AVAILABILITY AND UTILIZATION OF ELECTRONIC INFORMATION RESOURCES BY POSTGRADUATE STUDENTS IN SELECTED FEDERAL UNIVERSITY LIBRARIES IN SOUTH-EAST NIGERIA.

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ABSTRACT

Purpose: this study was to investigate the availability and utilization of digital information resources in selected federal university libraries in south-east Nigeria.

Design/Methodology/Approach: The descriptive survey research was adopted for this study. four objectives and four research questions were formulated to guide the study. The population for the study consisted of 2,100 registered postgraduate students (1,300 UNN and 800 UNIZIK postgraduates) from the 2 selected federal universities in Enugu and Anambra states. A purposive sampling technique was used to select 10%(210) of the UNN-130 and UNIZIK-80 postgraduate students. Instrument for data collection included a well -structured Questionnaire and an observation checklist. Two hundred and ten copies of questionnaire were distributed to the respondents with a return rate of 96%. The study used frequency count percentage, mean scores and ranking as statistical measures for data analysis.

Findings: the result revealed study showed that digital information resources like e-conference proceeding, e-newsletters, e-journals, e-thesis, etc are available in University of Nigeria Nsukka and Nnamdi Azikiwe University libraries. Although e-database/ repository was revealed to be the highest when compared to others. It was also revealed that postgraduate students of the both universities utilize these resources to a great extent and that it provides for the research needs

Implication: Suggested solutions to the challenges in the provision of electronic resources for the postgraduate students include provision of power generating set, training of library staff in the use of ICT facilities

Originality/values: it was recommended that the University management should ensure that 10% of the university budget goes to the library for the provision of information resources and more especially digital/electronic information resources. Major administrative challenge is in complying with the copyright and intellectual property rights issues.

Keywords: Availability of Electronic Resources, Utilization of Electronic resources, Electronic Resources, University library, Postgraduate students

Paper type: Empirical Research

Introduction

The 21st century has experienced a remarkable proliferation of electronic information resources which have tremendously changed the information seeking attitude of researchers globally. In recent times digital/electronic resources e.g. e-book, e-journals e-conference papers etc, have been identified as one of major sources for information dissemination in the private and public universities in Nigeria. Digital information resources, in most universities, are integral part of the electronic library and stand as vital academic resources that support teaching, learning and research activities (Zhag ye and Liu, 2011). In a study carried out by Dadzie (2005) on electronic resources: access and usage at Ashesi University College, Ghana it was noted that electronic resources were invaluable research tools.

Electronic information resources have been emphasized by many and developed progressively since the early 1990s. Responding to this kind of resources, many countries have begun to

study and create advanced manage models for digital libraries. These models try to make reference to the advantages of search engines and avoiding the inherent weakness of them, to realize digital libraries culture and social value (Men-Xing, chun-Xiao &Yong, 2010).

The goal of post graduate studies in any university is for further development of graduate students with the spirit of acquiring knowledge through training and research in an atmosphere of intellectual independence and individual creativity with a strong sense of group cooperation (Lateef, Omotoso and Owolabi, (2013). Postgraduate students are students who have completed an undergraduate degree and are pursuing further study like M.sc, M.Phil or Ph.D . This group of people are kin in having information resources readily available for them in the universities library for teaching, research and other scholarly works.

University libraries have experienced exponential growth of information on the internet and related sources coupled with increased usage has led to the development of digital library systems that provide numerous services. Central to the system is massive digitalization, storage, access, knowledge mining, digital reference service, electronic information resources, search coordination, management and access of archive materials (Sharma and Arora, 2005). Libraries have traditionally been part of the global information infrastructure an ideological and cultural force with far reaching implications in society. Over centuries libraries have collected, maintained, organized and provide access to information and knowledge resources that enable individual, organizations and communities to achieve institutional goals and objectives. Libraries today continue to mobilize and provide access to local and global knowledge for social, political and economic development. In doing so libraries act as a gateway for information and tools for bridging the information divide within countries and between centuries (Kavulya, 2007).

