



Utilization of Electronic Databases Among Postgraduate Students in Two Selected Nigerian University Libraries

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ABSTRACT

This study examined the use of electronic databases among postgraduate students of University of Ibadan and Obafemi Awolowo University in Kenneth Dike and Hezekiah Oluwasanmi Libraries, respectively. The study sought to discover how certain factors have contributed to postgraduate students' full utilization or underutilization of the resources in order for them to enhance the quality of their academic output. A survey design that employed questionnaire for data collection was used. 260 registered postgraduate students in the two university libraries were sampled, using a proportionate sampling method and 228 completed copies of the questionnaire were useably retrieved. Results revealed graduate students' poor familiarity with library electronic databases, as only JSTOR recorded the largest percentage 21.67% on familiarity. Also, financial problems, poor electricity supply, insufficient skills, poor training programs and excessive academic workload were great inhibitors to effective utilization of electronic databases by the students, even though majority of the respondents perceived the benefits of adoption and use of electronic databases. The study concludes therefore that postgraduate students have great prospects of effective use of electronic databases, when, all other inhibiting factors to such effective use, like those mentioned above, has been removed.

Keywords: Utilization, Electronic Databases, Students, Postgraduate, University Library

1.1 Introduction

The operation of library services has changed progressively and effectively in recent years due to the input of a consistent evolving of information technologies. These factors, Agbonlahor (2005) observed, has facilitated this role in ways that could only at best have been imagined a few decades ago. The synergy of two technologies, computing and communications has resulted in a vast

network of computer resources that contains numerous electronic information resources, one of which is electronic data bases. Moahi (2003) explains that:

Increasingly, it is to electronic sources that people turn for the initial research process-the literature review. Carrying out a comprehensive literature review can be done with the

aid of information technologies, whether one is searching an Online Public Access Catalogue (OPAC), the Internet, or other sources such as electronic indexes and abstracts, and journal articles. Such resources enable the researcher to establish the basic parameters of their research by making it possible for them to find out what has or has not been done in that area or field so far. (p. 135).

There is no over-emphasizing the overwhelming benefits of e-resources for research and general academic activities. Effective and optimal utilization as opposed to underutilization of these resources, however, is what will guarantee the best results reflected in the writing of quality term papers, dissertations, thesis and articles publications that compare with what obtains worldwide.

Postgraduate education in Nigeria has spanned well over five decades with the earliest that began in the early sixties with first generation universities like University of Ibadan and Obafemi Awolowo University. Objectively, postgraduate studies and research in Nigeria include, among other things, a further development in graduate students, the ability for in-depth research that will ultimately ensure application of instruction in a way that produces thorough capacity building and ability for problem-solving. Specific objectives also seek to provide facilities for training in research for those whose future careers will be in teaching and research at university level, and for those who may have to operate research and development situations in the public or private sectors, such as in government, commercial and industrial concerns. It is also to provide

both short and long-term training facilities aimed at improving and upgrading the existing and potential high-level man-power needed for planning, executing and reviewing national development plans (O.A.U Postgraduate College handbook, 2002).

Postgraduate research and scholarship in Nigeria has had to strive hard to achieve and maintain these objectives in the face of dwindling funds, inadequate facilities and worse still, the lack of strong political will of the country's leadership. However, as Falase (2006) points out the vision for the 21st Century places great premium on research activities, with emphasis on first, those things that are of purely academic interest (basic or pure research) and second, those areas which are aimed at problem solving (applied research). In the face of insufficient facilities, information resources inclusive, one of the most viable resorts tutors and students alike can turn to are electronic resources that are now available.

1.2 Objectives of the study

- i. identify the factors affecting the adoption and utilization of electronic databases by the postgraduate students in the selected universities.
- ii. identify hindrances to effective utilization of electronic databases by the postgraduate students; and
- iii. determine the level(s) and purpose(s) of utilization of electronic databases by the postgraduate students in the selected universities.

1.3 Research questions

- i. What are the factors affecting the adoption and utilization of electronic databases by postgraduate students in the selected universities?
- ii. What are the hindrances to the use of these electronic databases among the postgraduate students?

