Recurring issues encountered by distance educators in developing and emerging nations

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Recurring Issues Encountered by Distance Educators in Developing and Emerging Nations

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Abstract

This article explores a number of challenges faced by e-learning or distance educators in developing and emerging countries, provides a context for many of the challenges, and outlines some measures devised to overcome them. These educators must determine a sound rationale for employing online learning, recognize that technology is only part of the educational transformation process, address the lack of infrastructure and the cost of internet bandwidth and equipment, counter the cultural imperialism of courseware from Western nations, deal with limited educational resources, place a greater emphasis on quality assurance systems, and change negative perceptions of distance education. They must respond to the needs and concerns of both students and faculty, access or develop up-to-date educational resources, and consider the implementation of mobile learning. The continued growth and success of distance education in developing and emerging nations will depend on the extent to which issues covered in this article are addressed as they bear on the quality of the learning experience provided to students.

Keywords: distance education, online learning, e-learning, technology, developing countries, emerging countries

Introduction

Education can be the difference between a life of grinding poverty and the potential for a full and secure one; between a child dying from preventable disease, and families raised in healthy environments; between orphans growing up in isolation, and the community having the means to protect them; between countries ripped apart by poverty and conflict, and access to secure and sustainable development. (Mandela & Machel, 2002, p. A16)

Leaders in developing and emerging nations promote education as a means to improve their peoples and countries. “There are many reasons for the growth in distance education but none is as compelling as the hunger for learning felt by those who have been denied it for generations” (Dhanarajan, 2001, p.61).

A number of recurring issues seem to emerge when developing countries attempt to implement a technological form of distance education or its many variations - e-learning, distributed learning, or online learning. This article provides an overview of key issues faced...
by distance education in developing countries, describes some of their successful practices, and outlines criteria for measures that these educators could consider or already be using. Note that many of these issues are not new (Maidenberg & Forte, 2001; L. Benn, 2001; Lagreid and Peregian, 1988): they tend to be ongoing with very significant, developmental, or paradigm shift in the educational system. Also note that developing and emerging nations are not homogeneous. As each country displays different attributes pertaining to population, culture, language, social structures, politics, economics, development, resources, the use of technology, and so forth, the issues described below do not apply equally to every developing or emerging nation.

The Issues

Developing a sound rationale and vision for the distance education initiative. Government and institutional personnel in developing countries often decide to employ learning of online learning without fully realizing what it means for their students and their institutions. If students are still reading by candlelight and kerosene lamps, expecting them to learn online may not be realistic. Online learning is attractive to institutions that want to be perceived as being progressive; however, establishing online programs may not be the most effective use of scarce resources. It may be better to use the limited funds to encourage more traditional attendance, ensure students are well fed, and hire more tutors. Effectiveness will likely increase if students face-to-face with educators and other students are enrolled in the system, and the programs use online course material, are still the key ingredient in any educational system.

According to Wagner et al. (2005), "...the past decade provides strong evidence that misguided policies and funding for Internet communication technology (ICT) in education may fail to have the desired educational outcomes...while costing more than other educational interventions" (p. 12). Technology may not be the appropriate or only solution to an educational problem. (Weis & Weis, 2007).

Some institutions and government documents are attracted to online learning because they think it will save them a significant amount of money and human resources. They frequently imply that distance education and technology are a panacea for all that ails their educational systems. Cost savings can arise if a large number of students are involved (Nunnally, 2002) and fewer educators, facilities, or books are used, but instructors, tutors, course production teams, technical support personnel, and other human resources are still required, and they make up a substantial portion of the educational budget. According to W. Fruits, president of Thomas Edison College, "One of the biggest myths about distance education is that it's cheap. To produce high-quality distance education courses, it's expensive." (Silverstein, 2007). Distance learning should be about access, equity, and the distribution of quality products to a wider audience; cost savings are just one of the potential benefits.

There are numerous legitimate reasons why governments and institutions should introduce technologies into distance education, such as: greater information access; greater communication via electronic facilities; the introduction of asynchronous and synchronous learning; increased cooperation and collaboration; cost effectiveness (e.g., by reaching different students and in greater numbers); and pedagogical improvement through simulations, virtual experiences, and graphic representations. (Sife, 2007; Lwoga & Sarga, 2007). Online learning thus provides the opportunity to offer those who are working full-time or have household commitments "a second chance to improve their skills and further their education regardless of age, gender, ability or social background." (Nunnally, 2002). Distance education may also be used to bridge the digital divide, to reduce the "brain drain" of individuals who
leave to study abroad, to broaden access to individuals who have had limited opportunity, and to support social and economic development. Many distance education initiatives have been established to assist those who are poor and those who live in rural areas. However, despite the growth in information and communication technologies, inequities between rural and urban, and rich and poor, and men and women continue to exist (ISD, 2008).

