THE IMPACT OF ICT IN LEARNING THROUGH DISTANCE EDUCATION PROGRAMMES AT ZIMBABWE OPEN UNIVERSITY (ZOU): Roles of ICT in Learning Through Distance Education Programmes

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ABSTRACT

Zimbabwe Distance Open University is enrols students from both urban and rural settings. The majority of students living and working in rural areas have limited or no access to computers and electricity as a result the use of information and communication technology (ICT) in the learning process is very limited. Though government has realized the importance of developing ICT for learning purposes, in practice very little has materialized in the provision of the ICT technology especially in rural areas. The majority of Zimbabwe Open University students have expressed difficulties in coping with their studies partly due to lack of supplementary reading materials from internet.

The research will use a descriptive survey method to extract information regarding use of ICT from students living in rural areas and those in urban areas. Observation on what actually takes place in the library and learning process will be highlighted by the researching team comprising three lecturers who all work for ZOU. A contrastive approach will be used to compare the performance of students with access to internet with those without access to internet. Interviews of ZOU students and lecturers will be used to collect data.

INTRODUCTION

The development of knowledge through open and distance education is one of the tactics increasingly adopted in recent times by governments around the world who want to encourage economic development at the local, state and national levels. Researchers (Howell, Williams & Lindsay, 2003) have shown that distance education programs in particular are growing in importance as centres for the development of knowledge. Zimbabwe has been one of the countries, to develop strategies to encourage this effort aimed at providing people who do not have the opportunity to attend conventional institutions of higher learning (Gwisai 2006). However, despite advances in information and communication technology (ICT), colleges and universities in Zimbabwe are posed with complex problems especially in their distance education programs in reaching the goal of promoting the development of a knowledgeable society.

Figure 1 below highlights some of the problems that emanated from ODL has been highly negative

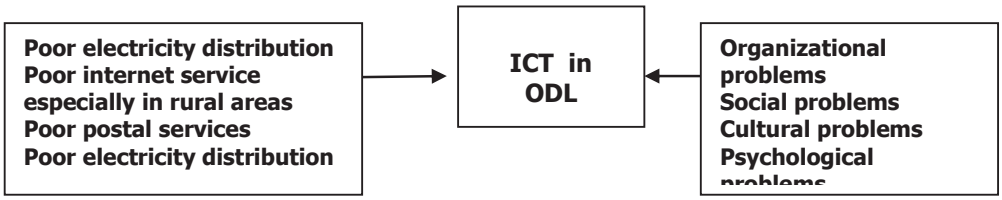

Figure: 1
Some factors affecting successful implementation of distance education in Zimbabwe

Computers were donated to communities in rural schools by the President R. G. Mugabe with the aim of enriching ICT knowledge among school leavers. Unfortunately most of these computers are gathering dust in most rural schools where electricity is not yet connected and in addition the skilled teachers for ICT in the rural students are not available.

BACKGROUND

Distance education, also called open or distance learning, is a form of education in which there is normally a separation between teachers and learners. Thus, it incorporates the printed and written word, the telephone, computer conferencing or teleconferencing to bridge the physical gap between the instructor and the learner. Distance education provides educational opportunities to those who otherwise would have been denied. Improving the quality of education through the diversification of contents and methods and promoting experimentation, innovation, the diffusion and sharing of information and best practices as well as policy dialogue are UNESCO's strategic objectives in Education (UNESCO, 2002, 2005).

By itself, the information and communication technology (ICT) literacy rate has become a key tool that has revolutionized how we see the world and how we live in it. ICT literacy is the capability (knowledge, skills and aptitude) of a person to identify, search effectively and present specific information in order to build knowledge and develop critical and creative thinking pertinent to a field of study. This phenomenon has given birth to advances in our ways of life. ICT is having a revolutionary impact on educational methodology both at conventional and distance education levels globally. However, this revolution is not widespread and needs to be strengthened to reach a larger percentage of the population. Therefore an interdisciplinary and integrated approach is very necessary to ensure the successful development of Zimbabwe's economy and society (Mac-Ikemenjima, 2005). According to Mukwate (2011), Zimbabwe is crafting an ODL national policy in line with SADC. ODL in most countries starts with the post-secondary section of the national education system which is given in Universities, Polytechnics and Colleges of Technologies including such courses given by some Colleges of Education, Correspondence Colleges and such institutions as may be allied to them.