- iii. What is the level(s) and purpose(s) do the postgraduate students make use of electronic databases in the universities under study?

2.1 Review of Related Literature

The usage of electronic information resources, e-resources for short, has been undertaken by many research scholars. Arogiya and Balasubramanian (2019) examined usage of e-resources in Madras University Library and showed satisfactory level of use. However, results also show the need for more current resources and the development of facilities in the university library. In their own study, Sharma et al (2019) presents results on awareness and use of e-resources by library users, which showed that users access e-resources for research work rather than for teaching. Patel (2018) study sought to identify user's internet search skills of library ICT resources, the purpose of using ICT resources and the different types used.

Results however, showed that users were not getting adequate training and needed assistance from library staff to enhance their search skills for relevant resources. Biradar and Naik (2017) in their study focus on literacy skills and competency among the research scholars and postgraduate students in Deemed University Libraries, Bangalore. Results showed users satisfaction in usage and purpose of use. Singh and Kuri (2017) in their study of user's satisfaction with library resources concluded that there is need to provide timely information to users which is the essence for electronic resources and also put in place a training plan for effective use of resources. Patel and Darbar (2016) study showed satisfactory use of internet services among MBA students of CKSVIM Library.

Gunasekara (2010) study results showed students' satisfaction with available resources and researcher recommends better promotion of awareness for use of electronic

resources. Gurikat and Gurikar (2015) studied availability of resources in Karnataka University Library. Results showed change from print to e-resources and the eagerness of users to use e-resources. Aravind (2018) examined extent students' access and use of e-journals from various available e-journal resources. Findings revealed that students' personal access of available open source e-journal was the most used source. Sharma (2018) study showed engineering college libraries have to increase accessibility of electronic resources in order to be able to satisfy research and academic needs of users. Gakibayo (2013) in a study revealed students' need for online information resources in their academic work. However, lack of adequate search skills, insufficient computers and ineffective internet connectivity contribute to inadequate usage. Ravanan and Marry (2013) in their study showed that 62.50% of faculty members use e-resources to enhance their teaching, while 15% use them for research. However, 13.34% of them frequently browse the internet. Satpathy and Rout (2010) revealed in a study where e-resources usage and challenges to effective use were put forward and results showed user awareness of available e-resources.

Sohail et al (2012) in a study suggested a need to guide users in their search for library resources.

Muswazi (2005) carried out a study survey on the integration of print and electronic sources at the University of Swaziland Library and findings show 86.2% (50 of 58) students did not use online databases - this showed the highest figure for underutilized e-resources. In Nigeria, a similar finding showed that besides inadequate computers with internet facilities for the use of students of the Federal University of Technology, Akure, lack of adequate searching skills, lack of full knowledge of the use of internet applications and cost of access, inability of some to

maximally utilize the resources of the internet ranked high as to students usage of the internet (Ojokoh and Asaolu, 2005). Salako and Tiamiyu's (2007) study of use of search engines for research by postgraduate students of the University of Ibadan, confirmed the need for educational planners and administrators in African universities to integrate adequate information technology literacy content into the curricula for postgraduate and research students in universities. Jagboro's (2003) study of internet usage in Nigerian Universities revealed that the undergraduate and postgraduate students of the Obafemi Awolowo University, Ile-Ife, use databases and the internet for academic research.

Specific cases in Nigeria, for instance, Ojokoh and Asaolu's (2003) studies on internet access and usage by students of the Federal University of Technology, Ate, Nigeria, revealed the inadequacy of computers with internet facilities for the students. Adeya and Oyelana-Oyeyinka (2002) in an international study-sponsored by the United Nations University, compared internet use by academics in four Nigerian and six Kenyan Universities in a bid to understanding the dynamics of ICT use in academic research, teaching and information dissemination. Results of the study among other things showed that while academics in the two universities had access to the cluster of technologies that make up the internet, there were differences in the speed, ease and quality of access to the internet. Also, there were variations in the constraints to internet use, while cost was the highest constrain to the Nigerians and availability of affordable internet connection was the biggest constraint to the Kenyans. Poor telecommunications infrastructure has been discovered to be a major hindrance to internet connectivity on the African continent (Fatoki 2004). She further revealed a lower proportion of students using the library's electronic

resources in her study.

