



## EFFECTIVENESS OF THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE DISTANCE LEARNING DELIVERY MODE: A CASE STUDY OF THE ZIMBABWE OPEN UNIVERSITY

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### ABSTRACT

*The study evaluates the effectiveness of ICTs in distance learning delivery. Results indicate that distance learning students in Zimbabwe continue to rely on printed modules in their studies and that there is no clear-cut strategy at the Zimbabwe Open University to ensure that the institution benefits from harnessing the capabilities of ICTs. A sample of fifty students and ten lecturers was used and the methodology was the case study. The study also revealed that despite establishment of functional computer laboratories at all ZOU regional centres students continue to struggle to access library and information services from the institution.*

**Keywords** Distance education, Distance learning, Information Communication Technology, Zimbabwe Open University

### 1.0 INTRODUCTION

Distance education at university level is relatively a new and innovative educational concept in Zimbabwe. It came into existence after the establishment of the Centre for Distance Education (CDE) of the University of Zimbabwe in 1993. The charter granted to Zimbabwe Open University in 1999 has its roots in the Williams Commission (1999) and the Zimbabwe Open University (ZOU) feasibility study of 1986. Based on the recommendations that there was need for distance education at university level to upgrade skills “to provide a continuing education facility for the adult population,”

([en.wikipedia.org/wiki/Zimbabwe\\_Open\\_University](http://en.wikipedia.org/wiki/Zimbabwe_Open_University))

niversity) In 1996 it became the University College of Distance Education (UCDE), renamed to ZOU after obtaining a charter in 1999.

Distance education by its nature of a wide geographical coverage stands to benefit tremendously by embracing ICTs by way of students’ communication with lecturers and learning. Yusuf (2005)[1] concurs to this view when he argues that ICTs provide opportunities for distance education students, academic and non-academic staff to communicate with one another more effectively during formal and informal teaching and learning. Brakel and Chisenga (2003)[2] claim that ICT as basic as e-mail has the potential to enable the remotely situated student to interactively



take part in a particular programme. ZOU has made considerable investments in ICTs as evidenced by the visibility of computers, networks, photocopiers and fax machines dotted across the ten regional centres and the National Centre.

The research aims to find out to what extent this investment has been of benefit to students, staff and administrators in both learning and other administrative processes. To facilitate the use of ICTs, ZOU also introduced ZOU Online in 2011 which aimed at complementing teaching methods by delivering degree programmes materials online. The actual operations involved students accessing lectures and modules online, sending assignments and getting feedback online, administration assistance, group work and interaction between the e-tutor and students using personal computers (PCs) connected to the internet and the web-based-learning system. ([www.zou.ac.zw/zou](http://www.zou.ac.zw/zou) online) The advantage of this initiative was that it would cut the distance and time barrier so much prevalent in the Open and Distance Learning (ODL) mode.

Despite considerable investments made in ICT gadgetry, the presence of an ICT department in all the regional centres headed by a director at the National Centre and the ZOU Online initiative, no studies have been carried out to assess the impact of ICTs on the institution. Without such studies the investment might be a waste of resources or it will be difficult to source and allocate more resources with justification. The researcher was motivated by the incidence of being an employee with ZOU who happened to witness the introduction of ZOU Online and the establishment of computer laboratories, a bold move which the researcher heartily felt was a move in the right direction. The researcher was also motivated by how other universities locally and internationally have embraced ICTs in their services. Finally, the absence of any valid research on the impact of ICTs on

ODL had a huge bearing on conducting this study.

## STATEMENT OF THE PROBLEM

ICTs offer a myriad of opportunities in bridging the physical gap between the instructor and the learner in servicing students in diverse geographical locations. The Zimbabwe Open University seems to be only using a miniscule of the full capabilities that ICTs enable in making university processes efficient and more accessible. The institution is obviously aware of the benefits as witnessed by the investments done on ICTs but there do not seem to be any clear-cut strategy that would ensure that the institution fully benefits from harnessing the capabilities of ICTs.

## 2.0 LITERATURE REVIEW

### 2.2 OPPORTUNITIES OFFERED BY OPEN AND DISTANCE LEARNING

Didd (1991) [3] views the open and distance learning mode as a great equaliser of educational opportunity that provides large numbers with the chance for many to continue with their education. Martey (2004)[4] also argue that ICT creates the opportunity for governments to provide distance-learning programmes which make it possible for many more people, located far from the centre of learning, to educate themselves. Gatsha (2012) [5] supports the view and adds the dimension of flexibility. He observes, open and distance learning entails policies that permit entry to learning with no or minimum barriers with respect to age, gender or time constraints. It enables learners to learn at a time, place and pace which satisfy their circumstances and requirements” (Panchoo, 2012) [6] argue that the technological advancements are increasing the array of learning opportunities as academics more and more



use social media and other services to share links and ports while online learning related chats and discussion forums engage people around the globe.