Educators in developing countries have employed distance education successfully to provide: accreditation to teaching and health professionals, to return professional/volunteer lifestyles; career paths, to help farmers improve agricultural production; and to increase literacy. More recently, distance education has been used to facilitate an interest in, and further, in governance. For many students, distance education provides a path to a better life. The more educated they are, the better jobs they will obtain, and the better they will be able to meet the needs of their families.

Recognizing that technology is only one component of the educational transformation, while shiny new technology appeals to politicians and educators alike, it should not be adopted uncritically or without careful planning. (Wright 2007) identifies necessary conditions for the effective use of technology in a distance education setting:

- Decision-makers must identify the problem, the technology will address, and the benefits the technology will bring to education and/or administrative processes.
- Educational and governmental bodies must be committed to the goals toward which the technology will be applied, ensuring that issues regarding accessibility and equity are addressed, develop measurable objectives and realistic timelines, and assign specific responsibilities to individuals and groups who will facilitate the change process, and provide the necessary resources.
- Key individuals, in collaboration with other stakeholders, must develop a plan to guide the implementation.
- The selected technology must be effective for its intended use and meet the needs of potential users.
- The curriculum should be adjusted to make the best use of existing and potential future technological developments.
- The technology should promote meaningful interaction between the learner and the learning material, instructors, tutors, other learners, and the community.
- Instructors must receive hard on the job training on the use of the technology and its potential benefits to learning and instruction.
- They must be able to provide effective student support and troubleshoot simple trouble-shooting.
- Incentives should be provided to encourage instructors to get involved with the new method of delivery. The time and effort required to develop and support online courses must be recognized.
- Copyright policies should be adjusted, if necessary, to enable the conversion of existing materials into electronic media.
- The technology must be maintained, supported, and secured.
- Organizational policies and management structures must be adjusted to cope with the flexible delivery methods, provide or learning assessment, support independent study materials, and address issues such as access, plagiarism, effective online behavior, and assist students who lack access in junior experience with the technology.
- Consideration must be given to how the technology and software will be updated in the future.
- Procedures for continuous assessment should be established.
- Educational administrators must be willing to review technological implementation plans regularly and revise them as necessary.
Planning is an important part of there will be unforeseen developments and challenges. Nevertheless, the integrated nature of planning and management, does not diminish the need for deliberate strategies to implement effective technology-based teaching (Miles, 2000, p. 7-2). The places in which an institution delivers its programs and processes greatly affects the success of technological implementations. In one institution in Southeast Asia, students were installed two years ago, still recusing them; by then, the equipment was outdated, new software was required, and they were avowed for the equipment and moved on to other positions. As computer performance grows, evaluate every 21 months (Strong, 2007) and new software is developed to take advantage of this increased performance; equipment specifications and implementation plans must be revised, periodically.

When distance education is being implemented, especially when it has a technological component, there is a need for lecturers who are flexible, open to new ideas, and willing to make decisions. In many developing countries the decision making process is filled due to the involvement of decision-makers who have limited or no experience with technology, the process of education, and change management. Those who will be making significant decisions about technology should use it on a daily basis. They should have some exposure with specific equipment or programs they are selecting; be aware of the potential impact of the technology upon learning, instruction, and administrative systems; and know how to handle the trend.

Institutions must put in place a clear, detailed plan for implementing technology in distance education. They must involve stakeholders such as the department or ministry of telecommunications, if they imply that teachers will lose their jobs when courses are placed online. The plan must be updated continually to accommodate new information and communication technologies, e.g. a strong yet flexible leader must exceedingly communicate the plan to all constituents. Planning with the school director of just the key personnel involved in implementing technology successfully in a distance education setting.

Despite the emphasis on the use of educational technology in this article, it must be recognized that developing countries continue to have success with paper-based and broadcast media forms of distance education as these are reliable and sustainable (Beld, & Rekh, 2006).

Addressing the lack of infrastructure and the cost of bandwidth. The lack of a sustainable and accessible electrical and telecommunications infrastructure inhibits not only economic growth (Miles, 2003, Fay & Morris, 2007), but also growth in the educational sector. In 2004, Kenya’s education minister, Prof. George Sotte, stated that approximately 90% of the primary schools and 35% of the secondary schools were not connected to the power grid (Kagami, 2007). Introducing a learning to these schools will be a challenge. Alternative power sources such as solar and wind must be considered as well as equipment that uses minimal power or includes electrical generating devices. In Namibia, solar panels and wind turbines are being used to generate electricity to support Internet services, computers, and servers in schools. The type of infrastructure that, in particular, enables schools to have high-speed Internet access to provide computers, training, and support to more than 300 schools via a significantly different electronic wireless internet network. Affordable and reliable electricity power would greatly facilitate the adoption of online learning.

