

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

---

6-2023

## AN APPRAISAL OF OPEN ACCESS INSTITUTIONAL REPOSITORIES USE BY ACADEMIC STAFF IN FEDERAL UNIVERSITIES IN NORTH CENTRAL STATES OF NIGERIA

Bello Salahudeen Hakeemat Mrs

*Federal University Dutsin-Ma, Katsina*, bhakeemat@fudutsinma.edu.ng

Oluwatoyin Oyeyemi Obinyan Mrs

*Ambrose Alli University, Ekpoma*, obinyantoyin@gmail.com

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Scholarly Communication Commons](#), and the [Scholarly Publishing Commons](#)

---

Hakeemat, Bello Salahudeen Mrs and Obinyan, Oluwatoyin Oyeyemi Mrs, "AN APPRAISAL OF OPEN ACCESS INSTITUTIONAL REPOSITORIES USE BY ACADEMIC STAFF IN FEDERAL UNIVERSITIES IN NORTH CENTRAL STATES OF NIGERIA" (2023). *Library Philosophy and Practice (e-journal)*. 7801. <https://digitalcommons.unl.edu/libphilprac/7801>

**AN APPRAISAL OF OPEN ACCESS INSTITUTIONAL REPOSITORIES USE BY  
ACADEMIC STAFF IN FEDERAL UNIVERSITIES IN NORTH CENTRAL STATES OF  
NIGERIA**

**BY**

**HAKEEMAT SALAHUDEEN BELLO CLN**

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

**bhakeemat@fudutsinma.edu.ng**

**OBINYAN, OLUWATOYIN O. CLN**

**Faculty of Law Library, Ambrose Alli University  
obinyantoyin@gmail.com**

## ABSTRACT

*This research was carried out to evaluate the Awareness and Use of Open Access Institutional Repositories by Academics in Federal Universities in North Central States of Nigeria. The research questions raised among others include: How often do academic staff use Open Access IR for dissemination of research outputs in Federal Universities in North Central States of Nigeria? What challenges are academic staff faced with in accessing Open Access IR in Federal Universities in North Central States of Nigeria? Descriptive survey research design was adopted for the research. The target population are 3,547 academics in the Federal Universities in the North Central States excluding University of Agriculture Makurdi, and University of Abuja. A sample of 355 respondents (Academics) was selected for the study. The figure represents approximately 10% of the target population of academics in the Federal Universities in North Central States of Nigeria. The instrument that was used to collect data for the study is questionnaire. The data collected was subjected to descriptive statistics. Mean and standard deviation were used to analyze the data. Some of the major findings revealed: that the Open Access Institutional Repositories were used by scholars on daily bases and at their will. That academics experience a kind of delay when looking for information from their Open Access Institutional Repositories during their academic activities which can lead to unproductive academic productivity. The study recommends that university management should provide necessary facilities and formulate policies that would encourage mandatory deposit and use of scholarly works in open access institutional repositories and other open access outlets to raise the level of usage among others.*

Keywords: Academic Staff, Academics, Institutional Repositories, Open Access, Scholarly works, University Management

## INTRODUCTION

With the introduction of modern information and communication technology (ICT), access to information is a pre-condition for becoming a knowledge society. The right of access to information has become the dominant right in the information and knowledge era. Because of this, many researchers can now be allowed access to the ideas of others and also this presents an opportunity to participate in the global information-based socio-economic and political activities (Musakali and Moli, 2011).

Open access has since become the subject of common discussion among researchers, academics, librarians, university administrators, funding agencies, government officials, commercial publishers, and learned-society publishers. Prior to the advent of the Internet, publishers (especially commercial) and academic societies dominated scholarly communication and most researchers have to channel the publication of their research output mainly through authoritative publishers and academic societies. However, with the advent of ICTs, different models of information access and dissemination are being developed to provide access, manage costs, and manage an organization's scholarly output, especially in academic institutions such as colleges, polytechnics and universities. The current evolving information access model is referred to as Open Access. (Giarlo, 2013) explained that, Open Access is used to describe a model of scholarly communication in which users may freely view, download, copy, and print scholarly articles, books, conferences proceedings, squibs and so forth. This implies that users are able to freely access scholarly materials because the price of publication has been assumed by another party, usually the author, the author's institution or grant which funded the research.

