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THE USE OF ELECTRONIC INFORMATION RESOURCES AMONG POSTGRADUTE STUDENTS IN RAMAT LIBRARY UNIVERSITY OF MAIDUGURI, BORNO STSTE-NIGERIA

SA'AD IBRAHIM
Library Department, Federal Polytechnic Bali, Taraba State

Abstract

The study examined the extent of utilizing electronic information resources by postgraduate (PG) students in Ramat Library, University of Maiduguri. The major objective of the study is to ascertain the availability, and extent of utilization of electronic information resources EIRs for research activities by postgraduate students. Quantitative research method was adopted for the study using cross-sectional survey on a sampled 436 postgraduate students from the population of 4,360 in University of Maiduguri, Borno state in 2022/2023 academic session. Questionnaire was used as the instrument for data collection. Random sampling technique was used to select respondents to enables each member of the population have an equal chance of being selected. The data collected from the field was sorted, organized, presented and analyzed using descriptive statistics for the research questions displayed in tables. Also, inferential statistics using Pearson Correlation Coefficient (r) at 0.05 level of significance. The findings revealed a high level accessibility of electronic information resources and high extent rate of utilization for research activities. Postgraduate students access relevant EIRs on the Internet through passwords obtained from the library. E-books and E-Journals, On-line databases and CD-ROM/DVD are used for Field Research purposes to ensure qualitative research. The correlational analysis rejected the null hypothesis which found that availability of EIRs have statistically significant correlation with utilization (r) of 0.997 and a P-Value of 0.044 for enhancing research activities among postgraduate students in Ramat Library University of Maiduguri, Borno State. The general conclusion of the research is that access to EIRs and high extent rate of utilization will significantly enhance research activities to postgraduate students. The study recommended adequate budgetary allocation should be given to the University Library for subscription to online databases and acquisition of electronic books, and organizing users' education for better use of electronic resources in the University.

Keywords: Use, Electronic Information Resources, Postgraduate Students, Ramat library

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Prof. A.I. Mteiye [MALAWI]

Introduction

The 21st Century has experienced a remarkable proliferation of electronic resources (e-resources) which have tremendously change the information seeking attitude of students and researchers globally. In recent times, electronic resources have been identified as the major sources for information dissemination in the universities, especially for researchers. Electronic resources, in most universities, are integral part of the electronic library and stand as vital academic resources that support teaching, learning and research activities (Zhang ye, & Liu, 2011). In a study carried out by Dadzie (2005) on Electronic Resources: Access and usage at Ashesi University College, Ghana, She noted that electronic resources were invaluable research tools. In academia, electronic resources are dominating the research activities of researchers; researchers have realized the importance of such resources (Hadagali, Kumbar, Nelogal & Bachalapur, 2012). Electronic resources provides accurate and timely information, especially for students who depend greatly on the electronic resources for information to advance research and collaboration with other researchers around the world for intellectual growth (Ukpebor, 2012).

The goal of postgraduate study in any university is for further development of graduate students with the spirit of enquiring knowledge through training and research in an atmosphere of intellectual independence and individual creativity with a strong sense of group cooperation (Lateef, Omotoso & Owolabi, 2013). Ndubuisi & Udo (2013), in an empirical study of motivation, challenges and strategies in the use of electronic information resources by postgraduate library users in South-East Nigerian Federal Universities, revealed that postgraduate students were motivated to use electronic resources in their university libraries because they found them to be more informative, easy to access and use, saves time, more useful and less expensive.

Assessment of electronic services by postgraduate students and research scholars, according to Ramana (2006), shows that a large majority of students use online journals for preparing project reports and for listing references. This shows that postgraduate students, irrespective of their field of work, have information needs in their various levels of studies and research.

In spite of perceived availability of electronic resources in universities and their benefits to university education, their effective utilization by postgraduate library users in Nigeria appears to be hampered by different factors (Ndubuisi & Udo, 2013). In a study conducted by Ojo and Akande (2005), they drew a conclusion from their research that the level of usage of electronic information resources among students was low.

Today, it is very common to find electronic resources in most university libraries. However, their availability does not necessary equates their utilization. Availability and utilization of electronic resources is the totality of utilization when needed and their being able to meet the information need of who is using them. The above situation establishes some doubts, in spite of enormous literature review about the availability and utilization of electronic resources in academic libraries. This research would examine the availability of electronic resources in the Modibbo Adama University Library and their utilization by postgraduate students.