University libraries as fountains of knowledge provide services to support learning and research activities to the parent organizations. University library is attached to higher education institutions which serve two complementary purposes- support the school's curriculum, and support the research of the university faculty and students. The mission is to provide quality information resources/ services and knowledge product (print and electronic) to scholars. The Canadian Association Research Libraries (CARL) report revealed that in the year 2000/2001 academic libraries subscribed to 436,731 electronic journals. The same report also state that librarian are leaders in using technology to transform traditional library resources and services to meet the challenge of the 21st century. University library is not static free-standing unit but ultimately adapt to global trend. Its strength must be judged by the quality of outcomes (students) of the institution.

Electronic Information Resources (EIRs) connotes those information resources which before now were in print form, but currently found in non-print form (soft copy) and are accessible through computer machines and other corresponding ICT tools (Obaseki, Umeji & Krubu, 2010). Similarly, Digital Information Resources(eIRs) include musics, games, stories, articles from magazines, published journal, books, encyclopedias, pamphlets, cartographic

materials and other published resources that are in soft copies. They also often include sound animated graphics, pictures and movies.

In spite of perceived availability of digital/ electronic information 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 and Udo, 2013). In a study conducted by Ojo and Akande (2005), they drew conclusion from their research that the level of usage of electronic information resources among students was low. It is gratifying to note that most university libraries in Nigeria have embraced digital system in library activities and services. It is also fair to say that ICT architecture (hardware) can be found in every University libraries in Nigeria, though in varying degrees. Internet connectivity can also be found in almost most libraries in Nigeria presently. (Womboh and Abba, 2008) yet library patrons do not get sufficient services delivery. The question is, are these facilities and resources available to be used by the students. Hence, they resort to other information centers. It is against this background that this study is being conducted to know the extent of availability and utilization of digital information resources by postgraduate students.

Statement to the Problem

Digital information resources are essential for academic and research activities especially at the postgraduate level. However, the extent to which these resources are available in Nigeria Universities and their effective utilization by students calls for further investigation. If the available digital information resources are not effectively utilized, it would amount to wastage of resources and poor research productivity. It is important to know this so as to avoid wastage of resources, make recommendation regarding possibilities of improving usage of the resources or cancelling subscriptions. In today's global economy, successful societies are those that develop, disseminate and apply knowledge and adapt flexibility to ever more rapidly changing circumstances. It has been believed though not proven 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 availability and utilization of electronic information resources for postgraduate programmes. Availability and utilization of digital information resources are vital to the success of postgraduate studies which are the main stay of research in any institution and library plays a major role in making the information available and accessible. It is therefore, necessary to find out if the University of Nigeria, Nsukka and Nnamdi Azikiwe University libraries are performing their primary responsibility of providing digital information resources to meet the need and the level of usage of such by Post-graduate students.

It is in the light of the above reasons, that the researcher was moved to carry out this research on the availability of electronic information resources in UNN and UNIZIK and how they are used by postgraduate students in learning and research.

Purpose of the Study

The main purpose of this study was to ascertain the availability and utilization of digital information resources in selected

Federal University Libraries in South East Nigeria.

The study specifically intends to:

1. find out the digital Information resources available in University of Nigeria Nsukka and Nnamdi Azikiwe Univertsity, Awka libraries,
2. ascertain the extent of utilization of digital information resources by Postgraduate. students in University of Nigeria and Nnamdi Azikiwe University libraries,
3. ascertain the extent the digital information resources have provided for the research needs of the postgraduate students and
4. find out the challenges faced by Postgraduate students in utilization of digital information resources.

Scope of the study

This study was centered on the availability and utilization of digital information resources by Postgraduate students and is intended to cover two federal universities in South-East Nigeria namely University of Nigeria Nsukka and Nnamdi Azikiwe University, Awka. The respondents are registered postgraduate students of the libraries for 2022/2023 and 2023/2024 academic sessions, of the selected Universities libraries.

Literature Review

Concept of Digital /Electronic Resources

The term digital/electronic resources is seen by Sharma (2009) as library's information materials that are in digital form which include electronic books (e-books); electronic newspapers (e-newspapers); electronic journals (e-journals) as well as internet resource. E-resources also consist of databases, magazines, archives, thesis, conference papers, government papers, scripts and monographs in an electronic form (Deng, 2010). Medline Science Direct, 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 and Edem, 2012). According to Graham (2003) the term "electronic Resource" 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 resource 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 and Edem (2012), has tremendously transformed the handling and management of information in Nigerian academic environments and university libraries in particular.

