# PERCEPTIONS OF OPEN AND DISTANCE LEARNERS TOWARDS MODULES ON CD: THE ZIMBABWE OPEN UNIVERSITY EXPERIENCE

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## ABSTRACT

The use of Information Communication Technologies (ICTs) has taken centre stage in the provision of learning and teaching materials in Open and Distance Learning (ODL) institutions. ODL institutions have recognized the value and economics of ICTs in improving and revamping the learning experiences of both learners and lecturers. In keeping up with these trends the Zimbabwe Open University (ZOU) introduced modules on compact discs (CD) format in 2009 to its learners in almost all of the faculties. There are challenges and opportunities this development offers, which need to be recognized and taken advantage of in an African environment. This study, therefore, is a response to that move as it seeks to find out learners perceptions towards the modules in the CD formats so as to improve the development of learning materials in an African context. Using a qualitative paradigm a descriptive survey design was employed to seek the perceptions of learners in the departments of Special Education, Psychology and Counselling on using modules on CDs. An open-ended questionnaire was used to gather data from all the participants. Interviews were held with key personnel within the ZOU to verify the data. The study recommended the orientation of students in the new technology and the use of a multimedia approach.

**Keywords:** Information Communication Technologies, Open and Distance Learning, Modules, Compact Discs, Learners.

## INTRODUCTION

The development of learning and teaching materials is central to the success of Open and Distance Learning Institutions (ODL) wherever they are located.  This area has been a subject of many researches and continues to attract more and more attention as the rate of information dissemination moves at breakneck speed in the super highway called the internet. In this scenario ODL institutions cannot be found lagging behind.  The use of Information Communication Technologies (ICTs) has taken centre stage in the provision of learning and teaching materials in ODL institutions (McMahan 1998, Vengesayi, 2009).  ODL institutions have recognised the value and economics of ICTs in improving and revamping the learning experiences of both learners and lecturers (Chikasha, Tarugarira, Van Pelegen 2006, McMahan 1998).  In keeping up with these trends the Zimbabwe Open University (ZOU) introduced modules on compact discs (CDs) format in 2009 to its learners in its faculties. The Zimbabwe Open University (ZOU) has always taken pride in the quality of its modules which have been the main teaching tool in its degree programmes.

The module is the lecturer to the student and it is written in a manner whereby the two appear to be in a face to face conversation.  According to Vengesayi (2009) the process in which these modules are written is a rigorous and thorough one which follows all the attributes of quality control.  These modules are in high demand to both the ZOU students and other institutions. The idea of using ICTs in the production of modules have been with ZOU for a long time.  In a foreword to the ZOU modules (Mataruse and Mwatengehama, 2001; Mberi and Kaputa, 2010), the Vice Chancellor of the ZOU writes that the ZOU will soon

supplement the print media with the electronic media. This will enable learners to access teaching and learning materials on the internet establishing virtual classrooms. This shows that it has always been the intention of ZOU to move towards e-learning as far back as 2001. The institution is spread out in the ten regions of Zimbabwe with most learners scattered far and wide in remote rural areas were accessibility is a major challenge; most of them are alone with no one to hold discussions with, therefore their motivation needs to be kept up by self-instructional materials that are produced according to local and international academic standards. The development of materials should take into consideration learners' characteristics and needs. In an African context described above our student have a number of characteristics which our materials producer must take into consideration. First their skills in the media. For the printed modules the students' reading skills suffice. But in this new innovation of e-learning the student needs to acquire new skills in addition to reading toaccess print. Another issue is the availability of the equipment or hardware to run the CDs on. How prevalent are these to the student in both the urban and rural set up?

The ZOU has always been aware of the need for ICT in the development of materials for students and the numerous scales of economies it would benefit from by introducing e-learning. Two crucial factors make this move forward irreversible. First is the advent of ICTs which has permeated into all spheres of life. The acquisition of ICT skills is now akin to the acquiring of reading and writing skills. In the past anyone who could not read, numerate and write was considered illiterate and could not move on academically. Currently if one is not computer literate then they may as well consider themselves academically illiterate. All spheres of life are it social, business or academic are using computers for information dissertation. McMahan (1998) and Haverila and Barkhi, (2009) show that more ODL institution are now mainly on line. In such a situation the ZOU has no option but to embrace the technology. Kabanda (2009) writes that there are three phases to the development of a digital learning platform in ZOU. Phase 1 comprises of the production of static non-interactive learning materials in the form of modules for all degree programmers' from 1999 to 2006. Phase 2 is the conversion of the modules into e-learning format with interactive technologies and pedagogies and this covers the period from 2007 to 2009. This study was carried out at the stage at which modules were being changed into CD format.

