USE OF OPEN ACCESS JOURNALS BY ACADEMIC STAFF OF FEDERAL UNIVERSITIES IN NORTH CENTRAL NIGERIA

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Abstract

This study investigates the use of open access journals by academic staff of federal universities in North Central Nigeria. Survey research design was used with a population of 5,365 lecturers from seven federal universities in the zone. A sample size of 241 lecturers were randomly selected, with a structured questionnaire designed and used for data collection. Out of the 241 copies of the questionnaire administered, 187 copies were returned and used for analysis. Collected data were analysed using frequency counts, percentages, mean (with a benchmark of 2.5), and standard deviation. Findings revealed that the level of use of open access journals by academic staff was fairly high, and there is significant effect of digital competence on use of the open access journals. Based on the findings, the study concludes that academic staff of the surveyed universities is actually using open access journals in their activities. Therefore, the study recommends, among others that, there should be constant training and retraining of the staff on digital skills, ICT and Internet use, management of the universities should install and improve their Internet services, procure and provide adequate ICT facilities that would serve the university communities effectively. The federal government should also provide adequate fund to the federal universities in order to enable them provide current information resources and ICT facilities to encourage greater use of open access journals by the lecturers.

Keywords: Academic Staff, Digital Competence, Use of Open Access Journals, North Central Nigerian Federal Universities.

Introduction

The advancement in information and communication technologies (ICT) particularly the web service has brought about immense opportunity to accessing e-journals through digital communication means (Swan & Brown, 2005). Most of these e-journals are facilitated via open access. "Open Access" is a simple term used to identify a work of art which is accessible to any user and at less-cost effective rate, on the Web. Suber (2012) describes open access literature as digital, online, cost-free, and free of a lot of limitations. The copyright owner is given the liberty to carryout computation functions that the author-allows the user for free reading, downloading, coping, printing, distributing, searching, linking to the complete content of the article, scroll it to index, as well as for lawful purposes, (Kwan, 2003; Suber, 2012). Such open access could be open access educational archives, which Christian (2008) describes as digital repository of the scholarly outcome produced by scholars, students, and researchers of an institution that are openly available to both users inside and outside the organization; or open access journals, which is the focus of this work.

Open access journals are educational literature that are accessible on the Internet to the users at a very less exorbitant cost and shunning all technical barriers with elements of legal infringement, and some require payment on behalf of the author (Suber, 2006). Suber (2006) also added that supplemental journals are sponsored by either government information centre or academic institutions. Research grants specially set aside for the purpose are used to sponsor researchers.

Open access journals have been a welcome development that is drastically changing the entire academic landscape in terms of distribution, access and publishing of intellectual content produced by scholars and researchers. Open access journals initiatives emerged as a result of individuals, academics and institutional consumers and libraries. This situation forced libraries to drastically reduce the subscription of journals, and consequently access to scholarly journals by scientists, scholars and academicians become undermined, especially to those from developing nations that are severely affected due to low income.

According to Giarlo (2006), the exorbitant prices of hard copy journals have brought about drastic decrease in journal subscriptions in institutions and libraries. This resulted into limitations of access, as scientists in the developing nations may not benefit immensely of the literature required in their research content, as to scholars that are from well-endowed nations. In academic environments, the traditional means of disseminating research materials has become obsolete that it slows down the speed of publishing scholarly journals. With the development of ICT, particularly the Internet, electronic

publishing has enhanced access to a myriad of information sources worldwide at a faster, easier and cheaper rate. Moller (2006) argued that the movement of open access initiatives as an outcome of enabling environment created by ICTs has drastically changed the frustrating conditions of accessing journals in the printed format and physical subscriptions. This development has suggested open access scholarly publishing as a new way to provide wider distribution of scholarly journals and content free for access, with no copyright restrictions to the end users.