Harnad, (2003) noted that institutional repository is a digital archive of the intellectual product created by the faculty, research staff, and students of an institution and accessible to end users both within and outside the institution, with few if any barrier to access. Lynch (2003) sees it as “a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members.” Hence the role of an institutional repository is basically to collect, preserved and disseminates the host institution’s research outputs. The research outputs could include electronic copies of pre-prints as well as post-print articles, conference and working papers, committee papers, teaching materials, thesis and dissertations, monographs, multimedia, student projects etc. Although institutional repositories are usually associated with universities and research institutes, they could also apply to governmental, nongovernmental and corporate organizations that generate intellectual output that could be digitized and disseminated.

### **Statement of the Problem**

Open access (OA) is growing across the globe, Nigeria is not an exception. Although the global pattern and level of awareness, deployment and utilization may follow the paths of digital advantage, the movement has gained tremendous pace, probably due to increased global access to the Internet, the activities of OA promoters and the pertinence of the mission of the movement. Essentially, Institutional Repository collects and provides free access to the research output of a given institution. The main function of IR is to provide improved access to the full text of research articles and improve retrieval of relevant research (Christian, 2008). In the 21st Century, universities libraries in Nigeria have embarked on integration of technology in their operations. This serves as a mechanism for improvement and development, especially, in a situation where attention is drawn to the academic contents and ways of digitizing and preserving

them for future use. Libraries have long played an essential role in containing, preserving, and sharing of information.

Although Open Access Institutional Repository have been introduced in universities to increase dissemination, access and impact of their staff, the academic staffs exploiting of such outlets has been slow and their use of these outlets in disseminating their research works has been low. The reasons for the slow and low rate of utilizing of OA IR among academics, however, have not been systematically established, documented and explained. This study was designed to investigate low use of Open Access IR among academic staffs in Federal University in North Central States of Nigeria.

### **Research Questions**

The study sought to answer the following research questions:

1. How often do academic staffs use Open Access IR for dissemination of research outputs in Federal Universities in North Central States of Nigeria?
2. To what extent do academic staffs satisfy with the contents of Open Access IR in Federal Universities in North Central States of Nigeria?
3. What challenges are academic staffs faced with in accessing Open Access IR in Federal Universities in North Central States of Nigeria?

### **Review of Related Literature**

Proliferation of literature on usage of open access resources in disseminating and accessing scholarly information has attracted the attention of many scholars in recent years (Ogbomo and Iwighrehweta, 2010). Many studies have been carried out on the use of open access journals. While extensive literature can be found focusing on issues relating to open access publishing from the point of view of libraries and publishers, very little have been done

on issues influencing authors' adoption and use of open access (Obuh & Bozimo, 2012). A study conducted by Obuh and Bozimo (2012) in southern Nigeria on the level of usage of OA publications among lecturers in the department of library and Information science indicated high level of usage i.e. both senior and junior lecturers exhibit a similar level usage in terms of high priority in sourcing OA materials for their work and also in their rate of retrieving OA contents. However, Obuh and Bozimo (2012) observed that the high level of usage of open access publications by both senior and junior lecturers can only be accounted for in terms of sourcing and retrieving its content for their research work as the result show that both categories of lecturers rarely self-archived their work on the Internet. A study by Dulle et al. (2010) found that despite the fact the respondents claimed to have used open access publication media to access scholarly works, but actually fewer Tanzanian researchers disseminated their findings through open access channels than those who accessed.

