



GLOBAL JOURNAL OF ADVANCED RESEARCH
(Scholarly Peer Review Publishing System)

TRANSFORMING DIGITAL LEARNING AND TEACHING IN INSTITUTIONS OF HIGHER LEARNING IN ZIMBABWE: THE CASE OF ZIMBABWE OPEN UNIVERSITY, BULAWAYO REGIONAL CAMPUS

DR SYLOD CHIMHENGA

Zimbabwe Open University,
Zimbabwe.

chimhengas@gmail.com

ABSTRACT

This study investigated the digital-learning problems and solutions that are experienced by learners in transforming Zimbabwe Open University into a digital-learning institution. Fifty learners in the Faculty of Social Sciences and Education doing Masters Degrees in Counseling and Special Education participated in the study. The survey design which was mainly qualitative in nature was used. An online questionnaire was used to collect in-depth information on perceptions and experiences of respondents on transforming Zimbabwe Open University into a digital learning institution. The participants indicated problems with: accessibility of websites and course/learning material; accessibility of digital audio and video; inflexible time limits in accessing computers and lack of needed adaptive technologies. Students also mentioned technical difficulties using digital-learning and connecting to websites, problems downloading and opening files for their assignments, web pages that would not load, video clips taking too long to download, poor use of digital-learning by lecturers and professors. They also indicated their own lack of knowledge working with digital-learning technological tools as a major problem in transforming Zimbabwe Open University into a digital-learning institution. The study concluded that Zimbabwe Open University is in the positive direction in transforming itself into a digital learning institution. Recommendations were made in improving the accessibility of technological tools for digital learning and this included improving the availability of resources to the institution by the government.

KEY WORDS: Digital-learning, technology, online questionnaire, ICT, adaptive technology

1. INTRODUCTION

Digital technologies are everywhere and they're bringing many exciting opportunities for institutions of higher learning in Zimbabwe, impacting what, where and how education is delivered. For this reason, transforming Zimbabwe Open University into a digital learning institution is a significant part of developing and assisting the needs of students. Transforming Zimbabwe Open University into an e-learning institution has provided students with access to the technology available and provides high quality, high capacity, ultrafast internet access for teaching and learning. Digital learning offers today's students and lecturers easier, affordable, and faster access to information, teaching and learning resources.

The application of Information and Communication Technologies (ICTs) have become so attached to contemporary educational delivery worldwide that it has virtually become impossible to deliver or receive formal or informal education without the application of such advanced technologies in the processes. The all-encompassing term -ICT- which covers a wide range of technologies for gathering, storing, retrieving, processing, analyzing and transmitting or presenting information is, in reality, practically indispensable in the delivery of contemporary education. Consequently, governments and its agencies, the corporate sector, educational outfits and individuals increasingly continue to invest huge sums of capital, time and other resources in this powerful engine of growth



GLOBAL JOURNAL OF ADVANCED RESEARCH
(Scholarly Peer Review Publishing System)

to keep up-to-date with regard to the current demands and trends. Currently the prominence of ICT and other external influencing factors; economic, social, cultural are driving the inner life of the higher education sector. In that respect many higher educational institutions are turning to digital learning technologies for improving the quality of learning by means of access to resources, services, long distance collaborations and exchanges. However this transition has been characterized by a mixed sense of optimism, skepticism and a lack of “adequate benchmarks”. Hence this study sought to investigate the possibility of using digital learning and its impact to the students of Zimbabwe Open University, Bulawayo Regional campus.

Digital learning is any type of learning that is facilitated by technology or by instructional practice that makes effective use of technology. Digital learning occurs across all learning areas and domains. It encompasses the application of a wide spectrum of practices including: blended and virtual learning. It is a generic term covering a wide set of ICT technology-based applications and processes, including computer-based learning, web-based learning, virtual classrooms, digital collaboration and networking (Hambrech, 2000). Some researchers refer to it as teaching and learning that is web-enabled (Garrison & Anderson 2003: 2). It may also be defined as the use of new multimedia technologies and Internet for improving the quality of learning by means of access to resources and services, and long distance collaborations and exchanges. In other words it refers to the application of information and communication technologies to core institutional functions such as administration, materials development and distribution, course delivery and tuition, and the provision of learner services such as advising, prior learning assessment and programme planning.