The National University Commission (NUC), a government agency in Nigeria, subscribes to a number of international and local journals and made them accessible in Nigerian Universities through its URL link (www.nigerianvirtuallibnrary.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.

Utilization of Digital Information Resources (DIRs)

In this digital era, any student at the higher level who intends to better achieve and go further in academics should have the ability to explore the digital environment. Adeyinka, Adedeji, Ayen, and Omoba, (2008) stated that students' ability to find and retrieve information effectively is a useful skill for their future life as well as enabling the positive and successful use of the digital resources while at school. Students' use of information systems can be in the form of communicating or posting of information or material by way of electronic mail, bulletin boards, world wide web or other such electronic tools (Mischnick, 2000). Digital information resources serve as a motivating factor to students as it provides them the opportunity to transmit, acquire or download process and disseminate information on a subject of interest. Digital information resources offer students greater opportunities that are quite different from their predecessors (Ray & Day, 2003). Other uses according to Ray and Day include the fact that "digital information resources are often faster than consulting print indexes, especially when searching retrospectively and they are straight forward when wishing to use combination of keywords. They open up the possibility of searching multiple files at one time, a feat accomplished more easily than when using printed equivalents. It could be said that "improved data transmission facilities will go a long way to reduce the incessant hardship faced by students in the acquisition and generation of data which serves as the basis for research and academic performance improvement (Day and Bartle,

2003). This is because the use of digital information by students of today enhances their performance in academic activities.

Furthermore, Day and Bartle, (2003) revealed that the academic community has accepted that electronic information resources have an impact on their work. However, services currently available to academic staff and students are not being used to their full potential and some are hardly being used at all. Waldman (2003), when drawing inference from Bandura's position, asserted that "students with high self-efficacy regarding computers would also be more likely to explore new technologies, software or databases.

Constraints to the use of digital information resources

A lot of factors identified as constraints to the use of digital Information Resources (DIRs) have been seen in library and information science literature. Imo and Igbo (2011) identified the following problems such as lack of skills and knowledge of digital and electronic resources development and management by librarian, inadequacy of funds for the projects, unstable electricity supply, lack of written policy framework 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. They further pointed out that funding has been identified as the most crucial factor for success in every initiative including digitization project. Owoeye and Oguntuase (2008) identified the problems of DIRs uses by students as technical problems that is, poor telecommunication links, trained technical staff to help students are inadequate, poor attitude to the training of professional staff, and administrative problem. Imo and Igbo (2011) citing Rosenberg (2009) identified lack of funds among students to buy airtime

to access the digital information resources, and lack of written policy framework on the part of the academic libraries, non-availability of training programmes for updating staff skills in order to meet needs of students that are ICT illiterate, high and power supply. Barttle and Walton (1999) reported that students have problems with access to Digital Information Resources (DIRs), according to them; there are still insufficient computers in most institutions for the number of students who want to use them, especially at peak times.

Inadequate provision of personal computers can make it difficult for people to access DIRs. Bazillion (2009) identified some problems encountered by the digital information consumer. Who is confronted with the problem of retrieval; apart from the experienced researchers, novice retrievers are faced with the dilemmas of precision versus recall of noise and of deciding on the validity of source; the multiplicity of access points to information- TV, newspapers, consumer magazines, learned journals, radio, Internet, PDA, online services- confuses the consumer and leads to breakdown in trust and information dissonances; all electronic media (including analogue broadcasts) in comparison with print media are difficult to navigate and reference as they are two dimensional, whereas print is three-dimensional, because the shape of the whole experience can be successfully deduced from the physical form; for example even the briefest knowledge of a print newspaper which is not usually indexed at primary use level leads the consumer to an understanding of what they will find and where, in relatively standard formula but digital formats, and the web in particular, have a tendency to break down this easy familiarity and leave the consumer floating in a sea of uncertainty- the consumer responds by losing trust and withdrawing loyalty; with new players coming in all the time, authority is plainly up for grab; it is difficult to determine ownership due to the fact that there are so many parties associated with the production of digital information service.

