

HARNESSING OPEN EDUCATIONAL RESOURCES IN TEACHER EDUCATION PROGRAMMES: AN ASSESSMENT OF THE EFFECTIVENESS OF PEDAGOGICAL APPROACHES USED BY ZIMBABWE OPEN UNIVERSITY

Makamure Clemence
Zimbabwe Open University
Zimbabwe

ABSTRACT

Open educational resources are a new paradigm that is hugely impacting and changing the mode of scholarly communication the world over. The paradigm is based on the notion and belief that the web is the largest library on earth, offering a wealth of useful and accessible resources in a variety of disciplines and fields. The web has revolutionised how information is accessed, making knowledge available to millions of people who would normally not have such access due to lack of libraries and the costliness of textbooks and reference materials. Budget cuts in library expenditure in many colleges and universities have deprived students of badly needed educational resources. Rather, open educational resources have modified existing pedagogical models and strategies in higher education. Wheeler (2010) argues that the enormity of accessible learning resources will eventually force academics to reinvent the way teaching- learning strategies are conceived in colleges and universities. Bill Gates (2010) in a speech at a Technomy conference said “Five years from now, on the web for free, you will be able to find the best lecturers in the world... It will be better than any single university... the best lecturer in the world will not be at hallowed institutions, reserved only for the privileged and elite, but on the web for everyone who wants access to them”. It is in light of this background that this paper seeks to assess the effectiveness of harnessing Open Educational Resources in teacher education programmes. The paper is a qualitative analysis of the effectiveness of the pedagogical methods used by the Zimbabwe Open University in teacher education. The study is informed by the contention that under current economic hardships in Zimbabwe, open and distance learning which fosters the use of open educational resources is becoming the best method in teacher education. Interviews through questioners, documentary analysis, focus group discussion and personal observations are to be used to triangulate data collection for this paper.

Keywords: Harnessing, open educational resources, teacher education, pedagogical.

INTRODUCTION

As economic hardships continue to pierce their sting into every sector of life in Africa, the need to learn while earning is rocking the hearts of many. Such a move has created a fertile ground for the expansion of Open Educational Resources in teacher education. This paper seeks to assess the effectiveness of pedagogical methods used by Zimbabwe Open University (ZOU) which is by and large the main university in Zimbabwe which stresses the use of OER in teacher education. The paper will start by giving the background of the study and then move on to the definition of ODL and OER. After this, the paper will look at the teaching methods which are used by Zimbabwe Open University and their effectiveness in teacher education programmes. The paper will end by giving recommendations on the use of ODL and OER in teacher education programmes.

LITERATURE REVIEW

This section reviews some of the literature on open educational resources and open distance learning.

The William and Flora Hewlett Foundation defined OER as:

The teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge

The Organisation for Economic Co-operation and Development (OECD) defined OER as:

Digitised materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning, and research. This includes learning content, software tools to develop, use, and distribute content, and implementation resources such as open license.

The Commonwealth of Learning defined Open Educational Resources (OER) as materials offered freely and openly to use and adapt for teaching, learning, development and research (*WikiEducator.org*). The Wiki Educator project defined OER as educational resources in the form of lesson plans, quizzes, syllabi, instructional modules and simulations that are freely available for use, reuse, adaptation, and sharing (*WikiEducator.org*).

Open Educational Resources have also been defined as digital materials that are designed to allow easy reuse in a wide range of teaching and learning situations. It is vital to note that OER movement originated from developments in open and distance learning (ODL) and in the wider context of a culture of open knowledge, open source, free sharing and peer collaboration, which emerged in the late 20th century.

OERs are teaching and learning materials that are freely available online for everyone to use, whether you are an instructor, student or self-learner (OER Commons, 2007). Others have defined OER as the open provision of educational resources, enabled by information and community technologies for consultation, use and adaptation by a community of users for non-commercial purposes (Tuomi, 2006).

