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Awareness and use of electronic databases by postgraduates in the University of Ibadan.

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Introduction

Globalisation through modern information and communication technology (ICT) is revolutionising the conduct of teaching and research in universities all over the world, particularly in developing countries such as Nigeria. One significant impact of globalisation, information and communication technology on teaching and research in developing countries is access to global information resources by researchers and postgraduate students of the universities. The university remains a centre of excellence, a citadel of learning, and more importantly the epitome of research.

Electronic databases play significant roles as information sources in today's libraries. Uzuegbu, Chukwu and Ibegwam (2012) defined electronic databases as specialized records of related published information documents which are not available on Google or other common search engines, especially in a full text. Furthermore, Ani and Ahiauzu (2008) stated that “electronic databases are collection of electronic information sources (e-journals or e-books) by publishers from various fields or disciplines and that some of these databases are provided free of charge to libraries in developing countries by their publishers or vendors, while others require some fees for subscription”

Electronic databases are now very popular among librarians and library users because of several factors like; speed, flexibility, wide range and the currency (BIAD, 1998). Online databases or web-based databases are widely available to library patrons in the entire world, and many patrons can tap into these databases from their own computers or electronic devices anywhere in the world. The Internet, through electronic databases or digital libraries, has become an important source of academic information for tertiary students (Hourcade, Bederson, Druin, Rose, Farber, Takayama, 2003).

Akpojotor (2016) averred that awareness and use of electronic information resources are very crucial so as to keep postgraduate students alert of the available media through which they can access needed information. In addition, Prangya and Rabindra (2013) reiterated that awareness is core to the usage of electronic information resources; where materials are in closed access, users' ease of access to such e-resources is by far reduced, but where they are in open access (not subscription-based), postgraduate students find and use them.

Obuh (2009) believed that awareness of electronic information resources has been a major concern for academia, postgraduate students and researchers in recent days. He further concluded that often it was in college that users became aware of libraries' electronic resources, usually while having to write research papers. Ojo and Akande (2005) opined that students' level of access, usage and awareness of electronic information resources at the University College Hospital (UCH) Ibadan, Nigeria is not high and that the major problem, however, identified in their study, is lack of information retrieval skills for exploiting electronic resources, thus making the level of usage of resources by medical students very low. Ajuwon's study on ICTs by health science students at the University College Hospital (UCH) Ibadan (2003), revealed that students could not use computers, and that the use of the database was because of lack of awareness, lack of access to computers, insufficient training and high cost of provision of electronic information resources subscription. Also, Dukic (2013) and Ahmed, (2013b), for example, indicated that use of electronic databases in developed countries is more than in developing countries because of poor ICT infrastructure and the huge cost of such resources. Anaraki and Babalhavaeji (2013) also pointed out that where students are not aware of the existence of electronic databases they tend to use general search engines to meet their information needs.

According to Balogun (2008), it is apparent that the use of these electronic information resources require special skills in Information and Communication Technologies (ICTs) that will help students navigate the maze of resources at their disposal via telecommunications channels. Tella, Ayeni and Omoba, (2007) reiterated that the ability to use e-resources efficiently depends on basic computer skills, knowledge of what is available and how to use it, and ability to define a research problem.

Tella, Ayeni and Omoba (2007) further argued that the students' ability to find and retrieve information effectively is a transferable skill useful for their future life as well as enabling the positive and successful use of the electronic resources whilst at school. They noted that in this digital era any student at the higher level who wants to perform better should have the ability to explore the digital environment.

Students are increasingly expected to use electronic information resources whilst at the university; to make use of the growing range of electronic resources, students must acquire and practice the skills necessary to exploit them (Okello-Obura and Magara 2008). Lawson (2005) posited that skills learning is essential in a technology-driven environment but can be enhanced tremendously through the use of innovative learning strategies.

In spite of the humongous potential in the use of electronic information sources, there are some hindrances and challenges to its effective use. The following are some of the findings identified by Ochs (2005); language barrier, inadequate infrastructure (computers, electricity, paper, toner cartridge etc), the high cost of printing of articles and limited access (Library hours)

Statement of the Problem

Electronic databases in the libraries have made information available to scholars and postgraduate students for study or research purposes. However, the development seems to pose serious challenges to the maximum use of electronic databases in a developing nation like Nigeria. Studies have shown that scholars and postgraduate students have not actually used electronic databases optimally.