The second factor is the cost effectiveness of the media. The traditional production of materials is very expensive especially in most African environments. Despite that the need to use more economic technologies renders the printed module more of an option rather than a necessity. In ZOU the production of printed modules uses a course team approach to ensure that teaching and learning materials are produced to the highest intellectual standards creating an enabling intellectual environment for the student (Vengasayi, 2009). The printing component tends to be the most expensive and the use of CDs would significantly cut costs. There are challenges and opportunities these developments offer, which need to be recognised and taken advantage of in an African environment. This study therefore was a response to that move as it seek to find out learners perceptions towards the modules in the CD formats so as to improve the development of learning materials in an African context.

This study was therefore guided by the following research questions;
1. What are the learner's perceptions towards the modules on CDs they received?
2. What benefits and challenges have they met in using this innovation?
3. How can this innovation be improved as a way forward?

## LITERATURE REVIEW
**Learner Characteristics, Perceptions**

Student perceptions are a very important way of gauging how a programme may be progressing. There are very few studies on student's perceptions, done in Africa (Kionywaki, 2011). This is because most of the time the ODL institutions are grappling with developing materials for large numbers of learners with limited resources. Most studies have clearly focused on students' perceptions on the whole e-learning as a mode of delivery (Chikasha, et al 2006,) and not its components. In Haverila and Barkhi's, extensive study on students' perceptions of e-learning (2009) they found out that the more experienced learners felt e-learning to be less effective as compared to their less experienced compatriots. An observation of the practise of material supply clearly shows that institutions attempt to supply to the student what they think they will find suitable for their needs. The nature of the ODL learners is that they are adults and thus tend to indicate their like or dislike of the mode of teaching and learning by either joining the university in droves or leaving it in droves.

Ruhonde in a paper titled 'Effectively interacting with learner characteristics in the context of Zimbabwe Open University modules' points out that the quality of learning which occurs between the learner on one side and the lecturer on the other, embedded in the module, depends on the ability of the writer to effectively interact with the characteristics of the learners to whom the material is intended. She proceeds to point out that module writers need to be conversant with the major characteristics of students who join the ODL institution. Such characteristics are their qualifications, educational training, geographical location, student learning styles, learner access to libraries and information technology facilities. We need to add computer literacy skills also. The last characteristic, which is the focus of this study, is crucial if learners are to access the new material. In response to the above the module producer must be aware of the skills needed to search for information on the computer. Availability of the ICTs enables the module writer to incorporate activities which the learner may pursue on the internet through their own initiatives.

**Benefits and Challenges of Using ICTs by Learners**

Despite the fact that many educators are using a revolution using technology in their classrooms and schools (Isman 2005) few researches have been carried out in Africa to find out how the students benefit from it and the challenges they face. What are available are studies done on their views of the ODL mode of delivery (Mudavanhu Mvere, Majoni, Mupondi and Kaputa). Such studies tended to dwell on purely administrative issues rather than the actual interaction with the module on CDs. Vengesayi (2009) cites the following as benefits accruing to the learner;

1. They acquire a lifelong skill of being computer literate using the computer which is a useful tool.
2. It introduces them to the domain of the internet which is a major source of information.
3. The student benefits by using a variety of learning stimuli such as the CD and the hard copy.
4. With the use of animation the learner is able to tackle and understand more difficulty concepts.
5. In the long run it is a cost effective way of learning delivery since delivery of information can be done through many gadgets. Learners can reach difficult places using virtual reality whilst they are at their homes e.g. practical observation of experiments.

There is need to find out if learners perceive the above benefits in the same way as the material developers?

The major challenges are learner's capacity and accessibility to the internet. Haverila and Barkhi, (2009) point out that the ability to access material does not mean that the learners will find it easier to internalise the material. However, in an area where the development and delivery of hard copies is difficult the electronic and the print modes should be combined to improve service.