An Overview of Electronic Resources

The term electronic resources is seen by Sharma (2009) as library's information materials that are in electronic form which include electronic books (e-books); electronic newspapers (e-

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newspapers); electronic journals (e-journals) as well as Internet resources. E-resources also consist of databases, magazines, archives, theses, conference papers, government papers, scripts and monographs in an electronic form (Deng, 2010). MEDLINE, ScienceDirect, AGORA (Access to Global Online Research in Agriculture), HINARI, OARE (Online Access to Research in the Environment), LexisNexis, Ebscohost were mentioned as examples of databases (Ani & Edem, 2012).

According to Graham (2003) the term "electronic resources" appear not to be used consistently; they may be referred to as electronic information resources (EIR), electronic information resources and electronic library resources. Digital resources, digital materials and soft library resources are other terminologies used for electronic information resources. The importance of electronic resources to students and academic libraries cannot be over emphasized. They offer postgraduate students the chance to access relevant and current information from different subject areas. The emergence of electronic resources, according to Ani & Edem (2012), has tremendously transformed the handling and management of information in Nigerian academic environments and university libraries in particular.

Availability at any time of the day; hyperlinks to other resources; huge information reservoirs; quick information; various search options; easy citations; ease in uploading and updating; ease in storage and dissemination; flexibility; time, space and cost are not major hurdles; ease of archiving are also importance of information resources as noted by Tekale & Dalve (2012). Also, electronic resources reduce pressure on academic libraries for physical storage space for books and journals and provide unlimited access to users (Norris, 2004).

The National Universities Commission (NUC), a government agency in Nigeria, subscribed to a number of international and local journals and made them accessible in Nigerian Universities through its URL link (www.nigerianvirtuallibrary.com) on the internet. Also, NUC, NULIB (Nigerian University Libraries Consortium) and eifl.net (Electronic Information for Libraries Network) are partnering to provide electronic resources towards teaching, learning and research in Nigerian Universities (Okiki, 2012). National Information Technology Development Agency (NITDA), according to Egbe (2014), is developing ICT in Nigerian tertiary institutions through the National Virtual Library Project by setting up virtual libraries and donation of computers and/or internet facilities.

Statement of the Problem

Significant investment have been made in electronic resources and accompanying computer-based technology to ensure access to electronic resources in the University of Maiduguri, Borno state. It is important to find out their extent of utilization. If some electronic resources are not being used or underused, it may be important to know this in order to make recommendation regarding possibilities of improving usage of the resources or cancelling subscriptions. It has been reported that Nigerian universities are lagging behind their counterparts in western countries in terms of research productivity. Part of the problems has been attributed to inadequate modern ICT infrastructural facilities in Nigerian universities leading to low levels of utilization of electronic information resources by postgraduate students. In order to know the cause and make recommendations, the study investigated the use of electronic resources in University of Maiduguri Library, Borno state.

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Utilization of electronic information resources is key to the success of postgraduate studies in any institution and the library plays the central role in making information available and accessible. It is therefore also necessary to find out if University of Maiduguri Library is performing her primarily responsibility of providing e-resources to meet user's information needs, learning and research. It is in the light of the above reasons, that the researcher examined the use electronic resources in University of Maiduguri Library and how they are used by the postgraduate students in learning and research.

Research Questions

1. What Type of electronic information resources available at University of Maiduguri Library Borno state?
2. What is the extent of utilization of the electronic information resources for research activities by postgraduate students in University of Maiduguri Library Borno state?

Hypothesis

Ho: There is no significant correlation between availability and utilization of the electronic information resources by postgraduate students in the University of Maiduguri Library.

Review of Related Literature

Concept of Electronic Information Resources EIRs

The term electronic information resources is seen by Sharma (2009) as library's information materials that are in electronic form which include electronic books (e-books); electronic newspapers (e-newspapers); electronic journals (e-journals) as well as Internet resources. E-resources also consist of databases, magazines, archives, theses, conference papers, government papers, scripts and monographs in an electronic form (Deng, 2010). MEDLINE, ScienceDirect, AGORA (Access to Global Online Research in Agriculture), HINARI, OARE (Online Access to Research in the Environment), LexisNexis, Ebscohost were mentioned as examples of databases (Ani & Edem, 2012).

