

# Barriers to Effective use of OER in Distance Education: A Case of Zimbabwe Open University Accounting Department

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## Abstract

Open Educational Resources are teaching, learning and research materials. OERs are released under an open license that permits no-cost access. The learner and the teacher have access to the OER unlimitedly. One wonders why most learners still find it a challenge to access these resources. This is the motivation for this study. The purpose of this study was to gather first-hand data from the learners as to the challenges on integrating OER into Distance Learning. This study was descriptive quantitative research with the purpose being to get information about the barriers to use of OER in Distance Learning in Zimbabwe. The population of the research was all learners in the accounting department of Zimbabwe Open University. Learners partaking a chosen accounting course were chosen as a sample. Purposive sampling was used as the sampling method. Learners who had practised Distance learning in accounting for a semester were legible. Data to be analysed was gathered from the learners through questionnaires. The learners were asked on the use of OER in Distance Learning given the contemporary issues such as COVID-19 pandemic and the economic constraints. Findings included sentiments by learners who lacked funds for data bundles. Some said the learners need training on OER. Use of OER was perceived by learners as being crucial because of its pragmatic and constructivist nature. Learners reiterated it boosted their level of understanding of a topic especially through videos. Low rate of OER use by learners was prevalent with an average use rate of 38%.

**Keywords:** Open Educational Resources, Learner perception, Distance Learning, Constructivist nature

## 1. Introduction

Zimbabwe Open University(ZOU) is the chief State University in Zimbabwe that implements a distance and open learning system. The term distance implies that learning is not performed with much physical interaction but makes use of media, whether printed media or non-printed (audio/video, computer/internet). These are induced within the MyVista platform and the Microsoft Teams platforms which were strategically crafted to meet the needs of the learners.

Open learning entails little limitations of learner age, year of graduation, period of study, registration time, and frequency of examinations. However, these are governed by regulations as per each faculty regulations which are to be approved by the Zimbabwe Council of Higher Education. For instance, the prospective learners must

have passed their secondary school level examinations with a minimum of five Ordinary Level passes. The idea of distance learning is the separation between learners and educationist which mean learners must be able to study autonomously.

ZOU supports their learners with a number of learning materials, basically in the form of hard copies of modules and soft copies of the modules. Hard copies are now a thing of the past with the advent of technology. More so with the Covid 19 pandemic use of ICT has overtaken the use of hard copies. Lectures upload various learning material on the MyVista platform for ease of access by the learners. During the learning process in one semester, learners must read the printed materials and utilise learning support based on multimedia and internet.

ZOU also provides learning support services based on internet, namely online tutorial, and online-based

enrichment materials which are embedded as links on the MyVista platform.

Online tutorial is a kind of e-learning implemented by ZOU to teach learners about a certain learning area. Online tutorial as one of learning support service for students as virtual class that is designed as a two-weekend class tutorial for the semester. Learners are invited through a Microsoft Teams platform link for a meeting. The learners attend to the tutorial sessions which are 3 hours each. Thus, each course should then be accorded 6 hours online.

Open Educational Resources (OER) is widely used by most Institutes of Higher Learning and ZOU is not an exception. OER have gained increased attention for their potential and promise to obviate demographic, economic, and geographic educational boundaries and to promote life-long learning and personalized learning. The rapid growth of OER provides new opportunities for teaching and learning, at the same time, they challenge established views about teaching and learning practices in higher education (Yuan, et al., 2008).

### **Open Educational Resources (OERs)**

OER is a special term which was coined after several terms had been employed in its place. Thus, prior to 2002 there were some terms that were used in place of OERs. These included terms such as “open content”, “learning objects” as postulated by (Downes, 2007), “open courseware” (Malloy, Jensen, Regan & Reddick, 2002) and “reusable learning objects” (Boyle, 2003), “reusable learning content” (Duval et al., 2001). As from the year 2002, the terms such as “reusable digital learning resources” (Leacock & Nesbit, 2007), “open eLearning content” (Geser, 2007), “digital learning resources” (Margaryan & Littlejohn, 2008) and were also employed to reflect OER.

### **Contemporary definition of OER**

The term “Open Educational Resources” was coined during a United Nations Educational, Scientific and Cultural Organization (UNESCO) meeting in 2002. According to D’Antoni (2008) it was meant to maximise information (D’Antoni, 2008). Another definition of OER was given by Bissell (2009) who alluded that OER are teaching, learning, and research resources that are in the public media or have been released through an intellectual-property license that permits their free use or onward customization by others. Bissell (2009) also stated that OER are digitised materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning and research.

According to Hodgkinson-Williams & Arinto (2017) all definitions of OER co-opt the aspect of open licensing – that is, the use of a licence which explicitly describes the means whereby open educational resources are to be legally reused, shared, revised, and remixed. Open

Educational Resources are basically “technology-enabled, open provision of educational resources for consultation, use and adaptation by a community of users for non-commercial purposes” (Hodgkinson- Williams et al, 2017). They can also be used directly by learners to get access to various articles, textbooks, and videos online. Open Educational Resources (OER) represents the combined international efforts to help equalise access to knowledge and educational opportunities throughout the world (Bissell, 2009).

