

PROVISION AND UTILIZATION OF ELECTRONIC INFORMATION RESOURCES (EIR) AMONG POSTGRADUATE STUDENTS IN PUBLIC UNIVERSITY LIBRARIES IN ABIA STATE, NIGERIA

By

ONYINYECHI GIFT ENYIOGU

Department of Library and Information Science,
Michael Okpara University of Agriculture, Umudike

and

REUBEN E. OZIOKO (PROF)

Department of Library and Information Science,
Michael Okpara University of Agriculture, Umudike

Abstract

This study investigates the provision and utilization of electronic information resources (EIRs) among postgraduate students in public university libraries in Abia State, Nigeria, specifically at Michael Okpara University of Agriculture, Umudike (MOUUAU) and Abia State University, Uturu (ABSU). EIRs—defined as digital materials such as e-books, e-journals, databases, and institutional repositories that are accessed through computers or mobile devices (IFLA, 2012)—are critical for teaching, learning, and research because of their accessibility, dependability, and timeliness. The study adopted a descriptive survey design with a population of 1,438 respondents, including postgraduate students and ICT staff. A sample of 289 respondents was selected using stratified and simple random sampling techniques. Data were collected via structured questionnaires and analyzed using descriptive statistics (mean and standard deviation) and t-test statistics at a 0.05 significance level. Findings revealed adequate provision of EIRs in both libraries, with postgraduate students utilizing these resources primarily for academic purposes such as project/thesis writing, coursework, assignments, and research. No significant differences were found in the extent of provision or purposes of utilization between the two universities. Recommendations include enhancing ICT infrastructure, strengthening awareness and user education, and improving authentication and access mechanisms to maximize the benefits of EIRs for postgraduate students.

Keywords: Electronic Information Resources, Postgraduate Students, University Libraries, Abia State, Nigeria

Introduction

University libraries are pivotal in supporting academic pursuits through the provision of electronic information resources (EIRs), which are critical for teaching, learning, and research due to their accessibility, dependability, and portability (Nnadozie, 2007). EIRs are defined as digital materials accessed via computers or mobile devices (IFLA, 2012) and include e-books, e-journals, databases, and institutional repositories. They provide students with timely and relevant information to enhance academic performance and research output (Mi & Sullenger, 2005). In Nigeria, public university libraries, such as those at MOUUAU and ABSU, have integrated EIRs to meet the growing information needs of postgraduate students. Provision in this context means the ability of university libraries to make these resources available for use, while utilization refers to the effective use of these resources to meet academic and research needs (Hornby, 2010; Uhegbu, 2007). Postgraduate students, who pursue higher degrees, rely heavily on independent study and diverse media formats, making robust digital resources indispensable (Ibrahim, 2004; Rasul & Singh, 2010). Despite their availability, the extent of provision and the purposes for which postgraduate students utilize these resources remain underexplored, particularly in Abia State. Preliminary observations suggest that EIR provision and utilization may be hindered by challenges such as inadequate ICT infrastructure, low awareness, and insufficient user education. This study therefore examines the extent of EIR provision and the purposes of their utilization among postgraduate students in these libraries.

Research Questions

1. To what extent are EIRs provided in public university libraries in Abia State, Nigeria?
2. What are the purposes for which postgraduate students utilize EIRs in these libraries?

Hypotheses

-H01: There is no significant difference between the mean ratings of ICT staff at ABSU and MOUAU on the extent of EIR provision.

H02: There is no significant difference between the mean ratings of postgraduate students at ABSU and MOUAU on the purposes of utilizing EIRs.

Literature Review

Provision of EIRs involves making digital resources accessible through ICT platforms such as online public access catalogues (OPACs), databases, and institutional repositories (Gbaje, 2011). Adequate provision requires robust hardware, software, and network infrastructure (Gwang, 2011) as well as continuous subscription and authentication (Jagboro, 2003). University libraries must subscribe to resources like TEEAL, HINARI, AGORA, and EBSCOHOST, ensuring accessibility through stable internet and sufficient computer units (Chong, 2002).

Utilization refers to the effective use of EIRs to meet information needs (Hornby, 2010). Postgraduate students use EIRs for academic purposes, including project/thesis writing, coursework, research, and assignments (Ramana, 2006). Ndubuisi and Udo (2013) found that EIRs are valued for being informative, accessible, and time-saving. However, effective utilization requires ICT literacy and awareness (Opeke & Odunlade, 2011). EIRs enhance research output by providing access to current and diverse information (Dadzie, 2005).