The terms of references for these institutions of higher education are indicated in the national policy on education which include the following:

- **The acquisition, development and inculcation of skills and values that develop the individual and society.**
- **The development of intellectual capacities of individuals to understand and appreciate their environments through the use of ICT.**
- **The acquisition of both physical and intellectual skills which will enable individuals to**

- develop into useful members of the community.
- The integration of ICT into the economy of the country so that life becomes more comfortable for the nationals.
- The Zimbabwe Open University charter of (1999) detailed that the goal of distance education as being aimed at:
- Providing access to excellent education and equity in educational opportunities for those who otherwise would have been denied.
- Meeting the special needs of employers by instituting special certificate courses for their employees.
- Encouraging the development of courses that are internationally recognised.
- Developing expertise from ZOU who will continue to man the different manpower needs of Zimbabwean and international community.

Thus, the government of Zimbabwe is convinced that for higher education to make optimum contributions to national development, ICT is an essential ingredient through the integration of Information and Communication Technology (ICT) in distance education programs.

The development of ICT in Africa has not been encouraging and has been the topic of a good deal of debate globally (Ololube, 2006b). In Zimbabwe, the relationship between the development of ICT penetration and use in distance education programs and its diffusion into the programs in higher education in general is dependent upon government policies.

Though the Zimbabwe Open University charter was crafted in 1999, integration of ICT has really lagged behind as will be shown from evidence that was highlighted by both students and lecturers operating in the distance education institution.

The policy that is being crafted in line with SADC is aimed at addressing innovation, entrepreneurship, development problems/strategies and the digital divide in Zimbabwe. While ICT has much to offer, its impact on ODL still need to be felt, hence there is need to find out its effect on the operations of Zimbabwe Open University.

STATEMENT OF THE PROBLEM

The importance of information technology in the learning process cannot be overemphasized. Despite the introduction of ICT on ODL the students still face challenges which include lack of accessibility to computers especially for the rural student, lack of skilled manpower, and poor rural infrastructure to support ICT use. Hence the research needs to answer the following major questions.

- What strategies is Zimbabwe Open University using in order to help students living particularly in rural areas access information that will complement the printed module?
- How do lecturers interact with students in order to prepare them to write balanced assignments and also prepare them to write examinations?

PURPOSE OF THE STUDY

There are very few documents that have been researched and published on the impact of ICT in higher education in Zimbabwe. Specifically studies on the impact of ICT on distance learning are not readily availabe There are a number of factors such as government policies, lack of funding, institutional problems, infrastructural problems, as well as brain drain that incapacitates the development of a well structured ICT programme in ODL.

The purpose of the study is to discuss the challenges that students studying with Zimbabwe Open university in accessing information in order to augment the module that are provided as study material. The paper discusses the contents of distance education in Zimbabwe, the challenges facing ICT usage, especially for students living in rural areas. An analysis of the contrast between the performance of students with access to ICT and those without will be done in order to assess performance. The question of funding, institutional problems, infrastructural problems, human capital problems affect the integration and approach to successful improvement of distance education programs.

METHODOLOGY

In this study the three researchers used a combination of observation and document materials for data gathering, which are valuable sources of data about educational research.

On the part of observation, the researchers participated in the activities of an open and distance education scheme as a full-time lecturers while the other observed student activity when preparing for assignment presentation in the library. Some observations were made of the physical settings of the institution and the quality of the ICT skills of those working in them based on their qualification and length of experience to be able to describe what was going on in the institutions (Pole & Lampard, 2002, 71).The study also used a combination of descriptive survey from a sample fifty students and five lecturers who work in distance education. Interviews were used to look for information from lecturers and students at Zimbabwe Open University.