(Chisenge, 2006) observes that, ICT infrastructure in most of the institutions and organizations are not up to the desired level so as to run advanced digital library services to the optimum level. Koehn and Hawamdeh (2010) argue that there are cultural issues at play also as the "increasing quantity of born-digital material and the growing preference of users for digital information access are forcing libraries to rethink the strategy in managing financial resources and serving the greater community" he stated. Further, Koehn and Hawamdeh in a research conducted involving telephone interviews with just under 4,000 members of the public concluded that "the Internet was overwhelmingly preferred over the library for the majority of users, many of which fall under the library's traditional mission of information provision". In most libraries paper based documents outnumber the electronic subscriptions and acquisitions. Some of the libraries need retro conversion and digitization of the library holdings too.

Several studies show that there is severe lapse on the libraries with regard to proper planning of information resources that are conducive for developing digital libraries (Lui, 2011; Kao & Wu, 2012; Chowdhury, 2010; & Matusiak 2012). Electronic information resources penetrate libraries in multiplicity of complex formats and with different access terms and conditions. These information resources are scattered and distributed across a wide variety of publications. Major administrative challenge is in complying with the copyright and intellectual property rights issues.

The digital library services face constant threat of "techno obsolescence" and transitory standards. Magnetic and optical discs as physical media are re-engineered to store more and more data. There is constant threat to backward compatibility for products that were used in the past. Digital images have to be constantly migrated and converted to new formats computing devices, storage media and software to ensure that valuable digital objects are not left behind in obsolete system which eventually breaks down rendering data inaccessible. The initial conversion of printed-text into digital objects is not only expensive but also necessitates diversion of manpower and resources into constant re- invention of wheels in terms of migration (Chowdhury, 2010).

A few studies closely related to the present research include the work done by Nwabueze (2009). The study was on the utilization of ICT for effective library services delivery in Nigeria Army training school. The aim of the study was to ascertain the type of ICT facilities available; services offered with the use of ICT; the extent of contributions of the ICTs in the libraries; to identify the factors that enhance the utilization of ICT, identify problems and proffer strategies for effective utilization of ICT. A descriptive survey research design was adopted using questionnaire and checklist for data collection.50% of the population, was used comprising of all library staff and the students of three military institutions. The questionnaire was divided into six (6) sections. Face –to- face administration of the questionnaire and assistance of research assistants were used. The data collected were analyzed using frequency counts, simple percentages and mean.

The finding indicates that fifteen facilities are available while five facilities are not available. The findings also shows that the various services offered with the use of ICT have contributed to the qualitative services delivery in the libraries.

Ekwelem, Okafor and Ukwoma (2009) carried out work on "Students use of electronic Information Resources (EIRS) at the University of Nigeria, Nsukka". Results from the study showed that 52.3% of the respondents agreed that electronic Information Resources (EIRS) provide reliable access to information resources, while 92.5% of them rated the Internet as their most preferred electronic Information Resources (EIRS). Another finding from the study is that 3.7% of the students preferred CD-ROM, and almost all the students spent about 40-60 minutes which is about 31.2% in searching for EIRs. Finally, the study found out that the main barriers to the use of EIRs by students includes - finance, inadequate skill, inadequate bandwidth and epileptic power supply.

Ray and Day (2003) surveyed the use of electronic resources, how students feel about various issues surrounding electronic resources. The research instrument used to collect data was questionnaire and descriptive survey was adopted as a design. Simple percentage and frequency count were used to analyze the data. Findings revealed that 91% of respondents acknowledged access to a networked computer via university, 54% acknowledged access at home as well as university; that the most popular electronic resources were CD - ROMs. While 37.5% of the sample population used e-journals as an information retrieval tool; only 46% of respondents claimed to use OPACs; that c-information has improved their academic career by providing them access to current up to date information, easier access to information, faster access to information, access to a wider range of information (in ascending order)