In 2007 OECD defined OER as digitalised materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research (OECD, 2007). OER from this definition is the accumulated assets that enable development of individuals or special capabilities for understanding and can be enjoyed without discrimination. Greenberg (1998: 36) defines contemporary distance learning as “a planned teaching or learning experience that uses a wide spectrum of technologies to reach learners at a distance and is designed to encourage learner interaction and certification of learning”.

Teaster and Blieszner (1999:741) say “the term distance learning has been applied to many instructional methods: however, its primary distinction is that the teacher and the learner are separate in space and possibly time”. For Keegan (1995: 7), distance education and training result from the technological separation of teacher and learner which frees the student from the necessity of traveling to “a fixed place, at a fixed time, to meet a fixed person, in order to be trained”.

According to UNESCO (2002), the terms open and distance learning represent approaches that focus on opening access to education and training provision, freeing learners from the constraints of time and place and offering flexible learning opportunities to individuals and groups of learners.

Peratton, Robinson & Creed (2001) defined distance education as ‘an educational process in which a significant proportion of the teaching is conducted by someone far removed in space and or time from the learners. Open Learning, in turn, is ‘an organised educational activity, based on the use of teaching materials, in which the constraints on study are minimised in terms of access, entry, or time and place, pace, method of study, or any combination of these. Thus, the concept of open and distance learning suggest an educational approach designed to reach learners in their homes, offices, shops etc, providing learning resources for them to qualify without attending formal classes in person, or create opportunities for lifelong learning, no matter where or when they want to study. Hulsmann (1997) identified four crucial features of distance education as follows:

- The separation of the teacher and the learner in time or place, or in both time and place.
- Influence of an educational institution: necessity for institutional accreditation of programmes and courses.
- The use of technical media: involving mixed media courseware such as print, radio and television broadcasts, video and audiocassettes, computer based learning and telecommunications.
- The provision of two-way communication: allowing for interaction between learners and tutors either synchronously or asynchronously, as opposed to the passive receipt of broadcast signals.

The ODL trainers' toolkit published jointly by the Commonwealth of Learning and the Asian Development Bank (2000) identified two additional features of distance education as:

- Possibility of face-to-face meetings for tutorials, learner-learner interaction (self-help study groups), library study, laboratory and practice sessions.
- Use of industrialised processes; that is, in large scale open and distance learning operations, labour is divided and tasks are assigned to various staff working together in course development teams.

UNESCO, (2002, 2005) reiterated that distance education, also called open and 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

RESEARCH METHODOLOGY

The Qualitative Research Design was used as the main research methodology. This design was quite appropriate as the researcher interviewed people and found out what they think and say about the effectiveness of the pedagogical methods used by Zimbabwe Open University.

The population

The sampled population was made up of students from 5 Regional centres of Zimbabwe Open University. Ten students from each region were randomly selected and investigated. This gave a total population, under investigation to be 50 people. The researcher had key

informants, which included the Student's Representatives, Class Representatives and Students' Union Members. The key informant interviews were based on preconceived focus group discussions. The choice of students was based on their knowledge of the pedagogical methods used by Zimbabwe Open University. The sample used was comprised of students from the following Regional Centres of Zimbabwe Open University: Mashonaland East; Harare- Chitungwiza; Mashonaland Central; Mashonaland West and Manicaland.

Research Instruments

Berhr (1973) says a questionnaire is a document that asks the same questions to all individuals in a sample. A questionnaire was an appropriate instrument used in this research to collect data as the information comes from a greater number of sources. Visits to the Regional Centres were mainly on weekend Tutorial days because that is when students could be found at one place. The researcher had to take time scrutinising the questionnaires. Some questionnaires had to be completed without supervision.

Moreover by using questionnaires, the research once again encountered other problems. The questions asked could not easily be understood by some respondents, so the researcher had the task of interpreting the questions to them. This further worsened the problems because a lot of time was consumed attending to very few respondents. Some respondents were not interested in answering the questionnaires; they simply did not have time. A lot of patience had to be invested to overcome that challenge especially the fact that this is purely academic.