"Use" as a concept has to do with the degree of importance you accord to something and where an item or object has no importance it cannot be put to use. In a nutshell, if something is of great relevance it is likely to be highly utilized (Oyedum, 2011; Ango, 2016). The rate at which open access journals are circulating and used for accessing intellectual content has attracted the attention of numerous researchers in recent times.

Statement of the Problem

The emergence of ICT and the growing popularity of open access journals have ignited many academic staff to use the medium to satisfy their ever increasing information needs. For academic staff to write their research articles, they require access to timely, accurate, and relevant scholarly knowledge. Furthermore, the research articles published by these academic staff usually form a relevant result for open access archives. The rigorous work of writing and publishing in hard copies, time it takes to access the resources and the total cost of production is now reduced due to the advent of open access journals.–Unfortunately, the extent of use of various open access journals by academic staff of federal universities, specifically in North Central Nigeria, remains unknown. This prompted the study so as to ascertain the level of use of open access journals, the effect of digital competence on the use of the journals, as well as ways of enhancing the use of the journals by academic staff in federal universities in North Central Nigeria.

Objectives of the Study

The main aim of the study is on the use of open access journals by academic staff of federal universities in North-central Nigeria. Specifically, the objectives are, to:

i. determine the level of use of open access journals by academic staff of federal universities in North Central Nigeria;

ii. investigate the effect of digital competence on the use of open access journals by academic staff of federal universities in North Central Nigeria; and

iii. identify ways of enhancing use of open access journals by academic staff of federal universities in North Central Nigeria.

Literature Review

Open access is one of the best institutional repositories that can be used by researchers and educational environments in advancing nations to make their investigation results readily reachable to the outside community (Christian, 2008). Christian (2008) further identified few problems that can influence awareness and use of organizational archives in advancing nations such as Nigeria to include inadequate skills on open access, insufficient ICT facilities, lack of financing and insufficient support.

Use of open access journals in propagating and accessing intellectual knowledge has drawn many academias' focus lately. Various studies on open access journals have been conducted by Sandhu and Daviet (2011), Ivwighreghweta and Onoriode (2012), Anyira (2012), Mohammed and Garba (2013), and Evans and Elliah (2014). A research by Sanchez-Tarrago and Fernandez (2009), for instance, revealed that among 60 academicians just 21 or 35% respondents accepted they have utilized and printed works in open access journals. Swan and Brown (2005), Kin (2006) and Utulu and Bolarinwa (2009) carried out research that showed more contribution of scholars in open access publications. Ango (2016) cited Kin (2006) accounted that, over half of the respondents stated that they produced their research or lecturing documents openly available via Internet.

Ivwighreghweta and Onoriode (2012) conducted study that revealed 100% of respondents agreed that they have downloaded open access journals articles; made links to other articles through open access journals; accessed open access journals; cited articles through open access journals articles and made links to other articles from open access journals. The study by Obuh and Bozimo (2012) established that majority of both senior and junior LIS lecturers indicated that the level of usage of open access journals were absolutely high. It was recommended that efforts should be made towards inculcating the use of open access journals especially via enabling infrastructure and implementing policies such as lectures must deposit their works in open access archive.

Evans and Elliah (2014) carried out a research on assessment of levels of open access awareness and its usage in relation to scholarly communication in Tanzanian universities. The study also revealed that majority of academia got their skills and knowledge of Internet through training and retraining of oneself in other to use open access scholarly communications, availability of open access journals are not guaranteed. Belshaw (2012) stated that Digital literacy or competencies implies the ability of the academician in this wise to perform effective information task in a digital/computer-based work environment. He further said that only those who are digitally literate can use digital tools to work across network to achieve a goal. Obasi (2012) listed networking, understanding digital concept, using digital equipment and knowledge of arrays of

information available and appreciating the benefits of ICT and Open Access as digital literacy definition. It allows for mass participation in information consortia thereby providing penetrable dissemination of information. Scholarly societies, government agencies, private bodies and the academia all support open access. It facilitates information collaboration, electronic information and its use is prevalent in today's information work. Open access allows for free access to information across the globe. Developing countries like Nigeria can benefit from the great potential offered by Open access.

