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Full Length Research

Digital information resources availability, awareness and utilization by postgraduate students in three state owned Universities in Ondo States, Nigeria.

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The research work is on digital information resources availability for and, awareness and utilization by postgraduate students in three state owned universities in Ondo States, Nigeria. Descriptive survey design was used. The Universities are: University of Medical Sciences,(UNIMED),Ondo Town. AdekunleAjasin University, (AAUA) Akungba and OlusegunAgagu University of Science & Technology, OAUSTECH) Okitipupa. The sample size for this study was 175 which is the same as the population size. Thus, it is a total enumeration sampling. Observation check list and structured questionnaire. The data was analyzed using descriptive statistics and One Way Analysis of Variance (ANOVA) and F-test associated with multiple linear correlation was used to test the hypothesis. The major findings are that some Digital Information Resources (DIRs) available in the university libraries visited by the researchers include the following: e-conference papers, e-zines, e-newsletters e-reference materials, e-projects, e-journals, e-seminar papers, e-books and e-dissertation. The findings also revealed that the extent of use usage of DIRs by students was low. The constraints encountered by students in the accessibility of DIRs in the three libraries are epileptic power supply, none availability of online databases, lack of formal training in Internet search skills among students, slow bandwidth, network problems and weak server. There was moderate positive relationship between accessing and extent of utilization of DIRs in university libraries in Ondo State, Nigeria. The novelty of this research work will be provided a solid foundation for critically assessing digital information resources and appreciating the different barriers affecting utilization and adoption of DIRs by Postgraduate students, Nigeria.

KEYWORDS: Digital Information Resources, Availability, Awareness, Utilization Postgraduate Students and Universities.

INTRODUCTION

In the library parlance, the terms awareness, availability, accessibility and utilization are concepts which complement one another. The awareness, availability, accessibility and utilization of DIRs through an effective dissemination network represents a necessary pre-condition for the emergence of a crop of well-informed citizenry. Information must be available, adequate and accessible in order to be presented in a way that is acceptable to facilitate its acceptability, hence utilization. Thus, information is a vital commodity in every environment and its use is largely determined by its availability and accessibility and acceptability (Ternenge&Kashimana, 2019).

Different terms are used to describe digital information resources. In recent times, digital/electronic resources have been identified as the major sources for information dissemination in the universities, especially for researchers including students and teaching staff (Ternenge&Kashimana, 2019). The Internet and the World Wide Web provide scholars with quick and easy access to electronic information resources located around the globe. Academic staff now exchange preliminary drafts of research findings with colleagues and maintain contacts by monitoring electronic bulletin boards, chat rooms and listserve on subjects of interest. Information users now use the Web to access remote databases and full-text document resources that were previously only available through expensive on-site research visits. Researchers use the Web to watch real-time images from remote research stations or participate in group discussions and group projects. Availability of Digital Information Sources relates to the provision for and inclusion of the resources in the collections of the libraries to users in academic institutions. Availability of electronic resources provides authoritative, reliable, accurate and timely access to information. In addition to this, the resources can enable innovation in teaching and increase timeliness in research.

Awareness is an extension of availability and it indicates the extent to which users have information and knowledge of electronic resources being subscribed to. When users of a library have adequate information on the electronic resources being subscribed to they are encouraged to use them. Available ICT and e-resources must be known to the users. Madukoma, Onuoha and Ikonne (2014) identified lack of awareness as a major contributing factor to non-use of e-resources. This implies that electronic resources must be made available in several brands to the users in their institutions. Their contents must also be publicized by the library in order to promote their use.

The growth of information resources has become a global phenomenon especially in developed societies due to technological advancement in information technology (IT). Postgraduate students in developed countries are getting access to digital information and creating their own information electronically. Academics now have access to global digital information resources, particularly the Internet for their scholarly communication (Ani&Ahiauzu, 2008). Interestingly, the Internet represents different things to different people depending on what is being sought. In the academia, it facilitates the extension of the frontiers of knowledge and constantly enhances the drive to keep abreast of scholarly publications (Ajegbomogun&Akintola, 2004).

Utilization of electronic information resources involve accessing and using of the e-resources for academic activities including teaching, learning and research. Students in carrying out their research projects turn to the library to access information. Since the advent of Information Communication Technologies in academic libraries, demand for electronic information resources seem to have overtaken that of print resources, although not totally replaced it. Digital information resources provide far reaching advantages to both users and the library in ways that include hyperlinks to other resources, huge information reservoirs, quick information, various search options, easy citations, ease in uploading and updating; ease in storage and dissemination; ease of archiving, et (Tekale and Dalve, 2012). Electronic resources make access to accurate and timely information possible for users especially, those of the institution of higher learning that are greatly involved in research (Ukpebor, 2012).