**The Way Forward**

Mudavanhu, et al (2004) in their study of different views of distance education and how these effect distance teaching and open learning within the Zimbabwe Open University recommended that open teaching should be through the increased use of radio, television and e-learning as modes of delivery. They also pointed to the need for vigorous orientation of new students focussing on ZOU operations and the role of distance learners. Kabonoki (1999) points out that media material should be made to address needs expressed by learners. This assertion indicates the need to hear the learners' perceptions so that adjustments and improvements can be made to the materials. Kabanda (2009) points out that module production should be produced in a cooperative process. Kabonoki and (1999) Kabanda (2009) agree that a collaboration is created between educators, the technical people who design the material and the authors in an open authoring environment to produce quality materials.

Maliki (2011) recommended serious investment on infrastructure and the training of ODL practitioners in the use of electronic technology. He also encourages the combination of the electronic technology and the print media to improve service delivery. Clearly a number of gaps can be noticed in the literature pertaining to students' perception of modules on CDs and the whole area of ICT. First we need to establish what the Zimbabwean perceptions are. Secondly what are the benefits and challenges they have faced? And lastly what do learners perceive to be the way forward. Let us look at the methodology used to collect this information.

**METHODOLOGY**
**Research Design**

The research design was a qualitative descriptive survey in which the researchers sought the perceptions of learners in the departments of Special Education, Psychology and Counselling. An open-ended questionnaire was used to gather data from all the learner participants. Triangulation was also employed in this study. This was done through interviews with key personnel in the Pro Vice Chancellor's office, the director and manager in the Materials Development Unit (MDU), the manager ICT department, Dean of the faculty of Social Sciences, Chairpersons of the three departments, one Regional Director, one Regional Student Support and Services Advisor and one Regional Programme Coordinator. Hewson (2006) define it as the use of two or more methods of data collection in a study of some human behaviour. Mixed methods, the multiple methods or the multimethod approach as it is also called enables the researcher to explain fully the richness and complexity of human behaviour by studying it from many angles (McMillan and Schumacher (1989) Gall, Borg, Gall (1996). Sharma (1999) cites that such a mixture which includes interviews is ideal for validating data.

**Sampling Procedure**

The sample of students consisted of 21learners, taken from the three departments namely, Special Education, Counselling and Psychology.  All the learners came from the biggest region of the Zimbabwe Open University which can have as much as 5000 learners in one semester.  The open ended instrument consisted of 13 items. Learners completed the questionnaires at the regional office. Purposive sampling was used to identify the key personnel (Oliver 2006). Interviews were held with the key personnel after the initial analysis of the learners' data. Three items, linked to each research question were identified as pertinent for the triangulation, these being; learners' perceptions on orientation for the CDs; benefits and challenges of the CDs; and the way forward.

**Data Analysis**

Data analysis was done concurrently with the data collection process.  The data from both the learners was checked and coded to come up with patterns and ultimately the themes. Structural analysis was made of the interviews to check for patterns among the key personnel in the three questions.  The second stage consisted of arranging the themes into a meaningful order under the research questions.  These learners themes where then checked against the key personnel's responses for any similarities and differences.

**RESULTS**
**Descriptive Details of the Participants**

Most of the learners were evenly distributed by gender.  Of interest was that most learners in the Psychology group ranged from the age 20 to 40.  More mature learners were in the Special Education group.  More learners in the psychology group (8) had their highest qualification as a diploma.  The rest of the learners had first degrees.  Despite the above they were no major differences between their perceptions towards modules on CDs so we decided to analyse their response as one group. The key personnel were varied but out of the ten interviewed three were women. Results presentation was done following the order of the research questions.  We present the learners perceptions first and then later on check them against the key personnel's responses.  Finally we discuss the implications of the findings.

**Learners Perceptions**
**Research Question 1: what are the learners' perceptions towards the modules on CDs they received?**

This was a general perception towards the modules on CDs received. The learners' perceptions can be divided into three; what they thought on their effects to their learning; their accessibility to them; and lastly the skills they have to use them.

**Effects on Learning**

Learners agreed that the modules on CDs do have an effect on their learning.  What came out was that learners acknowledge its use but had misgiving on other issues.  Table 1 is a summary of their perceptions on the CDs.

| Table 1 Effects on learning |
|---|
| In a way it helps but one easily forgets as compared to modules. |
| So far no effects because I have not used it. |
| Negatively affected my learning |
| It's a new thing they came late in the middle end of the semester. |
| To a large extent because not all of us have laptops or computers at home |
| Not easily accessing information from CD |
| Negatively affected as it requires use of a computer |
| Quite handy but had problems in finding software to use |

Learners were not against the use of computers but pointed out that because they did not have the means to read their modules on CDs this had an effect on their learning. This would definitely make studying, writing assignments and examinations impossible.