Interviews

Mudimi and Muchengetwa (2002) defined interviews as a direct method of obtaining information in a face to face situation and are appropriate mostly with those who are illiterate and semi-illiterate in terms of reading and writing English. Some respondents were reserved, hence were not prepared to disclose the needed information. Moreover, some responses were too skeletal and as a result the researcher took much of the time trying to make sense out of the responses given. However, this method provide information which one could not have obtained had people not been asked.

Data collection

Questionnaires were distributed to 10 respondents in each region. Distribution of questionnaires was mainly done during Tutorial days. All questionnaires distributed were completed and returned to the researcher. Focus group discussions were carried out during tutorial days as well because thus when the researcher could find the key informants at one place.

RESULTS

The pedagogical methods used by the Zimbabwe Open University

Zimbabwe Open University (ZOU) offers open and distance learning (ODL) which in its form differs from the traditional classroom or campus setting in that students complete coursework and testing independently with minimum face-to-face instruction of a lecturer. Rather, Lecturer/Tutor and student are physically separated and students complete their work by correspondence either through online or printed materials. Although students still complete assignments, undergo testing and are supported and guided by the Tutors, the

learning situation is controlled by the student. At the successful completion of ODL courses, students receive the course's prescribed qualification or certification.

Once the prospective student has chosen the programme to undertake, there are options of whether to undertake it as an online or print course. With online courses, students are able to access their course materials, lessons, submit assignments, and chat with Tutors and other students via the ZOU's e-learning platform. For students who select a print course, all course materials, including modules and assignments will be delivered to their doorsteps or collected from the ZOU regional centres countrywide. In addition to print course, students have access to face-to-face tutorials conducted during weekends and also can enjoy all online resources. The pedagogical methods of Zimbabwe Open University include the use of printed modules, textual materials, audio and video tapes, television, assignments, face-to-face, CDS & DVD, SMS (text) messaging, Voice over IP (VoIP), Podcasts and Web Cams. This implies that even though ZOU is largely a distance education institution, face-to-face teaching and learning modes are also used. Face-to-face contact happens by way of tutors and students meeting in regional centres to discuss various topics.

Zimbabwe Open University utilises the printed modules to facilitate learning. Each student gets a tuition package that includes modules on the courses on offer, assignment topics with due dates, tutorial letters and examination timetable. For students who live close to regional centres, the printed learning material is complemented by access to internet.

Zimbabwe Open University considers the modules as one of its strategies to be used by students to facilitate their learning. The modules are detailed and provide adequate information. These modules are produced using Open Educational Resources, text books and other sources of information. They are reviewed and updated after every 5 years. More to this, there is constant production of updated pamphlets which are given to students time and again to present new findings in the different subject areas so that the content that is studied by students is of a current nature. The modules are also produced in such a way that they provide an outline of the course under study.

Table 1: The support of modules as a pedagogical method

Opinion	Number of respondents	Percentage
Yes	44	88
No	6	12
Do not know	0	0
Total	50	100

Table 1 above shows the number of students who supported the view that the use of modules is a better pedagogical method. 88% of the students interviewed agreed that the modules from ZOU are very effective. 12% were against the idea of modules. These might be students who are accustomed to the conventional way of learning and are finding it difficult to adapt to the ODL way of learning.

In order to complement the written module, ZOU has integrated face to face learning programmes that are done once a month at the regional centres. A student has access to two hour sessions of tutorials per course three times a semester. During these tutorials, students are expected to interact, discuss and debate issues/questions they had identified during their studies.

So, the institution relies heavily on print media. Radio is also used. During such broadcasts, topics which students find to be difficult are discussed. Students may also telephone in to ask questions during the broadcast. At times, tutors also give lectures. Students are given timetables indicating days and times for discussions or lectures on radio.