One of the advantages of Digital Information Resources(DIR) for libraries and researchers in the information age is the reduction of pressure on academic libraries for physical storage space for books and journals and unlimited access to information by the users. In university and other academic institutions, focus of users has shifted more to electronic information resources as it dominates research activities of researchers and opens their eyes to realize the importance of such resources. The Digital Library in most universities manages electronic resources and these stand as vital academic resources that support teaching, learning and research activities. As reported by Ternenge and Kashimana (2019), electronic resources are invaluable research tools for students in higher institution of learning.

Digital resources are easily accessible in remote areas and solve storage problems and control the flood of information (Munira&Bushra, 2010). This has increased the global dissemination of information. Digital resources such as d-books, full-text d-journals and online bibliographic databases must be subscribed to by academic libraries to meet ever-increasing demands from users for remote access to information (Armstrong, et al, n.d). There are several forms and types of electronic resources which are available on the internet, some of the popular ones that are gaining ground are the electronic journals, standards, technical specifications, reports, patents, full text articles, trade reports and hosts of other.

Research is an important aspect of the learning process that is mandatory for every student in the Nigerian higher education system. Students in tertiary institutions in Nigeria engage in research either for expansion of what was learned in classroom or for project in their final year which is mandatory as a partial fulfillment for the award of degrees. For research to be carried out, relevant information resources are necessary. Students engage in research to discover, rediscover, identify, validate and solve a particular problem through a systematic, logical, scientific and painstaking enquiry using available information resources.

The use of digital information resources by postgraduate students in Nigerian institutions come with a couple of challenges like the nation's poor telecommunications infrastructure which has been a subject of debate to researchers in higher institutions. In the face of poor telecommunications infrastructure, poor user skills in navigating e-resources, high

cost of Internet subscription and restricted access to e-resources are also major challenges plaguing the use of electronic information resources by postgraduate students' in Nigerian universities.

It is pertinent to note that when postgraduate students are aware of e- resources they make adequate use of them for academic and research purposes. It is also important that for the students to make use of the resources, they ought to be skilled in information and communication technologies (ICTs) applications in order to gain independent use of various Digital Information Resources around the globe. Consequent upon these, this research work seeks to explore Digital Information Resources availability, awareness and utilization by postgraduate students in university libraries in Ondo State, Nigeria.

Statement of the Problem

Nigerian university education system is skill developing and advancing both in number and absorption of technologies into its teaching, learning and research processes. At the same time, the university libraries in the Ondo State, Nigeria have made huge investments in acquiring digital/electronic information resources in a bid to enhance the teaching, learning and research processes in their institutions and also meets up with global trends and standards. Digital information Resources have indeed become more important for the academic community in accessing up-to-date information at the right time and in the right form. They enable post graduate students to have access to first-hand information characterized by being timely, current, easy to access , (even from remote places) and also open up the possibility of searching multiple files at a time, a feat accomplished more easily than when using printed equivalents.

Unfortunately, literature and personal observation have revealed that digital information resources are grossly under-utilized by postgraduate students in Nigerian universities, particularly in Ondo State of Nigeria, despite the potentials they hold for effective learning and research. The impression is that many of the post-graduate students have shallow knowledge of basic searching skills, negative attitude towards use of DIRs and lack computer literacy.

However, observation has shown that university postgraduate students seem not to be utilizing these D-resources that are available to them. Could it be that they are not aware of these DIRs and if they are aware why is it that usage is hindered? DIRs have received high patronage with functional acceptance in other countries globally as against the situation in Nigeria. This they revealed might be due to lack of or inadequate awareness of e-resources. Also, studies have indicated that factors such as availability and skill are the determining factors that may influence users' decision to use DIRs. Therefore, the crux of this study is to investigate the availability, awareness and utilization of digital information resources by postgraduate students in University Libraries in Ondo State, Nigeria.

Purpose of the Study

The specific objectives of the study are to:

1. Ascertain the Digital Information Resources services available in University Libraries;
2. Ascertain the level of awareness of Digital Information Resources by postgraduate students in University Libraries;
3. Determine the extent of utilization of Digital Information Resources in by postgraduate students in University Libraries in Ondo State of Nigeria; and
4. Determine the constraints against availability and Utilization of Digital Information Resources (DIRs) by postgraduate students in University Libraries.