The use of electronic databases in Nigeria universities undermines the substantial efforts that have been made over two decades to ensure that electronic resources use penetrate all aspects of higher education in our universities. Electronic databases are used in the library by lecturers and students to provide access to enormous academic information which is very crucial to their overall academic performance and their productivity.

Those who have the awareness of its availability, access, skill, and the necessary infrastructural devices to assess information through them are continuously assessing extraordinary esteemed resources at much greater speed, depth and quantity. Those that are not aware of the existence of these facilities and resources, are being relegated and fall short of human potentials.

Nevertheless, it is one thing for an academic library to acquire and automate its services, it is another for the users to be sufficiently well-informed of the existence of these electronic databases, have easy access to them and make effective use of them so as to retrieve information. The absence of such awareness, availability, access and proper utilization of electronic databases in this information age may very well result in intellectual and possibly economic poverty.

Thus, the study aims to determine the level of awareness and use of electronic databases among postgraduate students in the University of Ibadan.

1.3 Objectives of the Study

The main purpose of the study is to determine the level of awareness and use of electronic databases by postgraduate students at the University of Ibadan. The specific objectives of the study are to:

- i) ascertain the level of awareness of postgraduate students of the availability of electronic databases in the university;
- ii) identify the purpose(s) for using electronic databases by postgraduate students;
- iii) determine the frequency of use of electronic databases by postgraduate students
- iv) investigate the level of skill postgraduate students possess in the use of electronic databases;
- v) identify the challenges postgraduate students face in the use of electronic databases.

1.4 Research Questions

The study attempted to provide answers to the following research questions:

1. What is the level of awareness and channels of awareness of the electronic databases among postgraduate students?
2. What is the main purpose of using electronic databases among postgraduate students?
3. What is the frequency of use of electronic databases by postgraduate students?

4. What is the level of skill and knowledge of skills experience with the use of electronic databases by postgraduate students?
5. What are the challenges postgraduate students faces in the use of electronic databases

METHODOLOGY

A survey method was adopted for this study primarily because it was a suitable and efficient way of studying large populations. It allows only a sample population to be used to represent the entire population. The target population for this study was postgraduate students of the University of Ibadan. 150 postgraduate students from four faculties (Art, education, science and social sciences) were randomly selected. A well-structured questionnaire was administered on the respondents and 131 out of 150 were completed and returned. The data collected were classified, analyzed and tabulated by using the simple percentage (%) and frequency counts as well as the arithmetic mean and standard deviation.

Data analysis and Discussion of Findings

Table 1: Demographic characteristics of the respondents

s/n	Variable	Label	Frequency	Percent
1	Gender	Male	100	76.3
		Female	31	23.7
2	Age	21-25	48	36.6
		26-30	50	38.2
		31-35	18	13.7
		36-40	6	4.6
		40 years and above	9	6.9
3	Present level of study	Masters	108	82.4
		PhD	23	17.6

Table 1 above shows that 100(76.3%) of the respondents were male and 31(23.7%) were female. It also shows that there are more postgraduate students 50 (38.2%) between the ages of 26-30 years. This is followed by those between the ages of 21-25 years, 48(36.6%). 18(13.7%) were aged 31-35 years, 6(4.6%) were aged 36-40 years and 9(6.9%) were aged 40 years and above. 108(82.4%) were masters students and 23(17.6%) were PhD students.

Result Presentations and Discussion of Findings

Table 2: Postgraduate students' awareness of electronic databases

s/n	Electronic databases	Not aware	Aware	Rank
1	AGORA	73(55.7%)	58(44.3%)	2
2	HINARI	94(71.8%)	37(28.2%)	4
3	JSTOR	67(51.1%)	64(48.9%)	1
4	EBSCO Host	104(79.4%)	27(20.6%)	5
5	AJOL	77(58.8%)	54(41.2%)	3
6	DOAJ	104(79.4%)	27(20.6%)	6

Table 2 above presents the information on the awareness of electronic databases by postgraduate students. Most of the respondents (79.4%) were not aware of EBSCO Host and DOAJ respectively. While a sizeable number of the respondents (48.9%) were aware of JSTOR which was ranked highest as the most electronic database they were aware of. Many of them (71.8%) were not aware of HINARI; some of the students (44.3%) were aware of AGORA; few of the respondents (20.6%) were aware of DOAJ; a good number of the respondents (41.2%) were aware of AJOL.

