

## **Guest Editorial: e/merge in Africa**

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***e/merge 2008 - Professionalising Practices*** (<http://emerge2008.net>) was the third virtual conference on educational technology in Africa, following and building on on the *e/merge* conferences in 2004 and 2006. *e/merge 2008* took place online from 7 - 18 July 2008 and was primarily designed to share good practice and knowledge about educational technology innovation within the further and higher education sectors in the region, as well as to strengthen communities of researchers and practitioners. *e/merge 2008* was mainly for educational technology researchers and practitioners based in Southern Africa and the English-speaking African countries in West and East Africa. Participants from other regions who have an interest in the use of educational technology in Africa were also warmly welcomed, and in some cases actively recruited as presenters or workshop leaders.

The Infodev Survey of ICT and Education in Africa (2007) across 53 countries described severe challenges to the integration of elearning within higher education institutions. Farrell and Isaacs stated that most "African universities are seriously constrained in the use of ICT by a lack of computer stations and a lack of access to affordable high-speed Internet connectivity" (p23). These basic infrastructure issues may however be easier to address than the limited "human resource capacity to exploit the technology" (p26). In the same year the report on ICTs in Higher Education in Africa (2007) provided a detailed analysis of the use of ICTs in higher education across 8 African countries. Their results suggested a dearth of pedagogically based research on the use of ICTs in African universities and also that "many of the countries and their higher education institutions (HEIs) are struggling with the issue of recognised and accepted paradigms of e-learning that are not only pedagogically sound but also appropriate to their context" (p3). Both of these issues may suggest limited human capacity.

At the same time, and despite the observed constraints, there has been an exponential growth in the use of online and networked learning environments in tertiary education in Africa, as evidenced both informally and formally through such projects as the Educational Technology Initiative for Africa. Similar trends are emerging in secondary education. Successful integration of the new waves of learning technology in teaching and learning depends crucially on the efforts and practices of the emerging profession of educational technologists and the adoption of new practices by lecturers and teachers.

*e/merge 2008* focused on professionalising the new practices of teaching with technology. This included sharing stories, sharing good practices and sharing research. The conversations in *e/merge 2008* engaged with our regional context of unequal access to technology as well as with educational technology trends within a global context of changes in teaching and learning tools and practices. *e/merge 2008* was organised and hosted by the Centre for Educational Technology at the University of Cape Town and funded by the Ford Foundation.

Presenters were recruited through a public and widely circulated call for papers as well as through personal approaches by e-mail and through personal conversations with selected presenters during the elearning Africa conference in Accra in May 2008. There were 36 presentations including five keynotes and 13 peer reviewed papers; and four online workshops. The *e/merge 2008* keynotes, presenters and workshop leaders were from Australia, Brazil,

Canada, Germany, Kenya, Iceland, Italy, Nigeria, Senegal, South Africa, Uganda, the United Kingdom and the United States.

The *e/merge* 2008 keynotes were:

- Dr Bakary Diallo, Rector of the African Virtual University on "Reaching the potential of ICTs in African Higher Education Institutions: Lessons learnt from the AVU Capacity Enhancement Program";
- Irene Karaguilla Ficheman, Researcher at University of Sao Paulo, Brazil on "Digital Learning Ecosystems: Authoring, Collaboration, Immersion and Mobility";
- Dr Ross Perkins, Senior Research Associate at Virginia Tech, United States on "Does Context Sensitive Instructional Design Really Matter?";
- Howard Rheingold Author and Online Community Pioneer, Visiting Professor at Stanford University and University of California, Berkeley, United States on "A Social Media Classroom for Student-Generated Learning"; and
- Dr Sasha Barab, Professor of Learning Sciences, Instructional Systems Technology & Cognitive Science, Indiana University and Dr Melissa Gresalfi, Assistant Professor of Learning Sciences, Indiana University on "Conceptual Play and Multiuser Virtual Worlds: Worked Examples from the Quest Atlantis Project"

With each *e/merge* conference participation has grown due to word of mouth from previous participants and the extension of our geographic base beyond Southern Africa. 224 participants logged on to the conference to participate during the two weeks of online discussion about the use of educational technology in Africa. While most of the participants came from South Africa, there were also delegates from 10 other African countries including Senegal, Nigeria, Ethiopia, Tanzania, Kenya, Uganda, Mozambique, Zimbabwe, Botswana and Namibia. Participants from other continents joined from as far afield as United Kingdom, Norway, Iceland, United States, Australia, Canada and the Philippines.