**Accessibility to Modules on CDs**

Only five (5) learners had computers at home. The rest either had them at work, in the community or had nothing at all. Table 2 below summarises the Learners perceptions of the accessibility of the module on CD. The learners, who had computers or had access to them tended to be more favourable to the CDs.

| Table 2: Learners accessibility to modules |
|---|
| I have no access to a computer to view the CD. |
| I have no machine to use |
| For many students CDs are just white elephants in their cupboards |
| University should take note that not all people have computers at their work place or home. |
| They could be an advantage to one who has access to a computer |
| Not all students have access to computers |

**Learners ICT Skills Needed To Use the CDs**

Most learners had problems in using the CDs due to lack of computer skills.  Table 3 summarises their reactions to the CDs.

| Table 3: Learners  ICT skills needed to use the CDs |
|---|
| Computer literacy |
| Advanced ICT skills |
| Computer skills |
| The general skill at how to use a computer is needed by everyone. |
| Basic computer skills to open and be able to read the CD. |

Some students did not even have the basic skills to install the acrobat reader needed to be able to read the CD once it was in the computer. Others despite having done the initial

computer courses offered by the university because of lack of experience could not open the CDs.

**Research Questions 2: What benefits and challenges did they meet in using the CDs?**

Three groups of students could be identified from the analysis. They were those who viewed this as a very beneficial move. Another saw the benefits but felt that other factors should be addressed before the introduction of the CDs. The last group saw no merit in this innovation but only challenges. Table 4 gives a summary of the benefits and the challenges.

| Table 4: Perceptions of benefits and challenges |
| --- |
| Benefits |
| Easy to handle. |
| You can download and keep a hard copy |
| There are portable and easy to move around with |
| It's efficient as it can be accessed easily by everyone around the world. |
| Technologically advanced and world class standards |
| You can easily retrieve (data) |
| Less expensive provided one has a computer. |
| I get information quicker (Home/Workplace). |
| Very useful |
| A computer is useful in that one doesn't need to carry a lot of printed material. |
| Makes downloading and printing easy |
| Challenges |
| Learning has become difficult because I am not computer literate and do not have a computer. |
| Have no computer to use for one to access the information |
| They (CDs) are not yet available at the region |
| Have no computer to use for one to access the information |

**Research Question 3: How can this innovation are improved as a way forward?**

The way forward was divided into four areas; for the learners, for the Departments/Region, for MDU and for the University.

**For The Learner**

Learners where aware that they need to both improve their ICT skills and also acquire the hardware. Table 5 provides their perceptions on the way forward.

| Table 5: Learners  Perceptions on how they should improve themselves |
| --- |
| Update my ICT equipment |
| I need to buy my personal computer or laptop |
| Learning more on computers |

**For the Department/Region**

Learners' felt that departments should do more by first, providing the CDs, preparing learners and lastly giving them access to computers. Table 6 shows how they perceive this could be done.

| Table 6: Way forward for the Department/ Region |
| --- |
| Should ensure that the number of CDs tallies with the number of students |
| Have a few hard copies for borrowing by disadvantaged students in remote places. |
| Should provide tutorials on how to use the CDs |
| Should have enough technology for their students to be able  to use CDs |

**For the Materials Development Unit (MDU)**

Learners called for the MDU to produce enough quality CDs.  The learners' should then be given the option to choose what they can afford.  Table 7 summarises their perception.

| Table 7: Way forward for the  MDU |
| --- |
| Improve the quality and quantity of CDs |
| Should produce materials to be used by students in time. |
| Either provide modules and text books or produce CDs in large quantities. |
| CDs should only stand as options |
| Simply convert CDs into hard copy |

**For the University**

The building of computer laboratories in the regions has been cited as a major way forward. Learners believe that the university should consider their students from rural areas and provide them with hard copies.  The early distribution of material to students was mentioned. Table 8 summarises the findings.

| Table 8: Way forward for the  University |
| --- |
| Ensure that employees each have own computer and ensure availability of CDs and modules. |
| Should provide a library with computers for use with students.  Website which is friendly and department should have its own website to use. |
| More students are in the rural and have no access to the computers to provide a computer lab for each region. |
| Computers should be a course where students are engaged practically for them to master (the skills) and there should be a ZOU study centre with computers even if a fee had to be paid to access them and the internet. |

**Key Personnel's Responses on the Learners Perceptions**

Interviews were held with the personnel and below are their comments. The purpose of this part of the research was to triangulate the learners perceptions by cross checking them with

the key personnel. Preliminary analysis of the students' perceptions determined the type of questions we then asked the key personnel.

