



Open-Access Electronic-Resources and Extent of Accessibility by Postgraduate Students of Federal Universities in South-South, Nigeria

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Abstract: Access to scholarly literature oils the machine of academics knowledge flow. The barrier of hoarding and economic restriction of information resources has been greatly displaced by Open Access. This allows corpus of scholarly literature to be freely accessible, accelerated with the expansion of the availability of the Internet. Giving the availability Open Access, this study examines the accessibility of Open-Access electronic-resources by Postgraduate students of Federal Universities in South-South, Nigeria. The study adopted descriptive survey design. Purposive sampling was used to select four (4) universities from south south, Nigeria. The population for the study was 1401, consisting of all registered 330 Doctoral (PhD) and 1,071 Masters of Education (M.Ed) students of the faculty of education of the institutions. This study which is on accessibility of Open-Access e-resources by Postgraduate students of Federal Universities in South-South, Nigeria, had shown that postgraduate students access Open-Access e-resources for academic purposes. This paper emphasised postgraduate student's access to Open Access e-resources and highlights the extent which was high, with no significant difference to both Med and PhD. This prompt the recommendations that adequate library ICT infrastructures be provided in the universities for postgraduate use as well as stable power supply to power the facilities.

Keywords: Open-Access, Accessibility, Electronic Resources

1. Introduction

1.1. Background

One of the proponents of open-access, Suber viewed open-access literature as digital, online, free, and free of most copyright and licensing restrictions [24]. These, Suber [24] said were made possible by the Internet and the consent of the author or copyright-holder. The main objective of the Open Access movement is to improve the system of scientific communication by optimising access to and maximising the impact of research results through self-archiving [6]. The Open Access movement is opined to have had important impact on access to scholarly literature [11]. It is a movement, which aims to make the corpus of scholarly

literature freely accessible, accelerated with the expansion of the availability of the Internet. There are various Open-access initiatives such as Gold Open Access, Green Open Access, Hybrid Journal, Mandate Open Access etc. While databases include the Directory of Open Access Journal (DOAJ), Google scholar, Hindawi, Medpub, among others.

Some researches on e-resources have been done and the available resources have been regarded as electronic collections from a general point of view. E-resources are electronic representation of information [23] in various forms and can be accessed using a technological device and the internet. They are: e-journals, e-books, e-groups, search engines, e-lists, web rings, library networks, databases, library websites, FAQs (Frequently Asked Questions), web OPACs, digital archives, bulletin boards, virtual conferences,

web exhibitions, virtual help desks and www. E-resources are associated with certain features, some of which include Multiple accesses speed, richer content, reuse, timeliness and remote accesses [8]. As with the progression and advancement in ICTs, a distinction in the various e-resources is being made. The advancement of ICT has created a paradigm shift in libraries. Tyckoson as cited in Ankrah and Atuase [2], stated that libraries and information centres may stop operating and possibly shut down if they fail to comply with appropriate information technologies in their services, and are essentially ICT positioned to provide access to electronic resources (e-resources).

E-resources cover every information resources that have or include an electronic technological touch to it. Developments in the electronic publishing sphere have come to show that e-resources can be classed into Open-access and Fee-based e-resources. Tiemo [25] confirmed this with a view of electronic information resource databases as a collection of electronic journals, books and other study materials available through the computer, the Internet and can be accessed free of charge. Harman and Koohang [10] promoted open access as a channel of e-resources distribution, when they revealed that academic open access e-journals were gaining widespread acceptance in most, if not all, disciplines and fields of study. Studies revealed that researcher use e-Journal for individual purposes [18]. This showed that the environment in which researcher learns can influence patterns of use of electronic information resources. Mbasere [18] also suggested that a general explanation of these personal practices would be useful, as scholars use whatever is free and readily available at their institutions. Therefore, if the source is easily accessible and free of charge, interested users of the library may use it. Ankrah and Atuase [2] in consensus with Madhusudhan [16] were of the view that, exposure of library's information resources to users, avail them the opportunity of accessing the resources.

