



## Publishing in Open Access Journals: A Study of Nigerian Librarians and Special Educators

Okafor, V.N.

Nnamdi Azikiwe Library, University of Nigeria, Nsukka

Nwachukwu, V. N.

Dept of Library and Information Science, University of Nigeria, Nsukka

Eskay, M.

Department of Educational Foundations, University of Nigeria, Nsukka

### ABSTRACT

*The study was conducted to find out the extent in which Nigerian librarians special educators publish their research findings in Open Access (OA) journals. The problem of study is to compare publications of Nigerian librarians and special educators with their publication in open access journals. The study was specifically interested in finding out open access journals where the librarians and educators publish, ascertain the importance of publishing in open access journals, find out problems that inhibit publishing in open access journals and suggest strategies that can enhance publishing rate in OA journals. The questionnaire was distributed at a Nigerian Library Association and special educators meeting. 150 questionnaires were distributed and 99 were returned showing 66% return. The study revealed that 58.6% of librarian and educators published 0-4 journal articles while 2% published from 17 and above journal articles. On the other hand 92.9% published between 0-4 journal articles and out of which 41.4% did not publish any article on OA journals. The study also revealed that Library Philosophy Practice (LPP) ranked the highest among the OA journals were the librarians and educators with 20.2%, this followed by Library and Information Research (Libres) with 19.2%. However, it was recommended among others that training of librarians special educators in the area of ICT will help to improve their skills, creating awareness on the importance of OA publishing and mentoring of the younger librarians will improve librarians publishing in OA journals.*

**KEYWORDS:** Open Access Publishing, Librarians, Special educators, Scholarly Communication

### Introduction

Assessment of scholarly productivity has changed over time. Before now, assessment was based on how many journal articles one has published in both local and international journals. With the advent of information technology and access to internet, the issue of scholarly web presence has come into play. Then issue of impact of where the person's research or journals were published surfaced. The recent issues can only be achieved if ones articles are readily available to others to access. Availability will lead to your professional colleagues' use of your articles and thereby increase the citation rate. Availability of information is much related to accessibility and use, since one can only use or cite what is available. So for a researcher to have web presence, the person must publish his articles on web-base journals particularly those with access so that other scholars can access and use his articles. Ocholla (2011) emphasized that the purpose of scholarly publishing is to promote and support scholarship research and learning activities. He emphasized that web-based publications are growing increasingly popular in the academic community for the rapid dissemination of research results.

Librarians have in recent times championed OA in other to provide free access to their users. It is then important to know the extent librarians contribute to pull of knowledge by publish in OA journals. Peterson (2006) discussion has recently surfaced about open access journals and citation analysis, but there has not been much on librarians publishing in OA journals. In ability to publish in OA journals leads to problems, as indicated by Peterson (2004) who viewed that with current system. The issue is that publishers in open access journals give their literature away intending to achieve impact not income and that will make authors to be influential in their field. Their interests are that their work gain wider dissemination and are cited by colleagues.

However Chain, Kirsop and Arunalam (2005) emphasized that increasing the visibility of research from the less developed countries is difficult. This is because publications in the mainstream journals face the problem of recorded prejudice against submissions from developing countries scientists. Also local journals struggle to survive and have very poor visibility due to method of distribution and dissemination; few of those journals are indexed by science citation index. Hence researchers in developing countries have little or no access to published research literature due to the high cost of journal sub-scripting if not for articles that are in open access journals in library and information science. Peterson (2006) opted that librarians have in recent times championed OA in other to provide access to their users. It is then important

to investigate the extent of librarians' contributions to articles in open access journals. Hence this study is to find out how Nigerian librarians contribute to the open access pool of knowledge for global visibility and equally what is happening in Nigeria and in their libraries to other professional colleagues in other countries.

Most university libraries in developing countries find it difficult to subscribe to journals. If they do, they subscribe to the ones in sciences. Hardly do they subscribe to journals in Library and Information Science. So most times for you to have access to articles published by your colleagues you have to personally subscribe to the journals or you buy the local journals during the annual conferences. Most access to journal articles are gotten from open access free journals. It is not clear whether Nigeria librarians publish in open access journals since there is no Nigeria journal in library and information science that is free even though some are in African Journal online (AJOL). Hence the study is to find out the extent Nigerian librarians publish in OA journals.

