

Editorial: ICT in support of school education

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Welcome to Volume 6 Issue 2 of the *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*.

IJEDICT concentrates on articles concerned with using information and communication technologies (ICT) to transform education, especially in developing contexts. This issue brings articles from Malaysia, Nigeria, Norway, South Africa, Uganda, UK, and the USA.

The article "Supporting Smart School Teachers' Continuing Professional Development in and through ICT: A model for change", by Thang Siew Ming, Carol Hall, Hazita Azman and Gordon Joyes, proposes an online model based on the Improvement Quality Education for All (IQEA) action research framework for school improvement (Hopkins et al 1996). The ultimate goal is to bring together the school-based cadres to share emerging issues, themes and evaluation and eventually develop expertise in managing change in their own institutions and beyond through the use of ICT. This concept paper provides the background, rationale, framework and the methodology of this research project.

The potential of ICT to enhance curriculum delivery can only be realised when the technologies have been well appropriated in the school. The study described in "An empirical survey on domestication of ICT in schools in disadvantaged communities in South Africa", by Agnes Chigona, Wallace Chigona, Patrick Kayongo and Moses Kausa, investigates the factors that affect the integration of ICTs in teaching and learning. Participants were drawn from randomly sampled schools in disadvantaged communities in the Western Cape. Results show that even though schools and educators are willing to adopt the technology, there are a number of factors that impede the integration of ICTs in teaching and learning.

The study described in "Measuring Levels of End-Users' Acceptance and Use of Hybrid Library Services", by Prisca Tibenderana, Patrick Ogao, J. Ikoja-Odongo and James Wokadala develops, applies and tests a research model of acceptance and use of such services based on an existing UTAUT model by Venkatesh, et al. (2003). Results show that 'relevance' and 'social influence' have significant effects on intentions to use e-library services. Results further show that university communities in Uganda are inclined to use electronic library services due to social demands, relevancy of services, available facilitating conditions and benefits they expect from the services. Most importantly, the Service Oriented Unified Theory of Acceptance and Use of Technology (SOUTAUT) model explains 57% of variance towards acceptance and use of e-library services.

In the article "Self-concept, computer anxiety, gender and attitude towards interactive computer technologies: A predictive study among Nigerian teachers", Alaba Olaoluwakotansibe Agbatogun describes a study that used three instruments to collect data from 454 Nigerian teachers. The data were analysed with Pearson Product Moment Correlation, Multiple Regression and Analysis of Variance. The findings revealed that the combination of the three independent variables significantly predicted the independent variable. Gender did not make any significant contribution to the prediction of the dependent variable. Recommendations were made based on findings.

The National Open University of Nigeria (NOUN) assessment system at present is challenged. The large number of students and numerous courses offered by NOUN as an open and distance

learning institution make assessment very cumbersome and an administrative nightmare. In “Rethinking and restructuring an assessment system via effective deployment of technology”, Charity Okonkwo describes the challenges related to conduct of examination such as question paper, finance, manpower, collation of results and release of meaningful results. The study explores how technology envisaged to ameliorate these challenges can effectively be employed to restructure assessment in NOUN. Issues relevant for effective deployment of technology in restructuring like question bank, logistic operations, operational processes of technology and formal registration of students for assessment are discussed for ease of implementation. Implications for the use of technology in assessment are presented. Cogent recommendations are made for effectiveness of the system.

“From digital divide to digital equity: Learners’ ICT competence in four primary schools in Cape Town, South Africa” by G.B. Gudmundsdottir explores factors influencing the digital divide in four schools. Learners’ ICT competence was compared between and across schools in relation to gender, home access and home language in addition to support and training possibilities for the teachers. The main findings indicate that, despite substantial efforts by educational authorities to increase ICT access for learners and teachers in public schools in Cape Town, when learners’ ICT competence is compared, digital equity has not been reached. In order to increase digital equity and decrease the digital divide, a renewed policy focus is needed which puts greater emphasis on addressing the severe inequalities of the learners within their school environment as well as outside of school, taking their home situation into consideration to a greater extent.

The article “Closing the digital gap in Cameroonian secondary schools through the CIAC project” by Julius Nganji, Roland Kwemain and Calisus Taku, is also about bridging the digital divide. They report on one of the pioneer projects, the Computer and Internet Access Centres (CIAC) project, implemented by the Association for Development, Communication and Environment (ADCOME), a non-governmental organisation with headquarters in the South West Region of Cameroon. They look at its history, implementation, successes, challenges and possible solutions.

While many digitization projects are currently underway, to help preserve Indigenous traditions, few explore the full potential of the development of digital media and networked technology through Indigenous cultures. In the article “Beyond preservation: New directions for technological innovation through intangible cultural heritage”, Christopher Robbins outlines the three phases necessary for a robust digital preservation, promotion and growth project:

1. Straightforward documentation of Indigenous traditions;
2. Translation of Indigenous traditions into emerging technology and contemporary cultural modes of expression;
3. Application of principles of Indigenous traditions to develop new technologies.

In the Project Sheet “Malaysian Education Index (MEI): An online indexing and repository system”, Muhammad Kamarul Kabilan, Hairul Nizam Ismail, Rohizani Yaakub, Najeemah Mohd Yusof, Sharifah Noraidah Syed Idros, Irfan Naufal Umar, Muhammad Rafie Mohd. Arshad, Rosnah Idrus and Habsah Abdul Rahman describe an on-going project that is being carried out by a group of educational researchers, computer science researchers and librarians from Universiti Sains Malaysia, Penang. The Malaysian Education Index (MEI) has two main functions – (1) Online Indexing System, and (2) Online Repository System. In this brief write up, the authors describe the objectives, functions and contents of MEI, as well as its critical role in the process of enhancing the quality of teaching and learning, and research in Malaysia.

The Project Sheet “Proposing a web-based tutorial system to teach Malay language braille code to the sighted” by Lee Lay Wah and Foo Kok Keong, describes the e-KodBrailleBM Tutorial System. The targeted group for this web-based tutorial system includes special education

teachers, pre-service teachers, and parents. Learning Braille code involves memorisation and repeated practice for mastery; hence an automated tutorial system would be a suitable medium of instruction. Instruction in e-KodBrailleBM consists of three phases: Modelling, Guided Practice and Independent Practice. In addition, an Extended Activity phase provides additional practice. Reusable learning objects such as Self-Learning Tutorials, Braille Simulator, Braille Exercises, Summative Self-Assessments and Braille Games will be developed to support the instructional phases. These learning materials are designed to be interactive, progressive and cumulative.

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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