Almost all authors writing about repository archiving report problems in encouraging author participation and use. Davis and Connolly's evaluation (2007) found the Cornell University repository to be under-populated and under-used by academic staff. Key reasons for non-use included preference for existing alternatives to repositories, a perception that repositories were redundant, technical difficulties, concern that their work may be plagiarized, and concern regarding quality and status of the repository, and confusion over copyright. Foster & Gibbons's (2005) research into understanding faculty in order to improve repository content recruitment found the majority of researchers did not perceive the repository to be relevant to their needs, nor perceive any potential benefit from using the repository. Apprehension towards repository deposit (and Open Access publishing in general) seems to centre around three key issues: lack of motivation to self-archive; concerns surrounding intellectual property, copyright

and plagiarism; and negative attitudes toward open access publication and archiving as legitimate modes of academic communication.

With the entire benefit offer by Open Access Institutional Repository, yet, Open Access Institutional Repository is being bedeviled with numerous problems across regions and localities across the globe, each region and locality with its unique problem and in some instance concord. Looking at the factors militating against the use of Open Access Institutional Repository in developing countries, studies conducted in India by Joshi and Vatnal (2012) reported that challenges in developing countries like India are erupt in the form of lack of adequate funding for building and upgrading ICT infrastructure. All the institutions of higher learning are not equally enthusiastic about establishing and maintaining institutional repositories. Though publicity is being given to OA IR resources, still many pockets lack total awareness regarding exploiting maximum benefit from them. Smith (2007) looked at South Africa, and found that insufficient bandwidth was a major problem, and the range of open access journals in the respondents' field of interest was fairly limited. Studied by Manda (2005) on the use of electronic resources in Tanzania by academics revealed that the use was low, due to inadequate end-user training, slow connectivity, and limited access to PCs, poor search skills, and budget cuts.

Looking in to Nigeria with regards to problems hindering effective usage of Open Access Institutional Repository, Christian (2009), reported that inadequate funding also constitutes another problem, stressing that since most of the academic and research institutions in Nigeria are funded by the government, these institutions continue to grapple with percentage decline in budgetary allocation. Considering the fact that development of institutional repository in this part of the world is a capital intensive project, funding constitutes another major obstacle to the development of institutional repositories in the country's institutions. Adequate funding to build,



upgrade and maintain ICT infrastructure is a problem in many developing countries. For example, because of the poor ICT infrastructure in academic and research institutions in developing countries like Nigeria it is difficult to sustain the development of institutional repositories. Upgrading ICT facilities requires enough financial support (Obaseki, et al., 2013).

### **Research Methodology**

The study adopted descriptive survey research design. The population for the study consisted of all academics in Federal Universities in North Central States of Nigeria that are having Open Access IR excluding University of Agriculture Makurdi, and University of Abuja. A total of 3,547 academic staffs in four (4) Federal Universities in North central state of Nigerian formed the populations for the study. A sample of 355 respondents (Academic staffs) was selected which represents approximately 10% of the target population of academic staffs in the Federal Universities in North Central States of Nigeria. The instrument that was used to collection data is Questionnaire. The data collected for the study were presented and analyzed using Mean and standard deviation.

### **Result and Discussion**

A total of 355 copies of questionnaires were distributed to the respondent, 346 (97.4%) copies were duly completed and returned.

**Table 1: Response Rate**

S/N	Federal Universities in North Central States of Nigeria	No. of Questionnaire Distributed	No. of Questionnaire Returned	Percentage of Questionnaire Returned
1	University of Ilorin	142	137	38.6
2	University of Jos	113	110	30.9
3	Fed. Uni. of Tech. Minna	83	82	23.1

4	Fed. Uni. Lokoja	17	17	4.8
Total		355	346	97.4

From table 1, a total of 97.4 % response rate was realized. This was due to the fact that the researcher with the help of research assistants administered and collected the instrument back. It shows that majority 142 (38.6%) of the respondents are from the University of Ilorin and the least respondents are from Federal University Lokoja 17 (4.8%).