Research Questions

The following research questions guided the study:

1. What are the Digital Information Resources services available in University libraries in Ondo State?
2. What is the level of awareness of Digital Information Resources by postgraduate students in University Libraries in Ondo State?
3. To what extent of utilization of Digital Information Resources in among   postgraduate students in University Libraries in Ondo State of Nigeria?
4. What are the constraints against availability and utilization of Digital Information Resources (DIRs) by postgraduate students in University Libraries?

Hypotheses

The null hypothesis guided the conduct of this study and they were tested at 0.05 level of significance.

Ho1. There is no significant relationship between ways of accessing and extent utilization DIRs in University Libraries in Ondo State, Nigeria.

Literature Review

The Digital Information Resources are fast gaining the confidence of scholars and researchers as a veritable source of information, it is viewed increasingly as a versatile system providing an enormous Variety of materials in different formats, and the electronic information resources based research takes a toll on traditional library based resources, making these long established tools underutilized by students researchers(Haliso&Ogungbeni, 2014). Also, Kehinde (2012) revealed that, students have access to up-to date information on various subjects and also assist in developing thinking and learning skills with the use of electronic information resources. Agaba (2005) stressed that, the shift from printed forms to electronic information resources means that both academic staff and students must utilize these resources for better quality, efficient and effective research more than ever. Furthermore, Adeleke*(2005)* posited that, electronic information resources greatly increased access to information and its implication must be carefully planned to ensure optimal use of space and time.

Studies on usage of digital resources such as the internet have revealed difference in use. Osunade (2003) Opined that, the internet is like a Pandora's Box, where anyone can put information at any point in time. The amount of information available on the internet means that user tend to be side-tracked with a lot of unnecessary useless information. As the internet is not owned by anyone, there are no checks or censorship of information available. In divergence to this opinion, Tiemo, Bribena and Nwosu (2011) posited that, the information on the internet may be outdated, biased, inaccurate, unreliable, or restricted for access. But good clientele evaluate the validity of information found on the internet, just as they do with print materials. According to Shoeb and Sobhan (2010), for any library clientele to use the internet in the library, he or she must have a password to login for authentication, as authentication is the process of determining the validity of users. In other words, authorization is the process of determining what resources a user is permitted to access. Similarly, Anton, Jones .and Earp (2007), stated the following authorization methods for using the internet. The most common and familiar authentication process is login ID and password based access, log in is also called log on, sign in or sign on, which identifies oneself to the system in order to obtain access. The use of the internet gives users a wide range of opportunities on the creation, processing, transmission and dissemination of information (Chisenga, Siame, Baisley, Kasonka, &Filteau, 2011).

According to Levey (2011), information access is not necessarily the problem but careful utilization is. This is because students do not always understand which information resources are most appropriate for their need. Therefore, users need skills to make comparisons between paper and electronic resources. Ojo and Akande (2005) noted that, students use internet source and email, through the use of computers more than other sources. Other electronic resources used by students include CD-ROMS, e-journals, c-books etc. Thus, Bakare,,Mosuro, &Osibanjo, (2000).affirmed that, for library and information centers, electronic mail can be used to answer questionnaires, organize loans, order journals track library orders. The e-mail has greatly reduced the turn-around time for document sourcing for library users and is also very useful for library discussion groups with other librarians for the purpose of resource sharing. Similarly, Niereuwem and Ani (2008) asserted that electronic mail is another major electronic resource that is very useful in modem library practices in the area of electronic document delivery. Through electronic mail, reference librarians can provide answers to the user's enquiries, without the user coming to the library and any relevant information could also be sent as an e-mail attachment to meet users' demands. So, it is no longer desirable for a library user in University of Calabar for instance to travel to university of Ibadan, to look for information when enquiry through e-mail could help to ascertain the availability or non-availability of such Digital information Resources in that library.

Scotti (2010) asserted that, the use of digital resources kept end users abreast of developments, saved time and money. Information was easily accessible and duplication of research was avoided. In corroboration of this assertion Dolo-Ndlwana (2013) pointed out that, academics and postgraduates made use of digital resources for various purposes and these included gathering information on a specific topic; doing a literature review, obtaining answers to specific questions and gaining general information. However, the most common reason was to retrieve information for academic purposes. The author further posited that, digital recourses play a crucial role in the information retrieval process, and digital resources have rapidly changed the way of seeking and disseminating information. Similarly, Omosekejimi, Eghworo and Ogo (2015) revealed that, though respondents   were aware of the different types of electronic information resources available in the university library the usage rate of these resources is low. The authors further posited that,

information professionals need to pay more attention to making every user aware of the various available digital resource and search strategies so as to promote the use of digital information services in the university. Bankole, Ajiboye and Otunla (2015) opined that, training students in information searching skills by the library the provision of networked computers in departments and colleges, and also lecturers giving assignments that require use of electronic resources would increase the utilization of digital information resources among postrgraduates.

