Why research the pedagogical integration of ICTs?

At the second World Summit on the Information Society (Tunis, November 2005), Kofi Annan reminded us that we are living in a world of rapid change where technologies play a multitude of roles. We cannot remain indifferent to this societal metamorphosis. As researchers and educators, we have a responsibility to embrace and shape the processes of change that ICTs bring to teaching, life, learning, work, and livelihoods.

ICTs are increasingly present in African societies, and have been introduced to varying degrees at all education levels from preschool to university, in both the formal and informal sectors. It is also used to offer distance education to teachers and other adult learners. However, in various education systems across Africa, ICTs are increasingly being taught as a completely separate discipline, while ICT integration into pedagogical practices to improve the quality of teaching and learning remains in the exploratory stage. Outside of South Africa, little African research is being conducted on the efficient use of ICTs in education, though an IDRC-funded study in 2004-2005 in West and Central Africa has demonstrated the potential of ICT use to help transform pedagogical practices.

The objective of the Panafican Research Agenda on the Pedagogical Integration of Information and Communications Technologies (ICTs) is to better understand how the pedagogical integration of ICTs can improve the quality of teaching and learning in Africa. During the initial two-year phase, researchers based for the most part at African universities will gather and analyse quantitative and qualitative baseline data and publish findings. An online Observatory and the project Web site will make the data and findings available for researchers and practitioners. Observatory data and project findings will be available to inform policy development initiatives and teacher training programs.

The Observatory indicators were developed through a highly participatory process involving researchers – male and female – from universities in 11 countries across Africa, and a workshop held in Dakar in September 2006. The more than 100 indicators monitor policy, access, teacher training, ICT use, learning, school administration and gender. ERNWACA and University of Montreal are responsible for project management and met in Bamako in July 2007 to draft the research methodology guide and prepare the methodology workshops to be held in September 2007.

ERNWACA has signed collaboration agreements with 11 universities on the continent. The project is open to partnership with other institutions, to contribute data to the Observatory and/or help promote it.
PanAf Team in Bamako, Mali

I am pleased to introduce three persons at ERNWCA Regional Coordination who will be working on the IDRC-funded panAfrican Research Agenda on the pedagogical integration of ICT (June 2007-May 2009), in which ERNWACA will partner with universities in 11 countries on the continent (Cameroon, Congo, Egypt, Kenya, Mali, Morocco, Mozambique, Uganda, Central African Republic, Senegal, South Africa) and with University of Montreal.

Mbagwana Moses Arezah, Research Program Manager, is a member of ERNWACA-Cameroon. Moses has a PhD in Educational Technology from USA and was recently promoted to Associate Professor. In addition to managing the new research project, he will work with the ERNWACA regional scientific committee on the Journal on Education Research in Africa.

Email: mmbangwana@rocare.org.

Dramane Darave, Research Assistant Webmaster, is 27 years old. He is an ICT engineer with an MA from Cheick Anta Diop University of Dakar. He has worked with PanaPress in Senegal. He continues to make available on the Web content from his home country, available at www.fasopresse.net.

Email: ddarave@rocare.org.

Moises Appolos Thera, Finance Officer, joins us from World Vision in Mali and has a Master’s in Economics from the Ukraine. He is responsible for financial audits of ERNWACA national networks. He will also work with the accountants and finance officers in partner universities who are responsible for submitting financial reports and receipts for expenses related to the PanAf project.

Email: mthera@rocare.org.

Hope you will enjoy interactions with members of the team and vice versa.

Kathryn Touré, ERNWACA Regional Coordinator, Bamako, Mali

Introduction to the Observatory

The Observatory is a search tool to find data on ICT in education. You can either use the Simple Search – which allows you to view indicators from a single country (or indicators from institutions within that one country), or the Advanced Search – which allows you to compare results across multiple geographic scales (and multiple indicators).

Online help icons are available throughout the site to coach you through the tools’ options and limitations. If your institution would like to become a member of the team and contribute to the project by expanding the number of institutions and countries for which data is available or if you note that data is incorrect, please contact the project managers at the following email: panaf@rocare.org.