1.2. Concept of Accessibility to Open Access E-resources

Akobundu [1] & Buckland [4] are scholars in the field of Library and Information Science that viewed access as a recurrent theme in relation to information. According to Oltmann [22], the notion of access has sparked debate among eminent scholars such as Buckland [4], McCreddie and Rice [20], Borgman [3] and Burnett, Jaeger and Thompson [5], to name a few. Access can be viewed from different perspectives in the library and information field. New telecommunication technologies allow remote access; payment-based information services are accessible differently because not everyone can afford the cost; and most library collections are open access, meaning users can go directly to the shelves. Occasionally two or more different types of approaches are considered simultaneously, although each of these access senses is related. Oltmann [22] further noted that the concepts of access to information reviewed in his work are complex, with many understandings of access to information. This is not surprising because other researchers have similarly noted different perspectives on information access. According to Dole, Hurych,

and Koehler [9], librarians around the world regarded "accessibility" as the core value of the library, but no consistent, shared definition of that value is available. The concept of access is viewed as the right or opportunity to use or look at something and accessibility as the quality or characteristic of something that makes it possible to enter, to approach, or to use it [7]. Mathiesen [17] noted in the 2013 iconference that the terms "access", "accessible" and "accessibility" were used 670 times in relation to information access. Depending on the situation, with the approach of possible action, access and accessibility are functionally identical. Access refers to one or more features that help users to understand knowledge, along with the source of information or in the fullest sense [4].

A single concept of access to information from a specific field is equivocal. According to Oltmann [22], non-technical access should be included in the complete comprehensive definition of access. Bearing this understanding, the concept of access consists of three main components; physical, social and intellectual. The major focus of discussions on information access tend to concentrate on physical problems like physical or electronic structures containing information and therefore the physical or digital pathways that leads to the obtained information [13]. Though this can be a necessary requirement, mere physical access is not adequate for full access. It is a typical, however inaccurate assumption that access to technology equate access to information [19]. Culnan, as cited by Indardi [12], includes physical access to physical access sources, interface to the source, and the ability to physically retrieve potential relevant knowledge. The user's ability to retrieve information and the ability to use that user's information to accomplish specific goals are very different.

The next level of access is intellectual access - the ability to understand information. Intellectual access is the ability to understand access to that information after gaining physical access [14]. Issues of intellectual access include understanding how information is provided to information seekers and the impact of such a presentation on the information search process. Intellectual access to information involves the process of categorizing, organizing, displaying, and representing information. Burnett, et al [5] argued that social access is that the third necessary access to information - the flexibility to speak and use data in social contexts. Such social contexts will vary from personal communication for amusement purpose to education and work organization to democratic participation. Receiving and understanding data while not the flexibility to speak that information prevents social engagement through data. Individuals have robust sense of community and taken to things wherever they are able to exchange information in social contexts [15, 27]. Social access currently depends heavily on data technologies for communication in several contexts. Social access depends on the user's ability to use data technologies to have interaction in social interaction and also the user's understanding and acceptance of the social norms encompassing data among a specific social world. To realize social equality in access to data, technologies, analysis and development ought to place bigger stress on achieving intellectual and social access to data and knowledge technology. This importance depends on a far better understanding of

knowledge behaviour within the on-line setting [22].

1.3. Statement of Problem

The campaign and promotion of open knowledge sharing by the Open-access Movement has being an ongoing trend. This has become a bedrock for academic libraries to enhance their information resources. Libraries now adapt and link licenced access to Open-access resources to meet the current standard and demand for information resources in the information age. Though Open-access is no longer novel and Open access resources offer unrestricted use, the question is; are the Open access resources being accessed? and to what extent are they accessed. Hence, this calls for an examination of Open-access e-resources as well as the extent of Accessibility by students, specifically Postgraduate Students of Federal Universities in South-South, Nigeria.

1.4. Purpose of the Study

The purpose of this study was to examine the accessibility of Open-Access e-resources by Postgraduate students of Federal Universities in South-South, Nigeria. The study specifically:

- 1) Identified the Open-access e-resources accessed for academic purpose by Postgraduate students of Federal Universities in South-South, Nigeria.
- 2) Examined the extent of accessibility to Open-access e-resources to Postgraduate students of Federal Universities in South-South, Nigeria.

1.5. Research Questions

The accompanying research questions were put up for the study.

What are the Open-access e-resources accessed for academic purpose by Postgraduate students of Federal Universities in South-South, Nigeria?.

What is the extent of accessibility of Open-access electronic-resources by Postgraduate students of Federal Universities in South-South, Nigeria?.

1.6. Hypotheses

The accompanying hypotheses were formulated and tested at 0.05 alpha level to guide the study.

- 1) H_{01} -There is no significant difference between the mean responses of M.Ed and PhD students on Open-access e-resources accessed for academic purposes.
- 2) H_{02} - There is no significant difference between the mean responses of M.Ed and PhD students on the extent to accessibility to Open-access e-resources by Postgraduate students of Federal Universities in South-South, Nigeria.