In eastern and southern Africa, the cost of internet access can be 20 (or 40) times the cost in North America, as 80% of the internet traffic is routed through such hubs (Zaheer, 2008; World Bank, 2007a). Satellites over Africa and the South Pacific provide slower, transatlantic rates than optical cable, primarily due to signal delays and narrow bandwidth. Unlike many of the satellites supplying signals to Africa and the South Pacific were launched more than 20 years ago and are aging. A terrestrial infrastructure backbone, recently approved by the World Bank to serve eastern Africa, would substantially reduce costs (World Bank, 2007a). In addition, 3G networks, Google, and Liberty Global and the HSBC Bank plan to launch a high-speed, low-cost network of 16 satellites which will enable the spread of locally generated content and e-learning, thereby encouraging social and economic growth in the developing world (IBIS News, 2009). Once a robust link to countries beyond Africa is established, it would be hoped that a network of telecommunications and internet hubs were implemented in Africa. Seventy-five percent of e-mail and telephone messages between African countries are routed through Britain, or the United States (Nkor, 2007); thus, it can be expensive to communicate and use services such as Web 2.0 tools (e.g., wikis, podcasting, and multimedia sharing services that may require larger bandwidths). A fixed basic income line in Kenya, costs US$96 per month and wireless internet service is US$63 per month. The average income in Kenya is US$220 a month (Zaheer, 2009). The high cost of internet access primarily explains why Africans combined only 1.5% of the world’s internet users in 2005 (Zaheer, 2007); and 3.6% in 2008 (Association for Progressive Communications, 2008). Only 8% of the Latin American population had access to the internet in 2007 (Mahar, 2007). “Even if the infrastructure is somehow present, the use-rate has ensured that [the internet remains] out of reach for the bottom of the pyramid. Priced per minute, mobile connection costs and purchasing devices that are not widespread even in the areas which are advanced in relative terms” (Nkor, 2007, p. 31). The cost of bandwidth is relatively expensive for most people living in developing countries; but at least they potentially have access to it. This is definitely progress, because in 1996 only five countries in Africa were connected to the internet and now all are connected (Zaheer, 2007).

Once the telecommunications backbone is established, wireless systems could be added to deliver services locally and to serve rural areas in which many marginalized and under-served people live. The developing countries have the advantage of learning from the experiences of other countries and can gain important insights into the stages of development. For example, instead of implementing hardware-based infrastructure, developing countries can employ wireless technology. An affordable, reliable, reasonably priced electrical and telecommunications infrastructure is essential. E-learning is to spread beyond large urban areas.

According to Groot (2006), “The challenges in Africa from a governmental and regulatory perspective is what can and should be done to encourage investment, both domestic and foreign, in the telecommunications industry. Perhaps governments should consider that no one company has a monopoly for this service and that a healthy competition among wireless providers is nurtured. Governments need to recognize regulatory barriers that prevent the establishment of a healthy competitive environment and encourage investment (Thehorn, 2008) or take a more socialist view and ensure that all citizens have access to the internet at a price they can afford. Countries such as Tanzania have eliminated taxes on computer equipment and reduced customs payable by telecommunication companies. Liberia intends to follow Tanzania’s policies by “solving customs duties on imported ICT in used equipment so as to enable Liberians to have more access to their” (Stability Act Now Update, 2008). By connecting learning centres to the internet, Sri Lankan officials can introduce the web to local communities. Once the internet connection to learning centres has been made, private companies can take the Internet connection from the learning centres into local communities. These connections may...
establish internet cafes which are "lurishing in developing countries such as Peru where "more than 20 percent of internet users connect from collective places," such as cyber cafes (Fernández-Maldonado, 2004). The money generated by the private contractors can be used to partially offset the cost of delivering the internet to the learning centers. By providing an internet connection to a learning center, the enabling for contractors to link to the connection, the contractor would provide a service that might have been unaffordable if they had to bear the entire cost of bringing the Internet to the community. This type of government-private partnership is beneficial to all.

Bandwidth is not the only issue in the development of network infrastructure; ease of installation, susceptibility to interference, coverage, data security, and costs are also relevant. Moreau University in Kenya considers using microwave, optical fibre, wireless networks, and/or satellite signals to provide the connectivity it requires. The National Oceanic University of Nigeria decided to use Nigeria's Communications Satellite (NIGCOMSAT) to link its main campus with its video conference facilities located in various locations across the country. Each institution had to carefully assess its infrastructure and learning needs, then determine a solution that took into account environmental constraints.

The challenges in Africa are similar but not identical to those in Latin America and the Caribbean, where the infrastructure is already more developed in terms of quality, reliability, and coverage. However, governments must set regulations; the need to stimulate and manage the infrastructure development, increase the infrastructure spending, and spend funds wisely is an issue. This situation calls for a new initiative that will build on existing projects (African, 2002). Hypothesis of the type of infrastructure that is implemented should be designed to accommodate the needs of the distance education program (Bates, 2002).