Digital learning and teaching can be considered as a useful tool for enhancing the quality of the educational process. However, the success of any technology application is dependent on how good it would satisfy the needs of its key stockholders, who compose the constituency of an organization and address their concerns. In the context of digital learning and teaching, students are the main stakeholders. Therefore, there is an emergent need to understand the factors that influence the use of digital learning and teaching to satisfy the students and improve their learning. The main aim of the current study is to investigate the transformation of digital learning and teaching in institutions of higher learning in Zimbabwe with special reference to Zimbabwe Open University, Bulawayo Regional Campus.

Digital learning and teaching presents new channels and approaches for the traditional method of teaching and learning. It is one of the innovative approaches for learning which challenge the traditional style of teaching and change the lecturers' work patterns (Singh et al., 2005). Digital learning and teaching is defined as the use of modern ICT and emergent media such as Internet, satellite broadcast, interactive TV and so on to deliver instruction, information and learning content (Selim, 2007). Digital learning and teaching provides more emergent teaching tools that facilitate more effective teaching methods compared to that of the traditional teaching methods (Volery et al., 2002). With digital learning and teaching, instructors' schedules are redefined, as well as their duties and relationships toward students (Young, 2002). Instructors are provided with superior teaching tools and methods, allowing them to test students in real situations (Singh et al., 2005). In addition they are given the opportunity to distribute up-to-date course content in relatively no time and apply knowledge in contemporary situations (Teare, 2000). Moreover, using such innovative learning tools, instructor can eliminate the students' technical frustrations, enhance their social interaction and encourage their involvement in an online community (Singh et al., 2005).

In line with this fact, higher educational establishments in particular have dramatically transformed their mode of operation. Today, the use of chalk and duster in our seminar rooms and lecture theatres are moving into extinction on some campuses. In place of that, we now have interactive whiteboards powered by computers and projectors, learning management systems etc. Electronic learning mediums referred to as digital learning and teaching is increasingly becoming the established practice with a wide array of positive outcomes.

Transformations come with fundamental challenges and opportunities that require a deliberate policy choice and continued efforts and investments. It also requires a shift in culture and an adaptation of the local population to fully embrace knowledge as a driver of social and economic development (Vigilante, 2003). Minimal technical competences have to be sufficient to allow an individual to use ICT with a certain level of independence, although those competences might not be sufficient to consider someone digitally literate. From this point of view, it is necessary to promote an understanding of ICT functions related to their opportunities and benefits particularly to education. This understanding will establish the range and guide the efforts to acquire more and better technical competences. Zimbabwe Open University acknowledges the need for radical improvements and further transformation of itself because the world is already changing faster than it has ever done before and the pace of change will continue to accelerate. With this transformation, are the stakeholders satisfied with their learning needs within Zimbabwe Open University in reference to Bulawayo Regional Campus?



2. STATEMENT OF THE PROBLEM

In today's world it has become very important to have access to information. Digital learning has become the most essential medium for providing information in Zimbabwean learning institutions. The study was designed to find an answer to the following main research question: To what extent has digital learning transformed the learning successes for students at Zimbabwe Open University?

2.1 Purpose of the study

The purpose of this study was to find out how digital learning has transformed the learning successes for students at Zimbabwe Open University in Zimbabwe.

2.2 Research Questions

The study was directed by the following research questions:

1. What digital-learning infrastructure and resources are available in Zimbabwe Open University?
2. How has digital learning assisted the students in accessing information for their assignments and examinations?
3. What are the challenges faced by Zimbabwe Open University as they implement digital-learning in teaching and learning?

3. METHODOLOGY

3.1 Design

The survey design which was mainly qualitative in nature was used. Surveys are normally appropriate for studies that seek to obtain participants' perceptions, opinions and beliefs on a phenomenon (Slavin 2007). Since the present study sought to find out how digital learning has transformed the learning successes for students at Zimbabwe Open University, the survey design was chosen as the most appropriate design for the study.

3.2 Sample

Fifty (25 females, 25 males) third and fourth year students in the Faculty of Education and Faculty of Science from Bulawayo Regional Campus took part in the study. The students were purposefully sampled. In purposeful sampling, the researcher selects the participants because they possess particular characteristics or knowledge being sought. In this study, the students were selected because of their knowledge and experience in digital learning and teaching. Their age ranged from 25 to 40 years while their experience in digital learning is less than three years.

