



Reaching EFA Through ICTs

The Debate Rages On

By Shafika Isaacs

The challenge to reach the EFA goals coincides with a global sea-change in learning and teaching processes and the development of new education frameworks which are underscored by the effects of rapid changes in new information and communication technologies (ICTs). The development challenge therefore is to reconcile the new advancing frontiers of education reform with meeting the most basic education needs. Southern Africa cannot afford to ignore these developments and has joined others in the great exploration of to what extent ICTs could be catalytic to the goals of EFA. But debates are still on about whether ICTs are really imperative for reaching MDGs and EFA goals, especially in Africa where the cost of investing in ICTs is considered, in some quarters, as an unjustifiable consideration over more basic needs such as school buildings, text books, teachers and toilets.

High level commitments to the use of ICTS in education

Notwithstanding this, the international development community has committed to “harness new information communication technologies (ICTs) to help achieve EFA goals.”¹ Similarly the forum of African Ministers of Education who met in 2002, states in their

MINEDAF VIII Declaration that strategies to reach EFA “must include the use of ICTs and broadcast technologies in education”. The Declaration commits “to design and implement effective strategies for developing, disseminating and mainstreaming the use of ICTs and satellite, audio and multimedia broadcast services in collaboration with media professionals and institutions. The World Summit on the Information Society (WSIS) Declaration of Principles and Plan of Action adopted in Geneva in December 2003 further expresses the importance of investing in ICTs to promote education, particularly in reaching the EFA goals.

With reference to the above, a broad, multimodal definition of ICTs is adopted. ICTs are regarded as a complex and heterogeneous set of goods, applications and services used to produce, distribute, process and transform information. For many in the development community, the emphasis is on the capability of the new technologies to enable, facilitate and enhance communication, with some preferring to allude to communication and information technologies.

The ICT sector consists of segments as diverse as telecommunications, television and video, radio broadcasting, computer hardware and software, computer services and electronic media including the Internet, electronic mail, electronic commerce and computer

games, as well as the content of the media. Evidently such a broad definition includes traditional communication technologies as well as high-end electronic media.

The case for using ICTs

The predominant rhetoric among ICT for development practitioners is that the new technologies hold the potential to facilitate and enable the achievement of the EFA goals and MDG objectives. The common rhetorical refrain is that ICTs are not an end in themselves but are an enabler, a means to a developmental end. ICTs are purported to:

- Enhance access to universal primary education;
- Promote and facilitate teacher training;
- Facilitate and improve learning capability and education quality;
- Facilitate access to adult literacy;
- Facilitate the promotion of gender equality and women's empowerment; and
- Enhance efficiency in education management and administration.

SchoolNet Africa and OSISA have partnered to facilitate and improve especially learning capability and education quality.

One of the challenges facing planners is to consider how ICTs can contribute to supporting the performance of different components of the education system (i.e., teachers, students, administrators) and supporting curriculum delivery and the education bureaucracy. The key arenas in which ICTs are felt to contribute to raising educational provision and quality are discussed below.

Training of teachers and policy makers

Many teachers in Africa are either untrained or under-trained, with some estimates putting the figure at as high as 21 million untrained teachers working in African schools.² ICTs have been successfully used in teacher training programmes, in some countries, as illustrated in the Box. ICTs can be used in the training of teachers, either in face-to-face training programmes where they are used to access content and to help teachers systematise planning, or through distance education programmes where ICTs are used to deliver content to trainee teachers in remote areas. Using ICTs in distance education programmes suggests a more cost-effective model of teacher training and development, as one trainer or mentor can work with a number of trainees in remote sites.

Early Childhood Development Virtual University

The Early Childhood Development Virtual University (ECDVU) is an innovative and multifaceted approach to addressing ECD capacity building and leadership development in Africa. The ECDVU is supported by a range of international, regional and local organizations, including the employers of participants. It is a unique training and results-oriented program that uses face-to-face and distributed learning methods including: residential seminars, Web-based instruction, CD-Rom and print material support, and a "community of learners" strategy within and among cohort countries.

The first cohort of African ECDVU learners consisted of a cadre of 27 committed ECD professionals from across sub-Saharan Africa (Eritrea, The Gambia, Ghana, Lesotho, Kenya, Malawi, Nigeria, Tanzania, Uganda and Zambia).

A recent evaluation by the World Bank was very positive and lists a large number of positive outcomes and activities. The ECDVU graduates remain fully engaged as leaders of ECD capacity-building initiatives supporting child, family and community well-being and broader social and economic development.

Source: Information taken directly from the ECDVU website www.ecdvu.org

Improved pedagogy

The rise of information technology, the Internet, fast and cheap international transfers of knowledge and information has changed the type of education and skills needed by children if they are to succeed in the modern world.

Some of the negative characteristics of African education are a reliance on "chalk and talk" styles of teaching, children learning blocks of knowledge, with only marginal comprehension, rote learning and little synthesis, application or evaluation of content.

It is argued that through ICTs, learners can develop higher order thinking skills, develop lifelong learning habits, and the ability to think critically. The effective use of ICTs in classrooms can help learners to develop the skills needed for problem solving, finding information, and integrating and working with different sources of information. ICTs can also alleviate under-resourcing in specific areas (e.g., a lack of textbooks or learning support materials), address equity issues through enabling equality of access to knowledge, resources and expertise, and support teachers who may be under-equipped to deal with new teaching challenges. The digitisation of content allows teachers

to potentially use the same materials over and over, with no physical degradation, as occurs when textbooks are used year after year. Access to the Internet also allows teachers to access up-to-date information.

