Encouraging Students to Persevere in Distance Education: Pedagogic Strategies for Africa

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Information and communication technologies are not a universal remedy, [...] but can greatly contribute toward improving life on earth.

Koffi Annan, 2005

Introduction

Several studies have put the success rate of distance learning at 20 to 45%. The strategies adopted by the team of the University of Montreal in collaboration with partners like the UNESCO International Institute for Capacity Building in Africa (IICBA) and the Francophonie University Agency, account for the success rate recorded in several subjects, sometimes over 90%. This article briefly looks at the importance of information and communication technologies (ICTs) for Africa and addresses the efficiency of open and distance learning. It goes on to consider the possible conditions for efficiency and how best they can serve as incentives and a source of perseverance for students. The objective is to better understand the srtrategies likely to enhance the success of African students taking part in a distance learning programme.

Information and Communication Technologies: how important they are for Africa

Several changes have been recorded in society in the past fifty years namely, the advent of television, video and information and communication technologies (ICTs). For many people, the most spectacular change has been the advent of the internet, particularly the graphic version fondly called the Web which has changed and will continue for a long time to change our lives and the world of communication. Figures which testify to the ever growing presence of the internet are quite impressive : 650 million internet users in 2005 (source: Ipsos Reid firm), figures likely to increase twofold in two, three years to come; 550 billion documents posted on the internet, 95% of which are accessible to the public; some 7.3 million new Web pages supposedly created daily. The knowledge society promised in the 1970s, acclaimed in the 1980s and dreamed to come true in the 1990s, though with mixed feelings of respect, incredulity and fear, has now become an unavoidable reality for many countries in the 21st century.

So what about Africa? The omnipresence of ICTs in Africa is simply unavoidable, particularly in the area of education, in order to encourage information accessibility, scale up the academic success rate of university students, improve the professional standards of the teaching staff, encourage leadership in management, interaction between universities and the community, enhance south-south, and north-south relationships. ICTs are very powerful tools with a cognitive potential that offers a series of solutions to the current problems facing the education sector in Africa. Africa also has the right to train high brow university experts in ICTs and education.

How Effective is Distance Learning?

For several years now, higher education has grown at a spectacular rate and it is equally marked by changes. University education is very much into digital information, internet and *e-education*. According to many sources, teaching with or by ICTs is the most dynamic and most popular sector in the education market, paticiularly at university level. However, despite the ever growing presence of ICTs in our society, there are still many questions on the relevance of open and distance education: Are they a better kind of education? Are they more effective?

L'ACGME recently stated on its website (www.acgme.org/) that distance learning in whateve form it may take is the *« hottest, sexiest, most controversial issue in American higher education »*.

A cursory look at journals and reviews on higher education in North America and Europe clearly testifies to the marked interest in open and distance learning.

Possible or established outcomes

For many people, open and distance learning is more effective than traditional classroom teaching, particularly in terms of effective research. Studies carried out prove that a student can learn more and faster with ICTs and online courses than he would in a normal classroom situation. Advantages abound in terms of flexibility, accessibility and better interaction. Besides, there are several modes of teaching and learning. In general, learning and teaching in this manner are better and tailored to the realities of the student. For example, open and distance learning are particularly useful to students who can't follow regular classes on campus on account of a tight schedule, a common problem facing many university students in Africa. Online courses with ICTs support affords them the opportunity to work at their own pace having a flexible timetable within an interactive environment where they can exchange views with colleagues and teachers.

Questions and limitations

However, despite the growing number of studies in Europe and North-America which testifies to the fact that open and distance learning with ICT support are generally very effective, particularly in terms of teaching knowledge acquired by the student, there is plenty of literature which says there is a marked difference between *e-learning* and traditional classroom education (Ungerleider, 2002, Rusell, 1999).