THEORETICAL CONSIDERATION

Zimbabwe Open University

Zimbabwe Open University started as the Centre for Distance Education established in 1993 by the University of Zimbabwe. The Centre for distance education initially catered for educational management courses. The major objective was to develop and train educational managers to manage and administer the schools effectively. By 1996 the Centre became the University college of Distance education. In 1999 through an Act of Parliament, the University College became a fully fledged university. The justifications for the establishment of the Open University are clear because there are approximately 200 000 school leavers per year who fight for a place to attend university. However, the University system can only accommodate 20% of this number. The course delivery of the Open University is through a combination of modules, textual materials, audio and video tapes as well as CD ROMs.

ICT and Education

Higher education institutions across the world have been adopting ICT teaching and learning technologies in an effort to create an environment for both students and their instructors to engage in collaborative learning and gain access to information (Ifinedo, 2006). Access to information through ICT increases the information accessible to individuals to support them in trying new strategies, thinking and creativity that are reflective in practice aimed at engaging them to new innovations through the use of ICTs (Ololube, 2006b). Information and communication technologies (ICT) are indispensable and have been accepted as part of the contemporary world especially in industrialized societies.

In fact, cultures and societies are adjusted to meet the challenges of the knowledge age. The pervasiveness of ICT has brought about rapid changes in technology and has caused social, political, and global economic transformation (Nwachukwu, 1994; Yusuf, 2005).

Distance Education Programs teaching and learning have been major obstacles that may have impeded proper implementation of the program by institutions of higher learning. The evidence seems glaring that Zimbabwe is not yet ready in her preparedness to integrate ICT in all spheres of her national economy (Ololube, 2006a, pp. 101-118). The domain of distance education has not been unaffected by the penetrating influence of information and communication technology. ICTs have impacted the quality and quantity of teaching, learning, and research in distance education.

Therefore, ICT provides opportunities for distance education students and academic and non-academic staff to communicate with one another more effectively during formal and informal teaching and learning (Yusuf, 2005).

For this reason, distance education programs in Zimbabwe need to integrate ICTs into their agendas, because the quality of teaching using ICTs to gain access to information is known in virtually all countries to be a key predictor of quality student learning.

Therefore, effective manpower training is crucial using ICTs, because ICTs are tools that on the one hand can facilitate human resources development, and on the other hand, help us to take full advantage of the potential of technology to enhance quality student learning via distance education (UNESCO, 2003).

Challenges of Distance Education in Zimbabwe

Despite the keenness by institutions of higher learning to establish distance education programs, they are confronted with enormous problems that may have impeded its proper implementation. Almost The most significant of these problems is poor ICT penetration and usage among Zimbabwean distance education practitioners. all African countries' basic ICTs infrastructures are inadequate; this is as a result of lack of electricity to power the ICTs materials, poor telecommunication facilities, and a poor postal system. Above all the lack of access to the needed infrastructures is due to insufficient funds.

According to Yusuf (2006), successful distance education cannot be assured without the use of effective communication and technological tools (e-mail, fax, Internet, television, radio, etc.). Several cities and rural areas in Zimbabwe are yet to have or have fluctuation in the supply of electricity. Most Zimbabweans do not have access to telephone and other telecommunication facilities especially in rural areas.

Even, telephone lines in the urban centres are not adequate to serve the teeming population. Cost of erecting telecommunication lines in the rural areas is prohibitive. These may make the integration of telecommunication in the delivery of distance education difficult. For example, in a ten African country survey, Botswana has the highest fixed line household penetration at 22.4%, followed closely by South Africa at 22.1%. Zambia is next at 18.6%, with Namibia at 14%. Tanzania has a fixed line penetration of 6.1%, Ethiopia just over 5% and Rwanda 4.4%. Uganda trails far behind the rest, with penetration under 1% (Gillwald & Esselaar, 2005).