To make life easier for students, the university operates in a decentralised manner. Students register in regional centres in the ten provinces (Harare, Bulawayo, Manicaland, Mashonaland Central, Mashonaland West, Matabeleland North, Matabeleland South, Midlands and Masvingo). Students pay their fees and receive learning material at the regional centres, which means that they do not have to travel to the main campus. Tutors who are trained to handle distance education students are always available to organise tutorial sessions and to offer students support where needed.

Students' assessment takes into consideration a student's profile, portfolio, and what is described as a process portfolio. Students are required to write semester assignments plus final examinations. University policy states that examination results are to count for 80% of a students' final mark, while assignments constitute 20% of the final mark.

The University has established a committee that oversees and evaluates programmes to ensure quality at the design stage. The committee oversees the programme at design stage in terms of modules written and how they are edited. External experts and Chairpersons of the departments are also used to evaluate modules, examination items and tutors' performance. Zimbabwe Open University also uses group work method of learning, whereby students are given tasks to tackle in groups. Students can choose group leaders and secretaries, work on the tasks, record proceedings and report back to the whole class. During group discussions, the tutor could be moving around from group to group, ensuring full participation of members, and clarifying any concepts. One tutor in an interview remarked: "... if some students are bright and get the point easily, then they can explain the point to their group members while the tutor is helping others". This method is effective in that when in smaller groups; shy members of the class may feel confident to contribute. Depending with the nature of the tasks, even those learners considered as academically challenged, using their backgrounds can contribute positively to the accomplishment of the tasks, as stated by one tutor: "... if we are talking about religion, if a student has been exposed to religion, the student could use that experience to enrich others".

Table 2: The support of group work as a pedagogical method

Opinion	Number of respondents	Percentage
Yes	48	96
No	0	0
Do not know	2	4
Total	50	100

Table 2 shows that 96% of the students benefit through group work method which is used by ZOU as one of its pedagogical method. Students highlighted that these group works give them chance to discuss freely and then the tutor would moderate their findings at the end. Moreso, group works give each student time to talk and air his or her view. However, 4% of the interviewed students indicated that group works do not help much to students. This could be responses from students who always think that the teacher is always right and students do not know anything.

Peer tutoring is the other method used by ZOU. The method benefits both the tutor and the tutee. The tutor benefits in that as he/she explains the concepts to the tutee, he/she clarifies her on reasoning and transfers the information to the long-term memory. The tutee benefits in that, the tutor is likely to explain the concepts using the tutee's language level. The environment will not be threatening, therefore the tutee can ask for clarification, without the fear of being laughed at or ridiculed by the whole class.

Table 3: The support of peer tutoring as a pedagogical method

Opinion	Number of respondents	Percentage
Yes	50	100
No	0	0
Do not know	0	0
Total	50	100

The table above shows that peer tutoring was supported by all the 50 students. This might be because of their conventional backgrounds. Moreso, peer tutoring helps students in that the Tutor will be explaining gray areas and thus aiding the tutee's understanding.

DISCUSSION

The effectiveness of ZOU's pedagogical methods

From the focus group discussion with students it was discovered that the methods used by ZOU are very effective in so far as they cut costs to travel to conventional universities which are situated in urban centres. The group concurred that the cost of travel is prohibitive, the students in conventional universities incur huge expenses of transport and accommodation and subsistence. They reiterated that the Regional centres are a bit closer to either their homes or work places and this strategy of open and distance learning goes a long way at cutting the costs of face to face at conventional universities. They also argued that with the government policies of rural electrification and the provision of computers, the provincial centres are now equipped with internet facilities and this ensure that they interact with their tutors and fellow students as well as helping them to access open educational information.

Female student respondents in a focus group discussion argued that the pedagogical methods used by ZOU are very effective in developing two way communications in a learning group. For them, the ODL model of learning is conducive to them because as women they have multiple roles especially as mothers at home. So, ODL gives them room to learn from their homes and work places. This ensures them to have ample time with their children and husbands while pursuing their academic ambitions at the same time. These students reiterated that the use of the module as the teacher and use of the internet goes a long way in solving the challenge they used to face as mothers. They could access material on the internet in order to augment the written modules other than spending money on text books. They can even contact their tutors and other students for any help if the need arises while at their homes with their husbands and children doing their work at the same time. ZOU regional centres have computers that are connected to internet and these make access to open educational resources much easier. However, where the students lack computer skills it becomes very difficult for them to access e-learning materials that benefit them.