### The main objectives of the study were as follows:

- To find out the extent of publications from Nigerian Librarian and special educators in open access journals.
- To compare their rate of publications of Nigerian librarians and special educators in open access and other journals.
- To find out which of the open access journals they publish more.
- To find out the reasons why publishing in open access is important.
- To find out the problems the Nigeria Librarians and special educators encounter in publishing in open access journals.
- To suggest strategies that can encourage them to publish more in open access journals.

### Literature Review

The libraries are expected to provide information needs of the researchers both in printed and on-line formats. However today even the richest library cannot afford all the research periodicals published annually (Bosc and Harnad, 2005). The internet has changed the way of availability and accessibility of such materials through Open Access (OA). This is when researchers publish their articles in toll-free, full text online access, web-wide to a peer-reviewed journal articles by publishing them in OA journals. Emcee (2011) submitted that the concept of OA is a model of publishing which makes journals available to the public immediately on publication, without restriction, financial, legal or technical barriers.

On this line Antelman (2004) explained that there are two roads to open access: open access journals and e-print (repositories), both of which is suppose to make the full text of scholarly articles freely available to everyone on the internet. Also Budapest Open Access initiative (cited in Arunachalam 2005) expressed there two ways of closing knowledge gaps in scientific research. The first OA strategy was called Self Archiving and the later referred to as Institution Archives/Institutional Repositories which proposed that copies of already published research articles should be archived in the authors institutional archive and made available free to all. All such Open Access Archives (OAA) should be inter-operable and searchable by search engine.

The second strategy was the development of OA journals (OA publishing) with alternative funding models that allow free access to all readers with cost borne by the author's institution, sponsors or organizations. This research work is mainly based on this second strategy because institutional repository is not yet common in Nigeria. Out of 96 universities in the country only four of the universities have fully started their institutional repository.

### Importance of Publishing in Open Access

Open access has opportunities for true global knowledge exchange. It is an outlook for building science capacity in developing countries (Subbiah, 2005). Bosce and Harnad (2005) emphasized that OA increases scientific impact which can be measured by citation counts of journals in which the articles appears, citation counts for researcher and usage measure (download counts).

In addition research impact is increased by open access Garfield cited Bosce and Harnad (2005). It has been demonstrated that online access improves both readership and citation impact. Preliminary results from a larger study which looked at seven thousand journal articles from ISI web of science database indicated a significant increase in research impact for open access articles in physics. Also Harnad, Brody and others (2004) found out that physics self-archived (hence OA) articles were cited 2-4 times as much as non-OA-articles in the same journal and the same year. Bosch and Harnad (2005) also added that increased research impact is rewarded by researchers' institutions and funders hence it advances researcher's careers and increases their grant support. It also enhances their university's prestige and most importantly advances research progress and provides a more level playing field for research in developing countries. Antelman (2004) advocates that other benefits of OA is that it encourages faster publication rate, research impact and readership to more colleagues and therefore articles are more frequently cited.

Similarly Subbiah (2005) emphasized that OA has helped in making international research output globally available and accessible to anyone and also OA has made research generated in developing countries available to other countries. He equally emphasized that OA will lead to institutional research output, future international collaboration, joint research, funding proposals, even recruiting and retaining of faculty members. Another is benefit is that OA has growing evidence that citation and impact of papers that are openly accessible are greater than non-OA publications. Steve (2001) found out that an average of 36% more citation of online articles compared to offline articles published in the same venue. Bioline international indicated that journal articles from developing countries that are made OA through the Bioline eprint archives have resulted in a tremendous and steady increase in downloads as well as gradual improvement of journals impact as measured from data from ISI, Google Scholar and Scopus. As a result of this raised visibility, an increase in submissions is also recorded.

Another study by Antelman, (2004) looked at articles in four discipline at varying stages of adoption of open access to find out whether they have a greater impact as measured by citations in the ISI web of science database when their authors make them freely available on the internet. The data showed a significant difference in the mean citation rates of open access articles ranging from of 45% in philosophy to 51% in electrical and electronic engineering, 81% in political science and 91% in mathematics. This indicates both a push away from print and a pull towards open access, which may strengthen the association between open access and research impact.