The success rate of students in open and distance learning equally goes to support Russell's argument. Gauthier who udertook a study in 2001 for a recruitment and training observertory in France says that most sources agree to an average dropout rate of 80% (between 70 to 90%) at all levels and for all training programmes put together (universities, professional institutions etc.). The results in some major universities which claim to be experts in open and distance learning are alarming: Thailand's Sukhothai Thammathirat Open University, in five years, 17%; Indira Gandhi National Open University, 22 %; British Open University, 45 % in eight years and 48 % in ten years; National Distance Learning Centre (CNED, less than 20% in some subjects; Geneva University, 29.3% (www. unige.ch). A look at these studies and the divergent views therein are proof of the fact that the challenges and advantages of open and distance learning are usually blown out proportion.

The two contrary and extreme views lay particular emphasis on technologies as if they were the only key to the efficiency of such a mode of education.

How to Guarantee Effective Distance Learning

The contradictions noticed in research findings on the effectiveness of open and distance learning with ICT support seems to indicate, over and above the major differences on reseacrh methodology, that efficiency here would mostly depend on how well or not the training is designed.

Research in distance education

From a corpus of 127 courses on the internet (until 1997), Boshier and his team underscored the elements that underpin effective e-learning. The findings of the study establish that the courses: (1) must be attractive, (2) accessible and (3) ensure a high level of interaction.The findings equally reveal another crucial problem common in distance education, inferiority complex. Generally, experts in distance education have the tendency to feel "inferior" to those in face-to-face education and have to work extra hard to simulate the interaction that one would find in a real campus. To this effect, Boshier and his colleagues assert that *«... the problem is that in trying to emulate the 'real' campus far too many authors have replicated the most rotten, demeaning, archaic and unfortunate manifestations of face-to-face education. »*

Since the study undertaken by Boshier, there has been a series of research and reports on how effective open and distance learning can be, particularly e-training. Nouveau-Brunswick's Tele–Education, like the study carried out by Boshier and his colleagues, emphasizes the importance of interaction in open and distance education, particularly synchronous and asynchronous interaction. With the ever growing presence of the internet, the report equally lays emphasis on the nature and variety of media resources put at the disposal of students. The report of the *International Distance Education Certification Center (IDEC),* for its part, highlights the mechanisms required to improve the platform and support structure for students and some elements that were not present in previous studies.

The *Higher Education Program and Policy Council* addresses for the first time issues like intellectual law, scientific validity of content and other aspects like teacher training in distance learning. As for the *Institute for Higher Education Policy,* which did a meta analysis of the various studies and the best practices in online training, it spotlights 24 possible ways to guarantee efficiency which could be sub-divided into six categories namely: institutional support, development and

course structure in distance learning, teaching and learning standards, support to students and trainers and assessment criteria. Just like the three previous reports, the *Quality on the Line* report underscores the importance of evaluation modalities in distance education, the desire of universities to have quality training comparable to the normal kind of education in order to challenge the media critcism on the lack of scientific thoroughness.

Pedagogy in distance learning

E-pedagogy is currently one of the major university innovatons. Thanks to e-learning, groups and individuals can now learn online. Besides pedagogic principles and theories that cannot be ignored like those propounded by Thorndike (the law of effect and practice), Dewy (learning by action), Piaget (building knowledge), Vygotsky (learning as a sociointeractive process), can be applied more easily and more regularly.

However, except for Nouveau Brunswick Tele-Education, most studies undertaken until recently make very little reference to "pedagogy" in *e-education*. Yet, pedagogy as underscored by Depover, Giardina and Marton (1998), is fundamental considering that the goal of distance education is not to attract the public through baseless and superficial means. On the contrary, the establishment of training facilities in universities should rather seek to facilitate learning. Many researchers say open and distance learning at university level should provide added value to the educational mission of the university (Perrenoud, 1998). The project or problem approach is well suited to distance learning. Moreover, the OECD education committee stated in its report of the seminar on ICTs (2001), and in the recent report on cyber information (2006), that it is not a matter of grafting the use of computer onto existing pedagogy but rather adapting teaching to the new possibilities that ICTs have to offer.