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Electronic Information Resources in Academic Libraries

In Postgraduate studies, libraries play a fundamental role in providing researchers with current print and electronic resources. This facilitates support for research activities. The advancing digital age characterized with applications, access and use of electronic resources in the research environments for teaching and research is transforming the nature of information use in libraries

Postgraduate researchers involved in research are in need of adequate access to modern electronic resources to support their research activities. Studies such as Aina (2014) on Awareness, Availability and Use of Electronic Databases revealed that only 40 (47.1%) of respondents had fully access to academic journal, Ebscohost and JSTOR databases while Odunlade (2017) found out that there is high level of accessibility but no relationship with utilization. However, Sejane (2017) investigate the access to and use of Electronic Information Resources in the Academic Libraries of the Lesotho Library Consortium shows the e-resources which were mostly accessed to include e-mail, search engines, websites and OPAC, while e-journals, full-text databases, IRs and reference databases were least accessed. In the same vein, Musa, Sahabi, Lawal & Amishe (2017) studied Academic Librarians Research Productivity amidst Open Access Resources indicated that support for accessibility policy was considered very important as their main factor for using Open Access resources with 131 (75.3%) responses, accessibility to publications at no cost with 135 (77.6%) responses while visibility and speed, which exposes OA scholarly works to a large readership were the major factor influencing them to use OA publications with 141 (81%) responses.

However, Song & Song (2017) study on the Availability and Utilization of electronic information resources for Research Development of postgraduate students revealed that the correlation showed that utilization of electronic information resources and enhancements of research development is positive and the study concludes that electronic information resources is necessary for postgraduate students' research activities. The descriptive analysis revealed that very few respondents rated they access Electronic Information Resources from the E-Library and the University e-library Network but there is a very high electronic literacy skill among the postgraduate students who can conveniently access needed information from electronic information resources. The study further showed that electronic information resources facilitate faster and convenient access to relevant information, increase richness of work thereby enhancing research productivity.

From the above review, knowledge gaps were identified, although, empirical studies were conducted but literature on quantitative studies to determine the availability of electronic information resources to facilitate utilization and their relationships with postgraduate researchers

setting on the subject matter seems to be relatively insignificant. Therefore, this study aimed at filling this knowledge gap.

Purpose of Utilizing Electronic Information Resources

Research and the publication of research outcomes are basically the academic routes through which scientists discover new knowledge and use it to consolidate or upgrade the existing knowledge. Other attributes involved in research output could be linked to individual's willingness or commitment to seek information where it is highly available. Priyadharshini, Janakiraman & Subramanian (2015) in their case study in the Agricultural College and Research Institute, Madurai found out that the most frequently used electronic information resources are E-journals (70%); followed by e-books (65%) and online databases (50%), while the least preference given to the use of e-archives and CD ROM databases (5%). In a similar study, Ansari & Bushra (2010) surveyed the use of electronic information resources in Karachi and found out that about one-third of respondents use electronic resources for research while one-quarter to one third use it to prepare lectures and gain subject knowledge, Electronic resources are mostly used for research and lecture preparation. Alhassan & Macaulay (2015) found out the purpose of utilization of the electronic information resources as enabling access to current and up-to date information, faster and easier access to information, and access to a wider range of information. Gakibayo, Ikoja-Odongo & Okello-Obura, (2013) study found out that although Mbarara University library subscribes to a number of databases including Emerald and EBSCO, 57.5% of the respondents agreed that the available electronic information resources help them to access a wider range of information which provides full-text journal articles. This review also identified a knowledge gap of insignificant works on the relationships between the electronic information resources and the purposes for which they are being utilized for research activities particularly among Nigerian postgraduate students as the subject matter. Therefore, this study aimed at filling this knowledge gap.

Research Methodology

The research approach used in the study was quantitative approach, due to its strength on objectivity and testing of hypotheses. The Cross – Sectional Survey was adopted for the study. This research design enables a researcher to find out the relationship between measures of different variables obtained at the same time. The targeted population for the study comprised of 4,360 post graduate students of University of Maiduguri Borno state in 2022/2023 academic session. Neuman (2006) opine that for equal accuracy a researcher can select 10% of population above 1,000 and 30% of population below 1,000. Based on this sample specification, 10% sample size was used for postgraduate students in the university because they are more than one thousand. Simple random sampling techniques was used to select 10% of post graduate students relative to their population, totaling 436. The selection was 436 from 4,360 postgraduate students.