Challenges in provision and utilization include inadequate funding, unstable power supply, insufficient ICT facilities, and low user training (Gani, 2014; Edem & Egbe, 2016). Scholars such as Kanyengo (2006) and Kinengyere (2007) have stressed the strategic importance of EIRs in academic libraries, asserting that their proper provision and use are

critical in the modern academic environment. This literature underscores the need for continuous investment in infrastructure and training to maximize the benefits of EIRs for postgraduate students.

Methodology

A descriptive survey design was adopted to assess EIR provision and utilization in public university libraries in Abia State, focusing on MOUAAU and ABSU libraries. The population comprised 1,438 respondents, including 1,427 postgraduate students (374 from MOUAAU, 1,053 from ABSU) and 11 ICT staff (7 from MOUAAU, 4 from ABSU). A sample of 289 respondents (286 students, 11 ICT staff) was selected using stratified and simple random sampling. Data were collected using two structured questionnaires: UEIR-Q (27 items for ICT staff) and PEIR-Q (42 items for students), both on a 4-point scale (Strongly Agree/Very High Extent = 4, Agree/High Extent = 3, Disagree/Low Extent = 2, Strongly Disagree/Very Low Extent = 1). Descriptive statistics (mean, standard deviation) with a criterion mean of 2.50 and t-test statistics at a 0.05 significance level were used for analysis.

Results and Discussion

Research Question 1: To what extent are EIRs provided in public university libraries in Abia State, Nigeria?

The extent of EIR provision in MOUAAU and ABSU libraries is presented in Table 1 based on ICT staff responses.

Table 4.1: Summary of library staff mean and standard deviation of responses on the extent e-resources are been provided in public university libraries in Abia State, Nigeria?

S/N	Items –Statement	$\bar{x}$	Sd	Remark
1	TEEAL server is located in a secluded version from dust, liquid, and unauthorized access.	2.91	0.81	High extent
2	TEEAL database is up-to date with the latest version	2.91	0.63	High extent
3	There is adequate number of computer units in the	2.55	0.82	High extent

library for students to access TEEAL and other EIRs			
4	We ensure up-to-date subscription to OARE database	3.19	0.69 High extent
5	OARE login details is freely available to all library users	3.36	0.41 High extent
6	We ensure up-to-date subscription to HINARI database	2.73	0.87 High extent
7	HINARI login details is freely available to all users	3.18	0.51 High extent
8	We ensure up-to-date subscription to AGORA database	3.27	0.56 High extent
9	AGORA login details is freely available to all users	3.64	0.41 Very high extent
10	ARDI login details is freely available to all library users	3.64	0.23 Very High extent
11	We ensure up-to-date subscription to EBSCOHOST	3.00	0.73 High extent
12	EBSCOHOST login details is freely available to all users	3.00	0.73 High extent
13	e-Books/ e-journals are downloaded from the Internet for free	3.27	0.56 High extent
14	There is paid subscription for e-Books/e-Journals	2.36	0.60 Low extent
15	e-Theses/dissertations are accessed from computers in the library	1.91	0.45 Low extent
16	e-Projects are accessed from computers in the library	1.45	0.43 Very low extent
17	CD-ROM databases are available in the library	3.19	0.51 High extent
18	e-Reports are accessed from computers in the library	2.64	0.60 High extent
19	e-Theses/dissertations are accessed from computers in the library	2.09	0.45 Low extent
20	e-Inaugural lectures can be accessed from computers in the library	1.82	0.33 Low extent
21	e-Conference papers are accessed from computers in the library	1.91	0.26 Low extent
Average		0.55	High extent
		2.76	

N/B:.. $\bar{x}$ = Mean and Sd = Standard deviation.

The findings related to research question one reveal that electronic information resources (EIRs) are adequately provided in the libraries of Michael Okpara University of Agriculture, Umudike (MOUUAU) and Abia State University (ABSU). This aligns with Gani (2014), who reported the availability of internet services, e-databases, and e-journals in Northwestern Nigerian university libraries, though Aina (2014) recommended longer access hours to meet user demands. Similarly, Edem and Egbe (2016) confirmed the availability of EIRs in the University of Calabar (UNICAL), while Umaru et al. (2018) found a variety of digital reference resources and services in federal universities in North Central Nigeria. Aina (2014) further stressed that university libraries should be evaluated not only by their print collections but by the extent and quality of electronic and digital content they provide to meet diverse user needs.