Graham and colleagues (2000), conscious of the very little concern for pedagogy in distance learning, decided to evaluate online courses on the basis of the seven fundamental principles

of effective pedagogy propounded a few years back by Chickering and his colleagues (1993). Moreover, according to Chickering and Reisser, the seven principles are usually used to evaluate real classroom situation teaching based on the principles of Chickering and Gamson (1987), which they applied to four online courses (see table 1) .

Psychological factors involved in distance learning

In addition to support given to students, recent research findings have proven that they should be given support up front. Most of the studies undertaken (Karsenti and Larose, 2001) including the last OECD report on cyber training (2006), prove that psychological factors are increasingly playing an important role in distance learning. The attitude and motivation of students – as is possibly the case in real classroom situations – features among the key factors likely to predict their success in online courses.

According to the cognitive evaluation theory (Deci and Ryan, 2000), students could feel motivated in distance learning if they had more self determination (if they had more choices, control in the activities undertaken during online courses), if they felt more competent or again if the fact of learning online could increase their sense of belonging (affiliation) with a group.

Various studies have identified other parameters intricately linked with the seven principles of effective teaching. Do the projects undertaken encourage students to take up more responsibility? Do the activities undertaken enable students to have quick feedbacks regularly? Does distance learning make education more attractive and varied? Do new technologies add more pedagogic value to education? Does the activity proposed to students constitute a real challenge? With the adoption of new technologies, are students aware of the effort they have to make? Do ICTs encourage greater student participation, more active learning, or can they be more commited from a cognitive point

Table 1: Basic principles for effective pedagogy in distance education (Graham et al, 2000)

Basic principles for effective pedagogy	Possible application in distance learning
1. Effective pedagogy will enhance relationships between students and teachers.	Policies on the various modes of communication may be formulated. Temprorary phone lines may be established to respond to student calls.
2. Efective teaching enhances cooperation among students.	For the purpose of efficiency, online discussions require some parameters: participation, small groups of discussion; discussion must be on a specific topic; the topic must be result driven; topics should encourage the participation of students; students should receive feedback on the discussion; evaluation should be quality driven; teachers shall publish the outcome of discussions.
3. Effective teaching fosters active learning.	Students shall carry out research projects to be evaluated by their peers. Peer criticism shall help boost the quality of their projects.
4. Effective teaching encourages rapid feedback.	Teachers shall acknowledge receipt of messages and give immediate feedback to students.
5. Effective teaching underscores the effort needed in the course.	Teachers shall insist on the effort required by students to do their work. Students shall be given timelines for their work.
6. Effective teaching raises expectations.	Students may be expected to do quite demanding work; good quality work shall be rewarded accordingly.
7. Effective teaching respects the diversity in teaching and learning.	Students may be allowed to choose the topics of their projects and undertake the projects themselves.

of view? Do the pedagogic activities proposed help the students set goals for themselves?

Information Variety and Quantity

The study on tele-education by Nouveau-Brunswick revealed that the more information students have at their disposal, the more important it is for them and such a practice should be encouraged in distance learning, because not only does it enhance access to resources which were hardly accessible in the past, but ICTs equally facilitate mutual exchange of knowledge.

Conditions and context for effective teaching

Research conducted so far reveals a model synthesis which outlines conditions for effective distance learning. The conditions are based on a key principle: online training should encourage better learning or better teaching skills. From all the factors identified, the following conclusion has been drawn: there are all in all seven major conditions for effective distance learning.

Table 2 shows each of these conditions and the underlying justification in relation to distance learning.