METHODOLOGY

The research design used for this study is descriptive survey design. The Universities are: University of Medical Sciences (UNIMED) Ondo Town. AdekunleAjasin's University (AAUA) Akungba, Akoko and OlusegunAgagu University of Science & Technology (OAUSTECH) Okitipupa. (Formerly, Ondo State University of science and Technology)

The sample size for this study is 175 which is the same as the population size that is all the Postgraduates' students in the universities in Ondo State, Nigeria. The use of the structured questionnaire helped the researchers to determine the level of awareness of Digital Information Resources in various university libraries. The researchers personally used the copies of the final version of the questionnaire was administered to the desired number of users of the library at the time of administration. The data obtained from retrieved copies of the questionnaire was analyzed using descriptive statistics which was   answer all the research questions. One Way Analysis of Variance (ANOVA) F-test associated with multiple linear correlation was used to test hypothesis. The hypothesis was tested at 0.05 level of significance.

Results and Discussions

The data collected for the study was analysed as   they relate to the research questions and hypothesis that guided the research. One hundred seventy-five copies of the questionnaire distributed while 154 was returned.

Research Question 1: What are the Digital Information Resource services available in the University libraries in Ondo State?

Table 1: Digital information resources available in the University libraries in Ondo State

S/N	DIRs	UNIMED	AAUA	OAUSTECH
1.	e- Project	Available	Not Available	Available
2.	e- Conference papers	Not Available	Not Available	Available
3.	e- Journals	Available	Available	Available
4.	e-Technical report	Available	Not Available	Available
5.	e-Reference materials	Not Available	Not Available	Available
6.	e-seminar Papers	Not Available	Not Available	Not Available
7.	e- Conference proceedings	Available	Available	Available
8.	e- Zines	Available	Not Available	Not Available
9.	e-Books	Available	Available	Available
10.	e-Newsletters	Available	Available	Available
11.	e-Grey document	Not Available	Not Available	Not Available
12.	e-Thesis	Available	Not Available	Available
13.	e- Dissertation	Available	Not Available	Available

The table 1 above used observation checklist to show that none of the University libraries has e-Conference papers. At the UNIMED Library, ten types of electronic information resources out of the thirteen types of electronic information resources checked were available. The available electronic information resources in the library are e-Journals; e-Technical report; e-Reference materials; e-Proceedings; e-Zines; e-Books; e-Newsletters; e-Grey document; e-Thesis; and e-Dissertation.

At the AAUA Library, four types of electronic information resources are available. They are e- journals, e-proceedings, e- Books, and e-newsletters. At the OAUSTECH Library, ten types of digital information resources out of the thirteen types of digital information resources checked were available. The available digital information resources in the library are e-Journals, e-Technical report, e-Reference materials, e-Proceedings, e-Zines, e-Books, e-Newsletters, e-Grey document, e-Thesis, and e-Dissertation. The findings show that digital information resources available in university

libraries in Ondo States are e- Projects, e –Journals, e-Technical report, e-Reference materials, e- Conference proceedings, e-Zines, e-Books, e-Newsletters, e-Grey document, e-Thesis, and e-Dissertation and e-Seminar. Data from the available DIRs in the three university Libraries shows that UNIMED and OAUSTECH have more DIRs than AAUA despite it being the oldest State University in Ondo State.

Research question 2: What is the level of awareness of Digital Information Resource among Postgraduate Students in University Libraries in Ondo State?

Mean scores(x) of extent of the level of awareness of electronic information resources *in the institutions*

S/N	Level of Awareness	N	Mean X
1.	e-journals	154	3.73
2.	e-books	154	3.71
3.	Online databases	154	3.69
4.	e-reference materials	154	3.65
5.	Internet search	154	3.62
6.	e-courseware	154	3.62
7.	CD-ROM	154	3.56
8.	e-thesis/ dissertation	154	3.60

Table 2 shows that all the listed level of awareness above were accepted by the respondents as that which they derived from their use of the DIRs as the mean ratings were all above the cut-point value of 2.50. However, "vast amount of information" (mean = 3.73), "online databases for research" (Mean = 3.71) and availability of information (Mean = 3.69) were the three most highly rated awareness.