### **Wiley’s 5Rs on OERs**

According to Wiley, Hilton, Ellington, & Hall, (2012) the nature of OERs is composed of “5Rs”. This framework explains the five rights that we gain as we exchange OERs. Wiley et al (2012) postulated that these are “the right to make, own, and control copies of the content (Retain); the right to use the content in a wide range of ways (Reuse); the right to adapt, adjust, modify, or alter the content itself (Revise); the right to combine the original or revised content with other open content to create something new (Remix); and the right to share copies of the original content, your revisions, or your remixes with others (Redistribute)”.

### **Benefits of OERs**

OERs can give learners and tutors access to learning material, including non-traditional groups of learners and those from disadvantaged backgrounds, resulting in the widening of participation in Distance education. OERs are a potential effective way to promote continuous distance learning. They bridge the differences between informal and formal learning. More so the OERs are crucial when it comes to the process of extending free or low-cost learning facilities to the developing countries such as Zimbabwe. In short, OERs offer a strategical contemporary approach to the knowledge sharing process which is crucial for the global distance learning (McDowell, 2010).

OERs are a valuable resource to learners and instructors for many reasons. According to Arendt and Shelton (2009) OERs have advantages such as free materials, continuous access to resources, the ability to pursue a topic thoroughly, the ability to learn for personal knowledge or enjoyment, and easy access to materials.

Recently, OER have gained increased attention for their potential and promise to obviate demographic, economic, and geographic educational boundaries and to promote life-long learning and personalized learning. The rapid growth of OER provides new opportunities for teaching and learning; at the same time, they challenge established views about teaching and learning practices in higher education.

### **Barriers to effective implementation of OERs**

The barriers to effective implementation of OERs are the key issue in this study.

#### a) Technological and Economic Shifts

According to D'Antoni (2009), there are several technological and economic barriers that hinder use of OERs by Distance education learners. These include the technical barriers such as lack of broadband access. On the other hand, the economic barriers include inadequate resources to invest in the necessary software and hardware. The social barriers include a lack of the skills needed to use technology.

As technology continues to rapidly change, so does the need to consider the extent to which learners and tutors have adequate accessibility to the requisite courseware. Courseware entails the educational material intended as kits for the educators as tutorials for learners (Hodgkinson-Williams et al 2017). OER are digital by nature, so they need the basic ICT infrastructure to be readily available to enable access of OER material. Stacey (2007) posited that these basic ICT infrastructures are sparingly available in developing nations, hence a serious technological barrier to OER adoption.

The other issue is the economic and social barrier to people who are not able to afford or keep up with the latest technology. These are the people, that would greatly benefit from the OER movement if only they could perform like the techno savvy learners. Such a scenario denies the freedom of education to some learners, especially those lacking the necessary resources (Trotter, 2018). The lack of resources is not the only thing attributed to software and hardware issues, but also the technological skills needed to utilise these OER formats. This is not only a technical barrier but also, an economic barrier. Panke (2011) realised that countries such as South Africa, Kenya, Nigeria and Tanzania had internet challenges, though South Africa was better having 10% of population with internet then.

#### b) Low OER awareness

Each country has its own approach to funding distance education and there are few or no specific national and-or institutional policies aimed at promoting open education in the higher education sector. Just as an example low OER awareness and a commercialised model of higher education appear to account for the lack of OER policies in Chile, while in Colombia various national and institutional strategies reveal a country at a nascent stage of open education policy development (Hodgkinson-Williams & Arinto (2017).

Barriers to the use of OER evolve around several strongly associated points. There is a lack of basic information concerning Open Educational Resources and Open Educational Practices (Toia, 2015) A lot of players in distance education are not familiar with the terms in use

and the benefits deriving from them. Strongly connected to this lack of basic information is the fact that many actors of adult education are reluctant to participate in Open Education.

#### c) Time and infrastructure

According to Hodgkinson-Williams et al (2017) the data from this study highlight the fact that OER implementation did not work well when students lacked adequate time and the appropriate infrastructure in which to interact with these resources. The optimal utilisation of OER relied on institutional provision of computer labs and favourable working conditions, which were not always present. The authors recommend that Chilean institutions enhance conditions in which OER strategies could be implemented rather than solely focusing on critique of these resources. According to Toia (2015) the state of the art of the quantity of Open Educational Resources online is another barrier. Thus, it takes too much time to search for reliable open content online and to adapt it for learners' purposes.

#### d) Infrastructural and resource challenges

Hodgkinson-Williams & Arinto (2017) discovered that many South American students face severe infrastructural and resource challenges as they try to get access to distance and open learning facilities. Notable, are constraints such as failure to afford various resources such as textbooks, ICT devices and broadband connectivity. This is aggravated by the robust lack of well-articulated policies and frameworks on how to address challenges related to issues of poor access and quality of education (Trotter, 2018).

#### e) Access to Infrastructure for users of OERs

Both educators and learners need access to several forms of infrastructure to adopt the digital OER platforms. A chief prerequisite for accessing the digital OER is the power supply. In the Global South, access to uninterrupted power supply is a challenge. In Afghanistan, Oates et al (2017) highlighted the lack of a reliable power supply in the rural Parwan province, where their study was located. In East Africa, Wolfenden et al. and Adala (2017) both report the lack of a reliable power supply as a structural constraint to OER access. In India (Kasinathan & Ranganathan, 2017) and South Africa (Cox & Trotter, 2017), power supply interruptions were notably common, although urban areas typically had fewer power interruptions than rural areas. In Mongolia (Zagdragchaa & Trotter) and South Africa (Cox & Trotter), higher education educators were more likely to enjoy a more robust power supply than university students, with school educators and students in rural environments having the least reliable power supply (Kasinathan & Ranganathan, 2017).

