

AWARENESS, ACCESSIBILITY, AND UTILISATION OF ELECTRONIC INFORMATION RESOURCES AMONG POSTGRADUATE STUDENTS IN UNIVERSITIES IN THE FEDERAL CAPITAL TERRITORY (FCT), ABUJA, NIGERIA

Lazarus Boniface Umeh,

Department of Library and Information Science, Faculty of Social Sciences,
Federal University of Abuja

Umeh, L.B.; Agbese, F.

Florence Agbese, PhD

Department of Library and Information Science,
Faculty of Social Sciences,
Federal University of Abuja

Abstract

This study investigated the awareness, accessibility, and utilisation of electronic information resources (EIRs) among postgraduate students in universities in the Federal Capital Territory (FCT), Abuja, Nigeria. A descriptive survey research design was adopted. The study population comprised 19,410 postgraduate students from six universities, from which a sample of 377 respondents was selected using the Krejcie and Morgan sample size determination table and proportionate sampling technique. Data were collected using a structured questionnaire with established validity and high reliability coefficients (Cronbach's Alpha = 0.83–0.90). Descriptive statistics, including frequencies, percentages, mean scores, and standard deviations, were used to analyse the data. The findings revealed that postgraduate students demonstrated high awareness, accessibility, and utilisation of commonly available electronic information resources, particularly internet services, electronic journals, and electronic books. Conversely, institutional repositories, Online

Public Access Catalogues (OPACs), electronic research reports, and CD-ROM databases recorded relatively low levels of awareness, accessibility, and utilisation. The study concludes that although postgraduate students extensively use web-based electronic resources for research, institution-managed electronic resources remain underutilised because of inadequate awareness and accessibility. The study recommends strengthening information literacy programmes, improving ICT infrastructure and remote access facilities, enhancing the visibility of institutional repositories and OPACs, providing regular user education programmes, and increasing investment in subscription-based electronic resources to improve postgraduate research productivity.

Keywords: Electronic information resources, awareness, accessibility, utilisation, postgraduate students, research activities, academic libraries, information literacy, ICT infrastructure, FCT-Abuja.

Introduction

Education remains a fundamental instrument for national development and human capital formation. In contemporary knowledge-driven societies, universities are expected to produce graduates capable of generating, applying, and disseminating knowledge through quality teaching, learning, and research. The rapid advancement of Information and Communication Technologies (ICTs) has transformed higher education by changing how scholarly information is created, stored, accessed, and communicated. Consequently, university libraries have increasingly adopted electronic information resources to support research and enhance academic productivity (Sele & Wanjiku, 2024).

Electronic Information Resources (EIRs), including electronic journals, electronic books, online databases, institutional repositories, electronic theses and dissertations, and other digital scholarly resources, have become indispensable tools for postgraduate education. Unlike conventional print resources, EIRs provide timely access to current scholarly

literature, support simultaneous access by multiple users, facilitate remote access, and improve the efficiency of information retrieval. These advantages have encouraged universities to invest substantially in digital library collections to strengthen research, innovation, and scholarly communication (Edem & Egbe, 2016).

The effectiveness of these investments depends largely on postgraduate students' awareness of available electronic resources. Awareness refers to users' knowledge of the existence, relevance, and academic value of electronic information resources provided through university libraries. Students who are adequately informed about available electronic resources are more likely to identify reliable scholarly materials and incorporate them into their research activities. Conversely, inadequate awareness often results in dependence on freely available internet sources that may not always meet the quality standards required for postgraduate research (Okechi & Oyetola, 2022).

Awareness alone, however, does not guarantee effective use of electronic information resources. Students must also have convenient and reliable access to these resources through adequate ICT infrastructure, stable internet connectivity, authentication systems, and responsive library services. Accessibility determines the extent to which users can conveniently retrieve and utilise available electronic resources. Challenges such as unstable internet services, inadequate ICT facilities, subscription restrictions, and insufficient technical support may significantly reduce effective access to valuable scholarly resources (Ogunyemi, 2021).

Effective utilisation represents the ultimate objective of providing electronic information resources in academic libraries. Utilisation refers to the extent to which postgraduate students employ electronic resources to identify relevant literature, retrieve empirical evidence, support research design, and produce quality academic outputs. Studies have consistently demonstrated that extensive utilisation of electronic journals, databases, and electronic books contributes to improved research quality, increased scholarly productivity, and enhanced academic performance. Conversely, underutilisation of institutional repositories, OPACs, and other specialised resources often reflects deficiencies in awareness, accessibility, or both (Chuks-Ibe et al., 2023; Eneh & Ekhurutomwen, 2023).

