

Increasing Access to and Quality of Open and Distance Learning Programmes through Technology-Driven Pedagogy: the Case of Zimbabwe Open University.

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Abstract: *This study sought to explore how technology-driven pedagogy can be utilised in order to increase access to and quality of Open and Distance Learning (ODL) programmes at Zimbabwe Open University (ZOU). The study adopted the qualitative research methodology and utilised the case study design. The population of the study comprised all Regional Programme Coordinators (RPCs) in the 10 regional centres of ZOU. A sample of 30 (N=30) RPCs from all the Regional Centres was used while Convenience sampling was adopted in coming up with the sample. The researchers were the primary research instruments and they utilised Questerviews and Focus Group Discussions (FGDs) in gathering data. Thematic content analysis (TCA) was used to discuss and analyse research findings. The study found out that ZOU's Regional Centres have functional computer laboratories and that students accessed e-resources including e-books and journals from regional libraries. Face-to-face tutorials and use of print modules are still dominant and in instances where students do not have hard copy modules, RPCs emailed them soft copies for use. The study also revealed that RPCs encourage students to utilise technology for research and communication and ZOU has since introduced Students Chat-group and the use of Turnitin originality check as well as My-Vista which are both platforms for ODL through ICT use. The study concluded that technology-driven pedagogy has the potential to increase access to and improve the quality of ODL programmes. It further concluded that despite the perceived challenges, ZOU is on course to embrace technology-driven pedagogy as evidenced by its current level of ICT utilisation. The study recommended that there is need for a University policy to guide the implementation of technology-driven pedagogy and that ZOU as well as other similar institutions should maximally utilize technology in teaching and learning in order to increase access to and quality of ODL. Future research on technology driven-pedagogy should be university wide instead of focusing on a single area as in the current study.*

Key Terms: *Quality in education, Open and Distance Learning, Technology Driven Pedagogy.*

I. Introduction

Open and Distance Learning (ODL) is a relatively new concept in the educational fraternity. However, it seems to have become the education of the moment and century as it suits different people in different social contexts. Fundamentally, ODL is a mode of study that suits different individuals as it is quite flexible in its implementation, unlike conventional education which restricts learners to the boundaries of the classroom and full-time face-to-face teaching and learning interaction. While ODL is suitable for almost everyone, it is more particularly so for the employed, as it allows them to 'learn while they earn'. It is within the broad ODL framework that the current study sought to explore opportunities sanctioned by technology driven pedagogy in ODL as a way of increasing access to and quality of ODL programmes at Zimbabwe Open University (ZOU).

Background to the Study

Generally, Open and Distance Learning (ODL) has since received widespread acceptance in Zimbabwe and other parts of the world. The origin of ODL may be traced to the 19th Century in England and continental Europe, during which period adult education institutions used postal services for providing education by means of correspondence (Keegan, 2006). As noted by Holmberg (1999), ODL was formally recognized as an international mode of educational delivery in 1982, when the then International Council for Correspondence Education (ICCE) changed its name to the International Council for Distance Education (ICDE). Since then, ODL appears to have taken significant strides and importance as an academic field of study and mode of delivery.

ADEA (2002) cited by the Commonwealth of Learning (2004:1) notes that "with increasing demand for access to educational opportunities at all levels, and often decreasing budgets in real terms for educational provision, there has been growing interest in many parts of the world including Sub-Saharan Africa (SSA), in the possibilities of distance education and open learning (DEOL) as a credible alternative to replicating and/or complementing traditional contact-based schools, colleges and universities". With the general increasing access and opportunity to technological utilization in education the world over, ODL, particularly at tertiary level,

becomes more relevant especially where its pedagogy is backed by technology. It is in this luminosity that an institution like Zimbabwe Open University (ZOU) was founded and established.