What female students said is in line with what Brunner (1991) ushered. For him, the advent of ODL, has widened the opportunities for women and has helped to make education and training more accessible to them as they can now study within their homes. It allows them to study at an individual pace and seek and acquire skills for individual development while, at

the same time, fulfilling family responsibilities. We have to recognise that we are living in an age of unprecedented societal change. Technological, cultural, and social upheavals have impacted upon us with regularity, radically changing the way we live, work, and learn (Wheeler, 2000; Edwards, 1997).

Additionally, the pedagogical methods used by ZOU has led to the continued skills upgrading and retraining, and technological advances have made it possible to teach more and more subjects at a distance. The new technologies have served to push knowledge acquisition into the domain of the individual. Concomitant with individualisation comes the growing autonomy of learners. Technology, and particularly its application in flexible ODL situations, can be considered vital for increasing and widening access to learning and autonomy for the learner (Laurillard, 1993). The flexibility of open, distance, and e-learning methodologies are the key factor in their emergence as the primary mode for lifelong learning.

Basically, to the learner, as was seen from focus group discussions, the pedagogical methods used by ZOU means more freedom of access and thereby a wider range of opportunities for learning and qualification. It is often a cheaper means of attending school for the students since some people may not be able to leave their places of work to go to school full time. For employers, ZOU's delivery methods offer the possibility of organising in-service training for their staff without necessarily releasing them for long periods of productive time. With sufficient number of employees being trained, ZOU delivery methods are often the most cost-effective means. For the government and educational policy makers, the system is a panacea to the perennial problem of provision of equitable and accessible education at an affordable and cost effective way.

One of the tutors reiterated that the flexibility of the pedagogical methods used by ZOU means that the student is able to set own schedule, study at own pace and study wherever it suits. ZOU's pedagogical methods are perfect for those looking to fit in learning with work, family and social commitments. And, with none of the overheads of the campus or the classroom, distance education is affordably priced without the sacrifice of a quality educational experience. Students won't be alone, as there is an extensive support network available to ODL education students. In short, distance education mode which is used by ZOU is simple, affordable and flexible.

How ZOU's mode of delivery has revolutionised teaching

Distance education has changed teaching and the role of the teacher from a disseminator of information to a facilitator of learning. Thus there is a need for professional development to equip and prepare the distance teacher for teaching in the Open and Distance Learning (ODL) environment. There is no doubt that the role of the teacher has evolved since the emergence of ODL. In ODL the teacher is no longer the "dispenser of information", especially in the wake of increased access to resources optimised by the internet. This has certainly transformed the role of the teacher. Sellers (2001:28-32) noted that the conventional classroom teacher served as the initiator of all classroom activities, and as such, the educator was responsible for students' learning opportunities. ODL is ultimately student centered and student-driven. The ODL environment encourages student-centered learning in which intellectual acquisition replaces the didactic force of the teacher as the main impetus of learning.

The most critical issue in this educational revolution is the role of the teacher. The distance instructor loses a certain autonomy common in the traditional classroom. In distance education, the teacher becomes a member of a team, thus the teacher no longer has total control of the learning environment. In conventional education teachers have managed classes by virtue of their control on information. Despite the availability of information on the internet and other published resources because of their youthful age and the nature of conventional study involving face to face daily lectures and limited prior learning experience, the teacher still retains much of that information control as students remain largely dependent on the teacher for information. In distance education the student has wide access to easy instructional materials such as modules, CDs, pamphlets; radio tapes DVDs and other OER materials which they access as soon as they commence their studies. In addition the prior learning experiences of the mature student ensure that the student has a lot of sources to draw information from apart from the teacher. The distant student is better able to afford the e-resources compared to conventional students since most students work, limiting their dependence on the teacher for knowledge. Muirhead (2001:15) suggests that distance education demands changing the traditional role of teachers from information transmitters to guides who arrange meaningful learner-centered experiences. The question emerges as to whether an inert learning package is sufficient as a teaching tool, despite how well written it maybe, can it be a substitute for real sustained communication with the teacher as both content and learning expert?. The role of the teacher is largely simulated by way of written instructions and commentary in ODL as opposed to the face to face interaction. It is also interesting to note that there is a qualitative difference between written communication (in the form of instructional material) and verbal discourse when guiding students. These are the aspects that distance education brings into teaching, the teacher should be mindful of these in order for the teacher to take such issues into account especially if a transition is being made from conventional teaching to distance teaching.