### **2.3 LEARNER SUPPORT SERVICES IN OPEN AND DISTANCE LEARNING**

A study by Audet (2008) [7] shows the burden of distance learners which are ignored leading to high rates of learners abandoning their studies. He concludes that between 60-70% of learners who join distance education programmes do not actually complete their studies. The same sentiments are reflected in a similar study by Educentre (2005)[8] which stated that 75% of distance learners drop their studies because they feel isolated in their studies. Learner support services are vital for success in open and distance learning mode. Panchoo (2012)[9] argues that even in the virtual environment, spaces should be built to encourage interaction relating to educational meeting with tutors at specific moments; otherwise students continuously postpone studies until they drop out. Learners need prompt feedback from the experts.

### **2.4 ROLE OF ICTS IN DISTANCE EDUCATION**

According to Stuart (2003) [10] many universities throughout the world are offering distance courses. They are doing that with ICT; the most appropriate technology of the day. (Martey, 2004:16).[11] A distance education provider can create and use a portal to provide technical and methodological help for academic staff for developing ICT-based courses and provide video conferencing facility for the distance learners. Nan Wang (2009)[12] argues that web-based distance education can achieve better educational performance, as it has the advantages of supporting ICT-based two-way interaction between teachers and students, presenting multimedia instructional resources and organizing

learning activities online, and building a virtual community for learners to exchange ideas.

## **3.0 RESEARCH METHODOLOGY**

### **3.1 Research design**

The case study design was judged to be the most appropriate for the research problem. Sutton (2007)[13] regards the case study as a narrowly focused description of a research question that is done by giving special attention to completeness, observation, reconstruction and analysis of the case under study. This fitted well with a single phenomenon, the Zimbabwe Open University in this case.

### **3.3 Sources of data**

#### **3.3.1 Sample and sampling procedures**

Data were collected from two members from the administration, one ICT technician, ten lecturers and fifty students. The students and lecturers were the key subjects since they play a symbiotic role in the teaching and learning which happens to be the core business of the university. From sixty questionnaires given to the students, fifty were returned which translates to 83% a convincing result in research. From the possible thirteen questionnaires, ten were returned translating into 78% also huge return by any measure in research parlance. The method of sampling adopted was the convenient sampling which consisted of only the subjects that were conveniently available at the time of the data collection. Questionnaires were distributed to the students who were writing their assignments in the library and since the due dates of the assignments are uniform to all faculties, there was fair representation of all the programmes, in which case the results can be viewed as validly representative of the bigger population.



**3.5 Data Analysis Procedures**

Pie charts, tables, and graphs were used in data presentation. The researcher considered that the varied way of presenting data would help illustrate the trends of the findings graphically in line with the saying of the old that ‘A picture speaks more than a thousand words’. Data was analyzed and presented in the form of frequency tables and graphs in line with research objectives.

**4.0 Data Presentation and Discussion**

**4.1 Usage of Information and Communication Technologies for Administrative / Communication Purposes**

**Table 4.1: Usage of ICTs for administrative purposes**

Administrative Role	YES	Percent age	NO	Percent age
Registration	21	42%	29	58%
Tutorial dates / venue	17	34%	33	66%
Overdue fees	31	62%	19	38%
Examination dates / venue	23	46%	27	54%
Modules arrival	25	50%	25	50%

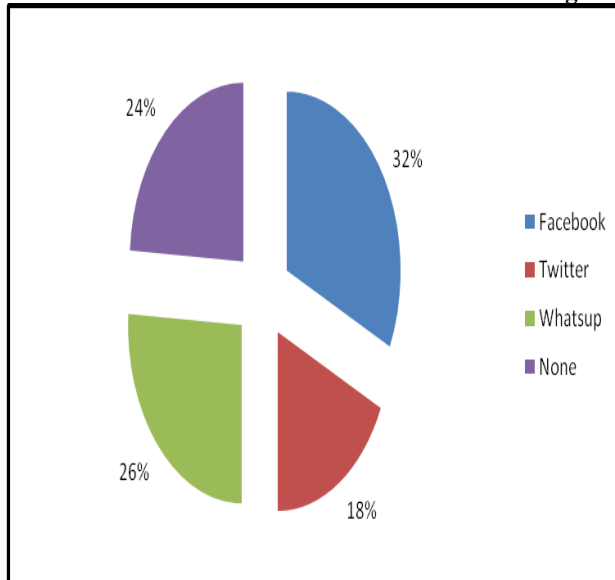
The Table 4.1 is an illustration of the use of ICTs for administrative processes. Registration remains largely manual. Fifty-eight percent responded that they did not witness any ICTs tool during registration. This is a far cry from the modern trends where application forms are downloaded filled and sent electronically. Another administrative process that ICTs are used is the communication of tutorial dates and venues to the students scattered through the districts of Manicaland. Sixty-six percent responded that they had not received the information through any ICT

