologies for science practical work. The research revealed that although lecturers place great value on practical work, in practice they prefer using lecture notes and Internet downloads rather than other instructional technologies.

In the article “Adoption of Web 2.0 technology in higher education: A case study of universities in National Capital Region, India”, Tyagi reports on a study that attempted to find out the usage of Web 2.0 tools to support teaching and learning in higher education in the NCR of India. From a survey, the investigator found that the majority of the faculty members have been using Web 2.0 tools for the three major purposes; web-based teaching and research; interactive learning features; and keeping themselves up to date in their area.

In the article “A needs assessment to identify the reality of two rural school cases in South Africa: Potential for ICT4D or not?” Pade-Khene presents findings which include: 1) the elaborated needs and priorities for developing access to education and knowledge in a rural area, and 2) proposed solutions to address these development needs. Examining these elaborated needs indicate that potential solutions to address them are beyond the scope of computer science and information systems, and should also include other development disciplines, such as, education, government, and sociology.

Chitanana investigated how to make efficient use of bandwidth in universities. The results, reported in “Bandwidth management in universities in Zimbabwe: Towards a responsible user base through effective policy implementation”, show that most universities did not have an official Acceptance Use Policy to assist with bandwidth management. In the article, the author recommends using Quality of Service and Bandwidth Management to control network traffic flow so that appropriate users and applications get priority during the allocation of network resources.

As part of Malawi Teacher Professional Development Support project, a sub-task was the piloting of an alternative technology that could be used for improving the quality and consistency of teacher continued professional development. The article “Pre-service teacher training in Malawi: Findings of a pilot study on the viability of media players for teacher development” by Carrier, Finholt-Daniel and Sales, reports on the pilot. The evaluation results demonstrated that, with a small amount of initial training, the devices were easy to use and they effectively deliver instruction.

The article “Shifting pedagogical space: Egyptian educators use of Moodle” by Richardson, Finholt-Daniel, Sales and Flora, focuses on exploring the outcomes of an e-learning initiative in Egypt. Researchers conducted training with 17 Egyptian educators on how to build, maintain, and teach using Moodle, an online content management system. The researchers evaluated the outputs of the training using the Technology Adoption Model (TAM) in an effort to assess perceived usefulness and perceived ease of use of this innovation in this particular context.

In their article “Educator discourses on ICT in education: A critical analysis”, Bladergroen, Chigona, Bytheway, Cox, Dumas and van Zyl present a Critical Discourse Analysis (CDA) of Primary School Educators’ dialogue on the use of ICT in an under-resourced schooling context. The results show that educators appreciate the value of ICT in education and are willing to adopt it. However, at the same time, they feel they lack capacity and support to achieve that goal effectively.

“The impact of learning driven constructs on the perceived higher order cognitive skills improvement: Multimedia vs. text” by Bagarukayo, Weide, Mbarika and Kim describes research project involving 223 students split into two groups - using multimedia and textbook instructional methods respectively. The findings from the study suggest that multimedia materials had no measurable effect on higher order cognitive skills as compared to the traditional textbook approach.

“Using educational webcasts in small multigrade schools of isolated islands” by Giannakos and Vlamos reports on a study of the effectiveness of educational webcast in the small and isolated islands of Greece. The field study compared multigrade traditional teaching to webcast enhanced multigrade teaching. The results indicated that educational webcasts can have a valuable contribution to multigrade primary schools students.

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 a sister publication in the form of an online newspaper – “IJEDICT Weekly News” – which is published every Thursday at: <http://paper.li/f-1325685118>.

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