Table 3: Test of norm showing the level of awareness of electronic database by postgraduate students

Grand mean = 9.21, Maximum score = 14 Interval = $14/2 = 7$, Classification = Not aware, Aware

Interval	Range	Level of awareness	Frequency	Percentage
1-7		Not Aware	44	33.6
8-14	9.21	Aware	87	66.4

Judging From table 3 above, 87(66.4%) respondents were generally aware of the seven electronic databases under consideration while 44(33.6%) were not aware. This finding corroborated with the finding of Aina (2014) which showed that majority of respondents were aware of Academic Journal 59 (69.4%), followed by JSTOR 48 (56.5%) and EBSCO host 43(50.6).

Also, the study by Egberongbe (2011) showed that 80 (71.4%) postgraduate students and 55(78.6%) research scholars were aware of e-resources.

Table 4: Means of Electronic Database awareness

s/n	Source	No	Yes	Rank
1	Through university bulletin	13(86.3%)	18(13.7%)	5
2	Visiting the library regularly	111(84.7%)	20(15.3%)	4
3	Through colleagues or friends	69(52.7%)	62(47.3%)	2
4	Through selective dissemination of information	101(77.1%)	30(22.9%)	3
5	Bills or posters	116(88.5%)	15(11.5%)	6
6	Surfing the net	64(48.9%)	67(51.1%)	1

Table 4 presents the information on the channels of awareness of the electronic databases among postgraduates' students. Most of the respondents became aware of electronic databases by surfing the net. It shows that 51.1% of the respondents get to know about electronic databases by surfing the net. A sizeable number of the postgraduate students (47.3%) were made aware of electronic databases through their course colleagues and friends. Others sources of electronic database awareness include: Through selective dissemination of information (22.9%), visiting the library regularly (15.3%), through university bulletin" (13.7%) and through bills or posters (11.5%)

Table 5: Purpose for using Electronic Databases

s/n	Purpose for using Electronic Databases	SD	D	A	SA	\bar{x}	S.D
1	For research work	15 11.5%	2 1.5%	41 31.3%	73 55.7%	3.31	0.97
2	For literature searching	20 15.3%	3 2.3%	47 35.9%	61 46.6%	3.14	1.04
3	To generate new information	21 16.0%	1 0.8%	51 38.9%	58 44.3%	3.11	1.04
4	To update knowledge	22 16.0%	5 3.8%	51 38.9%	53 40.5%	3.03	1.06
5	For doing course assignment	24 18.3%	3 2.3%	50 38.2%	54 41.2%	3.02	1.08
6	To write seminar/conference paper	26 19.8%	3 2.3%	46 35.1%	56 42.7%	3.01	1.12
7	For laboratory/field research	33 25.2%	4 3.1%	49 37.4%	45 34.4%	2.81	1.16
8	Assisting friends or colleagues to get materials	32 24.4%	6 4.6%	50 38.2%	43 32.8%	2.79	1.15
Weighted Mean = 2.86							

Table 5 above presents the information on the purpose for using electronic databases by postgraduate students. “For research work” ($\bar{x}=3.31$) was ranked highest as the main purpose for using Electronic Database and was followed in succession by “For literature searching” ($\bar{x}=3.14$), “To generate new information” ($\bar{x}=3.11$), “To update knowledge” ($\bar{x}=3.03$), “For doing course assignment” ($\bar{x}=3.02$), “To write seminar/conference paper” ($\bar{x}=3.01$), “For laboratory/field research” ($\bar{x}=2.81$), “Assisting friends or colleagues to get materials” ($\bar{x}=2.79$) and others ($\bar{x}=1.51$) respectively.

The inference to be drawn from the expression above is that the major purpose for using electronic databases as indicated by the postgraduate students are for research work, for literature searching, to generate new information, to update knowledge, for doing course assignment and lastly To write seminar/conference paper respectively.

The finding also agrees with Patitungkho and Deshpande (2005) who noted that among those who used electronic journals regularly were used for current awareness, writing and presenting seminar/conference papers and keeping up to date knowledge.

