

Technology and Development of Higher Education in Botswana

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Abstract:

Botswana is a small country with 1.8 million population. Development of Higher Education assumes greater importance in Botswana to meet the aspirations of people in the Society. Government of Botswana through its National developmental plans has been introducing several initiatives to develop Higher Education. In the process, several consultancies took place to bring the rational approach to the development of Higher Education. In recent times, Distance Education came in to being and trying to provide education with the use of technology. In addition to Distance Education initiatives, there have been remarkable changes that took place especially in the area of technology driven learner centered education aimed at increasing access to higher education. This paper while providing a brief background for the development of Higher education in the country, analyses the following:

- 1. Development of Higher Education - Back ground*
- 2. Role of University of Botswana in the development of Higher Education*
- 3. Government's Commitment to technology based higher education*
- 4. Development (recently) through WebCT, e-learning*
- 5. Other institutions and their role in the development of Higher Education in Botswana*
- 6. Way forward for further growth in the development of Higher Education*

In the process of analyzing the above, in addition to secondary data on the growth and access to higher education figures, informal meetings/interviews with the heads of Institutions and policy makers will be organised. Finally, a way forward and projections to growth rates are provided in the development of Higher Education with the help of technology.

Development of Higher Education-Background

Botswana got independence in 1966 and at the moment, it has got 1.8 million population. It is one of the best economies within Africa. In the field of education, several initiatives were taken to develop primary and secondary education in the early days. Later, in 1977 the National Commission on Education reviewed the situation and recommended necessary measures to develop education both in formal and non-formal set up. In 1994, the Revised Policy on Education brought several changes to develop Higher education in particular and education in general. With the revised policy, several initiatives were proposed and the Government supported the same in the process of developing higher education.

In the context of Botswana, even prior to independence, the teachers in Botswana received training from Zimbabwe between 1960 and 1965 (Jones 1979) and trained about 48% untrained teachers in Botswana (Jones 1981). Later in 1978, the Department of Non Formal Education (DNFE) was established in the Ministry of Education, and started functioning as a Distance Education Division (DED) of the DNFE. In 1991, the Centre for Continuing Education (CCE) was established and it became active in programming. Later in 1999, the government of Botswana established Botswana College of Distance and Open Learning (BOCODOL) to take care of pre-tertiary education in the country through distance mode. The above scenario of non-formal education was also part of the process in the development of higher education.

In the recent times, development of higher education assumes greater importance more especially in Africa where the countries used to send the students to developed countries for training and to obtain higher qualifications. Botswana is no exception to this phenomenon. Botswana has got only one University established in 1982. The University was mostly concentrating on certificate, Diploma and first-degree courses until 1994. Later, as the demand and necessity increased, the University wanted to move towards higher degree qualifications in a phased manner. Apart from a few Private institutions that have started offering tertiary education very recently, University of Botswana was and is the only leading Higher Education Institution in the country. Plans are at the advanced stage to start a new University soon to offer tertiary education. Apart from Distance education, which was used mostly at pre-tertiary level, there was also some first degree programmes developed through this mode. It has been noticed that the development of higher education through face to face is expensive and delays the access to masses, it has been decided (Various Policy document of the University of Botswana) to use a variety of technology in the development of higher education.

The possible Learning methods to be used in the Higher education are: e-learning/WebCT, video conferencing, etc. All these methods complement each other in transforming teaching and learning through use of appropriate technologies.

Development of Higher Education – Role of the University of Botswana

The University of Botswana was established in 1982. Since then, it has made a steady progress in the development of Higher Education, exclusively face-to-face method until very recently. This is the only higher-level institution in the country until recently. As things change, the emergence of technology-based education has become eminent. There has been a very high demand for the programmes and the spaces were very few. Almost 40% of applicants were rejected admission for want of spaces. This scenario continued until 2007. Later on, quite a number of Higher Education institutions come into being trying to offer higher qualification degrees through face-to-face method. Although these institutions rescue some percentage of demand, the question needs to be answered of how to make Higher Education accessible to masses and hence the requirement for technology.

The following table gives us the enrolment figures for the University from 2003-04 to 2009-10.