The instrument used was a 4 point Likert-type scale User evaluation questionnaire divided into sections A and B. Section A sought demographic information while section B assessed the data related to the research questions of the study. The researcher also visited the Electronic/Digital Library where observations were made with regards to the utilization of electronic resources by postgraduate students. Structured questionnaire was used to collect data for the study. In order to ascertain the validity of the research instrument, face and content validity test was carried out, while for reliability of the instrument, Cronbach's Alpha Coefficient was used in order to obtain the

reliability coefficient suitable for the study. SPSS Version 23.0 was used to test the reliability index of the research instrument. This yielded a coefficient value of 0.76 which signifies that the instrument is reliable to elicit the data required for the research. The data collected was analyzed using descriptive and inferential statistical methods. The null hypotheses was tested using Pearson Correlation Coefficient (r) at 0.05 level of significance.

Presentation of Data, Results and Discussion

Table 1: showing the Type of Electronic Information Resources Available for post- graduate students in Ramat Library, University of Maiduguri

Type of Electronic Information Resources	Post-graduate students	
	Mean	***Std Deviation***
E-dissertations, E-books and E-Journals	4.00	.634
Current Awareness Services (CAS) to enquire about status of newly subscribed EIR databases	3.42	.658
On-line databases and Scholarly Websites	3.56	.645
Offline Library Repository (such as D-Space)	2.81	.752
CD-ROM/DVD Searching Service	3.26	.671
Selective Dissemination of Information (SDI) for online reference services on EIR	3.10	.732
Online Public Access Catalog (OPAC) services to access databases	3.48	.710
Photocopy, Printing and Scanning Services	2.11	
Internet Resources	4.00	.634

Source: Field Survey, 2023

Respondents opinion of the electronic resources available in Ramat Library, University of Maiduguri as shown in table 1 revealed that respondents were aware of the readiness of E-dissertations, E-books and E-Journals with the mean score of 4.00(SD=.634) and Internet Resources 4.00(SD=634), followed by On-line databases and Scholarly Websites with the mean score of 3.56(.645). However, 3.48(SD=.710) and 3.42(SD=.658) of postgraduate students attest to Online Public Access Catalog (OPAC) services to access databases and Current Awareness Services (CAS) respectively. The popularity of E-dissertations, E-books, E-Journals and internet resources among the respondents may have been influenced by the engagements in postgraduate activities which is dominated by research. With the presence of Internet and WIFI within and around Ramat Library, University of Maiduguri, registered students had access to Internet resources without entering the Electronic Library complex. More so, users find it more convenient using search engines which gave them access to Internet resources. It is possible that the convenience of access to Internet resources through search engines increased the awareness and utilization of electronic books by postgraduate students in Ramat Library, University of Maiduguri. The higher awareness of databases is an indication that postgraduate students are well familiar with the databases available in Ramat Library, University of Maiduguri. This is in agreement with the findings of Dahiru & Mohammed (2020) who discovered that research scientist regularly access the online subscribed

databases like HINARI, EBSCOHOST, JSTORE, QUESTIA and HIGH BEAM. On-site visit to the Library record revealed that, the Library had access to the following databases: Ebscohost, Science Direct, Nigerian Virtual Library, Nexis Lexis, Dialog Database, Datastar Database, HINARI, AGORA, TEEAL, OARE, ACM, OAPEN, OAJSE, AJOL, SAGEOPEN, Springer Open and ARDI. The Modibbo Adama University Library website had access link to HINARI, AGORA, EBSCOHOST, TEAL, Nigerian Virtual Library and Science Direct. However, as at the time of the visit, the Library had access only to Science Direct, Nigerian Virtual Library, HINARI, OARE, OAPEN, OAJSE, AJOL, SAGEOPEN, Springer Open and TEEAL. Others (i.e. Ebscohost, AGORA, Nexis Lexis, Dialog Database, ACM, ARDI and Datastar Database) could not be accessed because their subscription had expired.

Table 2: Showing the extent to which postgraduate students utilize the electronic information resources in Ramat Library, University of Maiduguri for their research work?