In a related work, Okorie (2010) studied "Evolution of virtual libraries in Nigeria: Myth or Reality". Descriptive survey method was used for the study. Findings of the study showed that hindrances to the implementation and use of automated libraries are inadequate infrastructure, limited number of terminal, inadequate technology skills and incessant power outages. The study finding also revealed that 64% of the university libraries have relevant information infrastructure such as telephone, VSAT and radio link to support the evolution of virtual libraries. However, only 29% had website on the internet. The study concluded that Nigeria universities have facilities to provide enhanced information service delivery. Hence, library automation is not a myth but reality. Similarly, Williams (2008) carried out a study on the utilization of ICT facilities in Nigeria university libraries. The aim was to investigate the types of ICT facilities used for the provision of library and information services. He identified the ICT facilities from the findings as follow: computer, printers, microfilms, photocopier, video tapes, CD-ROMs, databases and microfiche. The findings revealed that, there is no difference between Southern and Northern university libraries in their utilization of ICT facilities with respect to location. The researcher recommended the installation of ICT facilities and appointing of monitoring committees in university libraries to ensure the maintenance and repair of broken ICT facilities for effective utilization. This work is related to the present study regarding the use of digital system facilities in university libraries but the scope is wide and did stress on availability of the resources.

METHODOLOGY

Research Design

The research design adopted was descriptive survey design. Descriptive survey research design is a design in which data are gathered from a sample of population or the whole population for subsequent analysis and for explaining and interpreting trends that are evident. (Nworgu, 2015). The design enable the researcher to collect original data and be able to describe the conditions in which they exist in their natural setting. It will also help to homogenize the population and afford the respondents equal chance of being chosen for the study.

Population for the study

The population for the study consists of all the 2100 registered postgraduate students in the selected federal universities (UNN-1,300 and UNIZIK-800) libraries in Enugu and Anambra state of Nigeria. The population of postgraduate students registered with the libraries from 2022/2023to 2023/ 2024 academic session was large enough for a sample to be brawn from.

Sample Size

The sample size was two-hundred and ten (210) postgraduate users drawn from the two federal universities. To determine the sample size, the researcher used ten percent (10%) of registered users in each of the federal university libraries under study. This 10% is in line with Uzoagulu (2011) who states that if the population for the study is known and it is made up of different groups, each group receives allocation based on its proportion to the population.

Instrument for Data Collection

The instrument for data collection was a researcher's developed questionnaire and an observation guide/checklist.

Methods of Data Collection

The researcher administered the instrument directly to the respondents. The questionnaire was retrieved after a week interval. There was a 91% return rate. Out the 210 postgraduates, 192 copies of the questionnaire were retrieved.

Data Analysis

The data generated from the questionnaire were collated, presented and analysed using mean and standard deviation to answer the research questions. The calculated mean score was computed using the following formula below.

$$(\overline{X}) = \sum \frac{FX}{N}$$

Where X = Mean

$\overline{\sum}$ = Summation

F = Frequency

X = Score

N = No of scores

The weight of the response options of the questionnaire items thus:

SA/VGE/VH = 4

A/GE/H = 3

D/LE/FH = 2

SD/VLE/NH = 1

The criterion mean is to be computed using four options

$$\frac{4+3+2+1}{4} = \frac{10}{4} = 2.5$$

Very great extent/Strongly Agree/very Helpful = 3.50-4.00

Great extent/Agree/Helpful = 2.50-3.499

Low extent/Disagree/Fairly Helpful = 1.50-2.499

Very low extent/ strongly disagree/Not Helpful = 1.00-1.99

However, a mean of 2.50 was adopted as a decision rule for the analysis of the data collected. An item with the mean of 2.50 and above was regarded as being to a great extent/helpful while item below 2.50 were regarded as being to a low extent/not helpful questionnaire while the calculated mean scores were gotten using the raw data generated using SPSS (statistical package of the social sciences). The null hypotheses postulated for the study were tested for significance using t-test statistics at 0.05 level of significant. Thus, the null hypothesis was significant if the calculated t-test was less than the t-table, and not significant if the calculated t-test is equal or greater than value at 0.05 level of significance.

RESULTS: The data obtained for this study were analyzed and presented based on the research and hypotheses that guided the study. Out of 210 copies of the Questionnaire distributed, 192 copies were duly completed and returned. This shows (91%) return rate. Analysis was based on the returned questionnaire (192).