Access to, although not necessarily ownership of, digital devices is also a qualification for OER adoption. In

Afghanistan, it was found that “almost all of the teachers in the study owned at least one digital device. However, of those who did own a digital device, less than half had internet access on their device” (Oates et al.). In Mongolia, Zagdragchaa & Trotter (2017) report that of 42 higher education staff surveyed, “57% ... own their own laptops, though many also use the desktop computers provided by their Higher Education Institutions”. Although access to mobile devices was quite common amongst scholars and educationalists alike, scholars were less able to access computers as these were often inadequate for the huge number of scholars (Adala, 2017) or the computers available were not functioning well (Kasinathan & Ranganathan, 2017).

In Sub-Saharan Africa, internet connectivity, and its price are significant factors that influence use of OERs. These factors affect the rate of downloading and loading OER learning resource material. Partial access to ICT devices limit tutors’ navigation of and acquaintance with OERs. A similar situation was reported at the University of South Africa (UNISA), where satisfactory internet access was accessible only to tutors while numerous scholars did not have unswerving access because they lived in underprivileged, rural areas with poor infrastructure, or in towns far from the UNISA satellite centres (Cox & Trotter, 2017).

In Asia, there is a more varied picture of the accessibility and quality of connectivity. A study carried out by Zagdragchaa & Trotter (2017) revealed that in Mongolia, most of the higher instructors were able to “connect to the internet while at work (81%) and/or home (76%) at speeds recognised as ‘medium’ (52%) or ‘fast’ (29– 33%)”. In contrast, restricted or slow internet access among educationalists was reported in Afghanistan (Oates et al, 2017), and imperfect internet access and connectivity issues subdued the work of educationists in Sri Lanka (Karunanayaka & Naidu, 2017).

The last set of variables for comparison of respondents’ use of OER concerns infrastructure which comprises location of internet access, devices to access the internet, and internet cost, speed, and stability. Location of internet access(f) and internet cost(g) were considered for this study.

#### **f)Location of internet access**

The fundamental assumption is that as engagement with OER is largely a non-obligatory activity for teachers, one would expect to find higher levels of OER use in contexts where respondents access the internet in places where they enjoy advanced levels of cosiness, luxury, and confidentiality (such as at home-based or at work rather than in a community setting) (Jackson et al., 2006). The data exposed no visible pattern globally regarding where teachers access the internet and whether they have used OER or not. For instance, in South America, Chilean responses suggested that all locations were positively

correlated with using OER, while in Colombia all places were negatively correlated. In Africa, Ghanaians and Kenyans were more likely to use OER if they frequented internet cafes, but this was not so in South Africa. In Asia, respondents using Wi-Fi hotspots were more likely to use OER than those who accessed the web from internet cafes (Jackson et al, 2006). In fact, the data show that the response rates tend to resemble those of the respective countries and regions in general in this dataset.

Thus, the assumption that the place of internet access should influence OER use does not appear to hold, at least not in any obvious way. There are national and regional differences regarding OER use rates, but they do not appear to be highly influenced by the types of locations that respondents use to access the internet.

#### **g)Internet cost**

The supposition that can be analysed is that internet costs (as expressed through levels of satisfaction) should affect OER use, in that they influence the amount of time users spend on the internet, and the type of activities they engage in (Herrera, 2010). Basically, higher satisfaction with internet would mean that internet access is cheaper and therefore more available for potential users. Only instructors in Kenya and Indonesia showed the expected trend of higher satisfaction being associated with higher OER use. In other countries, this trend was either reversed or non-existent. Certainly, because the Kenyan and Indonesian experience was not the case anywhere else, it is impossible to make any broad generalisations about instructors’ level of cost satisfaction in accessing the internet and their level of OER use (Herrera, 2010). Thus, the assumption that internet costs affect OER use cannot be generalised.

In spite of the foregoing it is also important to note that lack of clear civic innovation and awareness on the effective use of OERs in distance education could be a big barrier. Similarly, the study that was done by Muleya, Simui, Mundende, Kakana, Mwewa and Namangala (2019) noted that lack of civic education knowledge in the use of virtual learning managements systems in distance education slows down the uptake of OERs in distance education.

#### **Statement of the problem**

Open Educational Resources are teaching, learning and research materials. OERs are released under an open license that permits no-cost access. The learner and the teacher have access to the OER unlimitedly. Surprisingly most of the learners keep having challenges in terms of accessing the best learner’s material. Most learners keep scoring very low in accounting courses. Possibly therefore there are constraints or barriers to effective use and access of the OERs or the learners’ attitude towards use of the OERs is low.

**Research Questions**

The study was guided by the following research questions:

- i. What are the OERs being utilised by ZOU students?
- ii. What are the challenges facing learners on using OERs?
- iii. To what extent are learners using the OERs that are available on MyVista?