**Table 2: Frequency at which Academics Use Open Access Institutional Repositories in Federal Universities in North Central States of Nigeria**

S/ N	Frequency at which Academics Use Open Access Institutional Repositories	Federal Universities								Total	Mean	S. D
		University of Ilorin		University of Jos		Fed. Uni. of Tech., Minna,		Fed. Uni. Lokoja				
		F	NF	F	NF	F	NF	F	NF			
1	Daily	110	27	101	9	80	2	17	0	346	43.3	46.0
2	Weekly	69	68	60	50	75	7	10	7	346	43.3	30.1
3	Monthly	67	70	59	51	65	17	12	5	346	43.3	27.2
4	Quarterly	49	88	53	57	56	26	9	8	346	43.3	27.2
5	Bi-annually	50	87	46	64	20	62	7	10	346	43.3	28.6
6	Annually	51	86	32	78	49	33	11	6	346	43.3	28.8
7	At will	91	46	0	110	81	1	13	4	346	43.3	45.2

**Key: F= Frequent, representing Very Frequent and Frequent. NF=Not Frequent, representing Rarely Frequent and Not Frequent**

Table 2 presented the frequency at which academics use Open Access Institutional Repositories in Federal Universities in North Central States of Nigeria. From the table, it was seen that in the University of Ilorin, the academics with total counts of 110 indicated that they

used Open Access Institutional Repositories daily; it was followed by weekly with total counts of 69. Quarterly and bi-annually with total counts of 49 and 50 respectively were the frequencies with least responses. On the part of University of Jos, the academics with total counts of 101 indicated that they used Open Access Institutional Repositories daily; it was followed by weekly with total counts of 60. Annually and bi-annually with total counts of 32 and 46 respectively were the frequencies with least responses. On the part of Fed. Uni. of Tech., Minna, the academics with total counts of 81 indicated that they used Open Access Institutional Repositories at will; it was followed by daily with total counts of 80. Bi-annually and annually with total counts of 20 and 49 respectively were the frequencies with least responses. On the part of Fed. Uni. Lokoja, the academics with total counts of 17 indicated that they used Open Access Institutional Repositories at daily; it was followed by at will with total counts of 13. Bi-annually and Quarterly with total counts of 7 and 9 respectively were the frequencies with least responses. From the standard deviation angle, daily and at will with standard deviations of 46.0 and 45.2 respectively were the frequencies at which the academics use the Open Access Institutional Repositories. This finding agreed with that of Ogbomo and Iwighreghweta (2010) who revealed that the Open Access Institutional Repositories were used by scholars daily and at their will. This implies that the Open Access Institutional Repositories can be used conveniently as no restriction in terms of time and date of access by the academics.

**Table 3: Extent at which Academics Satisfy with the Contents of Open Access Institutional Repositories in Federal Universities in North Central States of Nigeria**

S/N	Extent at which Academics Satisfy with the Contents of Open Access Institutional Repositories	Federal Universities				Total	Mean	S. D
		University of Ilorin	University of Jos	Fed. Uni. of Tech., Minna,	Fed. Uni.Lokoja			

		S	NS	S	NS	S	NS	S	NS			
1	<b>Journal articles</b>	131	6	96	14	79	3	17	0	346	43.3	50.9
2	<b>Theses and Dissertations</b>	130	7	99	11	80	2	16	1	346	43.3	51.5
3	<b>Inaugural lectures</b>	120	17	70	40	42	40	17	0	346	43.3	37.6
4	<b>Conference papers</b>	110	27	95	15	52	30	15	2	346	43.3	39.5
5	<b>Seminar papers</b>	103	34	69	41	78	4	14	3	346	43.3	36.9
6	<b>Course materials</b>	108	29	87	23	70	12	17	0	346	43.3	39.6
7	<b>Lecture notes</b>	85	52	93	17	46	36	15	2	346	43.3	32.8
8	<b>Students projects</b>	104	33	82	28	67	15	4	13	346	43.3	36.5
9	<b>Committee papers</b>	104	33	89	21	59	23	12	5	346	43.3	36.8
10	<b>Computer software</b>	91	46	81	29	67	15	17	0	346	43.3	33.5
11	<b>Works of art</b>	88	49	43	67	11	71	4	13	346	43.3	31.3
12	<b>Photographs</b>	105	32	33	77	5	77	1	16	346	43.3	38.4
13	<b>Video recordings</b>	85	52	56	54	10	72	2	15	346	43.3	30.5