Research Question 1:
Digital Information resources available in the selected Federal Universities?
Table 1:

S/N	NUMBER AVAILABLE

	DIGITAL INFORMATION RESOURCES	UNN	UNIZIK	TOTAL
1	E-book	7,732	5,800	13,532
2	E-electronic database or repositories	15,201	7,019	22,300
3	E-journal	8,411	7,200	15,611
4	E-newsletter	2,550	2,100	4650
5	E-seminar paper	3,802	3,503	7,805
6	E-conference proceedings	2,672	1,951	4,623
7	E-technical papers	2,599	1,820	4,419
8	E-thesis	8,460	6,355	14,815
9	E-project	3,320	3,100	6,320
10	E-grey document	1,138	1,308	2,146
11	E –reference material	2,739	2,400	5,139

Source:(E-library register)

The observation checklist shows that the selected federal university libraries have the digital information resources itemized above. It was observed that the UNN and UNIZIKS libraries have digital library that cater for the information needs of students of the University. Both University libraries are equipped with computers, Internet and digital/electronic information resources which could be accessed through the internet. The above result is an indication that digital information resources are available in University of Nigeria Nsukka and Nnamdi Azikiwe University Libraries. The digital information resources available are E-database or repositories (UNN-7,732. UNIZIK 5,800) followed by E- journal (UNN-8,411. UNIZIK-7,200.15,) E-thesis (UNN-8,460. UNIZIK 6,355) etc.

E-database or repositories were found to be highest in number, while grey document was the lowest when compared to others.

S/N	DIGITAL INFORMATION RESOURCES	UNN (114)			UNIZIK (78)		
		$\overline{X}$	SD	Dec	$\overline{X}$	SD	Dec
1.	E-book	2.91	0.86	GE	2.51	0.89	GE
2	Electronic Databases	3.22	0.81	GE	2.62	0.91	GE
3	E-journal	2.96	0.93	GE	2.84	0.93	GE
4	E-Newsletter	2.63	0.99	GE	2.76	0.92	GE
5	E-Seminar Papers	2.50	0.84	GE	2.92	0.84	GE
6	E-Conference Papers	2.53	0.92	GE	2.48	0.99	GE
7	E-Technical Papers	2.32	1.01	LE	2.61	1.02	GE
8	E-Thesis	2.86	1.05	GE	2.53	1.05	GE

S/N		X̄	SD	Dec	X̄	SD	Dec
9	E-Project	2.95	0.98	GE	2.55	0.95	GE
10	E-Grey Document	2.28	1.06	LE	2.45	0.98	LE
11	E-Reference Material	2.81	0.95	GE	2.25	1.04	LE
	Grand Mean & SD	**2.72**	**0.94**	**GE**	**2.61**	**0.95**	**GE**

Table 2: Mean score (x) of the extent to which postgraduate use digital information resources (DIRs) in the institution.

Table 2. shows that the means score for UNN postgraduate students range from 2.28 to 3.22 with a grand mean of 2.72 and standard deviation of 0.94. The grand mean of 2.72 shows that UNN postgraduate students utilizes digital information resources to a great extent. The mean scores of the UNIZIK postgraduates range from 2.25 to 2.92 with a grand mean of 2.61 and standard deviation of 0.95. The grand mean of 2.92 also shows that UNIZIK postgraduate students utilizes digital information to a great extent. It simply denotes that UNN and UNIZIK postgraduate students responded to great extent to the items in table 2. Thus, the UNN and UNIZIK postgraduate students responded to a great extent that they utilized digital information resources in the University libraries.

Research Question 3:

Table 3: Mean scores (x) of the extent to which Digital Information Resources provide **postgraduate students research needs.**

S/N	DIGITAL INFORMATION RESOURCES	UNN (114)			UNIZIK (78)		
		X̄	SD	Dec	X̄	SD	Dec
1	E-book	3.24	0.99	H	2.98	0.85	H
2	Electronic Databases or Repositories	3.42	1.05	H	3.10	0.92	H
3	E-Journals	3.73	0.85	VH	3.22	0.89	VH
4	E-Newsletter	2.54	0.92	H	2.50	0.91	H
5	E-Seminar Papers	2.60	0.98	H	2.65	0.83	H
6	E-Conference Papers	2.50	0.94	H	2.66	0.84	H
7	E-Technical Papers	2.41	1.03	FH	2.10	1.05	FH
8	E-Thesis	3.49	0.87	H	3.11	1.07	H
9	E-Project	2.46	0.88	FH	2.44	0.97	FH
10	E-Grey Document	2,45	0.91	FH	2.12	1.06	FH
11	E-Reference Material	2.77	1.04	H	2.56	0.99	H
	Grand mean and SD	**2.87**	**0.95**	**H**	**2.67**	**0.94**	**H**