**Research Question 1: What are the learners' perceptions towards the modules on CDs they have received?**

The university had studied ODL institution in Malaysia and South Africa (UNISA) before it came to its decision. The institutional needs assessment revealed three areas which needed to be addressed being, the challenges of printing of hard modules in a hyperinflationary environment, the emerging technological advancements in ODL with its benchmarks as observed during a visit to Open University Malaysia. Clearly a multimedia approach would supplement materials. Thirdly they were needed to develop ICT initiatives in the form of creating ODL platforms using the wide area networks and digital access points in regions.

**Research Questions no 2: What benefits and challenges have they met in using the CDs**

With the type of answers we were getting from the learners we thought it prudent to find out if these personnel were aware of the learner's perceptions on the benefits and challenges. All confirmed what the learners had said. They agreed that two groups had emerged. The group which accepted the CDs came from those with the skills and hardware. These tended to perceive no problems but benefits with the CDs. The second group had no access to computers and asked the university to assist with printed modules. These were mainly rural based. The analysis shows that key personnel are aware of students' perceptions and are agreed that more still needs to be done.

**Research Question 3: How can this innovation are improved as a way forward?**

This is where learners' perceptions were confirmed to be in agreement with the institution's way forward. Table 9 summarises the way forward.

| Table 9: Way forward: Key personnel from the Units |
| --- |
| Create computer laboratories for each centre |
| Make laptops/notebooks available to learners through a subsidised price. |
| Creating hot spots in the regions labs to use with the notebooks |
| Providing orientation exercise for the learners which are conducted by MDU and ICT units |
| CDs to complement the written module |
| Provision of diversified learning materials i.e., internet, telephone, cell phone, radio, TV, V.SAT, animation. |
| Use both the hard copy and the CDs. |
| Books should be written to back up modules. This would give students choices. |
| Cater for learners with Special needs e.g. Disabilities etc. |
| Develop a course on computers with more practical content. |
| Do periodic needs assessments on the user friendliness of the CDs. |
| In future CDs of genuine quality should be used. These should be labelled clearly and placed also in a well labelled jacket with labels and instructions. |

## DISCUSSION

Learner perceptions being displayed are not unique to the ZOU. Other studies have also shown similar findings (Haverila and Barkhi, 2009). Clearly most learners with computer skills and access to computers tend to find e-learning more acceptable. Whilst learners without the computers no matter whether they are in urban or rural areas request their universities to assist them to access the material. It is unfortunate that some see this introduction as the end of their dream to become graduates. This should not be the case. The findings are also similar to those by Kabonoki (1999) who pointed out that implementation of on line materials should be in stages in cooperating learners 'needs orientating them as much as possible. This is in agreement with Maliki (2011) who recommends the combination of the electronic and the print media.

The statements on the way forward are clearly in resonance with the phase 2 and phase 3 of the ZOU plans for going fully on line outlined by Kabanda (2009). Demand driven ODL institutions ignore their learners' perceptions at their own peril. ODL institutions which do not take heed of the above are bound to eventually lose learners. In an African context where the hard copy module was the cornerstone of the ODL delivery mode it is imperative that as part of the teaching they should also skill learners in e-learning to ensure quality service. E-learning is here to stay and the more learners and institutions are aware of this, the better for them because its economies of scale are immeasurable.

## CONCLUSIONS

The following conclusions were drawn from the findings;
- Most learners acknowledge the use of CDs but have misgivings on other issues like accessibility.
- Learners who had computers or access to them tended to be more acceptable to the CDs.
- Learners saw more benefits than challenges in the use of CDs.
- Learners suggested that the CD should complement the printed module.

## RECOMMENDATIONS

The study made these recommendations:
- Learners be skilled in the use of the CDs through proper orientation programmes
- A multimedia approach is used whereby students are given a choice between CDs or hard copies.
- A computer course with a high practical component, to be done by all learners at the entry point.
- Computer laboratories are set up in all regions to cater for students who cannot afford computers.
- Learners to be assisted in acquiring computers, laptops or note books.
- A coordinated introduction of this innovation in both the development of learning materials and to the students should be followed.
- More studies of this nature should also be done on e-learning strategies.

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