Research Question 3: What is the extent of utilization of digital information resources among   postgraduate students in university libraries in Ondo State?

Table 3:Mean scores(x) of extent of students use of electronic I information resources (EIRs) in the institutions.

S/N	Electronic Information Resources	Mean	Remarks
1	e-Projects	2.68	High Extent
2	e- Journals	2.60	High Extent
3	e- Reference materials	2.70	High Extent
4	e- Seminar Paper	2.67	High Extent
5	. e- Books	2.62	High Extent
6	e- Newsletters	2.51	High Extent
7	e- Thesis	2.54	High Extent
8	e-Zines	2.06	Low extent
9	e- Conference papers	2.40	Low extent
10	e-Technical reports	2.49	Low extent
11	e- Grey_Document	2.17	Low extent
12	e- Conference proceedings	2.17	Low extent
13	e- Dissertation	2.36	Low extent
	Grand Mean	**2.46**	**Low extent**

The result presented in table 3 shows that postgraduate students use e- Projects; e- Journals, e-Reference materials, e-Seminar papers, e-Books, e- Newsletters, and e- Thesis to a high extent in the institutions, thus the mean scores of 2.68, 2.60, 2.70, 2.67, 2.62, 2.57, and 2.54 respectively. Postgraduates students also use e-zines, e- Conference proceedings, e-Grey document, e-Dissertation, e-Conference papers, e-Technical to a low extent, in the institutions, thus the mean scores of 2.40, 2.49, 2.17, 2.06, 2. 17 and 2.36 respectively. A grand mean of 2.46 shows that students use Digital Information Resources in the University libraries to a low extent.

Research Question 4: What are the constraints against availability and utilization of Digital Information Resources (DIRs) by postgraduate students in University Libraries in Ondo State?

Table 4: Mean scores(X) of students on the constraint faced by postgraduate students in use EIRs

S/N	Digital Information Resources	Mean	Remarks
1	Epileptic power supply	2.96	Agree
2	None availability of online databases	2.69	Agree
3	Inadequate or slow band width	2.98	Agree
4	Inadequate number of computers to access digital information resources in my library	2.57	Agree
5	Network problems	2.63	Agree
6	Lack of skills to access digital information resources in the both local /foreign	2.64	Agree
7	Lack of formal training in Internet use	2.68	Agree
8	Server slowness	2.62	Agree
9	Frequent breakdown	2.52	Agree

The results presented in table 4 show that the respondents agreed that epileptic power supply;   non-availability of online databases, inadequate number of computers to access digital information resources, inadequate bandwidth, Network problems, lack of skill to access digital information resources in local and foreign databases, lack of formal training on internet use, Server slowness and frequent breakdown of digital resources are constraints to students effective use of digital information resources in University libraries, thus the mean scores of 2.96, 2.69, 2.68, 2.57, 2.63, 2.64, 2.68, 2.62, and 2.52 respectively.

This shows that the postgraduate students agree that all the listed nine constraints for accessing electronic information resources were encountered by them as they tried to access the electronic information resources.

Ho1: There is no significant relationship between ways of accessing and the extent of utilization of DIRs in University Libraries.

Table 5: Summaries of simple linear coefficient of relationship (Pearson r) between accessing (X) and the extent of utilization of e-resources (Y) in University Libraries in Ondo State.

V	N	∑	R	MR	DR	Remarks
X	154	8611				Moderate
			0.504	Moderate	Positive	Positive
Y	154	8845				Relationship

Variables (V), Size (n), Summation (∑), Pearson r (r), Magnitude of Relationship (MR), Direction of Relationship (DR) and Remarks

Table 5   shows the coefficient of relationship between accessing and the extent of utilization of e-resources in university libraries in Ondo State. The result from the table shows that the realized coefficient of relationship is 0.504. This result further showed that the magnitude of the coefficient of relationship is moderate while the direction is positive. The magnitude and direction also indicate that as one variable increases, the other variable will as well increase. That is to say that, a positive change in non-print media tools utilization is also associated with a positive change in extent of utilization in University Libraries. The answer to the above question is that there is a moderate positive relationship between accessing and the extent of utilization of DIRs in University Libraries in Ondo State.