Forms of OER at ZOU

**Table 1: ZOU Website 2021**

Open Access Content	Electronic Books
1. ACB Virtual Library	1. ProQuest Ebook Central
2. OKhub	2. eBook Academic Collection (EBSCOhost)
3. Science Hub	3. Emerald Management 120 eJournal Collection
4. Directory of Open Access Journal	4. Institute for Operations Research and Management Sciences (INFORMS)
5. Public Knowledge Project	5. JSTOR
6. Directory of Open Access Repositories	
7. OpenDocs	
8. African Virtual University Resources	

Source: ZOU Website 2021

**Theoretical Framework**

This study resorted to utilising the OER Adoption Pyramid as postulated by Trotter & Cox (2017) as being the key theoretical framework. The value of this framework is that it enables a good framework of comparison of the factors involved in OER adoption by the learners. According to Trotter & Cox (2017), the pyramid represents six factors that are involved in adoption of OER and shows how the OER adoption activities of either the educators or institutions can be assessed with it. These factors are deemed essential for OER activity in an institutional setting, sequenced according to the level of personal control lecturers have over them (from externally determined to internally determine). From external to internal determination, these factors are infrastructure access, legal permission, conceptual awareness, technical capacity, educational resource availability and personal volition.

**Awareness**

This is the other factor which considers lecturers’ or institutions’ awareness of OER. In this study there was again a need to include the learner. Essentially, the relevant agent (lecturer, institution, or the learner) must have been exposed to the concept of OER and grasped how it differs from other types of (usually copyright restricted) educational materials (Hatakka, 2009; Samzugui & Mwinyimbegu, 2013). Awareness was measured by the readiness of information pertinent to the OER including the systems in place.

**Access**

The first factor determining lecturers’ or institutions’ engagement with OER is access. This refers to access to the appropriate physical infrastructure and hardware – such as electricity, internet connectivity and computer devices – necessary for engaging with digitally mediated OER (Trotter & Cox, 2017). Lecturers have the least control over it, in that it tends to be determined primarily by state resource capacity and provision (for electricity and connectivity) and institutional resource allocations

(for computers, Internet). To apply this concept, the researcher had to include to this theory, the learner. Thus, other than just considering lecturers and institutions’ engagement with OERs there was need to make an inclusion of the learner. Here the principles governing access to learner were considered. Here the access measures included the ICT devices plus the software necessary for the learner including connectivity and data bundles which in Zimbabwe can be at the University Campus or at the learner’s residence.

**Volition**

The final factor in OER adoption relates to lecturers’ or institutions’ motivation or volition: their desire or will to adopt OER. If the relevant agent enjoys the access, permission, awareness, capacity, and availability necessary to engage in OER activity, then volition becomes the key factor in whether they will use or create OER (Rolfe, 2012). The notion of a lecturer’s or institution’s volition is, however, complicated because it depends on the social factors that are surrounding the individuals (learners in this case) (Cox & Trotter, 2016). In this study volition considered the willingness of learner to part with funds to cater for the learning material or willingness to spare some time for his/ her studies. Nature of this study only required reliance on these three factors. Availability, permission, and capacity were shelved for further study.

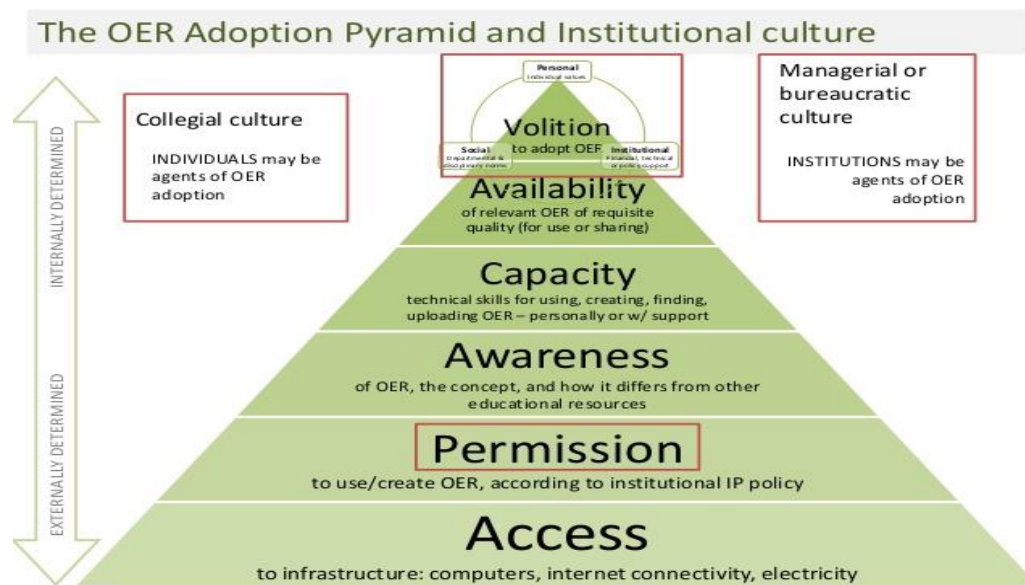


Fig. 1:OER Adoption Pyramid (Cox and Trotter, 2017)

## 2. Methodology

This study was descriptive quantitative research with the purpose being to get information about the barriers to use of OER in Distance Learning in Zimbabwe. The population of the research was all learners in the accounting department of Zimbabwe Open University. Learners partaking a chosen accounting course were chosen as a sample. Purposive sampling was used as the sampling method. Learners who had practised Distance learning in accounting for a semester were legible. Data to be analysed was gathered from the learners through questionnaires. The target population was the 80 learners for the accounting class within the faculty of commerce. Thus, all the 80 were to be ushered with questionnaires through the WhatsApp Group for the learners. For responses the learners were allowed to use the email system.