Awareness, accessibility, and utilisation are complementary dimensions of effective electronic resource use. Awareness introduces users to available resources, accessibility enables their retrieval, while utilisation reflects their practical application in research activities. A deficiency in any of these dimensions diminishes the value of institutional investments in digital library services and limits the contribution of electronic resources to postgraduate research productivity.

Although several studies have investigated awareness, accessibility, or utilisation of electronic information resources independently, relatively few have examined these variables collectively among postgraduate students in universities located in the Federal Capital Territory (FCT), Abuja. Given the considerable investments made by universities in digital information infrastructure, there is a need to determine the extent to which

postgraduate students are aware of, can access, and effectively utilise available electronic information resources. This study therefore investigates the awareness, accessibility, and utilisation of electronic information resources among postgraduate students in universities in the Federal Capital Territory, Abuja, with a view to providing evidence that can guide policy formulation and improve digital library services.

Statement of the Problem

Electronic Information Resources (EIRs) have become indispensable tools for postgraduate education because they provide timely access to current scholarly literature, facilitate knowledge discovery, and support high-quality research. Universities have consequently invested considerable financial resources in acquiring electronic journals, online databases, institutional repositories, and other digital library services to improve research productivity and academic excellence. Ideally, these investments should enable postgraduate students to access authoritative scholarly information efficiently and produce quality research outputs.

Despite these investments, evidence from many Nigerian universities suggests that postgraduate students do not fully utilise available electronic information resources. Instead, many students continue to rely heavily on freely available internet resources, which may not always provide credible or peer-reviewed academic information. This situation raises concerns about the extent to which university-sponsored electronic resources are being effectively exploited for postgraduate research.

The persistent underutilisation of institutional electronic resources may be attributed to several interrelated factors. Limited awareness of available resources, inadequate user education programmes, poor accessibility arising from infrastructural deficiencies, unstable internet connectivity, authentication challenges, and inadequate digital literacy may collectively hinder effective utilisation. Consequently, valuable electronic resources subscribed to by universities remain underused despite their enormous potential for supporting research and scholarly communication.

Although previous studies have examined awareness, accessibility, or utilisation of electronic information resources separately, relatively few have investigated these variables simultaneously among postgraduate students in universities located within the Federal Capital Territory (FCT), Abuja. The absence of sufficient empirical evidence from this region creates a knowledge gap regarding the relationship among awareness, accessibility, and utilisation of electronic information resources. This study therefore investigates the awareness, accessibility, and utilisation of electronic information resources among postgraduate students in universities in the Federal Capital Territory, Abuja, with a view to providing evidence that can guide institutional policies, strengthen library services, and improve postgraduate research productivity.

Purpose of the Study

The purpose of this study was to investigate the awareness, accessibility, and utilisation of electronic information resources among postgraduate students in universities in the Federal Capital Territory (FCT), Abuja.

Research Questions

The following research questions guided the study:

1. What is the level of awareness of electronic information resources among postgraduate students in universities in the Federal Capital Territory (FCT), Abuja?
2. What is the level of accessibility of electronic information resources among postgraduate students in universities in the Federal Capital Territory (FCT), Abuja?
3. To what extent do postgraduate students utilise electronic information resources for their research activities in universities in the Federal Capital Territory (FCT), Abuja?

Literature Review

This review examines existing literature on awareness, accessibility, and utilisation of electronic information resources among postgraduate students. The review is organised according to the variables investigated in the study to establish current knowledge, identify areas of consensus and disagreement, and highlight the research gap addressed by this study.

Awareness of Electronic Information Resources

Awareness is a prerequisite for the effective utilisation of electronic information resources because users cannot benefit from resources they do not know exist. Within university environments, awareness extends beyond simply recognising the existence of electronic resources to understanding their academic relevance, scope, accessibility, and potential contribution to teaching, learning, and research. Effective awareness is usually promoted through library orientation programmes, user education, institutional publicity, and information literacy initiatives, all of which influence students' willingness to explore specialised electronic resources.