The Digital competencies required by academic staff to use open access journals include: having the basic knowledge of computers, competency with search engines, competency with Internet facilities, competency with e-mail, competency with Internet navigator tools, competency with web browsers and web file formats, competency with database software, and Internet development and management expertise. It cannot be over emphasized that academic staff need to brace up to the new challenges of ICT competencies so as not to rust out of the global digital trend (Omekwu, 2003; Ango, 2016). According to Itsekor and Ugwunna (2014) and Canada (2009), open access will assist developing countries break the barrier of journal subscription which limits their access to information as scholars from these countries can now conduct and publish their research works. ICT competencies are required to enable members of the academia to tap into the benefits derivable from open access. The academia must, therefore, be in a position to utilize the opportunities offered by this initiative to enhance information retrieval, dissemination and utilization. This will help promote resource sharing and capacity building with little or no hindrance. Wide spread acquisition of the required skills and technical know-how must be put in place and effort made to increase wider internet availability and penetration. The present situation where internet facilities are more in cities and none in most rural areas is an impediment to information dissemination, and issue of Open access (Itsekor & Ugwunna, 2014).

The Canadian Association of Research Libraries (2013) stressed that open access enables cost-effective, unrestricted flow of ideas and information and underpins excellence in research while also bringing down barriers to learning, building informed communities, and fostering international collaboration and understanding. One of the factors that facilitate researchers' use of open access outlet is in the area of research visibility of publications; through open access researchers have wider visibility and usage of their research findings. As research finding were made available online, they have a significantly larger and more diverse audience. Increased exposure to research also increases citation rate (Jain, 2012). Open access provides an avenue to connect with a global society more easily and researchers can publish without printing costs.

International Scholars Journals (2013) observed that open access publications are frequently cited by researchers due to their high publicity and availability. Open access publications have high visibility, availability and provide free and unlimited accessibility of the publication over the web without any copyright restrictions (International Scholars Journal, 2013).

The world is fast changing and academic institutions are now responding by adopting institutional digital repositories as open access model in their various institutions. Florida State University (2012) observed that supporting faculty and researchers by offering greater, more immediate access to peer research will improve the caliber of student institution produces. International Scholars Journals (2013) reported that it has been argued by open access advocates that open access speeds research progress, productivity, and knowledge dissemination. Every researcher in the world can access, read, download, print and share articles, not just those whose library can afford to subscribe to the particular journal in which it appears (Musa, 2015).

Methodology

The descriptive survey research design was employed to answer the research questions. The population of the study comprised 5,365 lecturers from various academic departments in the seven federal universities in North-Central, Nigeria. They are University of Ilorin, University of Jos, University of Abuja, Federal University Lafia, Federal University Lokoja, Federal University of Technology, Minna and Agriculture University of Agriculture, Makurdi. A sample size of 241 was randomly selected and used for the study. The sample size of the study was considered adequate because Krejcie and Morgan (1970) stated that for a population of 200,000, a sample size of 384 is adequate. Based on this recommendation, 241 academic staff were selected for the study as they are considered adequate. The data collected was analyzed using descriptive statistics. The demographic information was analyzed using descriptive statistics such as frequency counts, percentages, mean and standard deviation. Statistics package for social sciences (IBM's SPSS version 23) was used for the analyses. In rating, the computed mean scores that range from 2.5 and above will be regarded as significant and Accepted 'A' while below 2.5 not significant and Rejected 'R'. The midpoint mean of 2.5 which is the criterion mean is gotten by adding up the four point likert scale as : SA-4 strongly agree, A-3 agree, D-2 disagree and SD-1 strongly disagree (4+3+2+1=10) and dividing it by the total number of response i.e. 10/4=2.5.

