

# **Contextual Background to supporting Learning in the Digital Age: A comparative Study of Botswana and Lesotho**

**Theme:** Formal Education

**Sub-theme:** Technologies for Scaling up ODL Programmes

## **Authors**

Lineo Clementina Kolosoa  
Institute of Development Management (IDM)

Phineas Sebopelo  
Botswana College of Open and Distance Learning (BOCODOL)

## **1.0 Background**

The government of Botswana in line with its Vision 2016, the National Development Plans – NDP-8 and NDP-9, developed a National ICT Policy which envisioned to position Botswana for sustainable growth in the digital age by serving as a key catalyst in achieving social, economic, political and cultural transformation within the country (Botswana National Information and Communications Policy V 2005, 8) A formal assessment on the current state of e-learning in Botswana preceded the introduction of the policy as it enabled the authorities to be in a position to determine the level of effort required to introduce this very important development. The results of the benchmarking and e-readiness assessments indicate that Botswana has a good infrastructure and supporting legislation in place, which provides the country with a solid foundation for accelerating an integrated National ICT agenda. (Botswana National Information and Communications Policy V 2005, 10)

In November 2007, the Tertiary Education Council facilitated a workshop the resultant of which was an intergraded tertiary education plan for the period 2009-2015. This white paper adopted a holistic view of how the tertiary education sector will deliver benefits by amongst others “the establishment of a sector wide tertiary education e-learning system that can be accessed by all the tertiary education institutions”. (Tertiary Education Council, formulating the NDP10 plan consultation paper, January 2008, 13)

Botswana College of Distance and Open learning (BOCODOL) has, ever since its inception had technology as one of the issues that were top on its agenda. For instance in the BOCODOL Strategic Business Plan 2000-2003, Planning for Progress and Excellence in Distance Education, the Multi-Media and ICT Department was mandated to support the introduction and strengthening of the ICT development through the review and development of the ICT strategy. In the strategic plan of 2003-2006, the College adopted the efficient and effective application of technology as one of the key result areas. The idea behind this was to harness technology for efficient and effective development and delivery of quality products and services.

As part of its strategic goals, BOCODOL is currently working towards developing ODL and ICT expertise, in order to progressively increase College bandwidth to facilitate delivery of on-line programmes and services. This is done to ensure that the College is in a position to respond more effectively to the needs of its learners in these matters.

Botswana College of Distance and Open Learning embraces the e-learning initiative not for its strategic growth in increasing access but also to position itself in a global market by reaching out far away learners. The effect of this would be to expand the market base and also inadvertently improve on quality of the service due to the external scrutiny the product will be subjected to internationally.

As part of ministry of Education and Training's stress on practical programmes and the desire to bridge the 'digital divide' and achieve its strategic goal 1 of improving access and equity of education and training at all levels by 2015, the Kingdom of Lesotho intends to develop sufficient, skilled and motivated human resource for the education and training system through the use of ICT and implementation of ICT programmes for all institutions of learning. This will be done through increased utilisation of ICT in teaching and learning and the use of ICT as an important tool for expanding the learning environment (ESSP, 2005). According to the Education Sector Strategic Plan (2005), the government of Lesotho is aware of the existing knowledge or information gaps between itself and the advance world as a development impediment that needs to be addressed.

Lesotho College of Education in line with the ESSP (2005) recognises technology based learning and in its Strategic Plan (2006/7) clearly articulates the integration of technology in the teaching and learning of College programmes, the use of ICT to support learners through e-learning streamline administration and enhancement of communication skills development among staff and learners.

## **2.0 Literature Review**

### **2.1 Definition of e-Learning**

E-learning is becoming increasingly widespread due to the need to widen access, its role in pedagogic innovation, enhancement of distance learning, organizational change and also revenue generation. According to Ravjee (2007), the notion of e-learning can be commonly understood as learning facilitated on-line through network facilities. E-learning is a widespread and dynamic learning environment that allows instructors, learners, and course materials to be placed at different locations so all parties can interact with at the same or various time frames, using well-designed, Web-based technology tools to facilitate the learning process.