3.3 Instrumentation

The questionnaire was used to collect in-depth information on perceptions and experiences of respondents on the domain areas of digital revolution and transformation, applications of digital technologies, and university libraries and information organizations. The questionnaire also sought to collect information on the challenges faced in the modern digital environment. This was used to obtain data regarding the extent to which the university libraries and information professionals are providing digital innovative technological solutions to support education and learning practices. This instrument was pilot tested to 10 randomly selected students. Items that were not clear were eliminated. The questionnaire was preferred because apart from being cheaper to construct and administer, it is anonymous and appropriate to a literate population like the students in this study. The face validity of the questionnaire was established by giving the questionnaire to experts to comment on its validity. The questionnaire was administered in person to 50 students from Zimbabwe Open University, Bulawayo Regional Campus by the researcher.

3.4 Procedure

The researcher distributed and collected the questionnaire. He explained the purpose of the study to potential participants. Participants were informed that participation was voluntary and that they were free to withdraw from the study at any stage during the study.



3.5 Data Analysis

The data was content analyzed. Content analysis produces a relatively systematic and comprehensive summary of data (Silverman2004). Recurrent instances were systematically identified and grouped together.

4. FINDINGS AND DISCUSSIONS

4.1 Digital-learning infrastructure and resources available in Zimbabwe Open University

The respondents indicated that the digital-learning infrastructure and resources that are available in Zimbabwe Open University, Bulawayo Regional Campus included mobile computer devices preferably portable digital gadgets such as laptops and tablets, handheld computer devices such as smart phones and personal digital assistants. The respondents also indicated that the Bulawayo Regional Campus has a computer laboratory with more than forty computers that are connected to internet. These digital devices provide seamless access to learning, information and knowledge globally. The respondents confirmed that mobile computer devices, internet and web and electronic resources and social media interfaces are widely applied to access education, learning, information and knowledge by the students.

4.2 How digital learning has assisted the students in accessing information for their assignments and examinations

The findings show that digital applications provide low cost options for accessing and dissemination education, research, information and knowledge due to limited financial resources. In addition, digital technologies offer better and cost-effective means to connect with fellow students and staff using internet based distributed systems. The participants indicated that increased applications of digital technologies have helped to expand and provide solutions to their assignments and examinations. Digital technologies have been widely accepted and applied in all aspects of human life in the society and organizations.

The participants pointed out that digital-learning stimulates the learning experience through collaboration by enabling the delivery of resource-rich educational content thus encouraging interaction between teachers and students, and empowering students to manage their learning modes and create meaningful learning environments. According to Jethro et al. (2012) digital-learning provides new and creative ways of motivating and engaging learners to develop their interests based on their educational potential, allows learners to arrange the content and knowledge for their own needs. This is supported by one participant who said:

Digital-learning transcends temporal and geographical barriers by offering learning anytime and anywhere; students can access not only the course materials from MyVista platform, but also a massive amount of information from the internet relevant to their studies at any time and from anywhere.

According to Al-Harbi (2010), digital-learning supports synchronous and asynchronous communications in various formats ranging from text, voice and video, which means connecting people in personal and public ways and so nurturing both independence and social interdependence simultaneously as well as developing students' understanding and enriching their educational experiences. It has transformed the learning and teaching processes, created new opportunities for students and has had an impact on the development of a student's personality. It has improved students' interaction and communication skills and has enabled them to learn, work and prepare for competitive job requirements as well as further university studies and to live successfully in a knowledge-based and global society.

Digital-learning provide opportunities for relations between learners by the use of discussion forums. Through this, digital-learning helps eliminate barriers that have the potential of hindering participation including the fear of talking to other learners. *Digital-learning motivates students to interact with other, as well as exchange and respect different point of views. Digital-learning eases communication and also improves the relationships that sustain learning (Participant 35 wrote).*

4.3 The challenges faced by Zimbabwe Open University students in the implementation of digital-learning in teaching and learning

The majority of the participants indicated that the lecturers' attitudes towards technology also influence students' acceptance of the usefulness of technology and its integration into teaching. They pointed out that if the lecturers' attitudes are not positive toward the



use of educational technology then they cannot easily provide useful insight about the adoption and integration of ICT into teaching and learning processes. One of the participants wrote:

Our lecturers need to move with time. Some of them do not acknowledge the use of ICT in their teaching. They still need to use traditional methods of chalk and duster.