ZOU was created by a Zimbabwean Act of Parliament (Chapter 25:20), on 1 March 1999 and started as a Center for Distance Education in 1993 which was transformed into a College of Distance Education, later becoming a fully - fledged university with its own Charter and Vice Chancellor in 1999 (Benza, 2001). As further described by Benza (ibid: 18), "ZOU is a multi-disciplinary inter-faculty institution offering degree and non-degree courses through distance teaching and open learning to youth and adult learners and evolved after the Zimbabwean government had realized that there was need to develop distance education and open learning to cater for a substantial component of the populace, who, intentionally or unintentionally, could not be accommodated in conventional universities". ZOU, therefore, came on board to essentially offer qualifying Zimbabweans the opportunity to study in the comfort of their homes and workplaces through ODL, a development that was necessitated by the fact that many citizens had been disadvantaged and/or marginalized by the Rhodesian colonial education system, hence, could not access tertiary education.

ZOU operates through a National Centre based in the capital metropolitan Harare, 10 Regional Centres dotted across the country's 10 provinces and a Virtual region which caters for clients in different parts of the world particularly Southern Africa. ZOU provides knowledge, competencies and dispositions necessary for the development of competitive human resources using well developed distance teaching and open learning methods (Kurasha, 2010). Kurasha (ibid) further elaborates that lifelong learning for social inclusion in a dynamic and fast changing global village is ZOU's fundamental beacon. It is against this background that the current study sought to investigate how technology can be utilised to facilitate high quality teaching and learning for sustainable development in ODL with special reference to ZOU.

Statement of the Problem

Against the background that ODL through technology driven pedagogy has become a panacea for accessible quality education particularly in higher and tertiary education, the problem is how and to what extent technology can be used to deliver high quality teaching and learning in ODL with special reference to ZOU.

Purpose and Research Questions

This study aimed at exploring how technology driven pedagogy can be utilised in order to increase access to and quality of ODL programmes at ZOU. The following specific research questions guided the study:

- What are the current trends of technology at ZOU?
- What are the benefits of technology driven pedagogy in ODL?
- What are the challenges associated with technology-driven pedagogy in ODL?
- How can the challenges be addressed so as to increase access to and improve quality in ODL at ZOU?

Significance of the Study

The importance of the current study is fundamentally premised on the broad significance of utilizing information and communication technology (ICT) in educational delivery, particularly in ODL. Its findings are meant to benefit the various stakeholders in the ODL sorority; including students, tutors (academic staff), administrative support staff, researchers as well as the general community. The study is of use to institutions and policy makers, as its findings instigate more preference and support for technologically supported ODL delivery. Thus, technology driven pedagogy in ODL ensures that it is considered as a panacea for addressing the long-standing challenges of accessing quality tertiary education by large numbers of dispersed individuals, allowing them to learn while they earn and while separated from the lecturer/tutor and classroom.

II. Review Of Related Literature

Concept 'Quality in Education'

In the field of quality management, one of the most essential adage is 'quality is everybody's business'! Essentially, quality' is related more to the relevance and value of an organisation's mission, purpose, goals and objectives, as well as the achievement of identified outcomes (Liston, 2009). 'Quality in education' according to Hoy et al (2000:10) entails 'an evaluation of the process of educating which enhances the need to achieve and develop the talents of the customers of the process, and at the same time, meets the accountability standards set by the clients who pay for the process or the outputs from the process of educating'. In the same vein, Grisay and Mahlck (2001) are of the view that evaluating the quality of any education system typically involves examining the:

- extent to which the products or the results of the education provided (the knowledge, skills, values and attitudes attained by the learners) meet the standards stipulated in the system's educational objectives,
- extent to which the knowledge, skills, values and attitudes acquired in the learning process are relevant to human and environmental needs,

- extent to which the acquired education is generally utilised by individuals and groups to solve micro and macro problems in life.

The current study considered how technology driven pedagogy may be utilised to increase access to and quality of ODL programmes at ZOU.