ODL as is used by ZOU relies on new technologies, and these are effectively integrated into the teaching and learning process through a constructivist model. The constructivist instruction requires learners to use their knowledge to solve problems that are meaningful and realistically complex drawing on their past experiences. The problems provide the context for the students to apply their knowledge and to take ownership of their learning. (Tam, 2000:50-54) The teacher's role becomes one of a facilitator in a constructivist model. Instead of telling students the answer, the teacher asks questions to help them discover the answer themselves. In this type of teaching, teachers need to give students time to explore the material and construct meaning from the experience. It is such teaching approaches which separate distance teaching from conventional teaching. The assumptions that the roles of the teacher as well as those of the students change in distance education is largely accepted. (Sellers, 2001:31-33) argued and correctly so, that, integrating student experiences with technology results in the role of the teacher changing. The teacher no longer has to be in charge, but gives some of the control over to the students and the technology. The task for the distance teacher is to organise the learning environment in ways that allow students to use their own knowledge to construct meaning of a particular problem. A learning environment is created in which students have a more active role in the learning process.

Problems faced by ZOU in it pedagogical methods

Despite the promises and obvious advantages of the pedagogical methods used by ZOU in its open and distance learning, there are problems that need to be resolved. These problems include the quality of instruction, hidden costs, misuse of technology, and the attitudes of

instructors, students, and administrators. Each one of these has an effect on the overall quality of the pedagogical methods used by ZOU. In many ways, each of these issues relates to the others. We will examine each of these issues separately.

Quality of Instruction

This is given through distance learning programs and depends on the attitude of the administration and the instructor. Many times it seems that the administration believes the technology itself will improve the quality of the class. Palloff and Pratt (2000:4) remind us that “technology does not teach students; effective teachers do”. They make the point that the issue is not technology itself, but how it is used in the design and delivery of courses. Too often instructors do not design their lessons to take advantage of the technology presented. This affects the quality of the instruction. The effectiveness of pedagogical methods used in open and distance learning is based on preparation, the instructor understands of the needs of the students, and an understanding of the target population (Omorieg, 1997). Sherritt (1996:2) found in her survey of higher education administrators that many of the decision makers view distance programs as second rate, a “necessary but deficient form of education”. This attitude is not conducive to an effective learning environment for the students. If the administration and instructors are lacking in true commitment, it is bound to have a negative influence on the entire distance learning experience and the pedagogical methods used.

Table 4: Attitude of the instructor as impeding ZOU’s pedagogical methods

Opinion	Number of respondents	Percentage
Yes	43	86
No	4	8
Do not know	3	6
Total	50	100

Table 4 above shows that the majority of students believed that the attitude of the instructor or tutor impedes the pedagogical methods that are used by ZOU. This view was supported by 86% of the respondents. 8% of the respondents were sure that attitude has nothing to do with the hindering the pedagogical methods of ZOU. 6% were not sure of the effects of attitude of the tutor towards the pedagogical methods used by ZOU.