Table 3 shows that the mean scores for UNN postgraduate students range from 2.41 to 3.73 with a grand mean of 2.87 and standard deviation 0f 0.95, the grand mean of 2.87 indicates that the digital information resources are helpful to postgraduate students

of UNN. the mean score of UNIZIK postgraduate range from 2.10 to 2.22, with grand mean of 2.67 and standard deviation of 0.94, the grand mean of 2.67 shows that the digital information resources are helpful to postgraduate students of UNIZIK. It signifies that UNN and UNIZIK postgraduates students responded to the items in table 3. Thus, the UNIZIK and UNN postgraduate

Table 5:

students responded positively and it also revealed that the Digital Information Resources are helpful and as well provides for their research need.

Research Question 4: Mean score of the Challenges facing P.G. students in the utilization of Digital Information Resources

S/N	DIGITAL INFORMATION RESOURCES	UNN (114)			UNIZIK (78)		
		$\overline{X}$	SD	Dec	$\overline{X}$	SD	Dec
1	Poor Internet Connectivity	2.54	0.86	A	2.65	0.79	A
2	Lack of Relevant Electronic Resources in My Discipline	2.56	1.03	A	2.89	1.06	A
3	Difficult to Access	2.43	0.98	D	2.16	0.84	D
4	Erratic Power Supply	3.45	0.90	A	3.50	0.86	SA
5	No Assistant from the Library Staff	3.13	1.02	A	3.46	0.97	A
6	Network problem	3.10	0.85	A	2.95	1.18	A
7	Lack of Technical Know How	2.93	0.95	A	2.53	0.98	A
8	Inability to Access the Available Electronic Database	2.31	1.09	D	2.35	0.99	D
9	Technological Constraints	2.64	0.71	A	2.78	0.81	A
10	Lack of ICT Skills	2.34	0.16	D	2.00	1.90	D
11	Inadequate / low band width	1.13	0.78	SD	3.58	0.95	SD
12	Malfunction of Computer and Access to E-Resources	2.49	0.89	D	2.46	0.92	D
	Grand total	**2.58**	**0.85**	**A**	**2.77**	**1.02**	**A**

Table 5 shows that the mean scores for UNN postgraduates range from 1.13 to 3.45 with a grand mean of 2.58 and standard deviation of 0.85, the grand mean of 2.58 reveals that postgraduate students of UNN agreed that they faced challenges in the utilization of digital information resources in their University library. The mean scores of the UNIZIK postgraduate students range from

2.00 to 3.50, with a grand mean of 2.77 and standard deviation of 1.02, the grand mean of 2.77 denotes that postgraduate students of UNIZIK agreed that they faced challenges in the utilization of digital information resources in their university library. It simply denotes that the UNN and UNIZIK postgraduates responded to the items.

Consequently, postgraduate students from UNN and UNIZIK agreed that with the enormous reasons for using digital information resources, postgraduate students still faced challenges in the utilization of digital information resources.

Discussion of findings

It was found out that the two University authorities of University of Nigeria Nsukka and Nnamdi Azikiwe University Awka have consciously provided digital information resources in the libraries in order to satisfy the research needs of postgraduate students, although there is need to provide e-grey document more in both University libraries that are in small number, for example e-gray document, e-reference, e-seminar paper. The findings also revealed that digital information resources available in university libraries in University of Nigeria Nsukka and Nnamdi Azikiwe University Awka are e-books; e-journals; e-seminar papers; e-references; e-newsletters; e-grey document; e-conferences papers; e-technical reports; e-projects; e- thesis. The total in the university libraries is one hundred and one thousand three sixty(101,360). E-electronic database and repositories were found to be highest in number, while e-grey document was lowest in number when paved together with according to type. Therefore, the findings of this study is pertinent, as it has provided further evidence that digital information resources are readily available for post graduate students .This finding is in disagreement with Lucky,(2014) that opined that e-grey-documents is inadequate in university libraries in Delta and Edo State.