## 3. Findings and Discussions

The response rate was quite favourable with 48 questionnaires being filled in by the learners out of the 80 learners who received the questionnaires online. Out of the 48 who responded 18 were male while 30 were female respondents. There was a general imbalance in terms of gender. However, the researcher was aware that it has no adverse impact on the conclusions to be made.

The barriers to effective utilisation of Open Educational Resources were divided into themes A to K as outlined in table 1. and in figure 1. The extent to which these statements (themes) prevailed were gathered from the students. A total of 48 students responded to the questionnaires. The data was tabulated and finally presented in graph form as shown in figure 1. The data generally shows a positive correlation as to the fact that the learners were encountering some barriers to the effective use of the OERs.

Key to the tables and Graphs

SA: Strongly Agree

AG: Agree

NS: Not Sure

DA: Disagree

SD: Strongly Disagree

Table 2: The Barriers to effective use of OERs by learners Variables coded A, D, E, F, G, I and J fall in the category of the factor access as per the OER Adoption Pyramid as

ITEM CODE	VARIABLES (ITEMS)	Factor as per OER Adoption Pyramid	Σ (SA +AG)	Total Learners	Percentage learners who agree that the factor is a constraint %
A	Failure to afford or keep up with the latest technology is a barrier to use of OERs .	Access	45	48	94
B	Low OER awareness is an obstacle to effective use of the Open Educational Resources	Awareness	48	48	100
C	There is a lack of basic information concerning Open Educational Resources	Awareness	30	48	63
D	Students lack adequate time and the appropriate infrastructure in which to interact with the open educational resources.	Access	42	48	88
E	Failure to afford various resources such as ICT devices is a constraint to the OER use.	Access	48	48	100
F	Failure to afford broadband connectivity is a constraint to the OER use.	Access	42	48	88
G	Power supply is a challenge which affects learners on using the open educational resources.	Access	39	48	81
H	The location of internet access influences OER use	Volition	36	48	75
I	the types of devices that the learner use to access the internet affect their OER us	Access	36	48	75
J	Internet cost affects the extent to which a learner uses the OER	Access	42	48	100
K	I do not have the funds to pay for the cost of internet and the adversely affects my use of the OER	Volition	30	48	63

Source: Primary Data

Table 2 shows the general barriers that learners are likely to face at institutions of distance learning. These were coded A to K as indicated in table 2.

postulated by Trotter (2017). They deal with the barriers that are to do with what affects the learner’s capability to gain access to the OERs. From the data gathered there were more of these factors. In this study they were seven

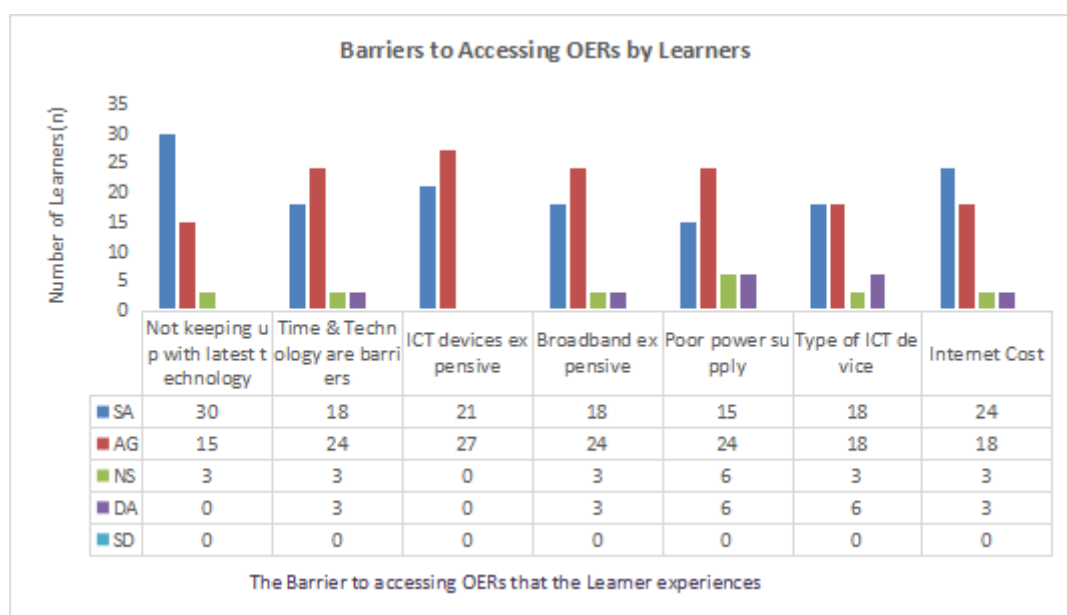


Figure 2: Learner Barriers Pertaining to Access to OER

Source: Primary Data

Access to OERs Barriers

as noted in figure 2. They included failure to keep up with latest technology, technology, expensive nature of ICT devices, the expensive broadband, power cuts, type of ICT and the high internet cost. Data was gathered from the 48

learners pertaining to the extent to which they consider the variables A, D, E, F, G, I and J as the barriers to accessing OERs. The data was tabulated and later mapped into some bar graphs. Each factor was mapped into some comparative graphs as per figure 2.