Table 6: Frequency of use of electronic databases

s/n	Electronic databases	Never used	Occasionally	Monthly	Weekly	Daily	\bar{x}	S.D
1	JSTOR	70 53.4%	34 26.0%	12 9.2%	7 5.3%	8 6.1%	1.85	1.17
2	AJOL	82 62.6%	28 21.4%	10 7.6%	9 6.9%	2 1.5%	1.63	.99
3	AGORA	83 63.4%	31 23.7%	7 5.3%	9 6.9%	1 0.8%	1.58	.93
4	HINARI	89 67.9%	30 22.9%	6 4.6%	6 4.6%	-	1.46	.79
5	EBSCO Host	98 74.8%	18 13.7%	6 4.6%	7 5.3%	2 1.5%	1.45	.92
6	DOAJ	103 78.6%	14 10.7%	6 4.6%	6 4.6%	2 1.5%	1.40	.89
7	Others	107 81.7%	11 8.4%	4 3.1%	8 6.1%	1 0.8%	1.36	.87
Weighted Mean = 1.53								

Table 6 presents the information on the frequency of use of electronic databases. It shows that JSTOR (1.85) ranked highest as the most frequently used electronic database and was followed in succession by AJOL (1.63), AGORA (1.58), HINARI (1.46), EBSCO Host (1.45), DOAJ (1.40).

Findings showed that 8.1% used JSTOR daily, 6.9% use AJOL and AGORA respectively weekly, 9.6% use JSTOR monthly, 26% use JSTOR occasionally while 78.6% of the respondents have never used AJOL. Preference of certain databases over others affected usage because users tended to use certain databases and ignored others that could be providing related information.

JSTOR being the most popular among the electronic databases in this study corroborated the report by Masinde, Okoh & Rajan (2011) who noted that Africa has about 600 universities and of these, about 67% are JSTOR participants. The popularity and high level of use could be attributed to the fact that it was comprehensive, user-friendly and has good and quality information that has met their research needs.

Table 7: Test of norm on the Frequency of Use of electronic databases by postgraduate students

Grand mean = 10.73, Maximum score = 35 Interval = $35/5 = 7$, Classification = Never Used, Occasionally, Monthly, Weekly and Daily

Interval	Range	Freq. of use	Frequency	Percentage
1-7		Never used	42	32.1
8-14	10.73	Occasionally	70	53.4
15-21		Monthly	12	9.2
22-28		Weekly	7	5.3
29-35		Daily	-	-

From table 7 above, it can be deduced that the frequency of use of electronic database by postgraduate students was occasionally.

Table 8: Level of skill and experience with the use of electronic databases?

Level of skill and experience with the use of electronic databases	Frequency	Percentage
High	68	51.9
Moderate	34	26.0
No skill	29	22.1

Table 8 above showed that majority (51.9%) of the postgraduate students had a high level of skill and experience with the use of electronic databases, 26.0% had a moderate level of skills and experience while 22.1% had no skills and experience at all with the use of electronic databases.

Table 9: Knowledge or skills gained from getting or retrieving information from electronic databases

Knowledge or skills gained from getting or retrieving information from electronic databases	Frequency	Percentage
Determination of appropriate search terms	102	77.9
Use of Boolean logic	17	13.0
Knowledge on database structure	12	9.2

Table 9 above showed that 77.9% of the respondents had knowledge on how they could determine appropriate search terms for retrieving information, 13.0% understood how to use Boolean logic and 9.2% possessed knowledge on database structure for retrieving information from electronic databases.

Table 10: Problems associated with electronic databases use

s/n	Problems associated with electronic database use	SD	D	A	SA	\bar{x}	S.D
1	Slow internet connectivity	21 16.0%	6 4.6%	59 45.0%	45 34.4%	2.98	1.02
2	Incessant power outage	30 22.9%	5 3.8%	44 33.6%	52 39.7%	2.90	1.16
3	No access to full text of citation/abstracts	26 19.8%	11 8.4%	51 38.9%	43 32.8%	2.85	1.09
4	Inadequate infrastructure for accessing electronic resources	31 23.7%	15 11.5%	37 28.2%	48 36.6%	2.78	1.18
5	Inaccessibility of some websites	26 19.8%	11 8.4%	61 46.6%	33 25.2%	2.77	1.4
6	Lack of knowledge of search techniques	36 27.5%	18 13.7%	48 36.6%	29 22.1%	2.53	1.12
7	Download delay	37 28.2%	13 9.9%	59 45.0%	22 16.8%	2.50	1.08
8	Lack of skill	46 35.1%	28 21.4%	35 26.7%	22 16.8%	2.25	1.11
9	Irrelevant information	53 40.5%	28 21.4%	36 27.5%	14 10.7%	2.08	1.05
Weighted Mean = 2.63							