Steve (2001) also advocates OA will facilitate peer review through ac-

cessing already past papers that are available in the net and will save a considerable amount of time. Open access and visibility will guide against repetition of research. If a research articles are not available then research may tend to be repeated. This is in line with Smith (2012), who emphasized that for researchers and academics to catch up with developed world, the academics and researchers need access to the current output of the academics researchers of developed world, so that they can build directly on the latest knowledge in parallel with their developed world colleagues.

### Problems

Publishing in open access journals is however not free from challenges. Among the challenges that lead to low publications in open access medium by researchers in developing countries include according to Subbiah (2005) include researchers' lack of capacity to absorb scientific and technical knowledge which may lead to low levels of scientific output and under-development due to weak institutional infrastructures, poor funding and absence of a critical mass of scientists to form a viable research community. In another study by Okafor and Dike (2011) which surveyed 291 academic staff in Southern Nigeria Universities in terms of problems that inhibit research productivity. Using content analysis, it was found out that the major factors that inhibit research productivity were lack of research materials and equipment which rated 80%. These include lack of subscription to relevant journals and abstracts, lack of online access to e-journals, inadequate internet facilities and services, poor quality reagents, inadequate supply and high cost of research chemicals, obsolete and unserviceable equipment, and non-availability of current of current journals. Others are inadequate funding, insufficient public utilities, excess workload and enough exposure.

Looking at the same issue Vose and Cervellini (1981) in their study of problems of scientific research in developing countries identified human resources, research priorities and funding, research facilities, communication and importation problems as the major problems envisaged. They suggested that apart from the direct financial support of specific projects, there will be a continuing need for international assistance through the provision of fellowships, visiting scientists and facilities for study at well established centre.

However, Singh (2006) in his study identified the reasons for the decrease in research output in developing countries attributed this to lack of manpower, funding, scientific knowledge and skill in conducting research. The quantity and quality of research from low and middle income countries must be improved. Interventions to improve the quality of research must be directed towards capacity development, increased international collaborations, mentoring of researchers and training programs to equip researchers with skills to produce papers that can meet the publication criteria of reviewers.

On the other hand, Steve Lawrance indicated that the problems in rights associated with authors in self-archiving of publishing articles. Depositing published paper in institutional repositories requires the agreement of publishers, if the authors have granted the publishers the exclusive right to their work. Therefore there is lack of awareness on the part of authors and lack of clear institutional policy.

### Methodology

Descriptive survey method was the design of the study. Questionnaire was used for data collection. Questionnaire were distributed during Nigeria Librarian Association conference held in July 2011. 150 questionnaires were distributed among academic librarians. However 99 of them were returned showing 66% return rate. To identify the OA journal, the researchers visited the website of DOAJ ([www.doaj.org](http://www.doaj.org)). The free journals in the questionnaire were gotten from Directory of Open Access Journals (DOAJ) and few others in the Google. Therefore we found seven journals in library and information science that are free and open to all forms of download.

### Finding and Discussion

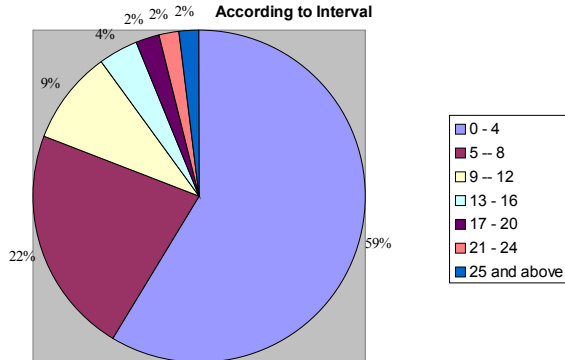
The major findings are presented in the tables and figures below.

The first objective of this study was to find out the extent of publication of librarians in Nigeria and this is represented in table 1 and figure 1 below.