Nwezeh and Shabi (2011) identified commonly provided EIRs to include journals, government documents, and indexes, while Oshinaike and Iyoro (2009) emphasized the importance of quality, current e-resources such as e-books and internet access for academic success. Kinengyere (2007) and Kanyengo (2006) highlighted the strategic importance of EIRs in academic libraries, asserting that their proper provision and use are critical in the modern academic environment. Rasul and Singh (2010) noted that postgraduate students, who rely heavily on independent study and diverse media formats, require robust digital resources. Therefore, ensuring adequacy of EIRs is essential for academic performance and satisfaction. Kanyengo (2006) also observed the increasing pace at which information is being converted into digital formats, necessitating academic libraries to adapt accordingly.

Chong (2002) and Breeding (2004) identified two core aspects of EIR provision: acquisition and user delivery. Access is typically provided via online catalogs, e-journal

locators, and DOIs. Moloi and Mutula (2007) emphasized the need for librarians to be proficient in internet and search technologies, while Chou (2003) advocated for librarian training in digital reference services to effectively support users.

Despite these advances, challenges persist. Recommendations include regular training for librarians to overcome technophobia, improvement in working conditions, and enhanced strategies to ensure seamless remote access to digital materials (Chou, 2003; Moloi & Mutula, 2007). These measures are essential to support students—especially postgraduates—and meet their evolving academic information needs.

Table 2: Summary of t-test analysis on the mean ratings of ICT unit staff of Abia State University (ABSU) and Michael Okpara University of Agriculture Umudike (MOUAU) libraries on the extent of Provision of e-resources.

Groups	Numbers	$\bar{x}$	s^2	DF	t-cal	t-tab	Decision at p< 0.05	Remarks
MOUAU(x)	7	2.748	0.579	9	0.975	1.96	Retained	Not Sig.
ABSU (x ₂)	4	2.679	0.586					

NB: $\bar{x}$ = mean, s^2 = Variance, DF = degree of freedom, t-cal = t-test calculated value and t-tab = t-test table value

The data in the table 2, showed a t- test calculated value of 0.975 and table value of 1.96 which was greater than the former at 0.05 level of significance. This implied that the null hypothesis, which stated that there is no difference between library staff of MOUAU and library staff of ABSU mean rating responses was retained, which means that the responses of MOUAU and ABSU library staff respondents are not significantly different, confirming the result obtained in the corresponding research question.

Research Question 2: What are the purposes for which postgraduate students utilize EIRs in these libraries?

The purposes for which postgraduate students utilize EIRs are presented in Table 2.

Table 3: Summary of mean and Standard deviation of responses on the purposes postgraduate students utilize e-resources in public university libraries in Abia State, Nigeria?

SN	Item-statements	$\bar{x}$	Sd	Remarks
1	For writing my articles for publication	3.21	0.73	Agreed
2	For my project/theses/dissertation writing	3.30	0.75	Agreed
3	To complement my course work	3.13	0.78	Agreed
4	To have leisure	2.79	0.77	Agreed
5	To enhance my study needs	3.09	0.83	Agreed
6	To enable me get information on scholarships	3.00	0.55	Agreed
7	To assist check bibliographic particulars of foreign books	2.78	0.79	Agreed
8	To do my assignments	3.00	0.89	Agreed
9	To prepare for my examinations	3.13	0.80	Agreed
		3.22	0.72	Agreed
10	To develop my research capacity	3.06	0.76	Agreed
	Average	3.06	0.81	Agreed

N/B: $\bar{x}$ = mean and Sd = standard deviation.

The study revealed that postgraduate students in public university libraries in Abia State utilize electronic information resources (EIRs) for a variety of academic and personal purposes. These include writing articles for publication, preparing theses or dissertations, complementing coursework, leisure reading, enhancing study needs, sourcing scholarship information, verifying bibliographic details of foreign books, completing assignments, preparing for examinations, and building research capacity.

This finding is consistent with Obaje and Camble (2012), who found that students at Obafemi Awolowo University used e-resources extensively for thesis and project writing. Similarly, Owolabi et al. (2016) reported that students used EIRs to support coursework, research, assignments, and personal academic interests. Akpojotor (2016) also confirmed that EIRs are critical tools for empowering postgraduate students in Southern Nigeria.

Gilbert (2015) observed high utilization of EIRs for research and education by postgraduates at MAUTECH Yola, while Odede (2018) noted their use for various academic tasks. Mi and Sullenger (2005) emphasized that e-resources offer convenience, ease of access, and timely information delivery for learning, assignments, and research.

Additionally, Ozoemelem (2009) found a high level of EIR usage among postgraduate students for purposes such as information gathering, literature review, answering questions, and making decisions. Deng (2010) also affirmed these uses. Collectively, these findings underscore that postgraduate students rely on EIRs to meet diverse academic needs effectively.