The papers for the *Special Issue* were selected for their quality and to represent a range of contexts, experiences and challenges faced by educational technologists across Anglophone Africa. The nine papers in the *Special Issue* all embody a focus on access to educational processes and resources. In contrast to the last *Special Issue* based on papers from *e/merge* this issue includes two authors from Uganda and Tanzania.

**Access cluster:** The first four papers focus directly on the use of educational technology to address differential access whether this is because of physical resource constraints in the classroom, gendered use of ICTs, rural-urban divides or opportunities for the use of pervasively available mobile technologies in education.

Many African countries have a long history of distance education which predates but overlaps with the existence of e-mail and the Web. Willy Komba from the Mkwawa University College of Education, which is a Constituent College of University of Dar es Salaam reviews the history of open and distance learning in Tanzania since the 1970s and highlights the importance of quality assurance processes for the ability of the sector to provide credible high quality courses which meet the needs of distance learners. Komba recommends that "Academic units should use more outcome-oriented and competency-based assessment techniques and move away from the conventional input-and process model in order to adapt to e-learning and other new forms of delivery as well as to increase the comparability of the quality of the products across institutions nationally and internationally."

"Conflict and sharing in discourse around primary school email use" by Nicola Pallitt from University of Cape Town considers conflict and sharing in discourse around primary school email use. This article shows how limited physical access to computers in a South African primary school drives interaction between pupils sharing computers. Paradoxically scarcity becomes a resource for shared conversation. This may imply some interesting questions concerning the use of constraint as a design variable and perhaps even whether the goal of One Laptop per Child places undue pressure on the scarce resources which are available for technology investment in developing countries.

Even after considerable investment in IT infrastructure there are still likely to be marked differences in physical and epistemological access to computers across a group of students. This becomes problematic where the differences in student access reinforce existing social divides including that of gender. In "Him & Her": Gender differentials in ICT uptake" Ruth Nsibirano, of Makerere University in Uganda poses the problem of gendered access to ICT by students at Makerere University in Uganda. Nsibirano then reviews key theoretical resources including standpoint theory and describes a plans for survey of university students. Nsibirano asserts that "A better understanding of students' meanings, most especially as born out of their own situated experience with ICT is a perspective still missing from the puzzle. This is called for as it reveals a point of view that is different from that of other players in the University as well as a standpoint from the beneficiaries of the move to promote ICT."

Paradoxically the history of constrained access to conventional IT resources in Africa may be a major driver for access to mobile technologies which have recently begun to take on some of the properties of conventional computers including multimedia and access to e-mail and Internet. Tino Kreutzer, formerly at University of Cape Town and now with the United Nations Development Programme shares the results of a survey of 66 young people in a South African township school concerning their use of mobile technologies. In "Assessing Mobile Technology Usage in a South African Township School" Kreutzer confirms the widespread use of cellphones for informal communication across multiple features and suggests that these are an underutilised resource in education. "On a typical day, the most important uses were personal communication (91%), entertainment use (82%, including music, photos, videos), websites (71%), and instant messaging (47%)."

**Professional Development Cluster:** The next three papers consider the professional development needs of educators in universities and schools. This includes responding to the changes in technology use by students, developing skills and perspectives in the integration of ICTs within the curriculum and the use of an online environment to support a dispersed educator community.

