

eLearning in the School System: How to Tap into New, Promising and Diverse Potentials

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Africa must find its path from teaching technology to teaching with technology: This is what Canadian researcher and eLearning and development expert Thierry Karsenti contends based upon the findings of a recent study he conducted in 120 schools on the Continent. In the following, he considers some of the action points uncovered by the PanAfrican Research Agenda on the Pedagogical Integration of ICT.

Many researchers, including myself, have made a clear distinction between two different types of ICT integration in an educational context: physical and pedagogical. Physical integration consists of making technological equipment available to teachers and students and promoting its use for occasional pedagogical needs. Physical integration is, thus, understood as a process that leads to the introduction and/or deployment of technologies in the educational institution. This is the predominant practice seen in the 120 schools involved in the PanAfrican Research Agenda on the Pedagogical Integration of ICT. For example, the Les Oiselets primary and secondary school in Bafoussam, Cameroon is equipped with computers and several teachers use them with their students – but only occasionally.

In contrast, the pedagogical integration

of ICT into schools means the appropriate, habitual and sufficiently regular use of ICT in order to produce beneficial changes in educational practices and improve student learning. This type of integration implies the routine use of ICT in the teaching and learning processes. The pedagogical integration of ICT must, therefore, be understood as integration whereby the student learns and socialises through a multitude of interactive and communication channels. It cannot be reduced to mere physical integration, which remains nonetheless imperative. There are few examples of pedagogical integration of ICT in Africa, one of them being at the École Front de Terre in Dakar, Senegal.

Currently, higher-level integration of ICT is very rare in African schools, although the PanAfrican project was able to identify a small number of programmes where it takes place, for instance at the Green Gardens Schools in Kiambu, Kenya. Here, the integration of ICT not only means installing equipment and networks, but also using a set of innovative technological techniques – audiovisual, information processing, and telecommunications – to enhance learning at schools and in continuing education programmes, as well as for economic, social, and cultural development.

Even though the pedagogical integration of ICT is still in its infancy in many places, the general outlook is nonetheless bright. The survey shows that there are multidimensional uses of ICT in Africa, from primary school to higher education. In higher African educational institutions, ICT integration appears to be considered a necessity for both university students and teachers. Indeed, as we highlight below in the section on issues, many subjects are either not taught or taught poorly in Africa due to the lack of qualified teachers. ICT for online learning is one way to address this shortage, as it would provide broader access to higher learning. Moreover, the higher-education sector includes graduate teaching and continuing education, where ICT holds enormous potential

for adult self-training and lifelong learning. Evidence for this is the fact that distance education has become increasingly common, particularly for adult-learner communities in various university programmes. In many African universities and training schools, ICT is used to facilitate self-training and successful cyberspace initiatives that are independent of time or location.

ICT is also increasingly used at pre-school, kindergarten, primary and elementary levels as a core learning tool in imparting educational basics: reading, writing, communication, listening, patience, amongst others and more. ICT appears to be even more widespread in secondary schools in Africa, including general secondary and technical schools, where teachers and students use it both to teach and to learn subjects. In technical and professional schools, ICT is used more specifically to teach and learn specialised disciplines. Thus, we observe that certain fields have developed ICT-related practices. Accordingly, ICT integration into learning activities in secondary schools would seem to be all the more important since it goes beyond interpersonal communication and integrates several dimensions, such as interactive learning, collaborative learning, and research for information for analysis and problem-solving.

Thierry Karsenti will attend eLearning Africa 2010 and hopes to give a practical presentation outlining a model for successful integration of ICT in African schools in order that schools across the Continent may benefit from the experience of others who have successfully overcome the same difficulties and challenges.

Mr Karsenti has recently published a book with further results and analysis of his work entitled *Pedagogical Use of ICT: Teaching and Reflecting Strategies*. It can be downloaded here: <http://crdi.crifpe.ca/karsenti/docs/livre.pdf>

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