Basically, African countries tend not to have the same infrastructural facilities and support as the developed West, which are prerequisites for the new order (Ifinedo, 2005). In addition, the poor state of telephone service has led to increases in dial-up cost for most Zimbabweans. Even with the recent introduction of GSM in, access is still limited, services are yet to be perfect, and service charges may make GSM unattractive for distant learners. Poor economic situations and their effects on middle level manpower, stand as the major obstacle towards the implementation of ICTs in distance education. Even an average middle income earner cannot afford basic technological and communication gadgets. Thus, computer related telecommunication facilities might not be useful for most Nigerians, as computers are still a luxury in institutions, offices and homes.

This has made the integration of necessary on-line resources (e-mail, newsgroups, world-wide-web, etc.) into distance education in Zimbabwe most difficult.

Similarly, according to UNESCO (1998), efforts to improve ICT access in Africa have been hampered by a number of factors; these are summarized as follows:

- **prospective ICT users that have the expertise, competence and equipment to benefit from access to electronic information networks are minute in number.**
- **the shortage and high cost of equipment, software and information compared to situations in industrialized nations.**
- **the lack of reliable and accessible physical telecommunications infrastructure; telecommunications monopoly, associated with overly restrictive regulations and high costs.**

Another most serious challenge facing distance education at this level in Zimbabwe is the need for the integration of new ICT literacy knowledge into academic courses and programs. This state of affairs grew mainly from the economic meltdown and political isolation that Zimbabwe experienced during the down turn of the economy since 1997. Most Zimbabwe's professionals relocated to other countries in search of greener pastures thus negatively affecting the distance education programs by ZOU.

DISTANCE EDUCATION PROGRAMS & DISCUSSION AND FINDINGS

In this study, we presented some of the challenges facing ICT usage, integration and diffusion and their influence on distance education teaching and learning. Some of the challenges that students face is travelling long distances to the regional centres.

The cost of travel is generally high especially when comparing with the low salaries that are earned by civil servants who comprise about 80% of the student body at ZOU. The other important challenge that a ZOU student faces is time.

Five days a week the majority of these student are at work. During the week end school these students have to travel to regional or district centres in order to attend tutorials. The researchers also observed that Zimbabwe is faced with challenges in the area of lack of funding, institutional problems, infrastructure problems, and human capital problems.

African countries have had to deal with the notion that distance education amounts to quality education that is cheap. That is a misconception. In many African countries none of this can be guaranteed (Pityana, 2004).

Included in the challenges faced by distance education providers is the required ICT competency in order for the programs to be effective. ICT competency involves but is not restricted to the use of an online catalogue to identify and locate resources for a specific information need, keyword search strategies to refine operational situations, browser and search engine to locate and retrieve appropriate information and the effective use of other ICT instructional materials that aid teaching and learning situations (Howell, Williams & Lindsay, 2003). However, distance and e-learning projects in Sub-Saharan Africa have grown significantly during the past three years, largely with the help of international development organizations. Nearly all countries in Africa are rapidly increasing the adoption and utilization rates of computers and the Internet. Senegal, Ghana, Uganda, Cameroon, Kenya, Tanzania, Malawi, Zambia, Botswana, Gabon, and Zimbabwe, among others, all contain populations with growing dependence on the Internet and pose great potential – and even several recent successes (Leary & Berge, 2006).

But a lot still must to be done to meet international standards and international best practices can only be of assistance up to a point. Almost all literature concerning this domain of study is concerned about the inadequacy (even outright absence) of essential services and infrastructure. Obviously, electricity, internet, computers, telecommunications and postal services must be developed to levels that can support the declared scale of open and distance education (COL International, 2001; Yusuf, 2006, cf.).

Possibly, another more serious challenge facing distance education at this level is the need for the integration of new ICT knowledge into academic courses and programs. This state of affairs grew mainly from the political isolation that Zimbabwe experienced during the time of economic downturn.

The speed at which internet is connected is another factor that affects student access to the World Wide Web.

The connectivity and speed in which internet serfs are generally slow. Where ZOU regions are connected to internet the student access is very limited. Of the 900 students registered at Bulawayo region there are only 10 computers connected to internet.