**Key: S=Satisfied, representing highly Satisfied and Satisfied. NS=Not Satisfied, representing rarely Satisfied and Not Satisfied**

Table 3 presented the extent at which academics satisfy with the contents of Open Access Institutional Repositories in Federal Universities in North Central States of Nigeria. From the table, it was seen that in the University of Ilorin, the academics indicated that they were highly satisfied with journal articles with total counts of 131; it was followed by theses and dissertations with total counts of 130. Lecture notes and video recordings with total counts of 85 for both were contents of the Open Access Institutional Repositories least satisfied with. On the part of University of Jos, theses and dissertations and journal articles with total counts of 99 and 96 respectively were the contents of the Open Access Institutional Repositories highly satisfied by

the academics. Photographs and works of art with total counts of 33 and 43 respectively were the contents of Open Access Institutional Repositories the academics least satisfied with. On the part of Fed. Uni. of Tech., Minna, theses and dissertations and journal articles with total counts of 80 and 79 respectively were the contents of the Open Access Institutional Repositories highly satisfied by the academics. Photographs and video recordings with total counts of 5 and 10 respectively were the contents of Open Access Institutional Repositories the academics least satisfied with. On the part of Fed. Uni. Lokoja, journal articles, theses and dissertations as well as inaugural lectures with total counts of 17, 16 and 17 respectively were the contents of the Open Access Institutional Repositories highly satisfied by the academics. Photographs and video recordings with total counts of 1 and 2 respectively were the contents of Open Access Institutional Repositories the academics least satisfied with. From the standard deviation angle, theses and dissertations and journal articles with standard deviations of 51.5 and 50.9 respectively were the contents of the Open Access Institutional Repositories highly satisfied by the academics. This finding agreed with that of Ogbomo and Iwighrehweta (2010) who revealed that the local contents of the Open Access Institutional Repositories were mostly theses and dissertations, journal articles among others and the members of the local contents environment benefits a lot from these documents. This implies that the universities research output can be detected from the contents of the Open Access Institutional Repositories. Also, scholarly publications and commitments of the Universities under study can be accessed through their Open Access Institutional Repositories. This finding also agreed with that of Obuh and Bozimo (2012) who indicated high level of usage of OA publications among lecturers in the department of library and Information science in southern Nigeria.

**Table 4: Challenges Academics Faced in Accessing Open Access Institutional Repositories in Federal Universities in North Central States of Nigeria**

S/N	Challenges Academics Faced in Accessing Open Access Institutional Repositories	Federal Universities				Total	Mean	S. D
		University of Ilorin	University of Jos	Fed. Uni. of Tech., Minna	Fed. Uni. Lokoja			
1	Awareness of Open Access IR	63	70	10	2	145	36.3	35.2
2	ICT connectivity inadequate and infrastructure	135	110	79	16	340	85.0	51.4
3	Unreliable Power Supply	132	108	80	12	332	83.0	51.9
4	Inadequate Funding	131	101	71	9	312	78.0	52.1
5	Inadequate advocacy	126	109	75	7	317	79.3	52.6
6	Copyright and Technical Barriers	107	86	60	8	261	65.3	42.7
7	Institutional culture and policy	85	60	10	6	161	40.3	38.6
8	Reward system in my institution	129	91	64	11	295	73.8	49.6