Empirical evidence consistently shows that awareness of commonly used electronic resources is generally high, whereas awareness of specialised institutional resources remains comparatively low. Studies conducted in Nigeria and elsewhere indicate that postgraduate students and academic staff are highly familiar with internet services, electronic journals, and electronic books because these resources are widely integrated into teaching and research activities (Akinbo & Omideyi, 2022; Humbhi et al., 2023). However, awareness of institutional repositories, specialised subscription databases, OPACs, and other library-managed resources is often less satisfactory (Joshua et al., 2022; Oyediran & Okorie, 2024). These findings suggest that institutional promotion strategies and user education programmes significantly influence awareness levels.

Differences reported across previous studies further indicate that awareness is influenced by institutional characteristics, availability of orientation programmes, and the visibility of electronic library services. Universities that regularly organise user education programmes and actively promote digital library services generally report higher awareness among postgraduate students than institutions where electronic resources receive limited publicity. This suggests that sustained awareness campaigns remain essential for maximising institutional investment in electronic information resources.

Accessibility of Electronic Information Resources

Accessibility refers to the ease with which users can locate, retrieve, and use electronic information resources whenever they are required. While availability indicates the existence of resources within a library, accessibility reflects the practical opportunity for users to obtain and use those resources without significant technical or administrative barriers. Effective accessibility depends on adequate ICT infrastructure, reliable internet connectivity, authentication systems, electricity supply, and responsive library support services.

Previous studies consistently identify internet connectivity, subscription limitations, inadequate ICT facilities, authentication difficulties, and unstable electricity supply as

major factors influencing accessibility of electronic information resources. Research conducted in Nigerian universities has shown that although electronic journals and internet services are generally accessible, institution-managed databases and repositories frequently experience accessibility challenges arising from infrastructure and funding limitations (Makinde et al., 2017; Ternenge & Kashimana, 2019; Ogunyemi, 2021). Similar observations have been reported in studies conducted outside Nigeria, where institutional support and investment were found to determine users' ability to access electronic scholarly resources effectively.

The literature therefore demonstrates that accessibility extends beyond the physical availability of resources. Universities must provide enabling technological environments that permit seamless access both on campus and remotely if postgraduate students are to benefit fully from institutional electronic information resources.

Utilisation of Electronic Information Resources

The ultimate objective of providing electronic information resources is to facilitate their effective utilisation in academic and research activities. Utilisation reflects the extent to which postgraduate students apply electronic resources to identify relevant literature, retrieve scholarly evidence, support research design, and produce quality academic

outputs. Effective utilisation therefore represents the practical outcome of adequate awareness and accessibility.

Existing literature indicates that electronic journals, electronic books, online databases, internet resources, and electronic theses are among the most frequently utilised electronic resources by postgraduate students because they provide immediate access to current scholarly information. Conversely, institutional repositories, OPACs, CD-ROM databases, and other specialised resources generally record comparatively low utilisation (Agboke & Effiong, 2022; Esharedede, 2023; Kingsley, 2024). These differences are commonly attributed to inadequate awareness, accessibility challenges, limited information literacy, and insufficient institutional promotion.

However, previous studies demonstrate a strong relationship among awareness, accessibility, and utilisation of electronic information resources. Students who possess greater awareness and experience fewer accessibility barriers are generally more likely to utilise electronic resources effectively in their research activities. Nevertheless, few studies have examined these three variables together among postgraduate students in universities located in the Federal Capital Territory, Abuja. This study addresses that gap by providing empirical evidence on how awareness, accessibility, and utilisation interact within this context.

1. Methodology

This study adopted a descriptive survey research design to investigate the awareness, accessibility, and utilisation of electronic information resources among postgraduate students in universities in the Federal Capital Territory (FCT), Abuja. The design was considered appropriate because it enabled the collection of data from a representative sample of postgraduate students regarding their perceptions and experiences with electronic information resources.

The population comprised 19,410 postgraduate students enrolled in six universities within the Federal Capital Territory. A sample of 377 respondents was determined using the Krejcie and Morgan sample size determination table. Proportionate sampling technique was employed to ensure adequate representation of respondents from each participating university.

Data were collected using a structured questionnaire developed by the researchers. The instrument consisted of sections covering respondents' demographic characteristics, awareness, accessibility, and utilisation of electronic information resources. Face and content validity of the instrument were established through expert review, while reliability was determined using Cronbach's Alpha, which yielded coefficients ranging from 0.83 to 0.90, indicating high internal consistency.

The questionnaires were administered directly to the respondents, and completed copies were retrieved for analysis. Data were analysed using descriptive statistics, including

frequencies, percentages, mean scores, and standard deviations. The findings are presented in tables and interpreted according to the research questions that guided the study.