Concept ‘Open and Distance Learning’

‘Distance education’ or ‘distance learning’ which is generally known as ‘Open and Distance Learning’(ODL) is a mode of delivering education and instruction, often on an individual basis, to students who are not physically present in a traditional setting such as a classroom or lecture theatre (http://en.wikipedia.org/wiki/Open_and_Distance_Learning). Moore and Kearsley (2003) note that ODL entails planned learning that normally occurs in a different place from teaching and as a result, requires special techniques of course design, instructional techniques, methods of communication by electronic and other technology, as well as special organizational and administrative arrangements.

According to the ZOU 2012 Annual Report “ODL is an educational process where all or most of the teaching is conducted by someone geographically removed from the learner, with all or most of the communication between tutors and learners being conducted through print or electronic media” (ZOU Annual Report, 2012:2). The same further defines ODL as “approaches to learning that focus on freeing learners from constraints of time and place while offering flexible learning opportunities” (ibid, p2). Contemporary ODL, thus, entails a distinct pedagogical philosophy which is gaining universal acceptance as the most flexible mode of distance teaching and open learning. It essentially allows education to be attained at a distance while also allowing employed individuals to ‘learn while they earn’ (i.e. in ODL, individuals are able to be employed or execute self employed errands while at the same time pursuing their education).

Thus, fundamentally, in ODL, the tutor is separated from the learner by distance in the form of both space and time (Cropley and Kahl, 1993). In the same vein, the concept ODL seems to be mostly used to describe the process of providing education where the student is learning at a distance, which often implies being geographically separated from the tutor (Gallagher and McCormick, 1999). In modern times, therefore, ODL entails to any instructional arrangement in which the tutor and the learner are geographically separated to an extent that requires communication through some media such as print or other form of technology (Keegan, 2006).

Distance education has, thus, been blended to be described as open and distance learning (ODL) to imply an education system which provides ‘access to learning when the source of information and the learners are separated by time and distance, or both’ (Sharon and Spring, 2007). ODL courses that require a physical on-site presence for any reason (excluding taking examinations) have been referred to as hybrid or blended courses of study. Massive open online courses (MOOCs), aimed at large-scale interactive participation by stakeholders and open access via the web or other network technologies, are a recent development in ODL (ibid, p121)

The Evolution of Open and Distance Learning (ODL)

As noted by Chimedza (2006:5), “The evolution of distance education has so far seen three generations”. Chimedza (ibid) summarises these generations in the ZOU New Student’s Orientation Handbook as follows:

- The first generation consisted mainly of correspondence learning where the learner learnt through the print mode only, without any contact with the tutor and with little or no meeting with other students. The module and tutorial letters were the only mode of delivery.
- In the second generation stage, besides the module and tutorial letter, other means of tutoring in particular, the face-to-face component was added. The tutor’s voice and the tutor’s support to the printed material became critical. This began to take place through face-to-face situations and through audiocassettes, videocassettes, television and other media. The student was afforded the opportunity to meet other students and share ideas and experiences. This mode encouraged interactive and cooperative learning with other students.
- The third and last generation stage in the evolution of ODL is characterised by e-learning. This involves the use of the Internet, the World Wide Web, E-mail, V-sat and so forth. In this modern mode, students continue to interact with the tutor and with other students but mostly electronically.

Chimedza (2006:6) acknowledges that “ZOU is currently in the second generation of the evolution of mode of delivery in distance education”. This implies that ZOU uses a dual mode of distance education, with the printed module being the key teaching tool, and is complemented by face-to-face tutorials to assist learners to understand the course and clarify areas they do not understand as they study the course alone.

Benefits and Challenges associated with the adoption of Technology-driven Pedagogy in ODL

One area in which Information Communication Technology (ICT) has made enormous impact the world over is in open and distance learning (ODL). Undoubtedly, the demand on the conventional higher education delivery system in many countries in the developing world is high and ever increasing that the conventional system is unable to accommodate the number of candidates seeking admission, hence, the need to advance the prospects of ODL as an alternative system of education (Ibara, 2008). Ibara (ibid), further notes that considering the level of infrastructural decay in the conventional higher education system in most African countries, ODL as an alternative system of education has become imperative for the realization of the primary objectives of education particularly tertiary education. This is particularly so considering that contemporary ODL does not necessarily require classroom settings for its implementation, as students can still effectively study on-line through e-learning, accessing information, e-books and e-journals through Internet as well as communicating with their tutors and peers by e-mail.