By using new approaches, learners can take a more active role in their own learning and can also develop the skills needed for collaborative learning processes. These processes have the potential to make learning more meaningful and relevant. A good example of such a project promoted by SchoolNet Africa is ThinkQuest Africa (www.thinkquestafrika.org) – which has now changed its name to *Mtandao Afrika* (www.mtandao_afrika.org) – another example that demonstrates the advantages of collaborative and interactive multi-cultural learning opportunities that new ICTs offer. Mtandao Afrika is a new learning programme that allows African learners from different countries to form teams and to develop educational Websites. Through this programme, African learners:

- Learn to work in international teams and acquire collaborative skills.
- Learn how to conduct research and acquire investigative skills.
- Learn how to develop Websites and acquire technical skills.
- Learn how to design effective Web interfaces and acquire design skills.
- Learn how to develop African education content and become producers of knowledge.
- Contribute quality information and knowledge to a global audience.

In its first year of operations a total of 709 learners from 26 countries, 13 of which are African countries, participated in the contest developing educational Websites. A total of 220 (31 percent) females participated in the contest. In its second year of operation the number of participants increased to 1034, of which 35 percent were female, from 37 countries, 26 of which are African countries. Importantly, five Websites were produced in local African languages.

Similarly, the Mindset Network project (www.mindset.co.za) in South Africa illustrates how

a creative combination of traditional and new technologies can be used to supplement teacher knowledge and provide access to information. This programme addresses interrelated challenges of schooling, health and livelihoods. It develops educational resources and delivers them freely via satellite broadcast networks in the form of computer-based video, multimedia and print educational content. Through its learning programme, learners and teachers have access to vast qualitative

global and local educational resources which can be obtained via the Internet and print media, through inserts in a weekly Sunday newspaper and a dedicated television channel that broadcasts lessons on a wide variety of subjects. In this way, learners and teachers can be reached in large numbers and in remote areas.

Increased educational access

Perhaps one of the best examples that demonstrate the development benefits of ICTs in education in Africa is a pilot project in Khomasdal, Namibia that tests the effects of the technologies on learners with special needs. According to Ricardo Diergardt, a 13-year-old visually impaired learner at the time of the project in 2002, “these technologies have opened a world I have never imagined.”

Improving educational administration

The use of ICTs to enhance the administrative capability of schools, districts and the education system is vast. At school level, using ICTs to record and store learner information (enrolment and performance data) can help administrators to plan, track performance on a longer-term basis and reduce the administrative burden on teachers – freeing them to focus on teaching activities. If data on student enrolments, school facilities and teacher profiles is captured electronically using a standard format it can easily be shared with the district office, if integrated information management systems are in place. This will enhance the efficiency of the education system as a whole, at national, regional and global levels.

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The contribution of ICT for Education (ICT4E) projects in Africa

Approximately 10 years of sustained initiatives on ICTs for Education can be demonstrated in Africa. Certainly the African SchoolNet movement can trace its history to the early 1990s in South Africa and Egypt. Over the years, various models of ICT integration which range from low cost access solutions to African-appropriate teacher professional development models as well as the development of digitalised local education content have been developed, as can be witnessed on their Website www.schoolnetafrica.org.

Shortcomings with ICT for education projects

However, the ICT for Development and ICT for Education sector in Africa to date certainly remains too limited to be able to demonstrate effectively the “impact” on reaching EFA objectives or the MDGs. As such, there continues to be scepticism about the developmental benefits of ICTs in education, premised on the notion that investment in new ICTs is too costly for a continent like Africa. However, since the education sector is articulated as one of the most strategic areas for targeted intervention and is purported to hold the key to economic growth and competitiveness for the developing world within the era of globalisation, some have argued that the long-term economic benefit of investing of ICT-enabled education can in the long run be a more cost effective strategy for the poor than for the rich (Wagner, 2001).

A response to the sceptics

Two examples of how ICTs have been creatively applied to promote learning and teaching are cited earlier in this article. However, they also represent the character that ICT for Education initiatives in Africa have assumed to date and they do not conclusively demonstrate the beneficial impact on development which the sceptics enquire about.

Many of the initiatives to date have assumed a donor-supported project status. These are often once-off, short-term, pilot demonstration projects with little or no consideration for continued existence and sustain-

ability. Many of these projects are also of a small-scale nature. In one country, a SchoolNet project was given one year to operate as a pilot in only three schools in the urban city centre – with no plan to continue support beyond the first year. Such a programme has little hope in providing sufficient evidence of improving access to information or improving learning outcomes.

Furthermore, these projects have not consciously

been set up to demonstrate the potential for reaching the EFA objectives using ICTs. Most of them were based within the formal education system, with extremely limited attention to “the poorest of the poor” and the estimated 42 million youth in Africa who are not in

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the formal education system. Demonstrating the impact of ICTs on reaching EFA targets requires a far more conscious integration into EFA national plans, an awareness among policy-makers of the potential of ICTs, and the political will to use ICTs within the education systems, a shift from an almost exclusive pilot-centred approach towards a mass model, a shift from donor dependency to multiple partnership models with governments and civil society playing a leading role, a shift towards national government budget commitment to integrating ICTs within the education system and sustained long-term intervention. Increased systematic research is needed into the long-term impact of the use of ICTs in education that allows for the measurement of impact on learner performance and changes in teacher behaviour. In addition, it would be beneficial to be able to measure the relative cost-benefit ratios of different programmes.

Thus, to the question whether ICTs are imperative for the attainment of EFA, the jury is still out and examples are chequered. ■

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Endnotes

- 1 Paragraph 9, Dakar Framework for Action
- 2 Cited in presentation made by S Isaacs during EFA conference.