Data Analysis and Discussion

A total of two hundred and forty one (241) copies of the questionnaire were administered to the academic staff in the sampled universities. Out of this number, one hundred and eighty seven (187) copies of the questionnaire representing 77.7% were filled, returned and found usable for the analysis.

Table 1: Population, Sample Size, Questionnaire Distributed to Various Universities and Retrieval Status

S/N	University	Population of Academic Staff	Sample/No. of Questionnaire Distributed	No. of Questionnaire Retrieved	Percentages (%)
1	University of Jos, Jos	1207	50	30	60.0
2	University of Ilorin	1023	45	40	88.9
3	University of Agriculture, Makurdi	976	42	31	73.8
4	University of Abuja	941	40	35	87.5
5	Federal University of Technology, Minna	775	35	30	85.7
6	Federal University, Lafia, Nasarawa State	242	16	14	87.5
7	Federal University, Lokoja, Kogi State	201	13	7	53.5
	Total	**5,365**	**241**	**187**	**77.7**

Table 1 shows that total response of 187 out of the 241 copies of questionnaire distributed were returned representing 77.7% feedback. University of Ilorin, has the highest number of the respondents with 40(88.9%). The lowest respondents were from Federal University Lokoja.

Table 2: Level of Use of Open Access Journals by Academic Staff of Federal Universities in North Central Nigeria

S/N	Statements	Mean $\overline{X}$	SD U	Decision
1	I often use open access publications in my research	3.30	.63	A
2	Open access journals are usually my first priority when sourcing for materials for my work	2.91	.88	A
3	I usually retrieve scholarly content from open access journals	3.29	.67	A
4	I have some publications in open access outlets	2.87	.83	A
5	I have submitted many papers to open access journals	2.48	.86	R
	Weighted mean	2.84		

A = Accepted, R = Rejected, SD (U) = Standard Deviation

From Table 2 the lecturers' responses showed that out of the five items listed for the lecturers to respond on the level of use of open access journals, it showed that four yielded high mean scores which were above the 2.5 mark on the 4 point likert scale. However, one item had low mean scores of 2.48; SD=.86 below the criterion mean of 2.5 respectively. On the whole, the weighted mean score of 2.84 is fairly high indicating that Academic staff (lecturers) level of use of open access journals in federal universities in North Central Nigeria is fairly adequate.

Table 3: Effect of Digital Competence on the Use of Open Access Journals by Academic Staff of Federal Universities in North Central Nigeria

S/N	Statements	Mean $\overline{X}$	SD U	Decision
1	I have general knowledge on the use of computer services	3.42	.56	A
2	I am proficient on the use of Internet facilities which has enhanced my use of open access journals	3.29	.57	A
3	I access e-journals with ease and equally have access to other Internet resources with much comfort due to the skills that I have acquired	3.26	.68	A
4	I have undergone training on how to use Internet services	2.99	.85	A
5	I attend short courses on computer appreciation which have heightened my skills in accessing e-journals	2.96	.95	A
6	I am Information Communication Technology (ICT) compliant	3.25	.68	A
7	I am conversant with the Internet search i.e. Google, Yahoo…	3.51	.68	A
	Weighted mean	3.24		

A = Accepted, R = Rejected, SD (U) = Standard Deviation

Table 3 showed that there is significant effect of academic staff digital competence on the use of open access journals in federal universities in North Central Nigeria. This is because all the seven items produced high mean scores which were above the mean score of 2.50 on the 4- point. On the whole, the weighted mean score of 3.24 which is the extent of staff competence in the use of open access journals in North Central universities in Nigeria is high and adequate.