Discussion of Findings

The number of available digital information resources in the University libraries studied shows that the three University authorities of Ondo State are weak in terms of provision of the digital information resources in the libraries, although there is need for attention concerning provision of e- Conference papers and provision of the DIRs that are in small number in the libraries. This study is line with Isiakpona and Ifijej(2012) which found out that EIRs are available in Federal University of Agriculture, Babcock and Covenant University Libraries of Ogun State. The findings also show that digital information resources available in university libraries in Ondo State are e- Projects e –Journals, e-Technical report, e-Reference materials, e- Conference proceedings, e-Zines, e-Books, e-Newsletters, e-Grey document, e-Thesis, and e-Dissertation, e-Seminar papers At OAUSTECH are well on -course in terms of provision of the digital information resources in the libraries, although there is need for attention concerning provision of e- Conference papers and provision of the digital information resources that are in small number in the libraries. Finding shows that DIRs are used to low extent in all the university libraries.

The results obtained reveal that students' use the following DIRs to a low extent: e-Zines, e-Conference papers, e-technical reports, e-Grey documents, e- Proceedings and e- Dissertation. The reason is because of inadequate infrastructures and lack of skills among students to access DIRs in the library. This study is in line with Achonna(2008) which found out that access and usage of e-resources among undergraduates was low because of lack of skills; inadequate provision of computers and power outrage and so on were the problems faced in use of e-resources at Yaba College of Technology Library Yaba, Lagos Nigeria.

The result obtained show that there are various factors which hinder students from accessing DIRs in Ondo state University libraries. These factors include epileptic power supply, network problems, and inadequate computer for students, slow bandwidth, lack of skills, and lack of formal training in Internet use, server slowness as well as frequent breakdown of facilities of Internet connectivity. This study agrees with   Imo and Igbo (2011) which identified similar problems in the utilization of DIRS among undergraduates in Nigerian Universities. Among the identified problems are lack of skills and knowledge of digital and electronic resources development and management by librarians, inadequacy of funds for the projects, unstable electricity supply, lack of written policy framework and guidelines for the project, lack of maintenance, fear of copy-right violation, and non- availability of training programmes for up-dating of skills of staff.

Conclusion and Recommendations

Based on the analysis and discussion of the results of this study, the below conclusion are drawn with reference to the research questions. Digital Information Resources (DIRs) are available in UNIMED, Library. In AAUA Library have only four types of DIRs which include: e-journals, e-proceedings, e-books and e-newsletters. Furthermore, DIRs are used to a moderate extent in both University libraries. In AAUA the postgraduate students make use of DIRs to a low extent. Furthermore, DIRs are used to a moderate extent in OAUSTECH. The coefficient of relationship between availability and utilization of DIRs in University Libraries in Ondo State is significant. There is a moderate positive relationship between accessing and extent of utilization in University Libraries in Ondo State, Nigeria. There is a moderate positive relationship between accessing and extent of utilization of DIRs in University Libraries in Ondo State.

The numerous factors that hinder the students from accessing DIRs include epileptic power supply, none availability of online databases, inadequate or slow bandwidth; lack of formal training in the Internet use, network problems, and lack of skills to access DIRs in both local and foreign databases in their library as well as server slowness. The recommendations that are proffered with regards to the findings and conclusions drawn from this study are as follows:

The university managements of UNIMED, AAUA and OAUSTECH should look into the development and growth of the digital library as a matter of urgency through the process of free downloading and subscription of online databases. Some of the available free databases include UNESCO libraries portal, HIGHWIRE (http://highwire.stanford.edu/lists/devecom.dtl, Aluka, Medline(Pubmed), Paperity, Who, Centre For Disease Control And Precention Stack, Eric, Eldis, Popline, Safetylit, ListaOpendoar, Worldcat, etc Database of African Thesis and Dissertations (DATAD), World Digital e-Library (http://elibrary.worldbank.org.), British library of development studies(BLDS) , and EBSCOHOST.

It was argued that lack of skills to access DIRs hinder postgraduate students from making use of e-resources therefore the researchers suggests that management of the four university libraries in the study should try to train their students in up- to-date 21st century skills of Information Communication technologies (ICTs). This will help to solve the problem of poor ICTs skills among postgraduate students.

It was also argued that lack of fund hinder the DIRs availability therefore, the researcher suggest that university management of should provide enough funds, that is government should vote a reasonable amount of fund to education, especially the library system, this will enable the library management buy all infrastructure and equipment needed for a

digital library to work effectively and efficiently. Finally, effort should be made by the University and library managements of the three state universities to minimize the challenges faced by postgraduate students to access electronic information resources.

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