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Benchmarks for e-learning in Africa

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While information and communication technologies are “not a panacea or magic formula, they could improve the lives of everyone on this plant.”

Kofi Annan, 2005

Resumo: Este trabalho inicia endereçando a educação aberta e a distância (EAD) e então focaliza as condições para a efetividade e impactos na motivação e persistência dos estudantes. Apesar de que vários estudos mostrarem baixas taxas de conclusão dos cursos de EaD de 20% a 45%, as estratégias implementadas pela equipe da Universidade de Montreal resultaram em mais de 90%. Este trabalho busca oferecer maior entendimento das estratégias viáveis para a aplicação da EaD na África.

Palavras-chave: educação aberta e a distância, taxa de conclusão, motivação de estudantes.

Abstract: This presentation begins by addressing the issue of effective open and distance learning (ODL) and then outlines the conditions for effectiveness and their impacts on student motivation and persistence. Despite the many studies showing that graduation rates for open and distance learning are between 20% and 45%, the strategies implemented by the University of Montreal team have resulted in over 90% graduation rates from demanding university programs. This presentation aims to provide a greater understanding of the strategies liable to foster successful open and distance learning in Africa.

Keywords: open and distance learning, graduation rates, student motivation.

I INTRODUCTION

As Kofi Annan declared at the World Summit on the Information Society held in Tunis in November 2005, we are living in an era of rapid change. Indeed, everything is in flux: our ways of living, learning, working, and earning a living. It is widely felt that neither individuals nor societies can simply stand aside from these metamorphoses and await the next generation. Quite the contrary. Citizens in all countries must take their destinies into their own hands and actively participate in the technological world. Although technology has hastened the advent of the information era, all are individually responsible for constructing the new information society.

This presentation begins by addressing the issue of effective open and distance learning (ODL) and then outlines the conditions for effectiveness and their impacts on student motivation and persistence. Despite the many studies showing that graduation rates for open and distance learning are between 20% and 45%, the strategies implemented by the University of Montreal team have resulted in over 90% graduation rates from demanding university programs. This presentation aims to provide a greater understanding of the strategies liable to foster successful open and distance learning in Africa.

II EFFECTIVE OPEN AND DISTANCE LEARNING

For many years now, university teaching has been evolving at breakneck speed. Like it or not, educators have been swept into a world of new knowledge, the digital universe, the Internet and e-education. It is said that ICT-assisted teaching is the most dynamic – and the most popular – sector of the education market. This is no surprise, given that the number of Internet users vaulted from 16 million in 1995 to over 606 million in 2002 (www.nua.com/surveys/), and in 2007 has been estimated at over one billion (<http://www.internetworldstats.com/stats.htm>). Hundreds of billions of documents are posted on the Internet, and almost 10 million new Web pages are created every day. Yet despite the exponential growth of ICT and its increasing presence in our lives, there are still doubts about the relevance of open and distance education. Do they really make for better learning? Are they really more effective?

The debate on the effectiveness of ICT and open and distance learning (ODL) in university pedagogy has been raging. The Accreditation Council for Graduate Medical Education (ACGME) recently stated on its Internet site (www.acgme.org/) that distance education in all its possible forms is the “hottest, sexiest, most controversial issue in American higher education.” An overview of the journals and newsletters on university teaching in both North America and Europe confirms this avid interest in open and distance learning. The journal issue that does not include an article on distance technologies or education is rare indeed. University educators and professors are constantly assailed with speeches touting the virtues of technologies and ODL. And this pressure is mounting, particularly when administrators proclaim that the future of the university lies in ICT and distance education. Yet for a variety of reasons, educators are not always eager to embrace the new technologies. According to a survey conducted by the Higher Education Research Institute in 2001 (www.gseis.ucla.edu/heri/), over 60% of university professors find this “technological pressure” more

stressful than any other aspect of their job, including pressure to conduct research, manage students, and churn out publications.

1 Actual and potential benefits

However, does the enthusiastic encouragement of administrators – not to mention the media – mean that ODL, particularly the technology-based kind, are really more effective than traditional classroom methods? For many, the answer to this question is a resounding “Yes.” However, in light of the research on effective open and distance learning, the answer is not so simple. Since its introduction into North America many years ago, ODL has been the subject of much debate in terms of its actual effectiveness, and so has the issue of ICT in education (RUANO-BORBALAN, 2001).