S/N	Utilization of EIRs	VHE	HE	LE	NA	Mean	Std Deviation
1.	E-dissertations, E-books and E-Journals	226	0	0	0	4.00	.635
2.	Current Awareness Services (CAS) to enquire about status of newly subscribed EIR databases	115	62	34	15	3.26	.659
3.	On-line databases and Scholarly Websites	122	68	31	5	3.63	.644
4.	Offline Library Repository (such as D–Space)	98	82	34	12	3.49	.655
5.	CD-ROM/DVD Searching Service	118	66	35	7	3.54	.649
6.	Selective Dissemination of Information (SDI) for online reference services on EIR	56	82	66	22	2.30	.726
7.	Online Public Access Catalog (OPAC) services to access databases	40	92	70	24	2.25	.710
8.	Photocopy, Printing and Scanning Services	90	78	42	16	3.34	.652

Source: Field Survey, 2023

Key:
VHE = Very High Extent **HE** = High Extent **LE** = Low Extent **NA** = Not Applicable **UN =** Undecided

Table 4 represents the extent of utilization of electronic information resources by Postgraduate students. From the analysis on the table, it was revealed that the respondents indicated they utilize E-dissertations, E-books and E-Journals with the mean score of 4.00 (SD=.635), On-line databases and Scholarly Websites with 3.63(SD=.644) and CD-ROM/DVD Searching Service with mean score of 3.54(SD=.649) for research. Current Awareness Services (CAS) 3.26 (SD=.659), Offline Library

Repository (such as D–Space) 3.49 (SD=.655) and Photocopy, Printing and Scanning Services 3.34(SD=.652) are also highly utilized. The analysis also shows that Selective Dissemination of Information (SDI) for online reference services with mean score of 2.30(SD=.726) and 2.25(SD=.710) Online Public Access Catalog (OPAC) services to access databases are not significantly utilized by the Postgraduate students.

The finding of the analysis is supported by Priyadharshini, Janakiraman & Subramanian (2015) in their case study and found out that the most frequently used electronic information resources are E-journals (70%); followed by e-books (65%) and online databases (50%), while the least preference were given to the use of e-archives and CD ROM databases (5%). The finding contrasted the work of Sejane (2017) who submitted that EIRs are rarely utilized, only 12 (30.8%) respondents indicated e-journals were the most used resources and only four (10.3%) indicated CDROMs. This low rate of utilization was as a result of lack of accessibility of the resources.

Hypothesis 1: There is no significant correlation between availability and utilization of electronic information resources in Ramat Library, University of Maiduguri by postgraduate students.

		Availability	Utilization
Availability	Pearson Correlation	1	.997*
	Sig (2-tailed)		.044
	N	3	3
Utilization	Pearson Correlation	.997*	1
	Sig (2-tailed)	.044	
	N	3	3

*Correlation is significant at the 0.05 level (2-tailed).

The analysis of hypothesis 1 revealed a Correlation Coefficient (r) of 0.997 and a P-Value of 0.044. The result indicates that there was a strong positive correlation (or relationship) between the availability of electronic resources and utilization of the electronic resources in Ramat Library, University of Maiduguri i.e. the strength of association between the variables was very high. The implication was that an increase in the availability of electronic resources in the Library would lead to an increase in their utilization.

The correlation between the availability and utilization of electronic information resources in Ramat Library, University of Maiduguri was significant at 0.05 level. Because of sufficient evidence in the sample (i.e. $P \leq 0.05$) in favour of H1, Ho was rejected. It was therefore concluded that there was a significant correlation between availability and utilization of electronic resources in Ramat Library, University of Maiduguri by postgraduate students.

Conclusion

It is the researchers' view that the study has succeeded in answering its research questions. The general conclusion of the research is that electronic information resources EIRs are available with high extent rate of utilization of the resources which significantly enhance research activities among postgraduate students in Ramat Library, University of Maiduguri. The study further concludes that postgraduate students' access relevant EIRs on the library's network through passwords obtained from the library for their research activities and that policies on access and

use of EIRs are effective for research activities. Postgraduate students were aware and utilized them. Though, the use of electronic information resources was slow compared to the investment made in electronic information resources.

However, the awareness and utilization of online databases was significantly very low among postgraduate students in Ramat Library, University of Maiduguri. Lack of computer skills and slow network were the major reasons that discourage some postgraduate students from effective utilization of electronic information resources in Ramat Library, University of Maiduguri.

Recommendations

In view of the findings of the study, the following recommendations were made to improve on the utilization of electronic information resources in the University Library:

1. The Library Management should create awareness on the electronic resources available in the University Library and its importance to postgraduate studies. Users should be made to understand that even if they cannot use a computer system, staff would assist them to meet their information needs.
2. The study observes that the more enabling access points to electronic information resources, the better increased rate of utilization of the resources by postgraduate students. Thus, Ramat Library, University of Maiduguri should provide more access point and improve the networking facilities within the campus for the enhancement of effective utilization of EIRs in research activities.

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