gadgets. Tutorial dates are posted on the notice board at the beginning of the semester but these are subject to change owing to the closure of registration. The University phones students of any changes to tutorial dates and venues.

It is interesting to note that of all the communications as shown on Table 4.1 it was the use of ICTs on reminders of overdue fees that the ICTs tools were recorded highest at 62%. Perhaps this would be understood against the backdrop that universities require huge inflows of capital to finance their processes and students’ fees constitute an important source of that money. It is very possible that the university goes out of its way to inform defaulters of the need to pay up before examinations, using whatever media, mobile phones being part of them. The same enthusiasm and mobilisation of resources is not shown on the communication of tutorial dates or examination dates.

Fifty percent of respondents yielded to the fact that ICTs in the form of cell phones were used to inform the students of the modules that arrived after registration. In the philosophy and operational plan of distance education mode, the module takes the place of the teacher. It is a highly sought-after commodity. As such the student is likely to be proactive to get this lifeline.

#### 4.2 Students' use of social networking



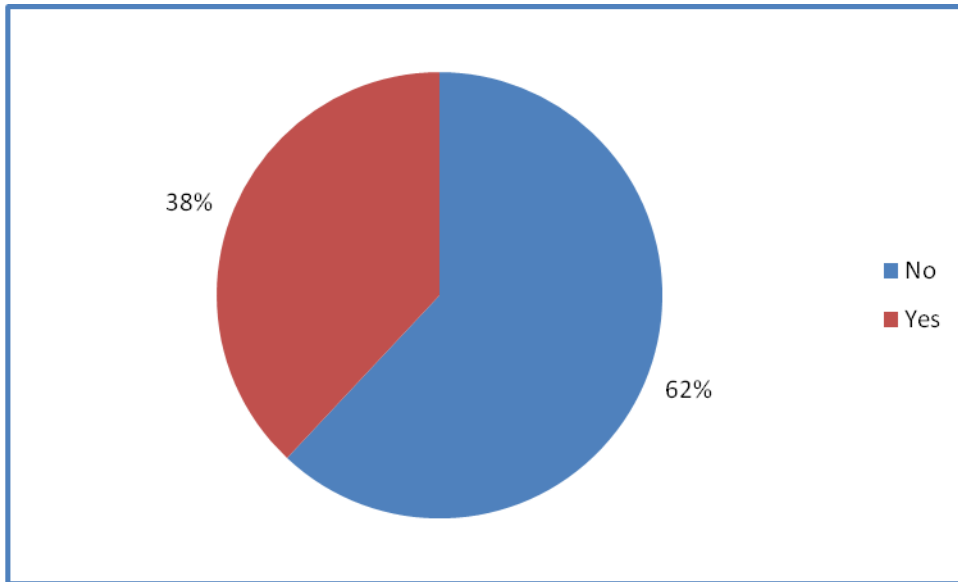
**Figure 4.1 Students' use of social networks**

The most popular social networking platform proved to be Facebook at 32% closely followed by WhatsApp at 26%. A significant 24% did not have accounts with any of the available networks. The implications are that whilst the university could use social networking to communicate with students, some students could not benefit from the same platform. The platforms can also be used effectively for teaching purposes and discussions by the students. Students not connected would

be disadvantaged. A survey of the students not connected showed that either they did not know that social networks could be used effectively in pedagogy or they did not have smart phones.