Even in a context of restricted bandwidth and limited experience of ICTs by pre-university students the use of Web 2.0 tools in teaching and research is starting to require the attention of educators. In "Investigating Popular Internet Applications as Supporting E-Learning Technologies for Teaching and Learning with Generation Y" Mici Halse and Brenda Mallinson of Rhodes University, South Africa review the challenges to educators posed by the characteristics of Generation Y users of technology. The authors consider a range of tools for teaching generation Y students and suggest that previous generations of educators can learn to teach with these. Within the global debates about the applicability of generation theory it rare to find examples of this literature on the African continent. Halse and Mallinson conclude that mastery of the new tools "should be well within the reach of most pre-Generation Y facilitators".

As universities across Africa start sharing resources and facilitating some online learning interactions staff developers need to think very strategically about how to inform, engage and support educators in the integration of ICTs within their broader teaching and learning models.

Episodic workshops and a software/technology focus have long ago been shown to be ineffective or insufficient as lone interventions Markus Mostert and Lynn Quinn, also of Rhodes University, reflect on what they have learnt about the professional development of university staff to teach with technology. They use the Technological Pedagogical Content Knowledge (TPCK) framework developed by Mishra and Koehler (2006) as a theoretical lens for exploring the integration of ICTs within the training of academic staff as higher education professionals. This integration is essential if university educators are to make effective use of ICTs in their teaching. They suggest that "Working in teams which include an educational technologist seems to be one way in which academic staff developers can begin to gain the other types of knowledge that will enable them to help their "students" develop TPCK."

Mathematical Literacy is a new subject in the South African secondary schools which is one of the products of recent waves of curriculum reform. Changing educator practices involves concomitant transformations in conceptual frames and professional identities. Especially where the practices are new practitioners, benefit from the support of both staff developers and the mutual support of peers in a community of practice. In "Creating an Online Learning Ecology in Support of Mathematical Literacy Teachers" Maggie Verster, of ICT4Champions explains how online interaction has been used to support an emerging community of practice of mathematical literacy teachers. highly usable technology is seen as essential in supporting the growth and maintenance of this community. The online community site has "assisted teachers in becoming more involved within the community by uploading and accessing resources, participating in discussions and sharing experiences."

**Open educational Resources cluster:** *e/merge 2008* included a strong focus on open educational resources. Cheryl Hodgkinson-Williams and Eve Gray of Opening Scholarship Project at University of Cape Town unpack the complex realities of openness in their article on "Degrees of Openness". In contrast to simplistic uni-dimensional understandings of openness they demonstrate how to unpack "social, technical, legal and financial openness in an attempt to make the task of identifying where changes could be made to existing teaching materials or processes a little easier for the lecturer and the educational technologist alike". This move from simplistic binary understandings of open educational resources to a more nuanced perspective may provide an intellectual foundation for more subtle approach to forming alliances within and across institutions. It also provides categories and tools to support a more rigorous reflection on their achievements and challenges by OER practitioners.

One of the key recent statements of values and aspirations by the Open Access movement in the last few years is the Cape Town Open Learning Declaration. There is always a question as to how such a call to action may inspire anything more than public statements of adherence. In "Educators and the Cape Town Open Learning Declaration: Rhetorically reducing distance" Andrew Deacon and Catherine Wynsulley of the University of Cape Town, South Africa analyse the rhetoric of the Cape Town Open Learning Declaration as a call to action by institutions and educators. They conclude that "By signing up to the Declaration, both understanding the text and being persuaded by it, educators will be assisted in taking further steps towards creating, shaping and evolving their own educational practices."

We thank the Ford Foundation for funding *e/merge 2008*. Our thanks are also due to Professor Stewart Marshall for once again providing a platform for key issues and papers from the *e/merge* online conference to be more widely shared. This includes the considerable time which he invests in the technical production processes for each issue. We thank our colleagues at the University of Cape Town's Centre for Educational Technology for their patience and support; just because a conference is online does not mean it is stress-free! We also want to thank the reviewers for insightful comments which lead to improvement, and the authors of these papers for their thoughtfulness, their appreciation for reviewer feedback and their patience during revisions. Last,

but not least, we thank the participants of *e/merge 2008* for bringing their energy and experience online and growing the professional practice of educators and learning technologists in Africa, and beyond.

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Guest Editors for Special Issue

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