Obviously from this review and on a larger scale, the state of telecommunication capabilities is effectively separating countries into rich and poor, developed and underdeveloped. The World Bank in 1994 pronounced that Africa lags behind other regions of the world in the dissemination and use of computers, electronic networking, and related technologies (FUTA Calendar. 2003-2005). Adeogun (2003) also pointed out that people who have necessary skills and infrastructural facilities are more than ever before accessing very important resources at a much greater depth and quantity. Effective utilization of electronic databases reflects in the level of full utilization which is made possible when every possible barrier to such have been removed. Certain variables have been selected to determine their influences as hindrances to effective use of electronic databases in this study. These are: Poor training programs: insufficient skill: poor supply of electricity; financial problems on the part of the users and the seeming busy schedule of students brought about by the excessive academic workload.

3.1 Research Methodology

The research design adopted in this study is a descriptive survey. A proportional sampling technique is used for the proportionate representation of users in the study population. Questionnaire was used for eliciting response. The study population include 2,657 postgraduate students of the University of Ibadan and Obafemi Awolowo University, Ile-Ife, who are users of the University Libraries of both institutions namely: Kenneth Dike Library (KDL) and Hezekiah Oluwasanmi Library (HOL), respectively. 1,656 students in KDL, and 1,001 students in HOL. A sample of 260 respondents was selected from the population: 160 from KDL and 100 from HOL. Data collected was analyzed using descriptive

statistics through the means of simple percentages and frequency and tables.

4.1 Results and Discussion

Results from this study reveals that of the 260 sample respondents taken out of the target population of 2,656 postgraduate

students in the two libraries, 228 respondents appropriately filled and returned the questionnaires distributed, representing 88% response rate, 138 (60.5%) respondents are from University of Ibadan as against the 90 (39.5%) from Obafemi Awolowo University.

Table 1: Distribution of respondents by program of study

Level	Frequency	Percentage (%)
PhD/ M.Phil	033	14.5
M.Sc /M.A/M.Tech/M.Ed/ MBA MPA etc	185	81.1
PGD	010	04.4
Total	228	100.0

Respondents distribution by program of study show those in the masters' degree program from various disciplines as having

the highest 185 (81.1%) response over others. Respondents in doctoral and diploma program were not much.

Table 2: Distribution by knowledge of electronic databases

Knowledge of Electronic Database	Frequency	Percentage (%)
Yes	182	79.8
No	046	20.2
Total	228	100.0

The respondents were asked to indicate whether they knew what electronic databases where. 183 (79.8%) reported that they were

knowledgeable as against 46 (20.2%) that had no knowledge of what they were.

Table 3: Respondents actual access of any of the libraries electronic databases

Access of any Library Electronic Databases	Frequency	Percentage (%)
Yes	057	25.0
No	171	75.0
Total	228	100.0

The respondents were asked, as shown in table 3, whether they were able to access their library's electronic databases. 57 (25.0%)

were able to access the resources, while 171 (75.0%) were unable to access.

Table 4: Respondents familiarity with their libraries electronic databases

S/N	Faculty	Frequency	Percentage (%)
1	Ebscohost	10	02.77
2	JSTOR	78	21.67
3	InfotracOnefile	10	02.77
4	Hinari	09	02.50
5	OUP Online Journals	25	06.94
6	WiderNet DigitalLibrary	13	03.61
7	AGORA	23	06.38
8	MIT Press Journals	11	03.05
9	DATAD online	19	05.27
10	PERI	07	01.94
11	The Annals of pharmacotherapy	04	01.11
12	Essential Academic Links (i.e. Highwire Press, DOAJ, Biomed Central, Law Journals, SciELO	13	03.61
13	The Federalist	07	01.94
14	ERIC	11	03.05
15	CAB Abstract	07	01.94
16	LIFE Sciences	09	02.50
17	Tropag and Rural	04	01.11
18	Humanities Abstract	23	06.38
19	Applied Sci & Tech Abstract	21	05.83
20	Social Science Index	20	05.55
21	E-Granary Digital Library	16	04.44
22	AJOL	11	03.05
23	Lan TEEAL	09	02.50
	Total	360	100.00