Barikor (2003) contends that the modern use of electronic educational technology (also called e-learning) facilitates distance and independent learning by the extensive use of Information and Communications Technology (ICT), which consequently replaces traditional or conventional mode of content delivery. This creates a virtual community of learners sustainable across time and serving large numbers of learners. Instruction can be synchronous and asynchronous online communication in an interactive learning environment or virtual communities, in lieu of a physical classroom. In technology driven ODL pedagogy, the focus is shifted from conventionalism to the education transaction in the form of virtual community of learners sustainable across time and serving larger numbers of learners (Ibid, 2003:78).

Although the expansion of the Internet blurs the boundaries, distance education technologies are divided into two modes of delivery: synchronous learning and asynchronous learning (Moore and Kearsley, 2003:76). The same source notes that in synchronous learning, all participants are 'present' at the same time for a tutorial. In this regard, it somewhat resembles traditional classroom teaching methods despite the participants being located remotely. It requires a timetable to be organized. Web conferencing, videoconferencing, educational television, instructional television are examples of synchronous technology, as are direct-broadcast satellite (DBS), Internet radio, live streaming, telephone, and Web-based VoIP. Online meeting software such as Adobe Connect has helped to facilitate meetings in distance learning courses (ibid, p79).

Moore and Kearsley (2003) further clarify that in asynchronous learning, ODL participants access course materials flexibly on their own schedules. Students are not required to be together at the same time. Mail correspondence, which is the oldest form of distance education, is a typical example of asynchronous delivery technology, as are message board forums, E-mail, video and audio recordings, print materials, voicemail, and fax. The two methods can be combined. Many courses offered by both open universities and an increasing number of campus based institutions use periodic sessions of residential or day teaching to supplement the sessional lessons delivered at a distance. This type of mixed distance and campus based education has recently come to be described as 'blended learning' or less often 'hybrid learning'. Usually, open universities generally use a blend of technological pedagogies and a blend of learning modalities (face-to-face, distance, and hybrid) all under the rubric of 'distance learning' (Sharon and Spring, 2007). Interestingly, access to and quality of ODL can also be increased by using interactive radio instruction (IRI), online virtual worlds, digital games, Webinars, and Webcasts, all of which are referred to as e-Learning (Norman, 2010).

According to Moore and Kearsley (2003), the very rapid spread of radio in the United States and other parts of the world in the 1930s led to proposals to use it for ODL. By 1938, at least 200 city school systems, 25 state boards of education, and many colleges and universities broadcasted educational programmes by radio. One line of thought was to use radio as a master teacher (ibid, p99). The same source notes that experts in given fields broadcasted lessons for pupils within the many schoolrooms of the public school system, asking questions, suggesting readings, making assignments, and conducting tests. This mechanizes education and leaves the local teacher only the tasks of preparing for the broadcast and keeping order in the classroom. A typical setup came in Kentucky in 1948 was when John Wilkinson Taylor, president of the University of Louisville, teamed up with the National Broadcasting Corporation to use radio as a medium for distance education. The University was owned by the city, and local residents would pay the low tuition rates, receive their study materials in the mail, and listen by radio to live classroom discussions that were held on campus. Charles Wedemeyer of the University of Wisconsin-Madison also promoted new methods. From 1964 to 1968, the Carnegie Foundation funded Wedemeyer's Articulated Instructional Media Project (AIM) which brought in a variety of communications technologies aimed at providing learning to an off-campus population (Holmberg, 1989).