Most professionals manning ODL regional centres have not been trained in the design of e-learning materials. As a result where computers have been secured, e- learning is not being used to interact with the student on a regular basis. This denial of assistance and interaction has had adverse consequences, both on the psyche of faculty and on the development of the infrastructure necessary for professional development (cf., COL International, 2001).

The other major challenge facing the institution is failure to link the ten provinces through ICT. Whilst the plans have been on the table for a number of years, the fact that ZOU does not have its own infra- structure in some regions makes it difficult for the institution to invest in rented accommodation.

Poor funding from Central government has also led to a number of skilled personnel leaving the employ of ZOU thus loosing experienced personnel. One of the major challenges facing Zimbabwe Open University is that though the institution is decentralised in Regions, up to 2011 the institution is not networked.

As a result, when students are being registered the cumbersome burden of sending documents by mail to National Centre and duplicating processes has led to many problems administratively.

A contrastive analysis of the work that is written by candidates who live in rural areas, where there is no access to an internet facility shows that these students are disadvantaged immensely.

They can only rely on the module to write their assignments. Some of the students who try to access Internet from Internet cafes find out that it is very expensive given that the downloading of information in most of these internet cafes is very slow.

The few students who manage to get a chance to access internet on ZOU computers also complain that downloading useful information takes a long time. Given that most of the students at ZOU are working students, they need to maximise the time they have when collecting information.

RECOMMENDATIONS

- **Governments in Africa should embark on a comprehensive program of recapitalization of higher education and should move from the traditional position of paying lip service or little attention to empowering higher education and distance education programs to a pro-active stance by funding, monitoring and controlling their implementation as a way of ensuring that standards are met. Accordingly, making sure that adequate and functioning ICT infrastructures are available, like electricity, telecom equipment and an effective postal system, and making these infrastructures accessible to organizers of distance education programs and their citizens at large.**
- **At a broad management level, this study calls for effective policies to make a balanced investment in distance education programs and provide resources needed to effectively implement the use, integration and diffusion of ICT in distance learning rather than paying lip service.**
- **About 500 hundreds of computers that are linked to internet need to be bought if ODL students in Zimbabwe Open University are to benefit from interacting with the world.**
- **The administrators of Institutions of higher learning need to deliberately invest in ICT so that students can have access to internet. Networking the 10 provinces in Zimbabwe is a must if ZOU is to provide quality service to its clients.**
- **Zimbabwe Open University needs to train all its lecturers to be skilled in designing e-learning materials. The interaction that follows, when student and lecturer interact through internet will go a long way at improving the learning process.**
- **Central government needs to develop the economy with priority being on the development of ICT so that in the long run access to ICT is easy to all students in both the rural and urban setting.**
- **In the short term Zimbabwe Open University is opening up district centres in different parts of the country where students can meet and interact with lecturers at least three times a semester. Whilst this approach has its benefits in the sense that lecturers provide the extra reference materials, the ideal is for the district centres to be developed as internet centres where students can interact with information.**
- **ZOU can work in partnership with private companies like ECONET Wireless (internet provider) to provide internet service to students. ZOU might secure diesel generators that will provide electricity in areas where there is no electricity whilst ECONET Wireless provides internet service. This is now feasible in rural areas since ECONET has set up base stations in most rural areas. The two can work in partnership with ZOU to provide internet services to ZOU students**
- **The majority of the student bodies at ZOU are elderly people who might not have been exposed to the practical use of ICT. A systematic exposure to ICT use is critical in order to equip these students with the basic skills of ICT.**
- **From the research methodology perspective, this study was characterized by a number of limitations. By design, it was an investigation based on a small amount of literature. Therefore, we recommend larger studies based on a more widespread survey of literature, which might also involve quantitative studies. These limitations need to be considered when evaluating the findings in this study.**

For instance, they raise the possibility that some differences in opinion may be more a function of research design and contextual factors than a result of any differences in distance education studies. As with many qualitative studies then, the findings should not be regarded as final but should be used as a basis of debate in order to improve the manner in which our institution provide quality service to clients.

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