Prof. Thierry Karsenti, University of Montréal, Canada
ICT and Gender

Information and Communication Technology (ICT) is increasingly being heavily relied upon in most countries in Sub-Saharan Africa because it has potential for social and economic development. But the project on measuring the digital gender gap in Francophone Africa echoed that women are marginalised within the Information Society in many ways (Mottin-Sylla, 2004).

They are far less likely than men to play a role in decision making about ICTs, to shape ICT content, to acquire ICT training, and to have access to ICT-based services. Such projects increase our understanding of how women are prevented from benefiting from the African Information Society and what steps can be taken to empower them.

ICT has the potential to eliminate barriers and disparities and can improve the lives of women because access offers new economic and social opportunities. However, in Mozambique the integration of ICT in secondary schools has produced favourable results (Cossa and Cronje, 2004).

Accentuating gender access to ICT by putting in place such facilities in the school system is the forward to address poverty in all its dimensions. This commitment to the information society is exemplified in the UN’s involvement in issues concerning it in the last few years.

For instance, the Millennium Declaration adopted in 2000 underscored the urgency of ensuring that the benefits of new technologies, especially ICT, are made available to all (UN Report, 2000).

Introducing ICT services in schools as a discipline or a necessary condition may be a major stride to ensuring a turn out of women and men who are literate for the information and communication society.

Such services are a source of curricula’s content as well as a pedagogical mechanism used for construction of knowledge. Taking into consideration factors contributing to the sustainable management and durability in integrating ICT within schools, a number of challenges have been identified (ROCARE Cameroon, 2005).

Prof Thérèse Tchombe, University of Buea, Cameroon

ICT training course in Cameroon
Analysis of Information and Communication Technology Policies in Africa

This paper analyses information and communication technology (ICT) policies and draft policies from 27 African countries: Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Comoros, Congo Brazzaville, Cote d’Ivoire, Egypt, Ethiopia, Gambia, Ghana, Guinea, Kenya, Madagascar, Malawi, Mali, Morocco, Mauritania, Mozambique, Namibia, Niger, Nigeria, Senegal, Tanzania, Uganda and Zambia.

The majority of the policies were developed in a participatory manner and the Economic Commission for Africa was involved in producing a good number of them.

The factors of analysis were:
- Vision for ICT in relation to national development in general and education in particular;
- Process for development of the policy;
- Role of public governance authorities and all stakeholders in the promotion of ICTs for development;
- Information and communication infrastructure;
- Access to information and knowledge;
- Capacity building;
- Building confidence and security in the use of ICTs;
- Enabling environment;
- ICT applications;
- Cultural diversity and identity, linguistic diversity and local content;
- Media;
- Ethical dimensions of the Information Society;
- International and regional cooperation.

All the countries look at ICTs as a means of resolving certain developmental problems and have thus generated visions and goals that implicate ICT in social and economic development. The policies account for ICTs being involved in poverty eradication, health, better education and good governance for example. Other areas of application indicated in this policy review include agriculture, environment, science, tourism, culture and employment.

The policies indicate that the major difficulties facing ICT use in Africa and which the countries intend to resolve immediately include inadequate infrastructure, insufficient human resources and inadequate access. The plans to resolve these problems include working in partnership with local and foreign investors as well as international organizations. To achieve this, many of the countries intend to set up necessary legal, institutional and regulatory frameworks and structures that motivate investors, facilitate training and produce an enabling and secure environment.

One component of regional and international cooperation that stands out when one reviews the policies is international trade. All the countries have a plan of exporting ICT products and/or services. In concluding the review, the author points out the need to achieve economies of scale with ICTs by organizing some activities or projects at regional or continental level so that they can be cost-effective.

To comment draft paper, go to www.ernwaca.org/panaf.

Dr Joseph Azia Tamukong
Vision and Design of PanAf

With the continuous growth of information and communication technologies (ICTs) on the African continent, education is one sector taking advantage of them thanks to the availability of data processing equipment and connectivity of schools, mainly urban ones currently, to Internet.