Cost Effectiveness

The second issue is the true cost and the cost effectiveness of distance learning programs. Are they actually cost efficient? A study by Phelps et al. (1991:303) found that “the potential cost-effectiveness of using online technologies in distance education is still uncertain”. The implication here is that the concepts of costs and effectiveness are not as simple as they first appear. Atkinson (1983, cited in Ng, 2000:306) notes, “it is possible for a program to be efficient but not cost effective if the outputs which are actually produced do not contribute to the program objectives: that is it may be efficient at doing the wrong things”. Ng (2000) also noted that the cost of online courses is affected by how they are implemented: as an enhancement or as the primary teaching medium. If it is implemented as a primary teaching medium, it is considerably more expensive. The teaching purpose of the different approaches needs to be taken into account. If this is not factored in by administration, there may be costs that are not apparent at first glance. More to this, starting a compressed video distance-learning program is not cheap. The startup costs, maintenance costs, and personnel costs are

expensive. The table below shows the respondents' opinion on whether the pedagogical methods of ZOU are cost effective.

Table 5: Cost effectiveness as impeding ZOU's pedagogical methods

Opinion	Number of respondents	Percentage
Yes	30	60
No	9	18
Do not know	11	22
Total	50	100

Table 5 shows that 60% of the respondents believed that cost effectiveness hinders the pedagogical methods that are used by ZOU in its teacher education. At the same time 18% of the respondents were against this opinion. For these students, ZOU benefits from the fees they pay and should always thrive to make sure that students benefit from their fees through provision of better learning methods to further lessen students' burden in obtaining information through open and distance learning. Interestingly, 22% of the respondents were not aware of what it means to be cost effective and thus they gave an intermediate answer.

Misuse of Technology

Besides the cost of the technology, there is the possibility of not utilising all its potential. Some of these problems arise from a lack of training, some from the instructor's attitudes about using the technology, and still others by hardware problems. It seems to be self evident that instructor need to be trained to use distance learning technology. The instructors must be trained "not only to use technology, but also to shift the way in which they organise and deliver material" (Palloff & Pratt, 2000, pg. 3). The respondents admitted that some of the material uploaded by ZOU instructors is not properly organised and there are signs of misuse of technology. The table below shows the respondents' opinions in this regard.

Table 6: Misuse of technology as impeding ZOU's pedagogical methods

Opinion	Number of respondents	Percentage
Yes	45	90
No	5	10
Do not know	0	0
Total	50	100

Table 1.3 above shows that 90% of the students admitted that misuse of the technology impedes the pedagogical methods of ZOU. 10% did not agree that misuse of technology impedes ZOU'S pedagogical methods of ZOU.

RECOMMENDATIONS

From the findings in this study, ZOU is implementing a combination of face to face and ODL in its teacher education programmes. The following are recommendations that if implemented could go a long way at ameliorating the situation at ZOU. ZOU needs to invest more in ICT so that students can access their tutorials through internet. The face to face contact through internet and e-learning could go a long way to solve the problems of travelling to regional centres for face to face tutorials. Module writers should revise and review modules to include current global trends across the board (for all the modules) using OER authentic materials peer reviewed by experts ZOU needs to establish centralised classrooms and internet facilities so that students will not need to travel to Regional Centres but contact lessons at the

established centres close to where students work. The government of Zimbabwe should also play a role in the production of OER by The Zimbabwe Open University. In this respect, the Governments should fund research on the comparative effectiveness of digital educational materials, including OER, and conventional materials.

CONCLUSIONS

It is true that there have been changes in higher education that have come about because of the availability of the Internet and the development of ICT in Zimbabwe. These changes, particularly regarding the teaching and learning mission, are pervasive than in conventional universities. This paper has assessed the effectiveness of pedagogical methods used by Zimbabwe Open University. The paper managed to bring to light the pedagogical methods used by ZOU and their effectiveness. The paper has also revealed that with the zeal to navigate the turbulent waters of today's dynamic and unpredictable economies formal education, training and learning providers are facing an increasing demand to find new ways to equip teachers, students and workers with the competencies and skills they need in a society at crossroads. Such competencies are found through the use of ODL mode of teaching which is fostered by ZOU in different pedagogical methods of teaching.

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