#### 4.3 Usage of Information and Communication technologies in the learning process

##### Support given to Students on the Use of Electronic Resources

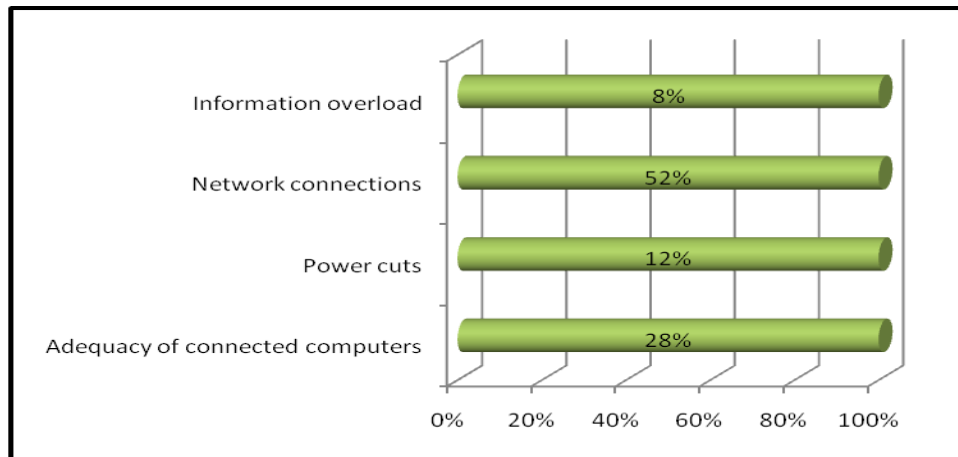


**Fig 4.2 Support given to Students on the Use Electronic Resources**

Figure 4.2 shows the distribution of responses regarding the use of electronic resources. Sixty-two percent of the responses revealed that they were not getting support from librarians, lecturers or tutors on not only what e-electronic resources ZOU had, but also on how to access the information; they thus relied on the module for most of their informational requirements. This confirms findings by Martey (2004)[14] who pointed out that the Centre for Continuing Education of the

University of Coast and the University of Education Winneba rely heavily on printed course modules for their distance learning programmes. Thirty-eight percent indicated that they got support from the institution. The library has embarked on information literacy skills training [from 2012] and it is possible the few trained students could make up the 38% that indicated institutional support.

**4.4 Problems experienced when Using ZOU Computers**





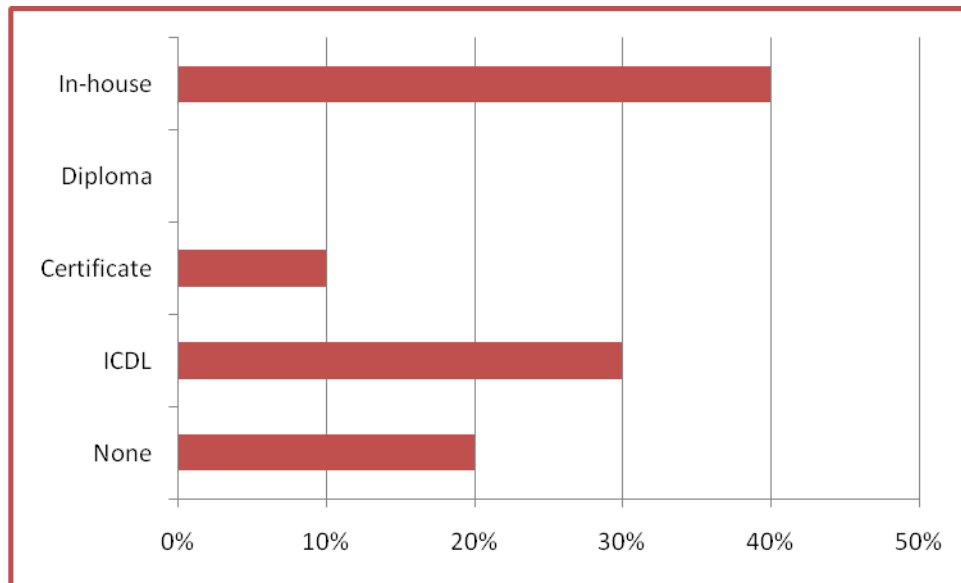
**Fig 4.3 Problems experienced when Using ZOU Computers**

Fig 4.3 shows the distribution of responses on the problems encountered when using ZOU computers. Fifty- two percent cited network challenges whereupon the computers lost network when students were searching for information. This was reportedly a very frustrating experience as explained by some of the respondents. Twenty- eight percent pointed to adequacy of connected computers. The ICTs technician pointed out that the institution had the capacity to supply additional computers to the computer laboratory at a very minimal cost, so the challenge could be a thing of the past in forthcoming

semesters. Power cuts were another disturbing issue to the full utilisation of computers. Students felt that they needed training on how to access and use information efficiently and effectively to overcome problems of information overload.