Obtaining equipment when funds are limited

When compared to the average wage, the cost of equipment can be expensive in many developing countries. Consider that USD 50 billion of India's 1.1 billion people suffer from two dollars a day to live (World Bank, 2005) which implies that an emerging status as an economic power house. The ownership of a computer is a dream for many; therefore, the laptop updates (http://www.telecentre.org) provide services to local communities as they attempt to bridge the digital divide.

There is also a number of low-cost computers that educators in developing countries can consider. These computers are significantly less expensive than a used Pentium III computer, which can cost up to USD 1000 in a developed country. A low-cost computer, which is currently sold at USD 180, seems to be built with constructivism and constructivism in mind. They are capable of handling networking and the software seems to accommodate collaborative activity easily. The competition appear to be well suited for educational school work, and students in these areas whose electricity and Internet infrastructure may be non-existent. As they consume 10% to 20% of the wattage of normal laptops, can generate their own power by use of pull boards, solar panels, and hand cranks. The water is used to clean the laptop, and have very few moving parts. While the Intel C processor (http://www.assemptap.com/), which can cost at USD 200 in USD 70, may be best for a desktop computer: the OLPC laptop and Line ClasmondPC are the only low-cost personal computers. A Canadian company, InktMedia Inc. (http://www.inkmedia.ca) has produced a USD 300 Linux-based laptop, for the developing world. Therefore, which is the HIM Thickpad, licenced in 2005, offers a USD 199 computer to the 600 million people who live in rural China. (McDaid, 2007). That sounds like a good deal until you realize that the average wage in rural China in 2006 was USD 600, although it is increasing at a rate of 10% each year. Currently, there are over fifty initiatives that involve the use of low-cost
computers to serve students in developing countries
(http://www.trends.org/ntic/publication/107.html). Despite recent downsizing of the
management of the OLPC initiative, OLPC is credited with shining a light on the technology
issue of those students and in inspiring others to develop low-cost computers.
Rather than purchase new computers, some countries such as Kenya, Namibia, Trinidad and
Tabago, and Uganda find the option of obtaining refurbished computers from non-
governmental agencies. Computers for Schools Kenya (http://www.cfsk.org) has provided
refurbishers with 200,000 students in marginalized communities (Okono, 2007). This
organization receives donated computers from Canada, Great Britain, the Netherlands,
Kenya, and the United States, then repairs them and retrieves residual data, installed by
previous owners, loads appropriate software, and tests the equipment. The work is primarily
completed by student interns and volunteers who acquire ICT skills at the same time to
obtain gainful employment. However, a number of challenges are related to refurbishing
computers, including dealing with the compatibility problems associated with the wide
variety of computers received, the potentially high maintenance costs, and restrictions on
software because the machines may not be able to run new programs (Ministry of

Educational institutions and governments must assess the true cost of the technology, not
just its initial purchase cost which may be only 20% to 25% of the actual cost of ownership
(Wither et al., 2001). Maintenance, software, and training costs must also be considered.
Whatever the cost of information and communication technologies (ICTs), they are
competing against food and health services for the limited funds of developing and emerging
countries.

Countering cultural imperialism and addressing cultural diversity
Weber’s concept bring Western values (Emirbayer, 2007). Many in developing countries,
particularly African, feel that they are forced to accept values from Western societies when
it is not beneficial to them to do so. They prefer to use - what is developed locally.

There are at least 6,912 living languages in the world, of which almost 3,476 have more than
di million speakers (Gordon: 2005). In Africa, where many countries have more than 20
languages or dialects, it may not be feasible to develop print materials and coursework in a
variety of languages. If the courseware is produced in one language, which should be?
Given that the language so selected is one from colonial times that complaints of cultural
imperialism are heard. Further, a variety of cultural groups have a traditional philosophy that is best
supported by lectures and group discussions. Other cultural groups are uncomfortable with
the concept of critical thinking engendered by many distance educators, as they view it as
le to criticism of their sides. For example, in an article describing the development of
distributed teaching in Bhutan and Nepal, Raban & Mason (2007) state, "the concept of
'the nature of critical thinking so highly regarded by Western educators, is anathema to the traditional
Buddhist educational system, and this actively works against the idea of students-centred
learning which uses culture, rationality, and critical thinking to bring about social change." In
Thailand project in Thailand failed not only because of the high societal communicative
costs, but a sense that medical personnel in urban areas were reluctant to consult with
those in rural areas. The technology was not able to bridge social barriers. The
implementation technology does not mean that culture and social forces disappear,
sometimes the fu forces are magnified. Overcoming culture and social barriers
related to technology and its use can be more difficult than actually implementing

In an effort to maintain an indigenous culture and to reach those who live in rural areas of the
country, presenting courses in local language is possible. However, if equipment

Reference: UNESCO, Financing Distance Education in Developing and Emerging Nations. UNESCO. February 2009
marula for vocational courses are available only in a foreign language by business is conducted in a language such as Maranum and English. It might be beneficial to expose students to these languages. The need to have resources in a local language environment is a common need for many educators. Inadequate version of the Wikiversity (http://www.wikiversity.org) that was founded by the Wikimedia Foundation to create and host free learning materials and activities. They also consider using Julia (http://juliapl.org) which is easy to setup and does not require students to have an email account in order to access the information on a wiki established by instructors.