2. Methodology

The descriptive survey design was adopted for the study. Purposive sampling was used in the selection of institutions. These were universities that met the criteria of; Postgraduate students; in the faculty of education; of federal universities in South-South, Nigeria The population for the study was 1401, consisting of all registered 330 Doctoral (PhD) and 1,071 Masters of Education (M.Ed) postgraduate students of the faculty of education from four (4) federal Universities of South-South, Nigeria; University of Calabar, University of Uyo, University of Port-Harcourt and University of Benin. A disproportionate stratified sampling technique was used to attain a sample size of 349. The questionnaire was used for the collection of data for this study. The researcher structured instrument was titled, Open Access and Extent of Accessibility Questionnaire (OAEAQ). Administration and retrieval of the instrument yielded 293 returned copies of the instrument, resulting to 83% rate for the study. Arithmetic Mean and standard deviation based on the 4-point rating scale were used to answer research questions that guided the study. The t-test was used to test the null hypotheses at 0.05 level of significance.

3. Findings and Discussion

3.1. Research Question 1

What are the Open-access e-resources accessed for academic purpose by Postgraduate students of Federal Universities in South-South, Nigeria?

Data for answering research question 1 are presented in Table 1.

Table 1. Mean and Standard Deviation of Responses on the Open Access E-resources accessed for Academic Purpose by Postgraduate Students of Federal Universities in South South, Nigeria (n=293).

S/N	Item Statement	Med			PhD		
		\bar{x}_1	S_1	Remark	\bar{x}_2	S_2	Remark
1	Directory of Open Access Journals (DOAJ)	1.43	.50	Disagreed	1.47	.50	Disagreed
2	Hindawi Open Access Journals	2.74	.44	Agreed	2.68	.50	Agreed
3	Open Access Publishing in European Network (OAPEN)	1.64	.48	Disagreed	1.32	.47	Disagreed
4	Google Scholar	2.53	.50	Agreed	2.51	.50	Agreed
5	World Library	2.67	.47	Agreed	2.58	.53	Agreed
6	Digital Commons Network	2.75	.44	Agreed	2.68	.50	Agreed
7	Biomed Central (BMC)	2.71	.46	Agreed	2.69	.50	Agreed

The data presented in Table 1, revealed the mean responses of M. Ed and Ph.D students in all the items except items 1 and 4 ranged from 2.53 to 2.75 and were all above the mean bench mark of 2.50 which indicated agreed

responses while items 1 and 4 had mean responses of 1.4 and 1.64, which were below the mean bench of 2.50 and indicated disagreed responses. This implied that they agreed that Open-access e-resources used for academic purpose by

Postgraduate students included Hindawi Open Access Journals, Google scholar, World library, Digital commons network and Biomed Central (BMC), while they disagreed that Directory of Open Access Journals and Open Access Publishing in European Network (OAPEN) are used for academic purposes by postgraduate students of Federal Universities in South-South, Nigeria.

3.2. Research Question 2

What is the extent of accessibility of Open-Access electronic-resources by postgraduate students of Federal Universities in South South, Nigeria?

Data for answering research question 2 are presented in Table 2.

Table 2. Mean and Standard deviation of the Responses of respondents on the Extent of Accessibility of Open-Access Electronic-resources by Postgraduate students of Federal Universities in South South, Nigeria (n=293).

S/N	Item Statement	M Ed			PhD		
		\bar{x}_1	S_1	Remark	\bar{x}_2	S_2	Remark
1	DOAJ	2.42	1.12	LE	2.40	1.16	LE
2	Hindawi	3.02	0.97	HE	2.40	1.16	LE
3	OAPEN	2.85	1.00	HE	2.37	1.09	LE
4	Google Scholar	2.52	1.23	HE	2.43	0.85	LE
5	World Library	2.52	1.20	HE	2.35	1.05	LE
6	Digital Common Network	2.46	1.14	LE	2.44	0.87	LE
7	Biomed central	2.44	1.10	LE	2.42	1.13	LE
	Pooled mean	2.60	1.11	HE	2.41	1.06	LE

\bar{x} = mean of respondents, S = Standard deviation, LE = Low Extent, HE = High extent.