Many studies have shown that students can learn more – and faster – with ICT and online courses than in traditional classrooms. These authors have also noted that open and distance learning offers attractive, individualizable options for teaching and learning. The many benefits include *flexibility, accessibility, enhanced communication and interaction, and a variety of teaching and learning modes.*

The overall outcome is better learning, improved teaching and a more suitable education for individual learner situations. For example, ODL is particularly useful for students that cannot attend courses on campus due to overly busy schedules. This is typical among African university students. With online ICT-supported courses, these students can pursue their studies on a flexible schedule. At the same time, they benefit from an interactive environment where they can exchange information with their colleagues and teachers. In addition, this form of education lets students work at their own pace – when they can find the time – while they benefit from participating in an academic network.

2 Issues and limitations

Nevertheless, although a growing number of studies in Europe and North America have

concluded that ICT - supported ODL is generally a very efficient vehicle for teaching and learning, a substantial body of literature stresses the contrary finding that there is no significant difference between *e-education* and the traditional classroom mode (UNGERLEIDER, 2002). The American writer Russell (1999), in his influential book *The No Significant Difference Phenomenon*, gathers over 355 such studies, all demonstrating that there are no significant differences in student outcomes between alternate modes of education delivery. That is, open and distance learning obtains much the same results as traditional classroom teaching.

ODL graduation rates also back up Russell's arguments. In fact, a comprehensive study carried out by Gauthier in 2001 for the *Observatoire de la formation de l'emploi et des métiers de France* showed that, although the available numbers are rare and confidential, most sources agree on an average dropout rate of 80% (between 70% and 90%) for all publics, academic levels and school types (residential schools, universities and trade schools). The results on certain major universities that specialize in ODL are even alarming. At the Sukhothai Thammathirat Open University in Thailand, the graduation rate was a mere 17% over a five-year observation period, while at the Indira Gandhi National Open University in India, it was only 22%. Even at the highly renowned British Open University, graduation rates were 45% over 8 years and 48% over 10 years. Can ODL really be effective when less than 20% of ODL students in certain disciplines earned a degree from the *Centre National d'Éducation à Distance* (CNED), one of the most prominent distance education institutions in the French-speaking world? At the *Université de Genève*, we note that the graduation rate in traditionally taught disciplines is twice that of distance-taught disciplines (61.3% versus 29.3%) (www.unige.ch).

In these studies, those that applaud the virtues of ODL and those that use statistics to prove the lasting superiority of traditional delivery modes, we note a tendency to exaggerate both the challenges and benefits of ODL. Thus,

it may be viewed as a panacea for a multitude of problems in the university education system. Others foresee the danger of educators and professors being replaced by computers, and academic standards being diluted to allow a greater number of students to graduate. These two extreme and contradictory positions put too much faith in the technologies, as though they alone could determine the effectiveness of ODL.

3 Conditions and contexts for effectiveness: a synthesis

Based on the research to date, we propose a synthetic model of the conditions for effective open and distance learning (ODL). These conditions are based on an important principle: online education should promote better learning and/or better teaching. The many influencing factors identified are regrouped into seven key conditions that are liable to foster effective open and distance learning. Table 1 below presents these conditions and briefly explains their impact on open and distance learning.

Education stakeholders planning to develop open and distance learning in university pedagogy could incorporate these effectiveness conditions when setting up ODL programs in order to maximize the probability of success. Some factors, such as access and appeal, do not rely entirely on the educator, but must be facilitated by a technical support team, while the interaction factors must be implemented jointly by educators and the technical team. In ODL, educators may forget that interaction fosters learning. Too often they end up awarding marks for simply participating in e-Forums, chat rooms, and so on, which are really complements to the education process. When learners are not genuinely interacting, a closer look should be taken at the learning activities instead of pushing students to communicate with each other by awarding marks. A well thought out structure should also be provided for synchronous and asynchronous communication, with priority given to synchronous interaction, since it does not require simulta-

Table 1: Conditions for effective Open and Distance Learning (ODL)

EFFECTIVENESS CONDITION	OPEN AND DISTANCE LEARNING
1. ACCESS / APPEAL	<ul style="list-style-type: none"> • Simple and readily accessible delivery mode. • Appealing delivery mode and user-friendly navigation.
2. INTERACTION / COMMUNICATION	<ul style="list-style-type: none"> • Promotes multiple educator/learner and learner/learner interactions. • A variety of communication tools for synchronous and asynchronous interaction.
3. CONTENT	<ul style="list-style-type: none"> • Content is validated by domain experts. • Content is designed to challenge learners, but is consistent with traditionally taught courses. • Content is organized to facilitate acquisition. • Students' work can be assessed to monitor skills development and ensure parity with traditional classroom levels.
4. PEDAGOGICAL APPROACH	<ul style="list-style-type: none"> • Presents clear and precise expectations (objectives, purposes, results). • Promotes active student participation. • Fosters cooperation and collaboration among learners. • Fosters pedagogical approaches such as problem solving and projects. • Fosters the development of motivating factors (self-determination, empowerment, feeling of competence, sense of belonging, etc.).
5. RESOURCES	<ul style="list-style-type: none"> • Offers a large amount of learning resources. • Offers a large variety of learning resources (documents, audio and video clips, Internet sites, etc.).
6. SUPPORT	<ul style="list-style-type: none"> • Includes a technical and pedagogical support structure for learners and educators. • Fosters ongoing teacher training. • Raises learner awareness of the challenges involved in online learning. • Provides a detailed course outline for learners. • Provides methodological guidelines for learners.
7. SUSTAINABILITY AND ETHICAL ASPECTS	<ul style="list-style-type: none"> • Incorporates an ongoing evaluation system to ensure improved, sustainable delivery. • The delivery mode design accounts for ethical aspects and copyright issues.