### **2.2 Quality assurance in e-learning**

Many institutions of higher education, educational organizations, the business community, and learners are embracing e-learning for a variety of reasons and needs. According to Almala (2007) these parties refer to key factors such as flexibility, using mixed interactive multimedia, Internet research, archiving, electronic networks, telecommunications, and cost to support the idea that e-learning can serve as a viable and qualitative learning alternative. Almala (2007) further argues that due to rapid changes in technological development and evolving e-learning instructional strategies, the related issues of accreditation, quality standards, policy issues, educational equity, assessment and evaluation, designing courses and programs, integrating curriculum and technology, student needs, and learning styles need to be re-examine to render and deliver e-learning courses of the highest quality.

### **2.3 Motivation to learn on-line**

The success of e-learning depends on a multitude of factors. If effective e-learning is to occur, a combination of active participation, social interaction, and collaboration needs to transpire. According to Sullivan and Butler (2007) distance learning students must feel connected. In the factor analysis study they conducted on student barriers to on-line instruction, the single most important barrier to students learning on-line is lack of social interaction. The research indicates that improving on-line interactivity is critical to ensuring that students stay connected, enjoy the on-line experience, complete and continue enrolling in online courses. This is critical as it creates a feeling of belonging as they are able to identify with a real class participation experience.

In a study conducted by Uzunboylu, H(2007) which sought to determine attitudes toward on-line education of English language teachers employed in state secondary schools in North Cyprus following an in-service program on distance education, significant differences in attitude toward online

education were found based upon teaching experience, school location, and use of e-mail. The study demonstrated that the use of computer and internet technologies and online education requires more positive attitudes than found among the sample of teachers in this study.

These observations demonstrate that acceptance and resistance to e-learning, requires that time, meaningful recognition for participation, and personal and technical support need to be provided for the successful implementation of e-learning initiatives.

## **2.4 E-learning as an advantage**

Recent advances in information technology literacy and the abundance of personal computers has placed e-learning in increased demand. In the past distance education was traditionally undertaken as a geographical necessity, now some students who are now able to access on-site internal education are now choosing distance education to better meet their androgogical needs

Although research consistently demonstrates that students learn content in online classes as well as their campus based counterparts and are equally satisfied with the quality of their learning, more information is needed that describes how the learning experiences themselves may vary. A study was conducted by Reisetter, LaPointe and Korcuska (2007) in which a traditional group of students was compared with an online group taking the same graduate class in research methods using the same materials and with the same instructor. Online learning was revealed as a distinctly different experience than face-to-face learning, offering insight into better understanding the nature of the experience of online learning and suggesting that online course designers focus their attention on particular elements that support the unique experiences of student who select this delivery mode.

Advantages of e-learning include increased student autonomy, facilitation of a realistic balance between learning and personal and professional commitments, and elimination of potential student concerns such as embarrassment at making public mistakes and working at a slow pace (Cook et al., 2004; Johnston,1997). According to Maor and Volet (2007), three major educational issues for the development of professional online learning are identified: the importance of recognising professional study as an integral part of work; the significance of congruence between online study features and professional learners' characteristics; and, the need for course developers to further enhance their technological and pedagogical capacity in the area of professional online learning.

## **2.5 E-learning in Botswana, Africa and elsewhere**

According to the report from the, from the 3rd International Conference on ICT for Development (2008), changing universities with ICT, an e-learning case study from Botswana, Information technology and e-learning have come a long way at the University of Botswana. However, similar to many other universities in the developing world, the implementation of e-Learning of at the University of Botswana was not all smooth sailing. The major challenges are in the area of limited resources particularly availability of computers. (<http://www.elearningafrica.com/newsportal/english/news13.php>)

Despite this, there are some African countries that are forging ahead with the introduction of an e-learning culture in their universities, based on national ICT strategies and education policies. A case in point is the establishment of an e-Learning Centre (eLC) in Namibia, which is a multistakeholder centre to host all e-activities of all educational institutions in the country on one common Learning Management System under the auspices of Namibian Open Learning Network Trust (NOLNet) ([http://www.uneca.org/disd/events/2006/e-learn/news/news\\_2006052601.html](http://www.uneca.org/disd/events/2006/e-learn/news/news_2006052601.html))

Serfontein (2004) argues that E-learning is not yet happening on a large scale in distance education in South Africa because the attempts at e-learning are sporadic and the result of individual rather than institutional efforts. This is partially caused by systemic and institutional constraints, as well as limitations faced by individuals and departments in distance education institutions. In the absence of an institutional strategy to implement e-learning, it is up to individuals and academic departments to put it into action.