Table 4 presented the challenges academics faced in accessing Open Access Institutional Repositories in Federal Universities in North Central States of Nigeria. From the table, it was seen that majority of academics in the University of Ilorin with total counts of 135 indicated that the challenges faced in accessing Open Access Institutional Repositories was ICT connectivity inadequate and infrastructure; it was followed by Awareness of Open Access IR with total counts of 132. Reward system in my institution and Institutional culture and policy with total counts of 63 and 85 respectively were the least challenges the academics faced. On the part of University of Jos, it was seen that all the academics with total counts of 110 indicated that the challenges faced in accessing Open Access Institutional Repositories was ICT connectivity inadequate and

infrastructure, it was followed by inadequate advocacy with total counts of 109. Institutional culture and policy and reward system in my institution with total counts of 60 and 70 respectively were the least challenges the academics faced. On the part of Fed. Uni. of Tech., Minna, majority of the academics with total counts of 80 indicated that the challenges faced in accessing Open Access Institutional Repositories was awareness of Open Access IR, it was followed by ICT connectivity inadequate and infrastructure with total counts of 79. Reward system in my institution and Institutional culture and policy with total counts of 10 for both were the least challenges the academics faced. On the part of Fed. Uni. Lokoja, majority of the academics with total counts of 16 indicated that the challenges faced in accessing Open Access Institutional Repositories was ICT connectivity inadequate and infrastructure, it was followed by Awareness of Open Access IR with total counts of 12. Reward system in my institution and Institutional culture and policy with total counts of 2 and 6 respectively were the least challenges the academics faced. From the mean and standard deviation angles, ICT connectivity inadequate and infrastructure has the highest mean of 85.0 followed by Awareness of Open Access IR with mean of 83.0. However, Reward system in my institution and Institutional culture and policy with means of 36.3 and 40.3 respectively have the lowest means. This finding corresponded with that of Utulu and Bolarinwa (2009) who discovered that Open Access Institutional Repositories cannot be accessed if the challenges of ICT connectivity and infrastructure are encountered. This implies that academics experience a kind of delay when looking for information from their Open Access Institutional Repositories during their academic activities which can in turn lead to their academic productivity negatively. This is because in this century, without constant access to the internet in the learning environment, the teaching, learning and research which are the major activities in academic environment will be affected negatively.

## **Conclusion**

Open access institutional repository is a very new and dynamic medium of dissemination and access to scholarly information. The main force behind the emergence of open access institutional repository is that it is a platform for knowledge sharing and development and also to ensure free access as against restriction to information through copyright and licensing as practiced by the commercial mode of scholarly publishing. Although, there is clear evidence that open access institutional repositories have a lot of benefit within the university set up. Academic indicated that the Open Access Institutional Repositories are very important to the University community. This is because the repositories help the teachers when preparing their teaching activities; they help the researchers which include the teachers and students when looking for information concerning their researches. The repositories also help in sharing the knowledge, ideas, and research findings among the members of the University local environment. Furthermore, the academics in the Federal Universities in North Central States of Nigeria showed that they were highly benefited with many of the contents of Open Access Institutional Repositories including theses and dissertations, journal articles, conference papers, seminar papers, inaugural lectures among others.

## **Recommendations**

In line with the findings of this study, the following recommendations were made:

1. The management of the Universities should be enlightening the members of the Universities environment through other methods such as sensitization, campaign, orientation etc. about the existence and importance Open Access



2. The university management should provide necessary facilities and formulate policies that would encourage mandatory deposit and use of scholarly works in open access institutional repositories and other open access outlets to raise the level of usage.
3. The management should continue to encourage the members of the University environment to be depositing their publications regularly in order to share their knowledge with colleagues, students among others.
4. The management of the Federal Universities in North Central States of Nigeria should provide more focus on the ICT connectivity thereby improving the necessary technologies needed towards making internet connectivity more efficient and effective.

