

Editorial: Participation, collaboration and effective use of ICT

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Welcome to Volume 3 Issue 3 of the International Journal of Education and Development using Information and Communication Technology (IJEDICT). This issue brings articles from and/or about Bangladesh, China, Greece, the Netherlands, Oman, South Africa, Tunisia, Turkey, Uganda, United Kingdom.

In “E-learning data warehouse maintenance system for collaborative learning availability resources optimization”, Jalel Akaichi studies the issues of using agent’s based architecture to achieve e-learning data warehouse maintenance under schema changes by repairing automatically affected view definitions. This implicitly optimizes e-learning resources availability by automatically finding replacements for affected components belonging to view definitions.

“Teaching history using a Virtual Reality Modelling Language model of Erechtheum” by Demetra Eggaxou and Sarantos Psycharis presents a Virtual Reality Modelling Language VRML exploration of the Erechtheum in Athens. The design principles of the applications are described in detail as well as the technical characteristics of the application. A pilot evaluation of the teaching approach is also presented and the results indicate a strong positive impact on students’ performance.

In “Construct validation of ICT Indicators Measurement Scale (ICTIMS)”, Yavuz Akbulut, Mehmet Kesim and Ferhan Odabasi report on their study of the psychometric features of a scale developed to measure indicators of ICTs at an undergraduate institution in Turkey. Issues forming successful ICT integration were identified according to competencies stated by UNESCO (2002). Besides, each competency sheltered further sub-components which were adapted from UNESCO (2002) and Odabasi et al. (2006).

Poor internet connectivity is hampering the transition of developing countries to the global information society. In her article “Can the Internet in tertiary education in Africa contribute to social and economic development?” Anna Bon discusses how the recent emergence of national and regional research and education data communication networks in parts of the developing world have shown large benefits arising from collaboration amongst tertiary education institutes. She goes on to argue that collaboration amongst tertiary education institutes in Africa is essential to make them key players in the enhancement of ICTs for society. The University of Nottingham, UK and the Beijing Foreign Studies University, China have been engaged on a collaborative project to develop a generic module for the training of online tutors as part of the eChina-UK programme. In the article “Researching a participatory design for learning process in an intercultural context”, Gordon Joyes and Zehang Chen describe the participatory design approach in this project and explores an activity theory based analysis approach that is used to identify some of the factors that affected the design process.

Johnnie Wycliffe Frank Muwanga-Zake studied 26 teachers from 23 South African disadvantaged schools to report on evaluation strategies that could be used to introduce an educational computer programme (ECP) in disadvantaged schools. His article - “Introducing educational

computer programmes through evaluation: A case in South African disadvantaged schools” - discusses the strategies, the concepts the ECP presents, and considers the curriculum issues around ECP use in teaching. Babalola Isiaka reports on the “Effectiveness of video as an instructional medium in teaching rural children agricultural and environmental sciences”. The study also examined the effect of gender and grade on the performance of the pupils taught with four instructional media. The study revealed that the pupils taught with the video performed equally as well as those taught with real objects (Realia), while both groups performed significantly better than those taught without either.

In the article “The innovative elements in non-formal education of Bangladesh: Perspective of income generating programmes for poverty alleviation”, Md. Islam and Ahmadullah Mia describe a study based on a survey of the beneficiaries, focus group discussions, and documentary review. The study shows that most of the NGOs have programmes for socio-economic development but a very few of them have innovative elements in non-formal education linked income generating programmes for poverty alleviation. In the article “The status of Omani women in the ICT sector”, Ayman Elnaggar fears that women in the Arab Gulf region in general and in Oman in particular are at a higher risk of being marginalized from today’s knowledge-based economy. The article presents a gender sensitive assessment of the ICT space in Oman and the status of women within it, and to develop the seeds of an information base that provides gender analysis of opportunities and challenges in the ICT space.

Joseph K. Ssewanyana and Michael Busler examined the extent of adoption and usage of ICT on one hundred and ten firms in Uganda, and established benchmarks that can be utilized in future research and comparison between firms. The results reported in their article “Adoption and usage of ICT in developing countries: Case of Ugandan firms”, revealed that the adoption and usage of ICT by firms in developing countries follow the same pattern as in developed countries, and they only differ in the level of usage and adoption.

This issue of IJEDICT concludes with a project report - “Improving production and accessibility of agricultural information through capacity-building, networking and partnerships in the South Pacific” - by Danny Hunter. The three main project components are: to develop appropriate agricultural technologies based on farmer livelihood needs; to improve access to agricultural information; to build institutional capacity and partnerships with National Agricultural Research and Extension systems (NARES), NGOs, information providers, and farmer and community groups, in order that technology identification and knowledge dissemination will be sustained beyond the end of the project.

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