2. Results and Discussions

A total of 377 copies of the questionnaire were administered to postgraduate students across six selected universities in the FCT, Abuja. The distribution and return rates are presented in Table 4.1 below.

Table 4.1: Questionnaire Administration and Return Rate

S/N	University	Copies Distributed	Copies Retrieved	Return Rate (%)
1	University of Abuja	110	110	100.0
2	Nile University of Nigeria	65	65	100.0
3	Baze University	55	55	100.0
4	National Open University (NOUN)	80	80	100.0
5	Veritas University	42	42	100.0
6	African University of Science & Tech (AUST)	25	25	100.0
TOTAL		377	377	100.0

Source: Field Survey, 2025

Table 4.1 shows that all 377 copies of the questionnaire distributed were retrieved and found valid for analysis, representing a 100% return rate. This high return rate ensures

that the sample is statistically reliable and representative of the postgraduate population in the FCT.

Research Question 1: What is the level of awareness of electronic resources among postgraduate students for their research activities in universities in FCT-Abuja?

The data collected to answer this research question are presented in Table 4.2. The scale used is Very High Level (VHL), High Level (HL), Low Level (LL), and Very Low Level (VLL).

Table 4.2: Level of Awareness of Electronic Information Resources (EIRs)

S/N	Awareness of EIRs	VHL	HL	LL	VLL
1	Electronic Books (E-Books)	180 (47.7%)	120 (31.8%)	50 (13.3%)	27 (7.2%)
2	Electronic Journals	195 (51.7%)	135 (35.8%)	32 (8.5%)	15 (4.0%)
3	Electronic Databases	110 (29.2%)	140 (37.1%)	85 (22.5%)	42 (11.1%)
4	Electronic Research Report	95 (25.2%)	125 (33.2%)	102 (27.1%)	55 (14.6%)
5	Digital Institutional Repository	70 (18.6%)	105 (27.9%)	130 (34.5%)	72 (19.1%)
6	OPAC	65 (17.2%)	90 (23.9%)	145 (38.5%)	77 (20.4%)
7	Electronic Newspapers	140 (37.1%)	150 (39.8%)	55 (14.6%)	32 (8.5%)
8	Electronic Magazines	115 (30.5%)	130 (34.5%)	85 (22.5%)	47 (12.5%)
9	CD-ROM	40 (10.6%)	60 (15.9%)	160 (42.4%)	117 (31.0%)
10	Internet Services	250 (66.3%)	100 (26.5%)	20 (5.3%)	7 (1.9%)

Source: Field Survey, 2025

Table 4.2 indicates that postgraduate students demonstrated high awareness of Internet Services (92.8%), Electronic Journals (87.5%), Electronic Newspapers (76.9%), and Electronic Books (79.5%). In contrast, awareness of Digital Institutional Repositories, OPAC, Electronic Research Reports, and CD-ROM databases was relatively low, with most respondents indicating Low or Very Low awareness. These findings suggest that students are more familiar with web-based electronic resources than institution-managed electronic information resources.

Research Question 2: What is the level of accessibility of electronic resources among postgraduate students for their research activities in universities in FCT-Abuja?

The data used to answer this research question is presented in Table 4.3

Table 4.3: Level of Accessibility of Electronic Information Resources (EIRs)

S/N	Accessibility of EIRs	VHL	HL	LL	VLL
1	Electronic Books (E-Books)	165 (43.8%)	115 (30.5%)	62 (16.4%)	35 (9.3%)
2	Electronic Journals	170 (45.1%)	130 (34.5%)	50 (13.3%)	27 (7.2%)
3	Electronic Databases	95 (25.2%)	120 (31.8%)	105 (27.9%)	57 (15.1%)
4	Electronic Research Report	88 (23.3%)	110 (29.2%)	112 (29.7%)	67 (17.8%)
5	Digital Institutional Repository	62 (16.4%)	95 (25.2%)	140 (37.1%)	80 (21.2%)
6	OPAC	55 (14.6%)	85 (22.5%)	155 (41.1%)	82 (21.8%)
7	Electronic Newspapers	145 (38.5%)	135 (35.8%)	60 (15.9%)	37 (9.8%)
8	Electronic Magazines	120 (31.8%)	140 (37.1%)	75 (19.9%)	42 (11.1%)
9	CD-ROM	35 (9.3%)	55 (14.6%)	165 (43.8%)	122 (32.4%)
10	Internet Services	230 (61.0%)	110 (29.2%)	25 (6.6%)	12 (3.2%)

Source: Field Survey, 2025

Research Question 3: To what extent do postgraduate students in FCT-based universities utilise EIRs for their research activities?