The generality of the learners strongly agreed that the factors were barriers to accessing OERs. They concurred with Kasinathan & Ranganathan (2017) who alluded that the learners lacked the computers, and this impacted negatively on their learning since some had dysfunctional computers. Adala(2017) also reiterated that the computers were essential for success in OERs. D’Antoni (2009) reiterated the same by saying there are also several barriers that hinder use of OERs by Distance education learners. In this study these included the technical barriers such as lack of broadband access. On the other hand, the economic barriers include inadequate resources to invest in the necessary software and hardware.

Summing up the number of respondents who strongly agreed(SA) and those who agreed(AG) was done. The analysis came up as follows: Average Percentage of learners agreeing that the factors are barriers to accessing OERs =

$$\text{Average percentage of agreeing /N} = \frac{+88+100+88+81+75+100}{7} = 626/7 = 89.42 \%$$

The analysis above shows that 89.42% of the learners agreed that the factors, A, D, E, F, G, I and J strongly impacted negatively upon their propensity to want to utilise the OERs.

**Awareness Barriers**

There is a lack of basic information concerning Open Educational Resources and Open Educational Practices (Toia, 2015). This is in synch with what was gathered on this study.

Data was gathered from the 48 Accounting department learning. The learners filled in some questionnaires which had both open ended and structured questions but being mainly structured. The Learners expressed themselves freely and managed to inform the researcher that the majority really had low awareness of OERs. They seemed to have little knowledge as to the existence of the OERs. They alluded they lacked even the basic information of the OERs.

$$\begin{aligned} \text{Average percentage of agreeing /N} &= (100+63)/2 \\ &= 163/2 \\ &= 81.5 \% \end{aligned}$$

The above analysis shows that 81.5% of the respondents agreed that low OER awareness and lack of basic information on OERs was prevailing and it was an obstacle to OER success in Distance Education programmes.

**Volition Barriers**

Volition was determined using two aspects which are lack of funds to cater for data bundles and location of internet access as factors hindering use of OERs by learners. Data was gathered from 48 learners. Tables were used to record data which was then used to form graphs in figures 3 and 4.

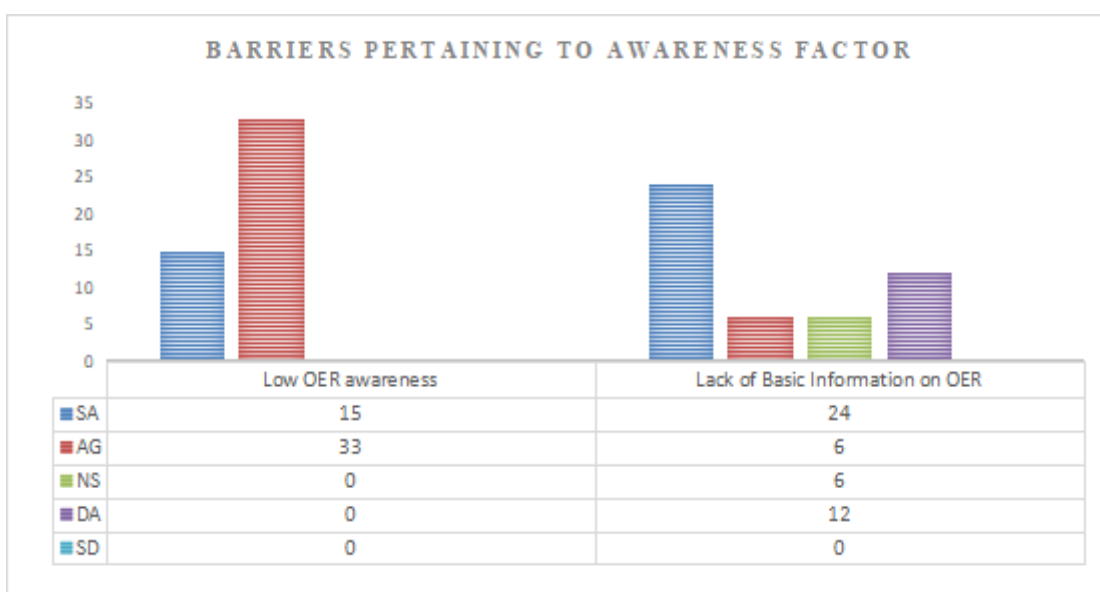
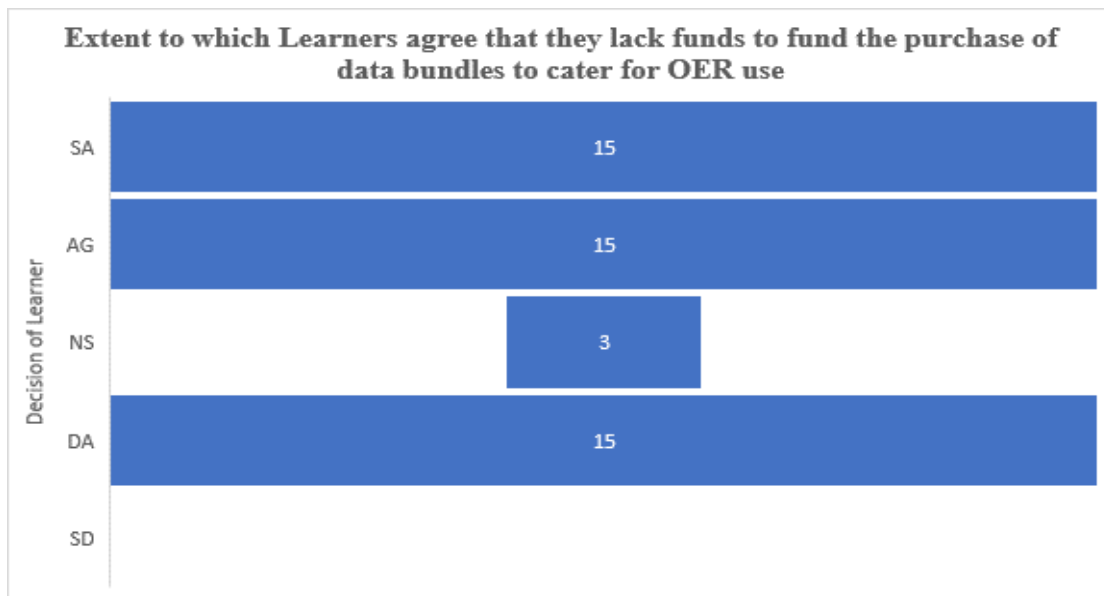