Table 10 above presents the information on the problems of using electronic databases. It shows that “Slow internet connectivity” ($\bar{x}=2.98$) ranked highest as the major problem associated with electronic database use and was followed in succession by “Incessant power outage” ($\bar{x}=2.90$), “No access to full text of citation/abstracts” ($\bar{x}=2.85$), “Inadequate infrastructure for accessing electronic resources” ($\bar{x}=2.78$), “Inaccessibility of some websites” ($\bar{x}=2.77$), “Lack of knowledge of search techniques” ($\bar{x}=2.53$), “Download delay” ($\bar{x}=2.50$), “Lack of skill” ($\bar{x}=2.25$) and “Irrelevant information” ($\bar{x}=2.08$) respectively.

The prevalence of these factors have also been reported in similar studies by Alhassan (2015) which includes: lack of IT knowledge to effectively utilize the services, network failure, poor network/internet connectivity and power failure were the major factors that hinder the effective use of electronic resources by the undergraduate students in both FUT Minna and IBBU Lapai.

The result also fell in line with Lec and Isa (2001) who reported from a related study on accessing and sharing research information that the pressing factors hindering maximum utilization of these facilities include lack of adequate internet facilities, use of the password to access some journals. The implication is that these problems have constituted a hindrance to maximum utilization of electronic information resources by researchers and lecturers in the tertiary institutions. If these are allowed to persist, there will be low patronage by the users of these resources. This will bring about an economic and educational setback to the university

Conclusions

The study found out that majority of the postgraduate students of the University of Ibadan is generally aware of electronic databases under consideration. However, most of them are not aware of the individual electronic databases that are made available by the university library for postgraduate students' use. The major channel of electronic databases awareness was surfing the net while bills and poster ranked lowest among the level of awareness channel. The study also established that respondents use electronic databases majorly for various purposes like research work, literature searching, generate new information and to update knowledge. Results from the analysis also showed that the frequency of use of the electronic database by postgraduate students is low. Higher percentages of the respondents rarely use the electronic database. The level of skill of postgraduate students in using electronic databases were majorly moderate, high level of skill was seen and very few respondents had no skill in using electronic databases. Also, knowledge or skills gained from getting or retrieving information from electronic databases via Boolean logic is low.

The study reports that slow internet connectivity, incessant power outage, no access to full text of citation/abstracts and inadequate infrastructure for accessing electronic resources was the major challenges militating against postgraduate students of University of Ibadan use of electronic databases.

Recommendations

The following recommendations were made, based on the findings of this study.

- The library has a role to play in creating more awareness programmes and mechanisms among postgraduate students on the availability of electronic databases and this could be best achieved by developing a functional library website or installing the Mobile Library App, which could be used as a tool for creating awareness or advertising newly acquired electronic databases to the postgraduate students. The library should employ more effective strategies such as using e-mail alert messages, text messages Mobiles services technologies as a method of awareness and use of the library's electronic databases. Also, librarians have a role to play in making these electronic databases known to postgraduate students by physically meeting with them and educating on them on its uses and benefits and the need to develop their information retrieval skills.
- University libraries should have standby generating set. This will be very important particularly in the situation of power outage; besides the generator, the university management should make frantic effort to generate an alternative source of electricity as this will be relatively cheap and help the process of electronic resource provision. In this 21st Century, the use of solar energy could also be used to generate energy, thereby reducing dependence on generating set.

- Institutional bandwidth should be increased. University library should have their own dedicated bandwidth with fast Internet connectivity. This will improve on full text delivery of resources, electronic document delivery and the use of search engines and as well put an end to the problem of network fluctuations and slow speed in the process of downloading information

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