Sweden on the other hand as an example of the developed world, has the best ICT infrastructure in the world. In a report cited by Odero, according to a survey by the International Data Corporation

(IDC) in February 2000, Sweden was declared the world leader in ICT infrastructure. This is largely attributed to the government concerted effort to transform the country into an information society for all.

The cited literature in this paper points to the fact that e-learning mode, despite some handicaps, is increasingly becoming a requirement mainly by business organizations and busy individuals seeking flexible and quality training and educational opportunities to enhance skills or earn academic or professional certification. The growth of e-learning calls for organizations and institutions to colleges and universities to provide e-learning that best suits and meets the needs of the targeted clientele.

### **3.0 Purpose of the study**

The primary purpose of the comparative study was to determine the feasibility of introducing e-learning as an alternative and or supplementary mode of distance learning to BOCODOL and LCE learners. Chambers in Rosenberg (2001) notes that "the biggest growth in the Internet, and the area that will prove to be one of the biggest agents of change, will be in e-learning."(<http://www.elearning.co.bw/>). The college views technology as a driver to increasing access both locally and internationally, e-learning becomes one of the means through which to drive this strategic imperative.

### **4.0 Objectives**

In particular the objectives of this study are identified as follows:

- a. To assess the readiness of learners to do their course programmes on-line.
- b. To find out if learners would be interested in doing courses on-line
- c. To determine if factors permit for learners to do learning on-line.

### **4.1 The core questions guiding these objectives are:**

1. Do learners have computer skills?
2. Do learners have access to computers?
3. Do learners have access to internet?
4. Are learners interested in doing their courses on-line?
5. Is there a reliable source of electric power in their areas?

### **5.0 Methods and procedures**

#### Data collection Instruments

This study used questionnaire as a method of data collection. Questionnaires are most often used if direct (person-to-person) contact with respondents is not possible or necessary. It is probably the single most widely-used data source in educational research. According to Whitney, D.R. (1972) some experts have estimated that as many as half the research studies conducted use a questionnaire as a part of the data collection process.

### **5.1 Sample and sampling**

#### Lesotho

The study was conducted using questionnaire data from 200 second and fourth year Distance Teacher Education Programme (DTEP) learners at the Lesotho College of Education. The learners were purposely selected from the lowlands regions of Maseru, Mochale's Hoek and Leribe. The lowlands regions whose communication lines, electricity and roads network are comparatively developed than the mountain regions.

#### Botswana

The data was mainly collected from a group of learners who enrolled in Small Scale Business Management (SSBM), Diploma in Business Management and Human Resource Management and English for Professional Courses (EPP). The questionnaires were randomly given to the learners through the regional officers and later collected for analysis. The survey covered all the five BOCODOL regional offices, namely; Gaborone, Francistown, Kang, Maun and Palapye regions.

## 6.0 Findings

This section presents findings from the analysis of data derived from the questions that were posed to respondents. Respondents were asked questions ranging from their computer skills, access to computers, and telecommunications connectivity in their area

### 6.1 Computer literacy

Table 1: Computer skills and competencies of respondents

Question	Botswana	Lesotho
Do you have computer skills	Yes = 76.2% No = 23.8%	23% 77%
<b>Computer skills</b>		
Word Processing	Very good = 37.6% Good = 37.6% Fair = 24.7%	10% 40% 54%
E-mail	Very Good = 28.8% Good = 39.6% Fair = 31.7%	3% 37% 60%
Internet	Very Good = 27% Good = 38.7% Fair = 33.3%	11 % 14% 75%
PowerPoint	Very Good = 22% Good = 33% Fair = 45%	3% 29% 68%
Excel	Very Good = 20.5% Good = 40.2% Fair = 39.4%	11% 31% 58%
Access	Very Good = 17.9% Good = 38.4% Fair = 43.8%	14% 23% 63%
How did you gain the skills?	a) I attended a course = 44.4% b) I acquired them at work = 55.6%	46% 54%

The table shows that 76.2% of respondents from Botswana are computer literate as compared to 23% from Lesotho. Moreover almost 75% of respondents from Botswana have of skills in Word Processing, whereas 50% of the respondents from Lesotho have those skills. In terms of the use of e-mail almost 70% of the respondents from Botswana said they are knowledgeable as compared with 40% from Lesotho.