However, the use of ICTs is often limited to computer literacy and information retrievals by pupils and teachers. Even if some progress has been noted in teaching and learning practices thanks to ICTs, their effective pedagogical integration remains marginal. Taking into account these realities, the Acacia program of the International Development Research Centre (IDRC) has granted, in its ongoing programming (2006-2011), a select place to a set of research themes centred on the new contexts of learning induced by ICTs and the innovative pedagogical methods which must result from this.

The programming approach adopted for this purpose is to promote an initiative of pan-African dimension offering, to several education research institutions, opportunities to undertake research on the pedagogical integration of ICTs. The design of such an initiative was based on lessons learned from ICT projects having pedagogical dimensions, financed by IDRC in Uganda and in Senegal, but also in other countries of Central and West Africa within the collaboration framework between ERNWACA and the University of Montreal.

While working toward the consolidation of its investments in this field and seeking to amplify them on the scale of the continent, IDRC hopes to contribute to a better understanding of the use of ICTs for education in African socio-cultural contexts and to the production by national researchers of knowledge likely to guide political decision makers, researchers, parents, and learners in their efforts to integrate ICTs at various levels of educational systems (pre-school, primary, secondary, non-formal, higher).

These research results will help in particular in the better integration of these technologies in the curricular reforms in progress in several countries of the continent.

Alioune Camara, Senior Program Specialist, IDRC

« IDRC hopes to contribute to a better understanding of the use of ICTs for education in African socio-cultural contexts. »

ERNWACA Small Grant Recipients participate in training workshops

In 2007, 90 young researchers organized in 21 interdisciplinary teams in 14 different countries, received ERNWACA Small Grants for Education Research.

Some of these researchers as well as several from the 2nd edition of the small grants program in 2006 participated in a 3-day training workshops in Abidjan, Côte d’Ivoire in July 2007 on research methods and scientific writing.

Participants expressed their satisfaction saying how they appreciated the opportunity to interact with senior researchers willing to share their expertise and experience. Each research team is coached by a project mentor and national scientific committees oversee the quality of work.

Recipients from 2007 are currently conducting their literature reviews and preparing data collection tools before fieldwork. Recipients from 2006 are editing their research reports and articles. The call for proposals for the 4th edition will be launched in January 2008.

Dramane Darave, ERNWACA Research Assistant, Bamako, Mali
“Let us use these ideas to ensure that our reconstruction and development go ahead in harmony.” Nelson Mandela

Presentation of ERNWACA

The Educational Research Network for West and Central Africa – ERNWACA – was created in 1989 in Freetown to increase research capacity, strengthen collaboration among researchers and practitioners, and promote African expertise on education so as to positively impact educational practices and policies.

The network is comprised of 400 member researchers in fourteen countries: Benin, Burkina Faso, Cameroon, Côte d’Ivoire, Gambia, Ghana, Guinea, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo.

JERA Call for Papers

The Educational Research Network for West and Central Africa (ERNWACA) calls for scientific articles in all areas of education for the maiden edition of the Journal of Educational Research in Africa (JERA), a social science review. JERA, a long time objective of ERNWACA, will help promote quality research relevant to African contexts and should help teachers, educational administrators and policymakers gain analytical in-depth understanding of contemporary educational issues.

JERA is an annual journal of the Educational Research Network for West and Central Africa. Vol. I, No. 1, will be published in mid-2008. Last date for submission of papers is 31 October 2007. An abstract of 150 to 200 words in both French and English is required. The articles should include introduction, context, problem, methods, findings, discussion.

Manuscripts submitted to the journal should be typed, approximately 7000 words, with one and a half point spacing. Send your papers to jerare@rocare.org in MS word or as an RTF attachment. Camera-ready copies of maps, charts, and graphs are required, as well as data used in plotting the charts and graphs. Use APA guidelines for bibliographic referencing. Authors should include their full names, address, academic status and current institutional affiliation on page 1 only and not in the body of the text. Manuscripts will not be returned to authors if the paper is not accepted.

Articles submitted to JERA should be original contributions and should not be considered by another publication at the same time.

Dr Moses Atezah Mbangwana, Bamako, Mali