Dealing with limited resources

Educators in developing countries are aware that external funding from international development agencies and corporations is not always available, and it may not be sustained once the external funding has ended. Thus, educators need to collaborate across borders, especially regarding the development and delivery of courses (Nakuru, 2007), and should consider the use of open-source course management and delivery software (Wright, 2004) such as Moodle (http://moodle.org) and Sakai (http://sakaiproject.org). Open source software offers the potential to reduce the cost of the software while providing an

Educators are well aware of the duplication of effort required to develop materials. The Commonwealth of Learning (COL), for example, works with nine countries in the Southern African Development Community (SADC, http://www.sadcnet.org) to develop learning materials to enable teachers to enhance their professional skills through distance and open

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Developing and emerging nations could establish regional learning repositories that contain learning objects or digital learning activities that meet their specific needs as well as complement the contents of existing open-source learning repositories such as the Multimedia Educational Resources for Learning and Online Teaching (MERLOT, http://www.merlot.org). Educators could then develop their own learning objects or online activities; they should ensure these are more than just electronic page-turners. According to Wright (2007), the online learning activities include:

- engage and motivate the learner by including online games, role-plays, and simulations;
- demand that learners interact with the online material, with their peers, and their community by using the various socialization tools that are available on the web;
- encourage critical thinking, creativity, and problem solving;
- provide opportunities for online practice and knowledge transfer;
- offer timely, constructive, relevant, and frequent feedback; and
- provide links to resources beyond the content and the learner's community.

Learning Issues Among Distance Educators in Developing and Emerging Nations, 2006LC. February 2009
Regional learning repositories are to be successful, educators must be willing to contribute some of their own funds and energy. They cannot rely solely on external funding from organizations such as the William and Jane Hewlett Foundation (http://www.hewlett.org/) that support open educational resource initiatives designed to equalize access to knowledge and educational opportunities. The Teacher Education in Sub-Saharan Africa (TESSA; http://www.teessafrica.net) initiative is an example of a successful collaborative effort that develops open educational resources and provides guidance to teachers. This initiative involves international organizations and educational institutions, the African Virtual Open Initiatives and Resources (AVOIR; http://www.avoir.org), comprising 10 African universities, focusing on developing free software that is relevant to African users.

Collaborating on course delivery and student support may be more difficult than collaborating on course development. However, the Association of African Distance Learning Centres (AADLC, http://www.aadlc.co.za), part of the Global Development Learning Network (GDLN, http://www.gdln.org), has enlisted individuals and teams to share knowledge on how best to offer distance education. One of its priorities is the provision of effective, cost-efficient support to distance learners. The partnership of 15 AADLC learning centres connects governmental, non-governmental and development agencies, and private-sector individuals across countries via interactive videoconferencing and the Internet.

Distance educators in developing countries also need to explore the establishment of a cadre of tutors who could serve more than one institution. Companies in India and many developed countries provide 24/7 on-the-tutoring and student support services. If there is a lack of specific content expertise or the number of students does not justify hiring full-time faculty at an institution, then institutions could consider collaborating or the provision of tutoring services. Collaborative efforts can address the challenge of limited resources and can be beneficial to all involved.

Working across borders can address the lack of educational resources and the need to introduce faculty to new instructional methods. Recently, the United Nations University Collaborative (UNU-Collab) on the deployment of e-learning in over 150 developing countries. In addition, the U.S. Agency for International Development stated that it plans to establish a virtual network that will enable institutions in South America to collaborate with their American counterparts (Window, 2008). Thus, the project and its partners are projects in education, economic development, food security, and health. According to Silas Lusakabwambo, rector of the National University of Rwanda, the partnership will benefit Africa's universities by "building the capacity and skills of our graduate students; introducing interactive teaching methods; providing training and mentorship opportunities to senior faculty members; and bringing more women into academic ranks" (Window, 2009).

Placing greater emphasis on quality assurance frequently, face-to-face instruction is associated with quality teaching even if the instruction is usually delivered in small, suitable conditions. Conversely, distance education is often viewed as second-rate education that focuses on memorization rather than problem-solving and is often considered a costly enterprise, especially when information and communication technologies are introduced. Piantoni (2007) expresses one view of distance education in the developing world. "Open and distance learning is regarded by students and members of the educational community as a second-rate system, used to offer a shadow of education while withholding its substance. It is an inefficient but cheap way of containing educational demand without meeting it" (p. 207). "This view of distance education is widespread not only in Southeast Asia and Africa, but also to a lesser degree in developed countries...as this was a common attitude in the West until about twenty years ago, and some may say is still prevalent in subject-specific areas" (Ronnie & Mason, 2007, p. 9). According to
Professor Dhananjay, vice-chancellor of Uva University, said: "The methods of delivery, whether face-to-face or virtual, actually have little to do with the quality of education. What's more important are things like, is there a careful measurement of learning outcomes and is the university benchmarking its developments... [to] whether the curriculum is given to the environment." (Raj, 2007). High-quality educational material needs to be ensured by people who have a positive attitude towards change and care about what they do and how they do it (Wright, 2006b).