## References

- Cervone, H. F. (2004). The repository adventure", *Library Journal* [online], 129(10), 44-46. Retrieved April 15, 2017 from <http://proquest.umi.com>
- Christian, G. E. (2008). Issues and challenges to the development of open access institutional repositories in academic and research institutions in Nigeria. *A research paper prepared for the international research center (IDRC) ottawa, Canada*. Retrieved January 24, 2016 from <http://ssm.com/abstract=1323387>.
- Crow, R. (2002). The case for institutional repositories: *A SPARC position paper*. SPARC, Washington, DC. 37. Available: [http://www.arl.org/sparc/bm-doc/ir\\_final\\_release\\_102.pdf](http://www.arl.org/sparc/bm-doc/ir_final_release_102.pdf).
- Davis, P.M. & Connolly, M. J. (2007). Institutional repositories: Evaluating the reasons for non-use of cornell university's installation of dspace. Retrieved from <http://www.dlib.org/dlib/march07/davis/03davis.html> on January 02, 2016.
- Dulle, F. W, Minish-Majanja, M. K, & Cloete, L. M. (2010). Factors influencing the adoption of open access scholarly communication in Tanzanian public universities. Paper presented at the World Library and Information Congress: 76th IFLA general conference and assembly. Gothenburg, Sweden. Retrieved from: <http://www.ifla.org/files/hq/papers/ifla76/138-dulle-en.pdf>.
- Foster, N. F. & Gibbons, S. (2005). Understanding faculty to improve content recruitment for institutional repositories. *D-Lib Magazine*. 11 (1) ISSN 1082-9873. Retrieved from <http://webdoc.sub.gwdg.de/edoc/aw/d-lib/dlib/january05/foster/01foster.html>
- Giarlo, M. J. (2006). The impact of open access on academic libraries. Retrieved from: <http://lackoftalent.org/michael/papers/532.pdf>
- Harnad, S. (2003). Online archives for peer-reviewed journal publication. In Feather J. and Sturges P. (Eds) *International Encyclopedia of Library and Information*. London: Routledge. Retrieved: from <http://www.ecs.soton.ac.uk/%7Eharnad/Temp/archives>.
- Obaseki, T. I, Nkwoma, S. & Ukachi, N. B. (2013). Electronic publishing and open access to information: The Nigerian situation. *Brazilian Journal of Information Science: Research Trends*, 7(1).
- Lynch, C.A. (2003). Institutional repositories: Essential infrastructure for scholarship in the digital age. *ARL Bimonthly Report*, 226: 1-7.
- Manda, P. A. (2005). Electronic resource usage in academic and research institutions in Tanzania. *Information Development*, 21(4), 269-282.
- Musakali J.J & Moli, R. (2011). Open access in Africa publishing industry: Opportunities and challenges. Retrieved from: <http://www.kmafrica.com/?=node/153>.
- Obuh, A. O., & Bozimo, D. O. (2012). Awareness and use of open access scholarly publications by LIS lecturers in Southern Nigeria. *International Journal of Library Science*, 1(4), 54-60.

- Ogbomo, M., & Ivwighreghweta, O. (2010). Awareness, attitudes, and use of open access journals by *master's degree students of the department of Library, Archival, and Information Studies, University of Ibadan, Nigeria*.
- Renwick, S. (2005). Knowledge and use of electronic information resources by medical Sciences Faculty at the University of the West Indies. *Journal of the Medical Library Association*, 93(1), 21.
- Smith, J Gretchen. (2007). The impact of electronic communications on the science communication process—Investigating crystallographers in South Africa. *IFLA journal*, 33(2), 145-159.
- Suleiman, J. S. (2012). Influence of social studies education on the attitude of women toward women empowerment in Katsina State. Unpublished M.ed Thesis Ahmadu Bello University, Zaria.
- Utulu, S. C. & Bolarinwa, O. (2009). Open access initiatives adoption by Nigerian academics. *Library Review*, 58 (9): 660-669.