The data presented in Table 2 revealed that mean responses of M.Ed students in the items 1, 7 and 7 ranged from 2.42 to 2.46 which were within the real limit of 1.50-2.49 and indicated low extent, while items 2, 3, 4 and 5 ranged between 2.52 to 3.02 and fall within the real limit of 2.50 to 3.49 indicating high extent responses. Also, the table further showed that the mean responses of PhD students in all the items ranged from 2.35 to 2.44 and within the real limit of 1.50-2.49 indicating low extent responses. The pooled mean responses of M.Ed and PhD students on the extent of accessibility of Open-Access electronic-resources were 2.60 and 2.41 respectively. These equally implied that the M.Ed and PhD Postgraduate students agreed that the extent of accessibility of Open-Access electronic-resources for academic purpose in the federal universities was to high extent and low extent respectively. The table 2 also showed that the pooled standard deviations of 1.11 and 1.06 for M.Ed and PhD respectively indicated that the respondents were not far from one another in their responses.

3.3. Hypothesis 1

There is no significant difference between the mean responses of M.Ed and PhD students on Open-access e-resources accessed for academic purposes.

Data for Hypothesis 1 are presented in Table 3.

Table 3. T-Test Analysis of the mean ratings of M. Ed and PhD Students on Open-Access e-resources used for academic purposes (n=293).

Status	N	X	Sd	Df	t-cal.	P-value	Remark
M. Ed	219	2.40	0.47	291	3.443	.165	NS
Ph.D	74	2.32	0.50				

\bar{x} = mean of respondents, S = Standard deviation, S = Significant, NS = Not Significant.

Data in table 3, reveal a P-value of 0.165 which is greater

than 0.05 alpha value. Since the P-value of 0.165 is greater than 0.05 alpha value, the null hypothesis stated was not rejected. Therefore, there is no significant difference between the mean responses of M.Ed. and PhD students on Open-Access e-resources used for academic purposes.

This finding is in affirmation of the findings of Ankrah and Atuase [2] who revealed in their study of the Use of Electronic Resources by Postgraduate Students of the University of Cape Coast, that most postgraduate students rather preferred to access information from Google scholar, and other web based databases more frequently than the databases in the library. This finding also agrees with Tiemo [26] who carried out a survey on Availability of Electronic Information Resource Databases in University Libraries in South- South, Nigeria, and revealed that majority of the EIR databases available in the federal and state university libraries in South South, Nigeria, were free based databases.

3.4. Hypothesis 2

There is no significant difference between the mean responses of M.Ed and PhD students on the extent to accessibility to Open-access e-resources by Postgraduate students of Federal Universities in South South, Nigeria.

Data for Hypothesis 2 were presented in Table 4.

Table 4. T-Test Analysis of the mean ratings of M.Ed and PhD Students on the Extent of Accessibility to Open-access e-resources by postgraduate Students of Federal Universities in South South, Nigeria. (n=293).

Status	N	X	Sd	Df	t-cal.	P-value	Remark
M.Ed	219	2.60	1.11	291	1.319	.201	NS
Ph.D	74	2.41	1.06				

\bar{x} = mean, S = Standard deviation, S = Significant, NS = Not Significant.

Data in table 4, reveal a P-value of 0.201 which is greater than 0.05 alpha value. Since the P-value of 0.201 is greater

than 0.05 alpha value, the null hypothesis stated was upheld. Therefore, there is no significant difference between the mean responses of M. Ed and PhD students on extent to accessibility to Open-access e-resources by Postgraduate students of Federal Universities in South South, Nigeria.

This finding was confirmed in Sejane [23] who established that e-resources which were accessed and used mostly were e-mail, search engines and websites, followed by the OPAC, e-journals, full-text databases, IRs, reference databases. Okello-Obura and Magara [21] in their finding confirmed that students had access to university e-resources as they noted that majority of Library and Information Science students at Makerere University depend on university computers for their work, and very few of them access the library's e-resources. The few who access e-resources are self-taught.

4. Conclusion

This study which is on accessibility of Open-access e-resources by Postgraduate students of Federal Universities in South-South, Nigeria, had shown that postgraduate students access Open-Access e-resources for academic purposes. It drew to light varied level of accessibility to Open-Access e-resources by Postgraduate students of Federal Universities in South-South, Nigeria as such, M.Ed students access Open-Access e-resources to a high extent, while PhD students access Open-Access e-resources to a low extent.

5. Recommendations

The federal government, university management, TETFund, library management and other NGO organisation should provide adequate library ICT infrastructures in the universities for postgraduate use. They should also ensure that there is a stable power supply to power the facilities.

The university management and head of departments should encourage the ownership of personal computer by postgraduate students to encourage e-teaching and e-learning in the various universities.

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