Figure 3. Source: Primary Data



Figure 4 Extent to which learners agree that they lack funds to fund purchase of data bundles for OERs

learners were of the notion that location of internet access affects OER use. This means 36 learners of 48 were of that notion (75%). This however contrasts Jackson et al



Source: Primary Data

Figure 4 shows that most respondents (15 + 15) learners agreed that they lacked funds to cater for purchase of data. This gives 62.5% agreement that learners lack funds. This was categorized as volition since it is based on the willingness of the individual to cater for the data bundles purchase as alluded by most students.

(2006) who allude that location of internet source is irrelevant. The overall average percentage of agreement is  $(62.5\%+75\%)/2 = 68.75\%$ . This is the lowest compared to the rest of the factors (awareness and access). Table 3 shows the Open Educational Resources the Zimbabwe Open University put on the Online ZOU library facility.

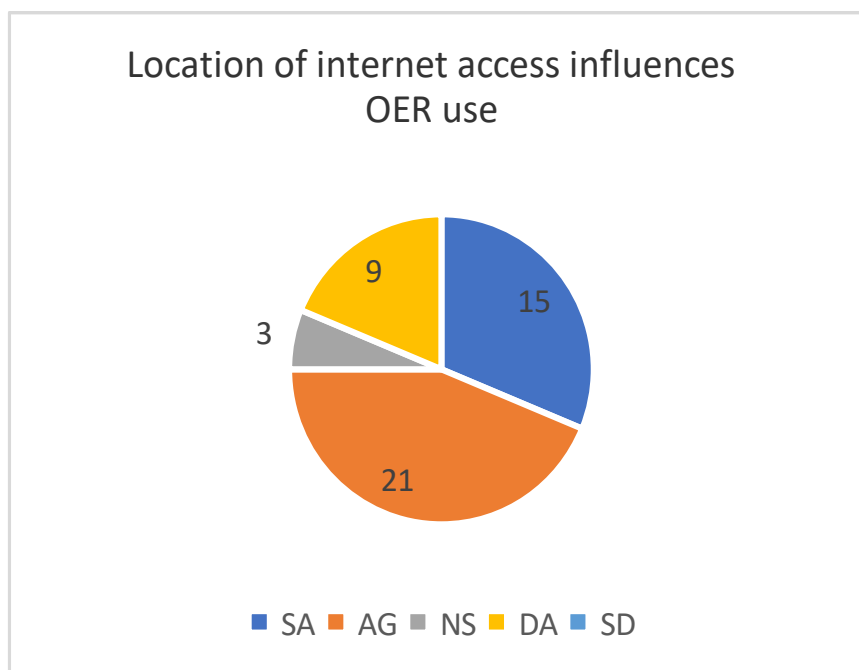


Figure 5 Location of internet access influences OER use

Source: Primary Data

Basing on figure 5, the learners were being affected negatively by location of internet access. 15 plus 21

Table 3 OERs used at ZOU

ITEM NO.	OER category	Possible number of learners (N)	Learners who haven't used the OER at all(n)	Percentage of the learners who haven't used the OER % (n/N) x 100%	Percentage of the learners who have used the OER % [(N-n)/N]x100%
L	ACBF Virtual Library	48	27	56	44
M	OKhub - The Global Open Knowledge Hub (GOKH	48	36	75	25
N	Science Hub	48	39	81	19
O	Directory of Open Access Journal	48	27	56	44
P	Public Knowledge Project	48	36	75	25
Q	OpenDocs	48	24	50	50
R	Africa Virtual University Resources	48	30	63	37
S	ProQuest Ebook Central	48	24	50	50
T	eBook Academic Collection (EBSCOhost)	48	24	50	50
U	Emerald Management 120 eJournal Collection	48	27	56	44
V	Institute for Operations Research and Management Sciences (INFORMS)	48	33	69	31
W	JSTOR	48	30	63	37
	<b>Average</b>	<b>48</b>	<b>29.75</b>	<b>62</b>	<b>38</b>

