

## INFLUENCE OF DIGITAL LITERACY COMPETENCY OF POSTGRADUATE STUDENTS ON THE USE OF ELECTRONIC RESOURCES IN FEDERAL UNIVERSITY LIBRARIES IN NORTH-WEST, NIGERIA

Hakeemat Salahudeen Bello Ph.D CLN, Jabir Isah karofi  
& Anas Sani Safana CLN

Department of Library and Information Science,  
Federal University Dutsin-Ma, Katsina State, Nigeria.

[bhakeemat@fudutsinma.edu.ng](mailto:bhakeemat@fudutsinma.edu.ng)

### Abstract

The study examined the influence of digital literacy competency of postgraduate students on the use of electronic resources in federal university libraries in North-west, Nigeria. The study adopted a descriptive survey research design. The population of the study was 2,144 library-registered postgraduate students' users and sample size of 214 was selected from the 2021/2022, 2022/2023 and 2023/2024 academic sessions. The instrument for data collection was a questionnaire designed by the researchers and validated by experts in library and information science and test and measurement. Data were analyzed using Mean and Standard Deviation, Linear Regression and Pearson Product Moment Correlation (PPMC). Findings revealed that there is a positive relationship between access to library information and use of electronic resources, also the study indicate a positive significant relationship exist between digital literacy skills and use of electronic resources by postgraduate students in federal university libraries in North-west, Nigeria. The study concluded with a call on the university libraries in North-west Nigeria to redouble their efforts and ensure that these future postgraduate students and scholars in universities are well-trained to be digitally up-to-date in order to contribute maximally to the Nigerian digital technology revival. The study recommended that management should provide more digital literacy skills training programs that can help the postgraduates to sustain and acquire more skills in universities in North-west Nigeria.

**Keywords:** Digital Literacy, Competency, Electronic Resources, University Libraries.

### Introduction

University libraries were established all over the world to purchase and make information resources available for use. The drastic change in provision of information through the use of Information Communication and Technology (ICT) in this age requires a lot of skills, knowledge and approaches to ensure maximum utilization of information resources. As libraries adapts to the evolving landscape of information access, it is imperative that postgraduate students be technologically savvy to be able to navigate and explore the collections of information channels available at their disposal. Electronic resources (ER) gives room for flexibility and remote access to information regardless of location (Igbinovia & Odelami, 2022).

Electronic resources are resources that need electronic devices, internet access, and data in an electronic format (Bataineh et al. 2021). Information resources that can be accessed, saved, and utilized electronically are referred to as electronic resources. Kalsoom et al. (2021) stated that they are available in electronic formats on the Internet, CD-ROM databases, e-books, e-journals, e-dictionaries, e-magazines, online databases, OPAC, pen drives, and other

computer-based electronic networks. Information resources known as ERs can be accessed using a computer or to satisfy users' information needs, any electronic device that provides a collection of data in the form of textbooks, journals, or other information resources that have been published under a commercially available title (Igbinovia & Odelami, 2022). They are primarily separated into offline and online ERs. Online ERs can be accessed via the Internet, however offline ERs, which come in the form of diskettes, CD ROMs, and other portable offline databases, can be accessed without internet connectivity. Electronic journals, electronic images, electronic books, electronic databases, electronic multimedia resources, websites and web runners, electronic correspondence, electronic reference materials such as directories and encyclopedias, Educational Resources Information Centre (ERIC) and Online Public Access Catalog (OPAC) are examples of ERs that fall under both the online and offline categories.

Library patrons should employ a number of tactics to access electronic information resources, including author, subject, title, keyword search terms, publication date, etc. However, Salman et al. (2020) indicated that one's degree of digital literacy may influence how well they search for and retrieve electronic information. One of the main factors influencing students' use of electronic information resources is their level of digital literacy (Ogbekene, 2022). Students do not fully utilize the options, opportunities, and increased flexibility that electronic resources offer through the use of the internet and web search engines for academic activity.

According to Yo (2021), students may use e-information on the internet differently than they can with traditional print, and they can read on the internet in a branch that they can go to the right or left depending on what they need most at the time. This suggests that postgraduates' ability to their degree of digital literacy determines how well they use the library's EIRs. Although possession of technical skills is an aspect of digital literacy, one cannot ignore the fact that individuals must also possess cognitive and information skills that are pivotal for the Google/Net generation, to enable them to make responsive choices. Thus, digital skills may include critical thinking, creativity, collaboration, communication, Information literacy, media literacy, technology literacy and flexibility.