**4.5 Usage of Information and Communication Technologies by Lecturers and Tutors**

**Level of ICT Training by ZOU Lecturers**



**Fig 4.4 Level of ICT Training of ZOU Lecturers**

Figure 4.4 graphically shows the level of training in computers by ZOU lecturers. The number of respondents who received training on the job is the highest at 40%. The in-house training was an initiative by the short-lived ZOU Online programme which earmarked to give computer

appreciation to all staff members in 2010 in readiness for a broader electronic services delivery. Both in-house training and the International Computer Driver’s License (ICDL) at 30% provide elementary training on the basic operations of the computer and do not adequately equip the



lecturers to be information literate as they merely leave them at the computer literacy level. When the lecturers are not trained

on ICTs, it would be an unrealistic expectation to expect them to use the ICT tools in their delivery.

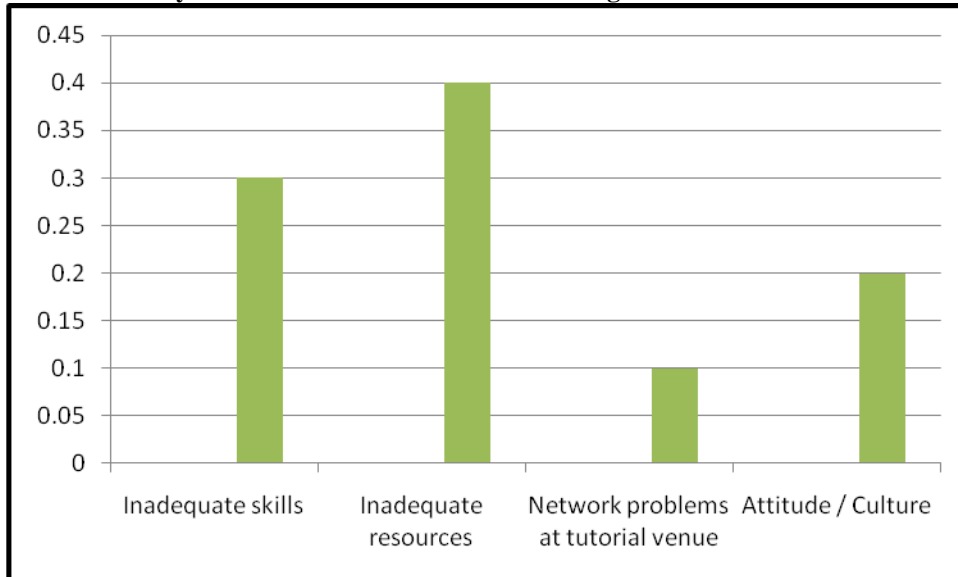
**Table 4.2 Frequency of the Use of ICTs during Teaching**

Rate of ICTs use in Teaching	Frequency	Percentage
Never	2	20%
Frequently	3	30%
Rarely	4	40%
Always	1	10%

Table 4.2 shows the distribution of the frequency of the use of ICTs during teaching by ZOU staff. It is disturbing that 40% of the respondents, the highest, indicated that they rarely used any ICT gadgetry during lessons. The use of a projector, laptop and power point presentation are likely to have a lasting impression on the mind of the student regardless of the content. On the question of which ICT tools were mostly used, the majority answered that they sometimes used the laptops [among the other gadgets

on questionnaire; overhead projector, recorded cassettes and videos] The discussion revealed that most of the lecturers had laptops which were however not provided by the institution for teaching purposes, but rather personal possessions. In –depth interviews yielded the revelations that most lecturers were willing to use the modern technologies as long as the institution provided them and there was an institutional framework to support the use of the ICTs on teaching.

**4.6 Reason why ICTs were not being used for Teaching Purposes**



**Fig. 4.5 Reason why ICTs were not being used for Teaching Purposes**

Fig. 4.5 shows the distribution of responses according to why the lecturers

did not use ICTs during teaching. Thirty percent were open to admit they lacked the





skills to deliver the open distance mode using the existing ICT tools. It is possible that the number could be higher but many could have opted to attribute the challenge to inadequate resources whose response was the highest at 40%. Currently, ZOU does not offer most of the ICTs resources for teaching like the liquid crystal display (LCD), overhead projector and facilities for teleconferencing and videoconferencing. This was confirmed by the researcher during observation when he made a survey of what ICT gadgets were used during tutorials. It was interesting to note that 20% stipulated attitude and

culture as the barrier on delivering lectures using ICTs. The lecturers had always used the module and the lecturing method over the years with the students getting good academic grades so there was really no incentive to introduce the ICTs in their teaching methods. Suggestions coming from the open-ended questionnaire slot on how ZOU can make full use of ICTs were investing in ICT hardware and software, establishing ICT centres at district centres and rigorous training of students and tutors on the usage of the same tools, some of whom had technophobia.