Table 2: How to guarantee efficiency in distance education

CONDITION FOR EFFICIENCY	DISTANCE EDUCATION
1. ACCESS / APPEALING FACTOR	• Training is simple and access is easy. • The device is attractive and makes internet surfing user-friendly.
2. INTERACTION / COMMUNICATION	• The device encourages teacher – student and student – student interaction. • Communication tools are many and can enhance synchronous and asynchronous interaction.
3. CONTENT	• Content is validated by field experts. • Content represents high hopes for students, but remains the same as in normal classroom situation. • Content is crafted in a user-friendly mannner. • The modalities for evaluation which are fundamental in measuring the targeted levels of competence by participants are the same modalities proposed to students undertaking similar courses in nomal classroom situation.
4. PEDAGOGIC APPROACH	• Course has clearly defined goals and objectives. • Course encourages active participation of students. • It encourages cooperation and collaboration among students. • Encourages customized teaching /learning (learning at one's own pace etc.). • Uses pedagogic approach eg. problem approach or project approach.. • Encourages the development of incentive-oriented factors (self – determination, feeling of competence and sense of belonging).
5. RESOURCES	• Course proposes a world of resources to students. • It proposes a wide variety of resources to students (documentation, audio and video outfits, Web sites, etc.).
6. SUPPORT	• Course has a technical and pedagogic support both for teachers and students. • It encourages teacher training. • It raises the awareness of students on the challenges inherent in e-learning. • A detail course programme is available for students. • A methodical approach is proposed to students.
7. SUSTAINABILITY AND ETHICS	• Improvement and sustainability of the course is possible thanks to a system of continuous assessment. • Ethical aspects just like those related to intellectual law are taken into consideration in the elaboration of the course.

Distance Education: A Must for Africa?

Initially poised to impart knowledge, university lecturers in Africa today have to accomodate the idea of students browsing the internet for knowledge. With the ever growing number of students involved in the universal internet culture, some of them do expect in their training rapidity and easy access to information on the Web. It has been noticed that with the advent of the internet, the various possibilities of interaction have disrupted the traditional academic hierarchy which existed in the past. That is why it is possible to say that technologies will profoundly offset the classical forms of education. Students now evolve in a context marked by change: in African universities students no longer rely solely on the lecturer or books for knowledge. The internet is, in the main, the primary source of knowledge. It is gradually and sustainaibly changing modes of thinking, teaching and communication. However, if such changes can create interesting opportunities, they equally impose new ways of considering university teaching in Africa. Otherwise, combining ICTs and the age-old traditional methods might not bring about much of a change in education. E-pedagogy is a blend of information and communication technologies and all the best pedagogic strategies drawn from major theories. E-pedagogy does not mean altering the substance of what has to be taught or learnt. It is the teaching or learning method that changes.

In the near future, the challenges of distance learning in Africa shall increase twofold. First it is important to draw attention to the lack of documentation on existing experiences in the field. Development projects are many and huge financial investments are being made, but very little scientific and rigourous assessment is done to know the real impact of these new modes of education in African universities. Just like in applied or pure sciences, research in distance learning is fundamental if the public has to know about this new and emerging field of education.

Lastly, how do we guarantee that technologies - which are kown to be historically unstable and generally designed for purposes other than teaching - can really enhance open and distance education? There can never be a solution without risks involved. The high drop out rate recorded in universities and the reluctance of many lecturers and professors are a constant reminder. However, this does not mean becoming debilitatingly cautious. Lecturers should demonstrate a sense of dynamism and discernement. They should be able to strike a balance between maintaining age old practices which have always been and continue to be the backbone of university pedagogy, providing students the opportunity to avail themselves of new possibilities through distance learning. Despite all the problems, there is no real alternative for university education in Africa. Distance learning is a must for the continent.

Conclusion

In projects of distance learning undertaken with Montreal University and its partners like IICBA and AUF, without necessarily claiming to have complied with the various principles and factors mentioned above and fufiling all the conditions to guarantee efficiency, we, however, succeeded in obtaining an interesting rate of qualifications. In Mali and Niger, for example, where we worked in partnership with IICBA, we achieved a rate above 90%. This, regardless of the quality of the programme produced by Montreal University, is the fruit of the labour involving the education ministries of both countries, support from training institutions, commitment from partners and monitoring on the part of IICBA. Generally, the training undertaken by the Montreal University since 2000 in Sub-Saharan Africa has made it possible to understand how to guarantee efficiency in this kind of training and particularly to encourage the use of communication tools to encourage and motivate students to stay on – a daunting challenge for distance education.

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