Baro, Obaro and Aduba (2019) investigated digital literacy skills of library and information professionals in various libraries in English-speaking countries in Africa. Findings revealed that the respondents rated their level of DL skills to be moderately low. With regards to database search skills, uploading documents to online platforms, skills in applying new technologies to library services, ability to create different file formats and ability to use open source software, respondents rated their skills very high, while on the other hand, metadata development skills and library website development skills were rated moderate and low respectively. Salman et.al (2020) investigated the factors that affect the acquisition of digital literacy skills by 278 undergraduates in the Fountain University library, and the effect of digital skills on the use of EIRs. Results showed that 90 (32.4%) admitted that a lack of digital skills hindered their use of EIRs. The majority 161 (57.9%) and 121 (43.5%) of the respondents identified low internet bandwidth and volatility of online information respectively as a major challenge to their acquisition of digital proficiencies.

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In the same vein, Yusuf and Endouware (2021) in their assessment of the digital literacy skills of 100 academic librarians in Nigerian Universities used a questionnaire as a data collection instrument. The study revealed a low level of digital literacy skill possession by the majority of the respondents. This result increases curiosity about the digital literacy level of undergraduates as librarians are supposed to be digital literacy advocates to undergraduates in their quest to use EIRs. The study recommended that both librarians and students should scale up their level of digital literacy skills which is a necessary skill to effectively function in the information age.

Digital literacy is one of the composite skills needed for a student to succeed academically in a digital environment. Without fundamental abilities and understanding of digital technology, postgraduate students find it difficult, if not impossible, to succeed in tertiary education (Adeoye & Adeoye 2017). A variety of skills that allow people to find, assess, and use electronic resources efficiently are included in digital literacy skills. The significance of these abilities cannot be emphasized in the context of postgraduate studies, where aspiring professionals are being prepared to act as information intermediaries. In light of the aforementioned, the purpose of this study is to investigate how digital literacy competency affect the use of electronic information resources by postgraduate students at federal university libraries in North-west Nigeria.

### **Statement of the Problem**

Electronic resources have indeed become very important to students in accessing recent information at the right time and in the right form. Researchers and graduate students can now access material for study or research owing to the electronic resources in these libraries. While there are many advantages to using electronic resources in libraries for postgraduate students' academic pursuits, such as the ability to search multiple files at once and access up-to-date information at the appropriate time and location, there are also many obstacles to overcome in order to make the most of these resources.

Despite the high necessity of electronic resource usage, it has been observed that electronic resources are grossly underutilized and that there are challenges which postgraduate students may encounter in their use of electronic resources. These challenges may be due to a lack of digital literacy skills (Ukwoma, Iwundu & Iwundu, 2016). Also, underutilization of electronic resources might be due to complexities associated with some electronic resources, as postgraduate students who do not possess digital literacy skills may find use of electronic resources difficult. It is therefore, in the light of this background that this present study was considered.

### **Objectives of the Study**

The study was guided by the following objectives:

1. Establish the various academic purposes for which postgraduate students' use electronic resources in the federal university libraries in North-west, Nigeria.
2. Ascertain the relationship between access to library information and use of electronic resources by the postgraduate students in federal university libraries in North-west, Nigeria.

3. Determine the relationship between postgraduate students' digital literacy skills and the use of electronic resources in federal university libraries in North-west, Nigeria.

### Research Questions

The following research questions guided the study:

1. What are the various academic purposes for which postgraduate students' use electronic resources in the federal university libraries in North-west, Nigeria?
2. What is the relationship between access to library information and use of electronic resources by the postgraduate students in federal university libraries in North-west, Nigeria?
3. What is the relationship between postgraduate students digital literacy skills possessed and their use of electronic resources in federal university libraries in North-west, Nigeria?

### Methodology

This study adopted the descriptive and correlational survey research designs, with a population of 2,144 library-registered postgraduate students, as noted in the PG e-library registration portal for (2021/2022, 2022/2023 and 2023/2024) academic sessions, in 5 out of the 7 federal universities in the North west, Nigeria which met the criteria for the study, the universities are: Ahmadu Bello University (ABU); Bayero University Kano (BUK); Usman Danfodio University (UDU); Federal University Dutse (FUD); Federal University Dutsin-Ma (FUDMA). Multistage sampling technic was used to arrive at the desired sample size. Out of this study population, 214 respondents representing 10% of the study population were proportionately selected based on the recommendation of (Suleiman, 2012). That is, 10% each for ABU, BUK, UDU, FUD and FUDMA students. The purposive sampling technique was used in selecting the respondents that are registered postgraduate library users.