Use of Digital Information resources by postgraduate students

On the use of digital information resources, the findings show that the digital information resources are utilized by postgraduate students for research purpose to a great extent, while grey documents were utilized to a low extent, this may be due to lack of awareness of the grey documents and e-technical papers among postgraduates in the university libraries. The hypothesis tested on this reveals that there is significant difference between the mean responses of UNN and UNIZIK postgraduate on the extent to which digital information resources are utilized. The null hypothesis is, therefore, rejected. University of Nigeria Nsukka postgraduates use DIRs more than post graduate students of Nnamdi Azikiwe University Awka. This is because digital information resources are more available in University of Nigeria Nsukka library and the MTN e-library, that houses the facilities and resources is well equipped and conducive than Nnamdi Azikiwe University library. The importance of utilization of digital information resources by postgraduate cannot be over emphasis. This finding is in consonance with Lucky, (2014) who stated that utilization of digital information resources is vital for teaching research and learning. The habit of using digital information resources is very important because it will make postgraduate improve in their research. Thisfindings is also in line with (Mischnick, 2000). Who states that digital information resources if being used serve as a motivating factor to postgraduate students as it provides them the opportunity to acquire or download information for research purpose.

Digital Information Resources provide research needs to postgraduate students

The result found out here shows that, UNN and UNIZIK postgraduate students responded positively to the digital information resources itemized .The UNN and UNIZIK postgraduate students were generally of the view that digital information

resources for example e-journal, e-database and repositories, e-thesis are helpful to them because it addresses their research, teaching and learning needs. The hypothesis, tested here shows that there is no significance difference between the mean responses of UNN and UNIZIK postgraduates on the extent to which digital information resources provide for their research needs .The null hypothesis is, therefore, not rejected. This is in consonance with Day and Bartle, (2003) that the use of digital information resources by students today enhances their performance in academic activities . Anunobi, (2011) also opined that the development of digital technologies, digital resources have become more popular and important to University teachers and students who are library users.

Constraints militating against the use of Digital Information Resources

The result shows that there are various factors which prevent or hinder students from accessing digital information resources in UNN and UNIZIK University libraries. This factors includes but not limited to poor internet connectivity, erratic power supply, network problem difficulty to access, no assistance from library staff, lack of e-resources in my discipline, malfunctioning of computer and difficulty to access e-resources. This study agrees with Imo and Igbo (2011) which identified similar problems in utilization of digital information resources among undergraduates in Nigerian Universities. Among the identified problems are lack of skills and knowledge of digital and electronic resources development and management by librarian, inadequacy of funds for the projects, unstable electricity supply, lack of maintenance, fear of copy right violation, and non-availability of training programmes for up-dating of skills of staff. This study is also in line with Lucky

(2014) which identifies the problems in availability and utilization of digital information resources by undergraduates in Delta and Edo state. Among the identified constraints are epileptic power supply, network problem, slow bandwidth, lack of ICT skills, in adequate computer for student, server slowness and lack of formal training in internet use However, the testing of hypothesis reveals that there is significant difference on the constraint encountered by postgraduate students in UNN and UNIZIK University libraries. Therefore, the finding reveal that digital information resources is very difficult to access and use by postgraduate students because of many challenges.

Conclusion

The researcher carried out a study on the availability and utilization of digital resources by postgraduates in selected federal university in south-east. In respect to the analysis and discussion of results of this study, conclusions are draw with reference to the research questions. Digital information resources are readily available in University of Nigeria, Nsukka and Nnamdi Azikiwe University, Awka. The postgraduate students from both universities responded to a great extent on the use of digital information resources. Consequently, the selected federal university postgraduate student sees research as the major purpose for utilizing digital information resources. Digital information resources which are proliferated now has been of great need to postgraduate students, it has drastically improve the teaching, research and learning skills of postgraduate student in the selected federal university libraries based on the findings above.

Recommendations

Based on the findings, the following recommendations were proffered:

1. The University libraries should create awareness on the availability and the need to utilize digital information resources as most of the postgraduate students are not aware of its availability and its importance when used.

2. Due to how helpful the digital information resources are, the University library management should ensure that well trained ICT librarians are in charge of the E-library section, so that postgraduate students.

3. Erratic power supply has been a national issue, no argument about that fact. But University libraries cannot continue this way, therefore the researcher recommend that the University management provide a stand by generating set so as to minimize this challenges.

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