The widespread use of Computers and the Internet have made distance learning easier and faster, and today, virtual schools and virtual universities deliver full curricula online (Ibara, 2008). A typical example is the African Virtual University, whose operations are now domiciled in a number of African Universities. Following

the introduction of the Virtual University, the share of students in distance education classes expanded and the percentage enrolled in distance education degree programmes also increased (ibid). As noted by Sazmand et al (2013), ODL therefore, has a long history, but its popularity and use has grown exponentially as more advanced technology has become available. For them, the implementation of technologically compliant ODL mechanisms such as Internet forum, online discussion group and online learning community contributes to an efficacious distance education.

This article acknowledges that there have been several benefits of technology driven pedagogy in ODL include, including the fact that it has incorporated learners into the global-knowledge-village. Thus, there has been a massive technological revolution worldwide in the field of education and elsewhere. Educational technological revolution has particularly been relevant in ODL pedagogy, and the many benefits of technology driven pedagogy in ODL have since been realised and cannot be overemphasised. This has largely been in response to the changing demands and needs in education and the modern world at large. However, technologically driven pedagogy in ODL essentially needs several things, which include the appropriate infrastructure such as physical and software resources such as computers and bandwidth, computer laboratories, human resource training and so on. It is in the light of the many benefits of technology driven pedagogy in ODL that this study was conducted as it focused on exploring ways of increasing access to and quality of ODL programmes at ZOU.

While technology-driven pedagogy is largely characterised by enormous benefits, research has proved that it is not spared from facing some challenges. According to findings by Mafa and Mpofu (2013), the major challenge associated with the adoption of technology-driven pedagogy is lack of financial resources. For them, funds may not be readily available to:

- acquire and set up appropriate infrastructure;
- train lecturers (tutors) and support staff;
- Attract personnel with requisite qualifications to upload learning resources and maintain infrastructure,; and
- To pay service providers.

However, ODL institutions, including ZOU, are not at all dissuaded by the various challenges associated with the use of technology-driven pedagogy for the use of technology-driven pedagogy is apparently the in-thing in modern educational delivery which was also noted to essentially increase access to and quality of ODL programmes.

III. Methodology

The study adopted the qualitative research methodology which is appropriate when a social problem needs to be explored, or because we need a detailed understanding of the problem or issue at stake (Creswell, 2007). The case study design or method was utilised, and focused on Zimbabwe Open University (ZOU) as an ODL institution. Basically, a case study was considered for its important hallmarks, namely:

- it is concerned with a rich and vivid description of events relevant to the case
- it provides a chronological narrative of events relevant to the case
- it provides a blended description of events and their analysis
- it focuses on individual actors or groups of actors, and seeks to understand their perceptions of events
- it highlights specific events that are relevant to the case
- the researcher is integrally involved in the case
- an attempt is made to portray the richness of the case in writing up the report.

(Cohen, Manion and Morrison, 2007).

Some of the major strengths of the case study, for which it was further considered, are that they can establish phenomenal cause and effect and that they observe effects in real contexts, recognizing that context is a powerful determinant of both causes and effects (Nisbet and Watt, 2004).

The study population, which Kuhn (2006) defines as ‘the totality of all subjects that conform to a set of specifications, comprising of the entire group of persons that are of interest to the researcher and to whom the research results can be generalized, comprised all Regional Programme Coordinators (RPCs) in the 10 regional centres of ZOU (excluding ZOU’s virtual region). According to ZOU’s human resource structure, RPCs are the tutors or lecturers for the different Faculties and these are found in all the institution’s regional centres. A sample of 30 (N=30) RPCs from ZOU’s Regional Centres was considered for the study, and of the sample, 20 responded to Questerviews, while 10 took part in Focus Group Discussions (FGDs). The sample was, thus, considered as part of the population which was considered to be representative of the larger population. Convenience sampling was employed for the study and using the technique, the researchers managed to identify data rich sources (Johnson and Christenson, 2014). Thus, participants were chosen on the basis that they were Regional Programme Coordinators stationed at ZOU’s regional centres.