### 6.2 Accessibility to computers

Respondents were asked to state whether they have access to computers and their services.

Table 2: Learners accessibility to computers and the internet.

Questions	Botswana	Lesotho
Where do you access the computer?	At home = 18% At work = 70% Friend/relative place	4.1% 5.4% 8%

	=5.7% No access = 15.5%	82.5%
How often do you use the computer?	Daily = 45.3% Once a week = 16.9% Rarely = 24.2% Not at all = 13.6%	4.1% 5.4% 8.2% 82.3%
Do you have the chance to use the computer as a resource for learning?	Yes = 51.5% No = 48.5%	14.3% 82.3%
Would you be interested in a course, which equips you with skills of using computer to enhance your career?	Yes = 98.8% No = 1.2%	92.5% 7.5%
Do you have access to internet?	Yes = 47.3% No = 52.7%	10.9% 89.1%
If yes, where do you access internet?	Home = 10.1% Work = 63.7% Internet cafe`s = 22.5% Friend/relative place = 3.6%	13% 7% 47% 33%

The table shows that 70% of respondents from the Botswana study access computers at work as compared to only 5.4% from Lesotho. Almost 100% of respondents from Botswana and 92.5% from Lesotho indicated that they are interested in course that would equip them with skills to enhance their careers. From the Botswana sample 47.3% said they have access to internet, while 10.9% from Lesotho have access to the Internet. 63.7% of respondents from Botswana access internet at work, while 7% of respondents from Lesotho do.

### 6.3 Connectivity of Power and Telecommunication infrastructure

Respondents were asked whether there is reliable infrastructure in their areas.

Table 3: Learner perceptions on availability of power and tele-connectivity in their area

Questions	Botswana	Lesotho
Is there a reliable source of electrical power in your area?	Yes = 96.7% No = 3.3%	59% 41%
If no, what source of power do you use?	Batteries = 27.3% Solar = 54.5% Nothing = 18.2%	36% 59% 5%
How is telecommunication connectivity in the area?	Good = 93% Bad = 2.9% Poor = 4.1%	60% 10% 30%

Almost all of the respondents (96.7%) from the Botswana study had a reliable source of electrical power, compared to only 59% from Lesotho sample. In terms of telecommunication connectivity 93% of respondents from Botswana study have indicated that it is good. From Lesotho almost 40% said the telecommunications connectivity is bad or poor.

## 7.0 Discussion of findings

### 7.1 Computer Literacy

The data reflects a varying degree of computer literacy between the two countries with Botswana in a positive contrasting position. However a relatively good number of learners from both countries have positively indicated that they have computer skills as pointed out by their skills in areas such as Word processing, E-mail, Internet, PowerPoint, Excel, and Access. This is encouraging as it will facilitate the implementation of e-learning and making it easy and rewarding to learners because most of them would be conversant with the use of computers and their programmes. Most of the learners

admitted that they gained computer skills at work since, the majority of them are working. Some said they acquired skills, through their computers at home, while others said they learned how to use computer at universities as computer studies is a bridging course in every programme. For those who pointed out that they do not have any computer skills, they still showed interest and eagerness in pursuing a computer course so that they can benefit from e-learning initiative.

## **7.2 Accessibility to computers**

The majority of respondents said that they access computers at work, this is probably so because most of them are employed. This is still a positive response because it makes their on-line studies easy and convenient.

Again more than half of learners who participated in this survey said that they have the opportunities to use the computer as a source for learning, mostly at their respective organisations. Most learners indicated that they access computer at work hence most learners will depend heavily on the computers at their respective organisation to carry out their studies. A great number of learners have expressed great interest in pursuing a course which equips them with skills of using computer to enhance their career. This shows how learners are excited about the prospect of doing their courses on-line.

Although a satisfying number of learners have access to computers and are also equipped with various computer skills, the only disturbing factor is that most of them have no access to internet. Internet services are a core delivery instrument for e-learning and as such this can be an impediment in the implementation of this project. For those who said they have access to internet, pointed out that they access it at work, on other hand this can be a plus factor because that the same place, most of them can access computers.