## 5.0 DISCUSSIONS

Of all the administrative purposes; registration, tutorial dates, examination dates and modules arrival it was the seeking of overdue fees that the majority of the respondents experienced the greatest communication using ICTs at 62%. It was suggested that this might have resulted from the financial position of the university in particular and the national economic performance in general. On a positive note, 76% of the respondents showed that they were on social networking whilst a mere 24% were not connected. It is encouraging that the cell phones acquired by respondents for totally different purposes can be used for educational purposes and communicating administrative information. However, the mere possession of the smart phones does not immediately translate to pedagogical use; it requires the initiative of the lecturer as observed by Sukon et al. (2012) [15] who observed that the best distance educational practice depended on creative, well informed instructors.

On all the ICT gadgets the cell phone proved to be the most owned when you compare it with laptops and desktops. The open distance mode could tap on the affordability and portability of this gadget. The level of computer illiteracy at 14%

was not encouraging. With the university having established a computer laboratory four years ago, it is unacceptable that some students graduate when they cannot operate a computer. It was suggested that the university comes up with compulsory and examinable computer practical which would ensure that all the students learn computers.

Related to computer literacy among the respondents was the issue of learner support from the lecturer. Sixty-two percent of the responses indicated that they did not get support from the lecturers on the available electronic resources as references or how to access them. The difference, 38% on the affirmative is likely to be the computer-literate younger generation of school leavers that pesters the lecturer and the librarian on the said resources because they are aware of their existence. The level of computer training amongst ZOU staff members showed that 40% had received in-house training while 30% had done the ICDL course both of which were only of rudimentary value when one considers the task of formulating information searches amongst the available complex databases. The use of ICTs on teaching showed that 40% rarely used any ICT tools during the delivery of lessons, whilst 20% were explicit that they never used any of the modern technologies.



Among the reasons cited for the state of the affairs was the need for institutional framework and support in terms of availability of resources.

## 6.0 CONCLUSIONS

The University has made considerable investments in information and communication technologies as evidenced by the establishment of a functional computer laboratory equipped with computers connected to the internet. Yet besides this very important initiative which is at the core of the electronic delivery of educational services, there was a weak ICT policy framework at institutional level which made it difficult to coordinate and give direction to ICT activities at the university. A case in point is the introduction of the very short-lived ZOU Online, which was never replaced by similar initiatives. Forty percent of the respondents revealed that they could fairly use internet while 14% was outright illiterate. These are worrying statistics as the internet has become the most cost-effective and convenient source of scholarly information. Additionally, many reputable international publishers now sell information in the form of e-books, e-journals and databases with very little investment in print.

Electronic resources can be accessed simultaneously by all the students, whilst access is enabled by monthly or annual subscriptions. Students with a little Internet appreciation will not benefit such is the case with most ZOU students. The ZOU website was not fully serving its purpose when we take into account that only 56% reported ever visiting the homepage. Additionally, the website is a vital source of academic information. Every effort should be put in place to ensure that all the students make the website the first point of call for all the institutional information. Furthermore, the smart phones can be used for both

pedagogy and communication with students if the activities are well coordinated. Finally, there is need for an enabling institutional framework and sourcing of resources to realise the goal of efficient and effective electronic delivery, the bridge to the future of open and distance learning.

## 7.0 RECOMMENDATIONS

1. Lecturers need to develop ICT skills and expertise in distance learning delivery in order to develop and implement effective learning programmes. They should upgrade their ICT skills. Lecturers also need to be equipped with information literacy skills in order to adequately support students in research.
2. Distance learning initiatives need to be supported by state-of-the-art library and information services to be successful. Distance learning students should be provided with user IDs and passwords to enable them to access academic resources provided by the University. This can only be achieved through improvement in ICT infrastructure and services in order to bridge the digital divide between Zimbabwe and the global north.
3. Distance learning students can be taught Information literacy skills so that they are adequately equipped to effectively use information independently and access and retrieve quality information from academic databases. The university needs to be more proactive in imparting information literacy skills and information technology literacy skills if distance learners are to benefit from the use of emerging information and communication technologies.



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