neous presence for delivery. And synchronous communication should also be used for specific purposes when real-time interaction is relevant and necessary for the activity.

As for content, the educator must ensure that it is scientifically valid, on the one hand, and that it is organized to facilitate learning on the other. The modular approach to ODL has been gaining popularity because learners can progress at their own pace and the educator has greater flexibility to structure the course. As mentioned above, the pedagogical approach is the cornerstone of effective open and distance learning. It is not a question of proposing a vast range of open pedagogies. Rather, the point is to adapt the pedagogical approaches to the clientele and the learning content. At times a more authoritative, less flexible approach

would be more efficient (for example, an introductory anatomy course with relatively stable content and less room for discussion). However, for courses requiring greater interaction or reflective criticism, approaches such as project pedagogy or problem solving would be more fruitful.

Access to a large and broad array of resources related to the target course competencies – particularly annotated, organized Internet links – is essential in ODL. It is also preferable to vary the resource types offered to learners (written documents, audio and video clips, etc.). In addition, an ODL support structure is required for both technical and pedagogical assistance. Provisions should also be made to help the educator and learners cope with the challenges inherent in ODL. All open and

distance learning should have a delivery system that allows learners to give feedback and make evaluations. This information should be taken into account as often as possible so that online courses could be continuously improved. Finally, the issue of intellectual copyright should be addressed in a clearly stated agreement between the university and the course designer.

III ODL: E-SSENTIAL FOR AFRICAN EDUCATION?

Formerly anchored in a logic of traditional knowledge dissemination, today teachers in African universities must embark on a journey of knowledge discovery. With a growing number of students navigating the World Wide Web, some expect to find in their education the same convenience, speed and ease of access to information. Moreover, we note that the multiple interactions made possible by the Internet appear to have overturned the hierarchies that used to buttress the academic world. And so it is said that technologies will profoundly change the education establishment. Learners are evolving in a constantly shifting knowledge environment. In African universities, professors and their books are no longer the exclusive guardians of knowledge. The Internet is far and away the primary source of knowledge. It has progressively and permanently transformed our ways of thinking, teaching and communicating. At the same time, although these transformations create exciting opportunities, they also impose new ways of thinking about university pedagogy in Africa. The danger is that information and communication technologies (ICT) may be simply grafted onto outmoded pedagogical approaches, leaving teaching practices essentially unchanged. *E-pedagogy*, on the other hand, is the combining of ICT with the vast assembly of pedagogical strategies arising from the major cur-

rent theories. *E-pedagogy* does not change the substance of teaching, instructing or educating; it changes the ways of doing it.

In higher learning, the objectives of open and distance learning are particularly ambitious. This type of education represents above all an alternative for acquiring the essential competencies that African university students will need in their future careers. In the coming years, there are a number of challenges to overcome in the development and implementation of open and distance learning systems. First, there is a serious lack of documented ODL experiences. Many development projects have been initiated and substantial sums have been invested, but only a very few rigorous scientific assessments have been made of the real impacts of the new education delivery modes in African universities. As in the pure and applied sciences, research on open and distance learning in African university pedagogy is essential to provide commonality in this emerging field.

Finally, how can we ensure that technologies, which historically have proven unstable, and have usually been designed for purposes other than teaching, are truly an efficient vehicle for ODL? There are no risk-free solutions. Universities are reporting high dropout rates, and many educators and professors remain resistant to new ways. Above all, we must not let ourselves be held back by caution. Educators must demonstrate a combination of enthusiasm and discernment. They must seek a judicious balance between maintaining practices that have provided and will always provide a rich university experience, and offering students new possibilities through open and distance learning. Despite the many problems to be solved, there are no other truly viable alternatives in university pedagogy in the African context. Open and distance learning are *the* future for universities on the African continent.

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