Results in Table 4 on familiarity with some of the library electronic databases available in the two libraries showed that 78(21.67%) who were familiar with JSTOR where the largest. This was followed at a distance by 25 (6.94%), 23 (6.38%), 21 (5.83%), 20 (5.53%),

19 (5.27%), and 16(4.44%), familiarity with OUP online Journals, AGORA and Humanities Abstract, Applied Sci & Tech Abstracts, Social Science Index, DATAD Online and E-Granary Digital Library respectively. Others followed these set at another great distance.

Research question one: What are the factors determining adoption and use of electronic databases by postgraduate students?**Table 5: Factors that lead to adoption and use of electronic databases**

S/N	Factors	Greatly	Moderately	Rarely	Poorly	Total No of Responses
1	Facilitation of Information	77 (39.09%)	73(37.05%)	26 (13.20%)	21 (10.66%)	197
2	Enhancement of Research activities	88 (45.83%)	64(33.33%)	23 (11.99%)	17 (8.85%)	192
3	Enhancement of the quality of academic works	68 (44.73%)	67(44.08%)	34 (22.36%)	13 (8.55%)	152
4	Enhancement of communication/ Group. Discussion	26 (13.98%)	65(34.95%)	67 (36.02%)	28 (15.05%)	186
5	Relevance to field of study	73 (38.83%)	72 (38.30%)	24 (12.76%)	19 (10.11%)	188

Table 5 shows extent of influence that electronic databases have in the facilitation of access to needed information 77(39.09%) recorded greatly, 73(37.05%) moderate while on the other hand, 47 (23.80%) recorded rarely and poorly from a total of 197 responses. Of a total of 192 responses on the extent of influence of enhancement of research activities, 88(45.83%) recorded greatly; 64(33.33%) recorded moderately, while 40 (20.84%) recorded rarely and poorly. On the assessment of enhancement of quality of academic work, from a total of 152 responses, 68 (44.73%) rated greatly; 67 (44.08%) rated moderately, while a low rate of 47 (30.91%) was rarely and poorly. Enhancement of communication and group discussions had a record of 26 (13.98%)

greatly; 65 (34.95%) moderately; and this effect was recorded rarely influential with 67 (36.02%) and poorly influential with 28(15.05%) totalling 186 responses. The respondents also recorded the extent of influence on relevance to field of study with a total of 188 responses. 73 (38.83%) greatly; 72 (38.30%) moderately, while 43(22.87%) was rarely and poorly. This result showed that many of the respondents were supposed to be more influenced by the effects of adopting and using electronic databases, with the majority recording great or moderate influence over a lower percentage that recorded a rare or poor influence of the effects, except in the enhancement of communication/group discussion where the greater percentage 36.02% recorded rare influence.

Research question two: What are the hindrances to effective use of electronic databases by postgraduate students?**Table 6: Hindrances to effective utilization**

S/N	Hindrances	Greatly	Moderately	Rarely	Poorly	Total No of Responses
1	Financial problem(s)	77 (38.90%)	63 (32.64%)	40 (20.72%)	13 (6.74%)	193
2	Poor electricity supply	138 (68.32%)	36 (17.82%)	19 (9.40%)	9 (4.46%)	202
3	Insufficient skill	62 (30.85%)	81 (40.30%)	43 (21.39%)	15 (7.46%)	201
4	Poor training programs	76 (34.44%)	66 (32.51%)	45 (22.17%)	16 (7.88%)	203
5	Excessive academic workload	54 (28.27%)	69 (36.13%)	52 (27.22%)	16 (8.38%)	191

A total of 193 responded to financial problems as a hindrance, 140 (71.54%). Poor electricity supply had a total response of 202.138 (68.32%) greatly; 36 (17.82%) moderately; and an addition of 28 (13.86%) for rarely and poorly. 201 responses were recorded for insufficient skill. Poor training programs also recorded 203 responses and

142 (66.95%) were greatly. 191 respondents also recorded excessive academic work. The greater percentages of respondents in this record show a higher degree of responses towards hindrances to effective utilization of electronic databases in all the listed hindrances.