Table 4: Enhancing the Use of Open Access Journals by Academic Staff of Federal Universities in North Central Nigeria

S/N	Recommendations	Frequency	Percentage
1	Internet connectivity needs to be improved	179	95.7
2	Provision of constant power supply	174	93.0
3	Provision of funds by government, university management and other donor agencies	174	93.0
4	Academia should publish more on open access journals	109	58.3
5	Adequate bandwidth makes utilization of open access journals faster and easier	155	82.9

Table 4, showed that majority of the respondents subscribed to all the suggested ways listed for enhancing the use of open access journals. A total of 179(95.7%) of the respondents, which is the highest percentage suggested improving the Internet connectivity; 174(93.0%) suggested provision of constant power supply; 174(93.0%) equally suggested provision of fund by government, university and donor agencies; 109 (58.3%) suggested academia to publish more on open access journals, while others, 155 or 82.9%, also suggested for adequate bandwidth which makes utilization of open access journals faster and easier.

Discussion of Findings

The study revealed that the academic staff in federal universities in North central Nigeria use open access publications in research, use open access journals when sourcing materials for work, have some publications in open access outlets and make links to other articles via open access journals. This study is similar to the findings of Ivwighreghweta and Onoriode (2012) which revealed generally high use of open access journals by all the lecturers in the study. This finding also agreed with the findings of Kin (2006) who reported that respondents have access to research or teaching materials through public websites.

The second finding from the study, as shown in Table 2, indicated that the level of effect of academic staff digital competence on use of open access journals. From the study, it was revealed as shown in (Table 2) that the level of effect of academic staff digital competence on the use of open access journals is fairly adequate. The high academic staff competence in the use of open access journals in federal universities in North Central Nigeria could be attributed to the impact of various trainings and re-trainings on ICT and other staff development programmes in form of conferences, workshops, seminars and other training programmes. This finding is in conformity with that of Sandhu and Daviet (2012) as well as Ivwighreghweta and Onoriode (2012) respectively, which discovered that respondents were conversant with open access journals, institutional repositories and self-archived resources on the web. Furthermore, they also discovered that the respondents were conversant with downloading exercise as well as linking printed materials to access articles published and referenced.

Furthermore, the study revealed that majority of the respondents accepted all the suggested ways listed for enhancing the use of open access journals in federal universities in North Central Nigeria. These include need for improvement of Internet connectivity, constant electricity supply, provision of fund by the government, management and donor agencies. Others are that academia should publish more on open access journals as well as provision of sufficient bandwidth for faster and easier utilization. This aligns with Oyedum (2011) that academic staff desires for acquisition of new knowledge requires constant training on digital skills, ICT use, infrastructure, and higher bandwidth for meaningful use of open access journals.

Conclusion and Recommendations

Based on the findings of the study one would, therefore, conclude that academic staff competence and Internet services are significant for adequate use of open access journals in federal universities in North Central Nigeria. Therefore, there is need for improved level of Internet connectivity for academic staff (lecturers), provision of adequate power supply, provision of current and adequate ICT facilities and infrastructure, provision of fund by government and other agencies such as TetFund, provision of fast and adequate bandwidth to enhance utilization of open access journals and the need for Nigerian universities to recognize and allocate good points to open access journals in their promotion exercise especially the universities in the North Central Nigeria. Once these are carefully taken care of in the federal universities of North Central Nigeria the level of use of open access journals by the academic staff is expected to improve the more.

Based on the findings the following recommendations are hereby made to improve the academic staff use of open access journals in federal universities in North Central Nigeria:

i.   Management of universities in the North Central, Nigeria should improve on their Internet services, procure and provide adequate ICT facilities that would serve the university community especially the lecturers better.

ii. There should be constant training and retraining of academic staff on digital skills, ICT and Internet use to lecturers in the studied universities.

iii. Provision of Internet connectivity, constant electricity power supply and adequate bandwidth for easy and fast utilization of open access journals in the North Central Nigerian universities should be given prime attention by the university management. It is only when this is achieved that the lecturers would effectively utilize open access journals for their academic development.

iv. Federal Government of Nigeria should adequately fund the federal universities in the North Central zone of the country.

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