The instrument for data collection was a questionnaire designed by the researchers and validated by experts in library and information science and test and measurement. Test-retest method was adopted. To determine the reliability of the instrument, 20 copies of the questionnaire were administered to the postgraduate students in the department of Library and Information Science, University of Ilorin who were not part of the study. The Cronbach Alpha method was used to establish the consistency reliability coefficient which yield a coefficient of 0.86. This indicates the instrument is reliable. However, data collected were analyzed using descriptive statistics to determine the frequency counts, mean scores and standard deviation for RQ1. Linear Regression was used to answer research question RQ2 and RQ3.

### Results

**Research question one:** What are the various academic purposes for which postgraduate students' use electronic resources in the federal university libraries in North-west, Nigeria?

**Table 1: Mean Responses of Respondent on the Academic Purposes of Utilizing Electronic Resources by postgraduate students**

N=196

	Name of schools					OVERALL
	UA	UB	UC	UD	UE	

		$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	SD
1	I use the library's electronic information resources to source materials for research/writing project	3.55	3.56	3.67	3.75	3.75	3.65	.50
2	I use them to do class assignments	3.53	3.72	3.42	3.75	3.50	3.58	.49
3	I use the electronic information resources to augment my class works	2.73	2.83	3.33	3.25	2.00	2.82	1.04
4	I use the Internet access in the library to send e-mail	2.78	2.67	3.58	3.75	3.00	3.15	1.21
5	I use the Internet access in the library to chat with friends	2.78	2.67	3.58	2.75	3.00	2.95	1.02
6	Use it to search for scholarship opportunities	2.09	2.17	3.67	3.00	1.75	2.53	1.12
7	To search for internship opportunities	2.42	2.61	3.08	1.25	2.75	2.42	1.13
8	I use the e-resources to retrieve current literature for studies	2.13	3.11	3.33	3.50	3.25	3.06	.74
9	I follow blog discussions on subject area of interest via the library's Internet access	2.50	3.50	3.67	3.25	1.25	2.83	1.15
10	I participate in professional discussion group/list serve via the library's Internet access	2.77	2.11	2.83	3.75	3.75	3.04	1.14
11	I use the e-resources to update my knowledge in subject areas of interest	3.09	2.67	3.25	2.75	3.25	3.00	.89
12	I use the Electronic catalogue (OPAC) for sourcing information in the library	3.13	3.11	3.33	3.50	3.25	3.26	1.04
13	I use the Internet in the library to generally source materials and information	3.29	3.11	3.58	2.25	3.00	3.04	.72
14	I use the electronic books provided by the library to complement my class notes	2.87	2.91	3.33	2.98	2.75	2.96	1.12

15	I use the electronic journals provided by the library for my project writing	2.44	3.06	3.25	1.75	2.00	2.50	1.15
16	I use the online database in the library for my assignments	2.94	2.78	3.58	2.58	3.75	3.12	3.61
	Cluster Mean	2.81	2.91	3.40	2.98	2.87	2.99	.50

**Keys: University A; University B; University C; University D; University E**

Result from table 1 revealed the academic purposes for which postgraduate students use electronic resources for in federal university libraries. The mean score of item 7 which is 2.42 fall short of the 2.50 acceptance benchmark which implies that respondents disagreed with it as academic purposes for which postgraduate students use electronic resources for in federal university libraries. However, the overall mean scores of items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15 and 16 which are 3.04, 3.04, 2.82, 3.15, 2.95, 2.53, 3.58, 3.06, 2.83, 3.65, 3.00, 3.26, 2.96, 2.50 and 3.15 are above the 2.50 acceptance benchmark which implies that they are accepted as academic purposes for which postgraduate students use electronic resources for in federal university libraries. These purposes include: to source materials for research/writing project, use them to do class assignments, use the electronic information resources to augment my class works, use the e-resources to update my knowledge in subject areas of interest, use the Internet in the library to generally source materials and information, use the Internet access in the library to chat with friends, among others. The overall mean and standard deviation scores for the entire items in table 2 is 2.99 and .50 respectively implies that respondents agree to the items on table 1 as the academic purposes for which postgraduate students use electronic resources for in federal university libraries. The findings corroborates the result of Quadri and Adetimirin (2014) who studied the purpose of use of EIRs by postgraduate students in two private universities in Ogun State and found that students used EIRs for class assignment, research and study.

**Research question two:** What is the relationship between access to library information and use of electronic resources by the postgraduate students in federal university libraries in North-west, Nigeria?