Those who are likely to make key decisions about technology and distance education and those who are regarded as "people of influence" are generally in their 40s and 50s. These individuals may initially resist technological solutions because technology was not part of their educational experience. (Wright, 2006b) Technology is not the issue, but rather, how it is used and the attitudes people have about it. Education should not only be exposed to the literature about effective distance programs, but must also use them in operation and speak to students whose lives have changed because they were able to access distance education courses. Increased awareness should improve attitudes towards the implementation of technologically-enhanced distance education.

One of the reasons why distance education is not respected in some countries is the lack of quality assurance systems that continually measure the frequency of organizational goals with actual achievement, instructor training, course development, instructor learning interaction, student support, assessment, and paths of student success upon graduation (Wright, 2007c). Also of concern is the lack of meaningful interaction that promotes higher-order critical thinking. Quality affects student achievement, graduation rates, the potential for students to obtain a job or to pursue further education upon graduation, the support of educational stakeholders, and the image or credibility the institution has within the community.

Various countries need and are seeking assistance in developing and customizing quality criteria for organizing distance education. They would not simply use those of traditional institutions, some of which do not address the peculiarities of distance learning systems. In some cases, staff who migrate from traditional systems to operate distance learning CDL institutions originating from aspiring institutions that may not have the CDL institutions to approximate these overall goals, especially goals related to accessibility, flexibility, and equity. Staff in new CDL institutions in emerging nations must be introduced to attributes of CDL that differentiate it from traditional teaching.

quality assurance systems should have a higher priority when resources are limited; they often receive little or no funding. Distance educators do not need to develop their own standards from scratch; they can obtain existing standards and modify them for their environment. In any event, they should utilize these standards they are using and ask external reviewers to review their progress in achieving these standards.

Recognizing those who are likely to succeed and addressing student needs
Educational opportunities should be available to everyone. People who live on the street and in rural areas, as well as those in affluent communities, have a right to an education. However, when new programs and evaluation established, government and funding agencies usually focus on completion and graduation rates, in determining whether funding should be continued and programs expanded. Since distance education programs may suffer from low completion rates, (Question: 2007), it might be advantageous for project failures. In contrast, this will likely be successful with distance education courses and initially offer programs that will meet the needs of these types of students. The results should yield high.
nomination rates thus attracting further funding that can be used to develop programs for higher-risk students.

Successful online and distance students are likely to be highly motivated, well-organized, self-disciplined, good time managers, supported by family and colleagues, able to tolerate ambiguity, flexible, goal-oriented, and interested in using technology (Wright, 2006). Post-secondary level students are likely to be more successful with distance education than primary students (Perrett, 2007). This does not mean that only these types of students will succeed, but rather that they are more likely to complete a certificate, diploma or degree program.

Adult learners are particularly motivated if at the end of their studies they will obtain a specific, formally recognized, employment-related credential (e.g., diploma, certificate). Distance education seems to be ideally suited for those who have full-time jobs and family responsibilities, are geographically dispersed, or are far away from home—for example, military personnel, small business owners, international volunteers, and refugees. These individuals recognize the need for access to education that is not limited by time and place. Distance education is also of interest to those with often conflicting learning needs. If developing countries want to maximize the return on their investment in distance education, they should take into account the diverse needs of students who are likely to make the best use of the form of educational delivery system and provide effective student support.

Students may need access to financial support, equipment and technology support, learning resources, and academic guidance. A number of these student services may be provided in a virtual campus (Bragg, 2001). In many cases, costs are borne by the typical traditional institution, such as tuition, or passed on to students who can ill afford an additional financial burden. In collaboration with the Canadian International Development and Research Centre (http://www.trimac.ca), countries such as Benin, Egypt, Kenya, South Africa, and Uganda have established a network of networks to provide affordable access to information and to support students as well as to promote the use of ICTs for community development.