Table 1: University of Botswana, Enrolments

Year	Full time	Part-time	Distance learning	Enrolments
2003-04	13104	2080	241	15425
2005-05	12771	2605	349	15725
2005-06	12602	2724	384	15710
2006-07	12935	2820	484	16239
2007-08	12401	2584	499	15484
2008-09	11348	2548	524	14420
2009-10	13413	2033	522	15968

Source: University of Botswana - Annual reports

The above table depicts the development of Higher Education in the University in terms of student numbers. This also signifies the enormous growth envisaged within the single University. There are at the moment 8 faculties offering programs. With the starting of the new University next year, there will be high competition for quality and even for budgetary requirements from the Government and ofcourse increase the out put of graduates with higher qualifications.

Government's commitment to technology based Higher education

Botswana Government recently approved a new tertiary education policy; it was intended to increase the country's research capacity and innovation is to be expanded from a single National University to other tertiary institutions and a second public University. The overall objective, as part of the county's vision 2016, which calls for an educated and informed nation after 44 years of independence, is to transform Botswana into a knowledge society.

The developing economies have realised that the conventional classroom based education became very expensive. In the light of the financial constraints and to make process of education user friendly, the Government of Botswana has taken a firm decision on the use of technologies for the development of Higher education in particular and all levels of education in general. The recent slogan of the Government "to build informed nation by 2016" is also based on technology driven activities making education accessible to all people in the country. It was also mentioned that the e-mail in internet facilities have to be provided in all rural settlements which in turn lead to rural development. In the same period, Botswana Technology Centre was established as a mark of nation's commitment to technology.

Development through e-learning/WebCT

The University of Botswana embarked aggressively on a programme of technological transformation (Uys, Nleya and Molelu, 2003). Educational Technology Unit has been charged with the responsibility of the technology transformation at the University. The Unit carries out the Training of academics in the effective and appropriate use of educational technologies at the University. A major undertaking was the launching of University – wide e-learning initiative (UBel) in 2001. The University made substantial progress in e-learning process since 2003. In 2002 there were about two courses introduced by on-line. WebCT offers a full suite of online learning tools including chat facilities, bulletin boards, assessment tools, student tracking, e-mail, content uploading and student administration. Later, a state of art e-learning support centre has been implemented as the first wireless network application at the University. Subsequently learning support centre has been used to train academic staff through about 40 workshops in a year. After a year or two, an e-learning support

classroom has been designed for flexibility in sharing information. Later a video-conferencing system; POLYCOM was installed to conduct video-conferencing locally and internationally.

The rationale for using e-learning at the university is:

1. Increase the quality of learning
2. Supporting new research opportunities
3. Reducing administrative and teaching pressures on staff
4. Making teaching more rewarding and exciting for staff.

The development in terms of e-learning and WebCT may possibly be measured through the number of trained designers of e-learning, number of workshops/training programmes held in the first place. Out of 800 teaching staff, 231 were trained as e-learning designers. It means close to 25% of total staff were trained which is a remarkable achievement in the University. Only during 2009/10 academic year 179 staff were trained. If the present situation continues, all the staff could be trained within 5 years period.

The figures in the following table will inform the growth in terms of courses put on e-learning over a period of time and as a qualitative measurement of students' satisfaction over the e-learning technology, which will reduce the pressure on both the student and the teacher. Since the data was not available for other institutions, it is decided to take a case study of e-learning at the University of Botswana.

Table 2: Number of courses developed through e-learning

Year	Number of courses
2002/03	23
2003/04	42
2004/05	121
2005/06	179
2006/07	258
2007/08	314
2008/09	375
2009/10	369

Source: Centre for Academic Development, University of Botswana.

Total numbers of courses available at the University are 1554 and at the moment, there are 369 active courses in operation through e-learning. Having committed to e-learning process, the number of courses put on e-learning will inform the audience the level of development.