Research question three: What is the level(s) and purpose(s) of postgraduate students use of electronic databases?

Table 7: Utilization Level and Purpose of Use

S/N	Purpose of Use	Frequently	Moderately	Rarely	Poorly	Tot. No of Responses
1	PhD Thesis	20 (33.90%)	17 (28.82%)	11 (18.64%)	11 (18.64%)	59
2	Masters Dissertation/ PGD field report	61 (32.27%)	71 (39.88%)	27 (15.18%)	19 (10.67%)	178
3	Article write ups/Assignment	84 (40.07%)	71 (36.41%)	24 (12.31%)	16 (8.21%)	195
4	Knowledge/Learning	67 (35.26%)	71 (37.36%)	33 (17.37%)	19 (10.00%)	190
5	Information exchange/Group discussions	27 (15.88%)	54 (31.76%)	57 (33.53%)	32 (18.82%)	170

Of five likely purposes crucial to postgraduate studies were listed with PhD thesis having a total number of 59 responses were received. 178 responses were received for masters and diploma projects. A total number of 195 responses, which is the highest number of responses, were received for article write-ups and assignments. 155 (76.48%) were frequent and moderate in their use of electronic databases for this purpose, while 40 (20.52%) were rarely and poorly. 190 responses, the second highest number of responses, were received for knowledge and learning as purposes for which electronic databases were being used. A of 170 responses were also received for information exchange and group discussions, as purposes of use. 27(15.88%) were frequently; 54(31.76%) moderately;

57(33.53%) rarely and 32(18.82%) poorly. The percentage of electronic database use for all given purposes of use reveal the majority of the total respondents claim frequent and moderate use of electronic databases. However, respondent's familiarity with the library's' electronic databases reveal an extremely poor familiarity figure. Majority in the study were obviously not sufficiently familiar and so not using most of the electronic databases, except for JSTOR.

The findings from data analysis, show that certain variables make effective utilization of the databases difficult. Wilberly and Jones (1994) study on humanist scholars show a slow adoption and use of IT as is the case with scholars from other disciplines. The study

revealed that the students were knowledgeable in electronic databases as 79.8% responded positively to their knowledge of electronic databases. Students' familiarity with electronic databases available in the libraries was also very low, as non-recorded above 6.94% familiarity, except JASTOR, which recorded 21.67% familiarity. The low familiarity, which also translates into low use of the resource, is assumed to be attributable to inaccessible password attached to a number of the resources. This is in line with Ehikhamenor's (2003) study on use and non-use of internet facilities, where non-use was attributable to accessibility problems. The result of analysis in this study has revealed that postgraduate students in the two universities studied have great prospects of effective use of electronic databases when all other variables inhibiting such effective use have been removed.

Further, results on extent of influence of several factors that lead to students' adoption and use of electronic databases reveal high percentage ratings as indicated above. Hindrances to effective use of electronic databases also revealed high degree response rates (greatly and moderately). This implies strong setbacks towards postgraduate students' tendency to effectively use electronic databases. However, on purposes why postgraduate students use electronic databases, and the levels of use, a generally high level of use was recorded.

Conclusion and Recommendation

It can be concluded, that even though a large number of postgraduate students reported that they were knowledgeable about electronic databases; that they often used the resources for various academic activities; and that they were highly influenced by factors that enhance adoption and use of electronic databases, yet, they were not substantially familiar with necessary electronic databases made available by their libraries; and also that

they were greatly hindered by factors that do not make for effective use of electronic databases. The above results therefore imply that the potentials of electronic database use for facilitating high quality academic output and excellence, and by extension, enhancing higher education and research for developmental goals in Nigeria, has not yet been fully explored.

Recommendations

First the two university libraries studied, should redesign their current awareness services and library electronic resources services provision policies to be more specific on target groups within the universities communities. Libraries should also adopt innovative user education programs that will enable them carry out training sessions on storage, organization and retrieval aspects of specific electronic resources in order to meet diverse skill deficiency needs of individuals and groups. Also, libraries should change their marketing strategies substantially.

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