In addition to issues related to the cost of equipment, access to the Internet, lack of familiarity with technology tools, limited access to up-to-date and engaging resources, and the need for quality assurance systems, heal in democratization and increased job prospects, students have other concerns that must be addressed. These concerns may contribute to attrition rates that can be 15% to 20% higher in distance education than for traditional face-to-face settings (Angello, Williams, & Newton, 2007). Humans need to be social beings who rely heavily on eye-contact, verbal cues, immediate feedback, and frequent contact with others. If these social factors are not addressed, distance education may lead to the feeling of isolation (Hillman, 2005). Students may feel the need to be part of a community. A community of learners. If educational technologies available to them do not provide opportunities for interaction with tutors, study groups, and the involvement of family and peers should be built into the program so learners do not feel isolated. It may be necessary to inform employers and family members about the long-term benefits of the education being sought and encourage them to support the learner. Students may want frequent contact with their instructor or tutor in order to obtain feedback that is timely, effective, and nurturing. The number of potential challenges facing students in developing countries is significant, but they can be overcome if careful attention is given to addressing these needs.

Dealing with faculty concerns

Returning Issues Focusing Distance Education in Developing and Emerging Nations, 2005, February 2005
Faculty may not support a learning system that is substantially different from the traditional, post-colonial, face-to-face institutional environment in which they were trained. The implementation of distance education may be impeded by faculty who have limited or no experience with distance education (Cuatti, 2008). Their students may also resist a shift in the face-to-face learning environment. In institutions with research and publications rather than the time and effort required to produce and support distance education courses, faculty may not have the support they need to make the transition to an electronic form of distance education (Anderson & McInerney, 2002; Levin & Wilmot, 2003). They may develop teaching anxiety associated with the lack of training with the new technology and instructional methods, the tension between allocating time to online course development and research, increased workload, and performance expectations in an unfamiliar learning and instructional environment, in which learning-centered and constructivist approaches may be emphasized. These faculty concerns are especially in developing countries such as Botswana (Wright, 2007b); as well as in more economically advanced countries such as Brazil (Porto & Borges, 2008).

Technical support is often lacking in developing countries, as the few individuals with technical expertise focus on network infrastructure and security. Faculty must learn how to install and maintain computers and software and troubleshoot problems that they and their students encounter (Wright, 2007b). Instructors also need to learn a variety of online computer classes (Smith, 2006) especially how to foster effective learning (M这座ura, Eltschka, & Watsor, 2007), build effective interaction in the classroom (Rottmann, 2005) manage their time (Ley, 2000; Shi, Bok & Maguire, 2006), and write effectively (Thomas, 2002). Often overlooked is the need to inform instructors and students about copyright and electronic plagiarism as well as to encourage them to look critically at the web and to verify information. Governments and institutions should be encouraged to establish laws and policies that support the free exchange of information for educational purposes.

One of the major challenges faced by faculty is they try to learn about technology in that they do not have easy access to it. Since 2006 the National Open University of Nigeria has provided three with general packet radio service (GPRS) and internet-enabled wireless terminals in each of the staff, especially the study centres staff and instructors on the main campus. The computers are provided via a very flexible loan arrangement between the staff and the University management. Each internet card has a monthly airtime credit of US $38. Some institutions purchase large quantities of computers at reduced rates and provide their distance educators with the technology.

Students are a resource that is often overlooked when faculty training is being implemented. In general, young people tend to pick up technology skills rapidly and can be used to assist instructors in learning computer skills and developing media-based materials (Wright, 2007b). This is to occur, faculty may need to overcome initial resistance to learning from students which may be accomplished more easily in some cultures than in others.

To provide faculty with current information and skills pertaining to distance learning institutions and governments in countries such as Bangladesh, Ghana, Nigeria, and Sri Lanka invite consultants from international development agencies that are usually based in Australia, Canada, England, Germany, the Netherlands, Sweden, and the United States. These consultants are not formally involved with them, but are considered a resource. They provide one-to-one 'infomation tours' that do not offer opportunities for participants to discuss how to adapt them to their own institutional contexts. The usual model is the West usually involves one instructor with a few students; this would be unsatisfactory in developing countries (Rentel & O‘Rourke, 2004). Developing country higher education institutions should insist that the training sessions be interactive and allow time for reflection and the development of
local solutions. Educators should be encouraged to obtain, share, view, and, if possible, use reliable websites and blogs such as EDUCAUSE (http://www.educause.edu), Stile’s Web (http://www.dowmsg.com), and Zeal (http://www.comlab.ox.ac.uk). Educators should actively participate in organizations such as the MERLOT Africa Network (http://merlot.org), that focus on the scholarship of teaching and learning using electronic resources.

Accessing up-to-date educational resources

Open educational resources and digitalized print resources can help alleviate situations arising from the paucity of up-to-date educational resources. Sources of open courseware include the OpenCourseWare Consortium (http://ocwweb.mit.edu), which provides access to university courses from Brazil, China, Columbia, France, Japan, Korea, Mexico, the Netherlands, South Africa, the United Kingdom, the United States, and Vietnam. The Open Educational Resources Community (http://www.openeduccom.org) offers teaching and learning material at the university, secondary, and college levels. Items can be retrieved online and transferred to compact discs or memory USB keys for use across multiple Internet access sites and bandwidth limitations. In 2008, the South African Institute for Distance Education (SAIDE) established Open Educational Resources (OER) Africa (http://www.oer-africa.org.za) to more easily access and use OER for higher education institutions in Africa. The OpenLearning Project (http://www.openlearning.org) is a collaboration of higher education institutions that provides audio and video captures of lectures at leading universities.