All the participants agreed that the teachers' attitude is one of the most significant issues during digital-learning implementation. One possible explanation of this finding is as follows: *teachers are key players in the learning process. They play a vital role in the learning process in general and in digital-learning in particular. The more enthusiastic lecturers are about digital-learning, the more students will adopt it as a cornerstone in all their educational practices.*

One problem identified by students participating in this study is the lack of knowledge and skills of how to use the computers with which they are equipped in their educational practices.

Some participants explained that changing to new work patterns and learning to use the technology is both time and cost consuming.

The majority of the 50 students who participated in the study believed that one of the challenges of applying digital-learning in educational practices was lack of sufficient resources. In addition there is a critical shortage of people with the right competence in applying digital-learning systems. Some lecturers did not comprehend how digital-learning would be of use to their own teaching. All participants stated that poor internet connection and general access to the internet are the largest problems for taking up digital-learning.

Some participants believed that students lacked technological skills and felt that they could not use the technological tools efficiently. The students pointed out that they had problems with uploading their assignments for marking because of poor internet connection. One of the participants wrote:

Many of the students at Zimbabwe Open University lack technological knowledge. They experienced technical difficulties using digital-learning and connecting to websites, problems of downloading and opening files for their assignments, web pages that would not load, video clips taking too long to download, poor use of digital-learning by lecturers and professors.

5. CONCLUSIONS

The study concluded that resources such as mobile computer devices, internet, electronic resources and social media interfaces are widely applied to access education, learning, information and knowledge by the students in institutions of Higher Learning in Zimbabwe. The study also highlighted that digital technologies offer better and cost-effective means to connect with fellow students and staff using internet based distributed systems. The participants indicated that increased applications of digital technologies have helped to expand and provide solutions to their assignments and examinations.

The study concluded that students in institutions of higher learning experienced difficulties with the accessibility of websites and course/learning material; accessibility of digital audio and video; inflexible time limits in accessing computers and lack of needed adaptive technologies. These students also had technical difficulties using digital-learning, problems in downloading and opening files for their assignments, poor use of digital-learning by lecturers and professors.

6. RECOMMENDATIONS

ICTs provide great opportunity for universities in Zimbabwe to improve their teaching and learning processes. Zimbabwe Open University possesses basic ICT infrastructure such as internet, computers, video, audio, CDs and DVDs, and mobile technology facilities that form the basis for the establishment of digital-learning. It should provide more digital-learning technologies to improve teaching and learning processes. Pedagogical, technical and cost issues should be taken into account for each specific technology when integrating ICTs in teaching and learning practices.



GLOBAL JOURNAL OF ADVANCED RESEARCH
(Scholarly Peer Review Publishing System)

7. REFERENCES

- [1] Al-Harbi, K.R.A-S. (2010). *Investigating Factors Influencing the Adoption of E-learning: Saudi Students Perspective*. PhD thesis, (Thesis Submitted for the Degree of Doctor of Philosophy at the University of Leicester), University of Leicester, School of Education.
- [2] Garrison, D. R. and Anderson, T. (2003). *E-learning in the 21st century: a framework for research and practice*. London: Routledge-Falmer.
- [3] Jethro, O., Grace, A. M., and Thomas, A. K. (2012). E-Learning and Its Effects on Teaching and Learning in a Global Age. *International Journal of Academic Research in Business and Social Sciences*, Vol. 2 (1), January 2012, pp. 203-210
- [4] Selim, H. S. (2007). E-learning critical success factors: an exploratory investigation of student perception. *International Journal of Technology Marketing*, Vol. 2(2), pp.157-182.
- [5] Silverman D (Ed.) (2004). *Qualitative Research: Theory, Methods and Practice*. London: Sage.
- [6] Singh, G., O'Donoghue, J., & Worton, H. (2005). A Study Into The Effects Of eLearning On Higher Education. *Journal of University Teaching and Learning Practice*, 2(1), 13–24.
- [7] Slavin, R.E. (2007). *Educational Research in an Age of Accountability*. Boston: Pearson
- [8] Volery, T., and Lord, D. (2002). Critical success factors in online education. *International Journal of Educational Management*, Vol. 14 (5), pp.216 – 223. Available at: <http://www.emerald-library.com>
- [9] Young, J. R. (2007). Rethinking the Role of the Professor in an Age of High-Tech Tools, *The Chronicle of Higher Education*, 44 (6).