## **7.4 Connectivity of Power and Telecommunication**

Although connectivity to power and telecommunication differs from the two countries the positive response that came from this survey is that learners admitted it is relatively not that bad. This will go a long way in the facilitation of the e-learning project as computers need a reliable source of power.

## **8.0 Conclusion and Recommendations**

The results of this study demonstrate that information amassed will have a positive implication on the implementation of e-learning. This so, because an overwhelming number of learners have expressed great admiration in e-learning initiative and the interest in doing their courses on-line from the two countries is encouraging. This kind of scenario gives the two Colleges an opportunity to evaluate the need to implement e-learning as vehicle of programme delivery.

Adoption of e-learning is a shift towards a new learning culture. While it is exciting to adopt e-learning as a strategy, uncalculated move may lead to unhealthy consequences. Critical requirements for successful e-learning implementation are an effective e-learning strategy and appropriate change management strategies for specific organisational context. As a result it is very imperative that the two colleges put proper mechanisms in place for the implementation of this project. The right equipments and staff have to be acquired to facilitate the implementation process.

Although most of the learners are computer literate, the only detrimental issue is lack of access to internet experienced by rather a high number of learners. Internet service is a critical aspect of e-learning and in order for the two Colleges to ensure that this project see the light of the day, it is very imperative that computer facilities be developed for learners to access internet. Given the above, a key role of government should be to ensure that all learners have basic IT skills. It should also support effective standard development and facilitation of provision of necessary infrastructure.

It is also very critical that the two colleges work closely with other stakeholders, like government departments where the majority of learners are working. Employers would have to be implored to allow and give support to learners who would need access to internet to pursue their studies on-line. The Colleges also need to organize an orientation workshop to fully equip the potential learners about

the whole processes of e-learning. It is also imperative to perform constant and timely evaluation of the quality of e-learning courses offered in the two institutions to ensure that they met the current needs of learners and curricula standards.

Literature also demonstrates that e-learning could be very effective if instituted under appropriate circumstances. If it is delivered in support of a recognized business need that commands attention throughout the organization, appropriate structures to support learning should be put in place. If learners are motivated to learn, and have good IT skills at the start the implementation of e-learning could prove a worthy exercise. These issues are critical for the two colleges to identify and address to ensure that the e-learning becomes an achievable and viable initiative.

Despite some seemingly existing technical and organizational problems, there is chance that given the determination within the organizations and the willingness of governments of the two colleges to provide infrastructure necessary, the e-learning initiative will advance. However, this will be determined by effective good practice in organisations, in which a small scaled approach is adopted, which allows for close monitoring and management of this e-learning initiative.

## References

Almala, A.(2007). Review of Current Issues in Quality E-learning Environments  
Distance Learning. Greenwich. 4 (3) 23.

Butler, J and Sullivan, M (2007). Pitfalls, Perils, and Profound Pleasures of Live E-Learning.  
Distance Learning. Greenwich: 2007. 4(3) 31-37

Lewis, P. and Price, S (2007). Distance Education and the Integration of E-learning in a Graduate Program. The Journal of Continuing Education in Nursing. Thorofare: 38 (3)139-144

Lesotho College of Education. Strategic Plan 2006/7. Maseru

Maor, D. and Violet, S.(2007) Engagement in Professional Online Learning: A Situative Analysis of Media Professionals Who Did Not Make It. International Journal on E-Learning. Norfolk: 6 (1) 95-118

Ministry of Communications, Science and Technology. (2005). Botswana Draft National Information and Communications Policy

Ministry of Education and Training. (2005). Education Sector Strategic Plan. Government Printers: Maseru

Ponton, R. Wighting, M. and Baker, J(2007). A Comparative Analysis of Student Motivation in Traditional Classroom and E-Learning Courses. International Journal on E-Learning. Norfolk: 6 (3) 413-433

Rabak ,L. and Cleveland-Innes, M.(2006). Acceptance and Resistance to Corporate E-Learning: A Case From the Retail Sector. Journal of Distance Education. Ottawa: Fall . 21(2) 115-35

Serfontein, (2004). A workable E-Learning Strategy for Distance Education In South Africa. Available from: <http://portal.acm.org/citation.cfm?id=1018423.1020182>