Hypothesis Testing

Table 4: Summary of t-test analysis on the mean ratings of postgraduate students in ABSU and MOUAU on the purposes of utilizing e-resources

Groups	Number s	$\bar{x}$	s^2	DF	t-cal	t-tab	Decision at $p < 0.05$	Remarks
MOUAU(X ₁)	70	3.137	0.90	276	0.163	1.96	Retained	Not Sig.
ABUS(X ₂)	208	3.158						

NB: $\bar{x}$ = mean, s^2 = Variance, DF = degree of freedom, t-cal = t-test calculated value and t-tab = table value

From data in the table 4, showed that null hypothesis was retained, because the t-test calculated value of 0.163 was less than t-test table or critical value of 1.96 which revealed that there is no significant difference between the mean ratings of postgraduate students in ABSU and MOUAU on the purposes of utilizing e-resources. This agreed to the fact that majority of postgraduate students in ABSU and MOUAU library agreed on the purposes of utilizing e-resources.

Recommendations

1. Upgrade ICT infrastructure, including faster internet and more computer units, to support EIR access.
2. Provide continuous subscription and authentication for all major EIR databases.
3. Organize periodic user-education and information-literacy sessions for postgraduate students.
4. Increase publicity and awareness of available EIRs through workshops, flyers, and web pages.
5. Provide stable power supply or backup systems to ensure uninterrupted access.

Conclusion

The study found adequate EIR provision in MOUAU and ABSU libraries, with resources like e-journals, e-books, and databases readily available. Postgraduate students utilize EIRs primarily for academic purposes, such as project/thesis writing and coursework. Addressing infrastructure, awareness, and training gaps will further enhance the effectiveness of EIR provision and utilization among postgraduate students.

References

- Akpojotor, L.O. (2016). Awareness and usage of electronic information resources among postgraduate students of library and information science in Southern Nigeria. *Library Philosophy and Practice*.
- Chong, W. (2002). Internet adoption in Macao. *Journal of Computer-Mediated Communication*, 7(2), 17-19.
- Dadzie, P.S. (2005). Information literacy: Assessing the readiness of Ghanaian universities. *Information Development*, 23(4), 266–281.
- Edem, N.B., & Egbe, N. (2016). Availability and utilization of electronic resources by postgraduate students in a Nigerian university library. *Information and Knowledge Management*, 6(2).
- Gani, E. (2014). Management of university electronic libraries in Northwest Nigeria. *Journal of Humanities and Social Science*, 19(8, Ver. V), 72-80.
- Gbaje, E.S. (2011). Digital preservation strategies: A case study of Nigerian National Information Centres. *International Federation of Library Associations*, 37(3), 218-227.
- Gwang, J.M. (2011). The provision of information services to Nigerians: Meeting the challenges of 21st century. *Library Philosophy and Practice*.
- Hornby, A.S. (2010). *Oxford Advanced Learner's Dictionary* (8th ed.). Oxford: Oxford University.
- IFLA (2012). Key issues for e-resource collection development: A guide for libraries.
- Jagboro, K.O. (2003). A study of Internet usage in Nigerian universities: A case study of Obafemi Awolowo University, Ile-Ife, Nigeria. First Monday, 8(2). Available at: http://Firstmonday.Org/Issues/Issue8_2/Jagboro/Index.html.
- Mi, J., & Sullenger, P. (2006). Examining workflows and redefining roles: Auburn University and the College of New Jersey. *The Serials Librarian*, 50(3/4), 279-283.
- Ndubuisi, C.J., & Udo, N. (2013). Empirical study of motivation, challenges and strategies in the use of electronic information resources by postgraduate library users in South-East Nigerian Federal Universities. *International Journal of Library and Information Science*, 5(11), 468-473.
- Nnadozie, C.O. (2007). *Foundations of library practice*. Owerri, Nigeria: Springfield Publishers Limited.
- Opeke, R.O., & Odunlade, R.O. (2011). Awareness and utilisation of information resources among Polytechnic Lecturers in Nigeria. *Samaru Journal of Information Studies*, 11(1 & 2).
- Owolabi, S., Idowu, O., Okocha, F., & Ogundare, A. (2016). Utilization of electronic information resources by undergraduate students of University of Ibadan: A case study of Social Sciences and Education. *Journal of Education and Practice*, 7(13).

Ramana, Y.V. (2006). *Assessment of electronic services by postgraduate students and research scholars of Vellore Institute of Technology*. In T.A.V. Murthy (Ed.), *Dynamic interoperable web based information systems* (pp. 316-326).