Other institutions and their role in the development of Higher Education

It is a recent phenomenon that a few institutions having registered with Tertiary Education council (TEC) of Botswana making their efforts to offer higher education degrees and diplomas. Sixteen institutions have registered with TEC to offer tertiary education in Botswana. Out of 16 institutions, only a few of them have started Diplomas programmes. The few prominent among these 16 institutions are; Limkokwing University, Botswana College of Distance and Open Learning, Gaborone institute of Professional studies, BA

ISAGO College, ABM College and DAMELIN College. Again among these six prominent institutions only Limkokwing and BA ISABO College have started the Diplomas and Degrees and others only Diplomas. The enrolments data is not available for these institutions. Informal discussions with these two institutions revealed that they have so far achieved close to 30% success in uploading their courses on e-learning.

Although 16 Private institutions have registered with Tertiary Education Council (TEC) only the University of Botswana is offering the full qualification degrees and Diplomas and for the last 5 years the enrolments have increased substantially in Graduate programmes. The other private institutions have started recruiting students for degrees and diplomas but they lack resources to develop Higher Education. Most of them are face- to- face and a few of them recently embarked on e-learning mode of delivery. The situation in the use of e-learning technology will further improve in future and all these institutions will compete to offer programmes on e-learning to make higher education accessible to masses.

Way forward

The potential for growth is there as seen by a number of initiatives taken by the University of Botswana. Once the courses are increased, the blended approach could yield benefits and develop more courses on e-learning mode. Having seen the demand for higher education, it is imperative that the e-learning coupled with other technologies will make a big difference and go a long way in the development of Higher Education in the country.

Table 3: Future projections in terms of courses and enrolments for next five years

Year	Number of courses	Part-time	Distance Education	Graduate studies	Under-graduates	Total Enrolments
2010-11	1600	2094	538	1660	12418	16710
2011-12	1650	2156	554	1760	13040	17510
2012-13	1700	2221	570	1868	13719	18378
2013-14	1750	2288	587	1985	14464	19324
2014-15	1800	2356	605	2112	15288	20361
2015-16	1850	2427	623	2250	16209	21509

Source: University of Botswana-Enrolment Strategy document

The above growth rates are projected in view of the University's recent decision to increase enrolments keeping in view the Graduate courses and the need for e-learning initiatives. The informal discussions held with University management and other policy makers were very encouraging and set the need for e-learning mode of delivery for higher education. As a matter of policy, the University has decided to have e-learning committees at Faculty level to plan and monitor the progress of uploading courses through e-learning. In addition, there are e-learning groups on campus where colleagues share their views on e-learning and make future plans. The Centre for Academic Development at the University is also conducting e-learning workshops regularly to promote e-learning among staff. The projected growth figures in table-3 will also put pressure on e-learning processes as the face- to- face mode cannot handle the increasing demand from the people seeking Higher education.

Conclusion

Our experiences show that we can only train very few participants with face -to -face mode of delivery. Taking the advantage of technology, it is possible to make the education accessible to many people. It correlates positively with the growing demand for Higher Education in all fields. The situation in the market has changed quite a lot as there is no value for lower qualifications in terms of getting employment or the required levels of knowledge demanded by various sectors of economy.

Offering education (more especially) hitherto was done in face- to- face mode with a direct contact between the learner and tutor. While there is no doubt on the success of this method, the accessibility was limited to few people. On the other hand, the demand for Higher Education has been on increasing trend as 40% applicants were unable to find the place at the university(Until 2007) The **subscription** rates were very high and only 60% applicants were admitted in the University due to lack of space as dictated by infrastructure and other requirements for teaching and learning.

In the present day competitive market, especially in private sector, the demand for Higher Education and people wanting to upgrade their qualifications has been on increasing trend. In the same way, there is demand for Higher Education and employers were never hesitant to spend on training as long as the staffs acquire the skills through higher qualifications. As most people were looking for spaces in the conventional system, the institutions in Botswana especially the Higher Education institutions/colleges were unable to cope with the demand due to insufficient resources available at their disposal in face –to- face method of imparting education. Hence, the way forward for more technology based Higher Education in Botswana. It is also suggested that in addition to the initiatives taken by the institutions, the Government should also encourage and invest more and more in e-learning processes to make education more accessible, flexible and learner cantered.

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