The researchers, who were the main research instruments, mainly used Questerviews to gather research data. While use of Questerviews did not give the researchers the opportunity to probe and clarify issues, the anonymity associated with their use resulted in the generation of honest responses (Frankel and Wallen, 2006; Creswell, 2007). The administration of Questerviews involved the researchers emailing them to Regional Quality Assurance Coordinators (RQACs) found in every regional centre. We then requested the RQACs to print the Questerviews and give to RPCs (2 per regional centre to make a total of 20 participants from the 10 regional centres). RPCs returned the completed Questerviews to us and after partial analysis of the Questerview data, we then conducted two Focus Group Discussions (FGDs) in two Regional Centres for triangulation purposes. Questerviews were considered appropriate for use in the regional centres as they could collect information from dispersed participants in a short period of time, while also protecting their anonymity (Patton, 2000). Before use of the Questerviews, the researchers pre-tested them with two RPCs at one of ZOU's regional centres, which enabled the researchers to consolidate some Questerview items which were found to be unclear to participants.

After collecting the data, Thematic Content analysis (TCA) technique was used. Questerview data analysis involved face-sheet coding of the Questerviews from the different regional centres, segmenting and coding data on each Questerview, enumeration of codes and arranging the coded data into themes. FGDs data analysis involved transcribing, with participants checking, segmenting, coding, enumerating and arranging coded data into themes and sub-themes.

IV. Discussion Of Findings

The study generally found out that ZOU is gradually embracing the use of technology-driven pedagogy. This was essentially noted to be necessitated by the following revelations from the study:

- ZOU's Regional Centres have functional computer laboratories
 - Face-to-face tutorials and use of print modules are still dominant
 - In instances where students do not have hard copy modules, RPCs emailed them soft copies for use
 - Students submit assignments as typed hard copies
 - RPCs encourage students to utilise technology for research and communication
 - ZOU's Regional Centres for Student Management have put in place a Students Chat-group; which is a social network for sharing information through use of mobile phones.
 - Some RPCs have been trained in the use of Turnitin originality check which is an ICT software technique which subjects students' softcopy documents to originality check and therefore determines their extent of originality or plagiarism
 - ZOU has recently introduced My-Vista which is a platform that tutors and students can use to share information through ICT
 - Students access e-resources including e-books and Journals from regional libraries
- Findings from the study also showed that ZOU has since noted some benefits from its utilization of technology driven pedagogy. Some of the major ones are:
- Extensive utilisation of current academic information
 - After initial set-up, it is less costly
 - Expedites the transmission of information
 - All other things being equal, it increases access to and quality of ODL

The study further revealed that though ZOU is progressing well on utilizing technology-driven pedagogy in offering its ODL programmes, this development is besieged by some challenges. These include:

- Inadequate computers at Regional Centres
- Limited Bandwidth for Internet connectivity
- High initial costs to the University
- Limited computer literacy of both tutors and students
- Unreliable Internet network coverage in remote areas
- Risk of increased cases of plagiarism; there is increasing tendency for cutting and pasting documents in assignments.

The study found out that the following may be considered as some of the strategies to enhance the adoption of technology-driven pedagogy:

- Training RPCs in the effective use of technology-driven pedagogy
- The computer course should be more practical oriented and done by students during the first semester of admission
- Students should be encouraged to use their smart cell phones as learning gargets
- Engaging service providers to increase Bandwidth and avail Tablets and Laptops to registered students on favourable terms.

V. Conclusion And Recommendations

Based on the above findings, the study concluded that technology-driven pedagogy has the potential to increase access to and improve the quality of ODL programmes. It further concluded that despite the perceived challenges, ZOU is on course to embrace technology-driven pedagogy. In line with Chimedza (2006), ZOU is, therefore, steadily assuming the third and last generation stage in the evolution of ODL which is largely characterised by e-learning.

The study recommended that there is need for a University policy to guide the implementation of technology-driven pedagogy. In the same view, ZOU and other institutions of kind should maximally utilize technology in teaching and learning in order to increase access to and quality of ODL. Future research on technology driven-driven pedagogy should be university wide instead of focusing on a single area/Unit as in the current study.

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