Source: Primary Data

Table 3 shows clearly that most of the learners have not yet had the opportunity to use the available OERs as reflected by the percentage of students who have not used the OERs. They are all above 50%. Thus, an average percentage of 62% as shown on table 3 alluded that they have not yet used the OERs. This could be just the fact that the learners simply did not know the OER, but upon further asking the respondents explained and clarified that they were not conversant with OERs. Quite pleasing was the fact that (100- 62) % = 38 % knew OER. Thus, with further awareness campaigns the learners will surely be conversant with OERs.

**Discussion of findings from the open-ended questions on the questionnaire**

The learners were given an opportunity to express themselves. They then said out some of the key barriers that were impacting upon their use of the OERs that were at their disposal within the ZOU Library and Information System.

Respondents h and i were keen to express that network was a real challenge that was impacting negatively upon access to OERS. They cited that they were having challenge when it comes to accessing the library.

The respondent j had this to say:

‘I did not have a clue that OERs existed. There is need for induction for students so that we know how to use them and to access them. More so the virtual library needs a password to access it and whenever I tried to put the password access was not granted. The IT people should do something about it.’

This response falls in the theme of the access factor as per the OER Adoption Pyramid (Cox and Trotter, 2017).

Respondent m had this to say:

‘I managed to open up the ZOU library, but I could not access the books I wanted, and I could not download any books’

Thus, the learner possibly was not well versed with how the OERs are navigated to gather the necessary data and information through use of the OER.

Respondent c, a male had this to say:

‘Some students come from poor families, they don’t have purpose fit gadgets to access the internet and hence barrier to the use of OERs. However, we do appreciate the materials especially the videos that are on the OERs.’

Thus, the learners were having the technology linked barrier. This was in synch with Trotter (2018) who was of the notion that developing nations face technological barriers to use of OERs. Trotter further alludes that the disadvantaged learner would surely have benefited had he or she the adequate gadgets to use.

Respondent n had this to say

‘Lack of awareness, lack of motivation and lack of training.’

This agrees with Hatakka (2009) who said the learner must have been exposed to the concept of OER and grasped how it differs from other types of (usually copyright restricted) educational materials. Thus, awareness is a crucial factor when it comes to OERs. The learners should be informed of the resources available for them to utilise them. More so they need training as to how to navigate through the system. Basing on the theory by Cox and Trotter (2017), this response falls in the awareness category. The learner also exposed the fact that the learner ought to be self-motivated. Thus, the concept of volition should be considered serious here. Thus,

volition is also a barrier to use of OERs. This is in synch with Cox & Trotter (2016) who purports that the learner willingness is crucial to adoption of OERs.

#### 4. Conclusion and Recommendations

In conclusion, the study has revealed the major Distance learning barriers encountered by learners as they learn through use of OERs at Zimbabwe Open University. There is need to work tirelessly on improving the technology linked factors such as availability of affordable and efficient ICT gadgets that enable learners to be fascinated with OERs as the gadgets will be of high speed. This works to improve access of learning content through the OERs. Also, the learners must be oriented specifically on the issues to do with the navigations needed for them to access the OER material. More so the various OERs within the ZOU Library system should be part and parcel of the learner's opening orientation. Notable was the 38% learners who alluded they are conversant with OER. This is quite a good level to start with. It clearly shows that a reasonable number of learners are using the OERs.

- i. All the OERs that are on the MyVista platform are being utilised by the learners, though the rates of utilisation are very low with the highest rate being 50%. The students ought to improve upon volition which bases upon the willingness of the learner to use the OERs. Hence the learners ought to be widely encouraged. Possibly this could be through setting up some policy framework to entice the learner to utilise the OER. Massive induction upon use of the OERs is also recommended. Henceforth it is widely recommended that the University expedites the training of the learners on the importance and the mechanics behind the OERs. This is crucial since the university has invested widely on the procurement of the system.
- ii. Learners have various challenges that were categorised as access, awareness, and volition. The access barriers were more pronounced at an 89.42% level followed by the awareness (81.5%) and lastly the volition at 68.75%. This is based on the calculations above. This entails there is need to assist the learners with ICT knowledge since most learners were of the notion that they need assistance to that tune. When it comes to ICT gadgets possibly the learners might need to be helped in terms of sources partners who would sell the gadgets to learners on instalment basis or through some other favourable way that would ease the once off payment to the learner. Further the government might need to chip in with scholarships/grants which cater for ICT gadgets.
- iii. ProQuest Ebook Central, eBook Academic Collection (EBSCOhost) and OpenDocs were the most utilised with an average rate of use of 50%.
- iv. The techno savvy learners really appreciated the importance of OERs. They reiterated importance of the videos that are on the OER packages saying they enhanced their understanding. They however requested that training on how to use the OERs be done to the learners every semester.
- v. The educationists are therefore recommended to be pragmatic in their pedagogy since learning through OERs is constructivist in nature. Thus, Distance learning requires learners who construct knowledge rather than just passively take in information.

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