The scale used is Very High Extent (VHE), High Extent (HE), Low Extent (LE), and Very Low Extent (VLE).

Table 4.4: Extent of Utilisation of Electronic Information Resources

S/N	Statements	VHE	HE	LE	VLE
1	I utilise e-journals for my research	185 (49.1%)	132 (35.0%)	40 (10.6%)	20 (5.3%)
2	I utilise e-books for my research	170 (45.1%)	125 (33.2%)	52 (13.8%)	30 (8.0%)
3	I utilise e-newspapers for research	105 (27.9%)	140 (37.1%)	85 (22.5%)	47 (12.5%)
4	I utilise e-conference proceedings	90 (23.9%)	115 (30.5%)	120 (31.8%)	52 (13.8%)
5	I utilise OPAC for my research	48 (12.7%)	75 (19.9%)	162 (43.0%)	92 (24.4%)
6	I utilise CD-ROM databases	32 (8.5%)	55 (14.6%)	170 (45.1%)	120 (31.8%)
7	I utilise e-magazines for research	95 (25.2%)	135 (35.8%)	92 (24.4%)	55 (14.6%)
8	I utilise online databases	130 (34.5%)	145 (38.5%)	72 (19.1%)	30 (8.0%)
9	I utilise e-theses and dissertations	142 (37.7%)	138 (36.6%)	65 (17.2%)	32 (8.5%)
10	I utilise Internet resources	245	105	17 (4.5%)	10 (2.7%)

		(65.0%)	(27.9%)		
11	I utilise electronic databases	125 (33.2%)	140 (37.1%)	75 (19.9%)	37 (9.8%)
12	I utilise e-research reports	100 (26.5%)	125 (33.2%)	105 (27.9%)	47 (12.5%)
13	I utilise e-lecture notes	150 (39.8%)	130 (34.5%)	67 (17.8%)	30 (8.0%)
14	I utilise computer-based networks	115 (30.5%)	120 (31.8%)	92 (24.4%)	50 (13.3%)

Source: Field Survey, 2025

The findings presented in **Table 4.4** reveal that Internet Services (90.2%), Electronic Journals (79.6%), Electronic Books (74.3%), and Electronic Newspapers (74.3%) were the most accessible electronic information resources to postgraduate students. Conversely, Digital Institutional Repositories, OPAC, and CD-ROM databases recorded comparatively low accessibility levels. This indicates that while internet-based resources are readily accessible, access to institution-managed electronic resources remains constrained.

Table 4.4 shows that postgraduate students extensively utilised Internet Resources (92.9%), Electronic Journals (84.1%), Electronic Books (78.3%), Electronic Theses and Dissertations (74.3%), and Online Databases (73.0%) for their research activities. However, OPAC and CD-ROM databases recorded the lowest levels of utilisation. Overall, the findings indicate that postgraduate students rely primarily on web-based scholarly resources while institution-managed electronic resources remain underutilised.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Universities should strengthen information literacy and user education programmes to improve postgraduate students' awareness and effective use of institutional electronic information resources, particularly OPACs and institutional repositories.
2. University management should improve ICT infrastructure by providing reliable internet connectivity, adequate bandwidth, stable electricity supply, and seamless remote access to subscribed electronic resources.
3. Academic libraries should increase the visibility and usability of institutional repositories, OPACs, and electronic research reports through regular orientation programmes, promotional campaigns, and integration into postgraduate research activities.
4. Universities should allocate adequate funding for the acquisition, renewal, and maintenance of subscription-based electronic databases to ensure uninterrupted access to current scholarly information.
5. Library staff should organise periodic hands-on training workshops to enhance postgraduate students' digital information literacy and promote effective utilisation of available electronic information resources.

Conclusion

This study concludes that postgraduate students in universities in the Federal Capital Territory, Abuja demonstrate high awareness, accessibility, and utilisation of internet-based electronic information resources, particularly electronic journals, electronic books, online databases, and internet services. However, institution-managed electronic resources such as OPACs, digital institutional repositories, electronic research reports, and CD-ROM databases remain comparatively underutilised because of limited awareness and accessibility. These findings underscore the need for universities and academic libraries to strengthen information literacy programmes, improve digital infrastructure, and promote institutional electronic resources more effectively. Enhancing these areas will maximise the value of investments in electronic information resources and contribute to improved postgraduate research productivity and scholarly output.

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