**Table 2: Correlational Analysis on the Relationship between Access to Library Information and their Use of ERs by the Postgraduate Students**

	N	Mean	SD	r	Sig.	Decision
Access to Library Information	196	3.35	.55	.862	0.000	S
Use of Electronic Resources in University Libraries	196	3.55	.50			

r=Pearson Correlation Coefficient, N=total number of respondents

Table 2 showed the correlation analysis on the relationship between access to library information and their use of ERs by postgraduate students. The mean of access to library information is 3.35 while the mean for the use of ERs in university libraries is 3.55 with corresponding standard deviation of .55 and .50. Since the correlation coefficient (r) is 0.862

indicating a relationship between the access to library information and use of ERs by postgraduate students in university libraries is significant at 0.00 which is less than 0.05 level of significance, it therefore implies that there is a significant positive relationship between access to library information and use of ERs by postgraduate students in federal university libraries in North-West Nigeria.

**Research question three:** What is the relationship between postgraduate students digital literacy skills possessed and their use of electronic resources in federal university libraries in North-west, Nigeria?

**Table 3: Correlational Analysis on the Digital Literacy Skills and Use of Electronic Resources by postgraduate students**

	N	Mean	SD	r	Sig.	Decision
Digital literacy skills possessed	196	3.56	.48	.732	.038	S
Use of electronic resources	196	3.55	.50			

r=Pearson Correlation Coefficient, N=total number of respondents

Table 3 showed the correlation analysis on the relationship between digital literacy skills possessed and their use of ERs by postgraduate students. The mean of digital literacy skills possessed is 3.56 while the mean for the use of ER in university libraries is 3.55 with corresponding standard deviation of .48 and .50. Since the correlation coefficient (r) is 0.732 indicating the relationship between the digital literacy skills possessed and use of ERs by postgraduate students in university libraries is significant at 0.03 which is less than 0.05 level of significance, it therefore implies that there is a significant positive relationship between digital literacy skills possessed and use of ERs by postgraduate students in federal university libraries in North-west Nigeria.

**Discussion of Findings**

According to the study's findings, respondents' academic purposes for use of electronic resources by that postgraduate students in the university library are mainly for such activities as sourcing materials for research or writing project, doing assignments, retrieving current literature for studies, use the Internet access in the library to send email, updating my knowledge in subject areas of interest. The findings corroborates the result of Ukachi (2013) inferred that electronic information resources are utilized by postgraduate students in the universities for several academic purposes which include: doing class assignments, writing term papers, augmenting class works, retrieving current literature for studies, following blog discussions on the subject area of interest, searching for scholarship opportunities, searching for internship placement and for research purposes.

Regarding the correlation of the access to library information and the use of ERs show that there is a positive relationship between access to library information and the use of electronic resources by postgraduate students in federal university in North-west, Nigeria. This result implies that the extent to which these resources can be access by postgraduate students

will influence the extent to which they will utilize them. Aguolu and Aguolu (2002) correspondingly, stated that the resources may be available in the library and even identified bibliographically as relevant to one's subject of interest, but the user may not be able to lay hands on them due to lack of access to use the resources.

Additionally, result of correlation shows that there is a positive relationship between digital literacy skills of postgraduate students and use of electronic resources in federal university library in North-west, Nigeria. This implies that with digital literacy skills it will enable the Postgraduate students perform their academic task with electronic resources. This findings corroborates the observation made by Adeleke and Emeahara (2016) shows the level of digital literacy skills possessed by students has the potential of enhancing their use of EIRs such as the Internet, on-line databases, e-books and e-journals.

### **Conclusion**

Based on the findings of this study, digital literacy competency is essential for postgraduate students of federal universities libraries to achieve quality academic success in the current digital world. Digital literacy competency are enablement aids which exceed the four walls of the university in terms of accessing and utilizing electronic resources. The objective of this study which is focused on finding out how information literacy abilities of postgraduate students as relate with their use of university libraries' electronic resources in North-west, Nigeria has been attained as the result of the study has shown that for the postgraduate students to make good use of the electronic resources, they need efficient access to library resources and digital skills, due to the fact that all these skills have strong relationship with the use of electronic resources. However, this study concludes with a call on the university libraries in North-west, Nigeria to redouble their efforts and ensure that these future postgraduate students and scholars in universities are well-trained to be digitally up-to-date in order to contribute maximally to the Nigerian digital technology revival.

### **Recommendations**

In the light of the findings of this study, the following recommendations are pertinent in improving the digital literacy skills of postgraduate students:

1. University libraries should prioritize electronic resources as the major information resources and ensure its effective and efficient usage by students
2. University libraries should design and implement digital literacy programmes to train postgraduate students to develop their knowledge and practical skills on the use of digital technologies
3. Postgraduate students should see digital literacy competency as a necessity for living and success and thus, should embrace it with open arms by making their personal sacrifice in acquiring relevant digital literacy competency through self-sponsored training
4. Management of universities should provide functional digital infrastructures like computers and internet facilities in order to prepare their postgraduate students for global competitiveness in the present information-saturated world

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