Most importantly, educators in developing countries need to overcome the "teaching honeymoon" by recontextualizing, localizing, and contextualizing material they obtain from other sources. Wright (2002a) notes that, although developed by institutions, the material is not always available in an open-source format. They must obtain permission to use it and then simply forward it by adding their institution's name, logo, and contact information. The materials are not changed significantly, so considerable time is saved. Educators may decide to localize material by utilizing appropriate information, including local examples, or learning management systems (LMS) components. The OpenLearn Learning and Teaching Service (http://www.openlearn.org.uk), managed by the British Open University, enables users to download and remix course content. Distance educators may also contextualize the materials for a local audience by changing the content and examples.

The African Virtual University (AVU, http://www.avu.org), aims to provide world-class quality education and training programs in education in Africa as well as undergraduate and graduate academic courses. One of the major challenges is to adapt course materials developed in an affluent Western context to the educational environment in Africa.

According to Lou Sinanan of Curtin University of Technology in Australia, material that has been adapted successfully must balance Australian, international, and African perspectives. It must allow students to reflect on the knowledge in their own countries, yet enable them to draw on expertise and experience from other countries (Wright, 2002d).

The Ordinary Digital Library (http://www.ordinarydigitallibrary.org), the Internet in a Box initiative, managed by the University of Iowa, enables people in developing countries to access recent information without incurring internet charges or struggling with limited Internet bandwidth. Jeffrey (2007), the library comprises more than 60,000 web pages including Computer Science Institute of the University of M. I. T. (http://ocwweb.mit.edu), Project Gutenberg (http://www.gutenberg.org) classic literature collection, 46,000 books, and 200 full-text journals. The material is spread on Windows or Linux servers costing as little as US$12,000 that plug into existing local networks. These servers provide access to information that can be up to 5,000 times faster than the satellite links that are used primarily in Africa and the South Pacific. They are currently located in institutions in Africa, Bangladesh, Haiti, and India. Institutions are charged an annual fee of US$120, for twice
Implementing mobile learning

Although implementing mobile learning is not a daunting task, educators have not previously encountered this method of delivery. It is an urgent issue for developing countries. As they try to implement online learning effectively, mobile learning can also explore the use of mobile technology. As we all know, the small screen and the current small devices make them difficult to use for many educational purposes. However, the devices are more affordable than computers, are socially acceptable in all areas of society, are easy to use, and are everywhere. In Africa, mobile phones are used to contact groups of educators such as teachers and principals with specific messages related to administration and educational content. Mobile phones are also used to transmit electronic lesson plans, to contact students about class activities or suspensions, and to record and distribute photographs and audio or video recordings. In Nigeria, mobile phones are used to teach literacy to some of the 83 million children who wonder about its terrain or along its shoreline (Abbrivio, 2006; Abbrivio, 2007). The phones are also used by government officials and health information to reduce the number of cases of Cameroon and Uganda and to enable doctors to diagnose patients in remote areas (Kowalski, 2004; Abbrivio, 2007; TRACAC, 2007). "Africa will establish an innovation center to develop mobile applications in health, education, agriculture, and small business that will focus on creating, innovating, and supporting indigenous populations." (Abbrivio, 2007) The projects described in this paragraph do not currently have too individual learning aspects that most would consider to be an important ingredient of quality distance education programs. But they are a start in the right direction. They are providing educational resources and opportunities for those who have had limited or no access.

A London Business School study indicates that an increase of ten mobile phones per hundred people boosts the economic growth rate of developing countries by 0.5% ("Economist Review," 2007). These educators will have tremendous growth in mobile phone in developing nations. As interest educators express in using these devices, the involvement of mobile phone manufacturers in projects that will expand educational opportunities, a time will come when the phones are used routinely for communicating, conducting financial affairs, and performing administrative tasks, but also for in-depth learning and assessment. The future of mobile learning is uncertain, but it may become the foundation of an exponential growth in distance learning because mobile appliances are ubiquitous, affordable, and have wireless capabilities that can reach rural and urban areas that lack a terrestrial infrastructure. However, those who advocate mobile learning are likely to encounter the issues discussed above relative to online learning.

Conclusion

Despite the challenges described in this article, new institutions are launched each year, existing educational institutions are expanding their online learning options, and enrollment in...
distance education courses continues in both the developed and developing worlds. The
continued growth and success of distance education institutions will depend on the extent
to which issues covered in this article are emphasised as they deal with the quality of the
learning experience provided to students. For those in developing and emerging nations,
distance education is the potential of a better life, not just an enhancement of existing
educational offerings.

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