**Table 1: Journal Articles Published by Nigerian Librarians and special educators According to Interval**

Range of Publications	No of respondents	Percentage
0-4	58	58.6
5-8	22	22.2
9-12	9	9.1
13-16	4	4.0
17-20	2	2.0
21-24	2	2.0
25 and above	2	2.0
	99	100

**Fig 1: Journal Articles Published by Nigerian Librarians According to Interval**



In table 1 and fig 1 above, 58.6% of the respondents published 0-4 journal articles while 22.2% of them published 5-8 journal articles. Also 9% of them published 9-12 journal articles and 4% of them published 13-16 articles while 2% of them published 17-20, 21-24 and 25 and above journal articles. It is observed from the bar chart that as the range number of articles increases the percentage of the librarians' decreases. The low publication rate among some of the librarians as suggested by Subbiah (2005) were weak institutional infrastructures, poor funding and the absence of critical mass of scientist viable research community. In addition Okafor and Dike (2010) identified among others included lack of current journals, excess workload and lack of enough exposures as problems that may lead to low research output. From the interview of some librarians, they expressed that it is difficult to do full work of librarians and at the same time embark on full time research and publishing. The research level can improve if,

the librarians form a research group, by attending to seminars and workshop and also they should solicit for mentors that can direct them in their research.

**Rate of Publishing in Open Access**

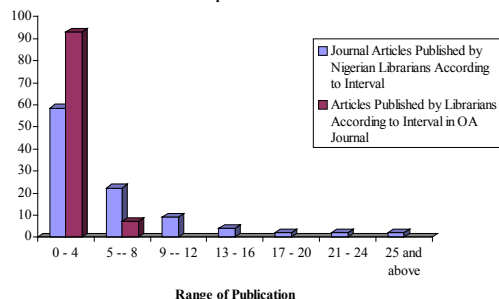
Journal articles published in OA journals by Nigerian librarians are shown in table 2 below.

**Table 2: Articles Published by Librarians and educators in OA Journal**

Range of Publications	No of respondents	Percentage
0-4	92	92.9
5-8	7	7.1
9-12	-	-
13-16	-	-
17-20	-	-
21-24	-	-
25 and above	-	-
	99	100%

Table 2 above showed that 92.9% of the respondents published 0-4 journal articles in open access journals while only 7.1% of them published 5-8 journal articles in OA journals. Therefore the highest publication in open access journals by the respondents was between 5-8 articles.

**Fig 2: Comparison of Nigerian Librarians Rate of Publication with their Publications in Open Access Journal**



**Comparison of Rate of Librarians and special educators Publishing and their publication in OA Journals**

The fig 2 above shows the bar chart of librarians and special educators' publications and also their rate of publishing in OA journals.

From table 2 and fig 2 above the highest range of publishing in OA journal were 5-8 journal articles. Singh (2006) suggested that the reason for low research output in developing countries is due to lack of scientific knowledge and skills in conducting research. He then suggested capacity development, increasing international collaborations, mentoring of researchers and training programs to equip researchers with skills to produce papers that can meet the publication criteria of reviewers. The problem of low publication in open access journals also include lack of awareness, fear of exposing the person's research, fear of the unknown whether those journals that are not in hard copies will one day disappear.

**Open Access Journals where the Librarians and special educators Publish**

The OA journals where the librarians publish are ranked and presented in table 3 below.

**Table 3: OA journals where Nigerian librarians and special educators publish.**

S/N	OA Journals	No of Respondents	Percentage
1	Library Philosophy and Practice (LPP)	20	20.2
2	Library and Information Research (Libres)	19	19.2
3	International Journal of Library and Information Science	6	6.1
4	PNLA Quarterly	5	5.1
5	Journal of Electronic Publishing	4	4.0
6	International J. of Library and Information Studies.	2	2.0
7	Webology	1	1.0
8	New Library World	1	1.0
9	D-lib Magazine	-	-

From table 3 above, 20.2% of the respondents published in Library Philosophy and Practice (LPP) while 19.2% of them published in Library and Information Research. This is followed by International Journal of Library and Information Science with 6.1%, PNLA Quarterly 5.1%, International Journal of Library and Information Studies 2% while 1% of them published in Webology and in New Library World. However although D-Lib Magazine is among OA journals, none of the respondent published in it. It was also observed that 41.4% of the respondents did not publish at all in OA journals. Low publishing in OA journals can be as mentioned before lack of awareness because publishing in most of

these journals are free while one has to pay to publish in local journals. The fact 41.4% of the librarians did not publish in any of OA journals may be due to the fact that they lack confidence and skills in publishing in OA journals. What they require is training in appropriate ICT skills.

#### Importance of Publishing in OA Journals.

The importance of publishing in OA access journals is presented in table 4 below.

**Table 4: Importance of Publishing in OA Journals**

Important of Publishing in OA Journals	SA (%)	A (%)	DA (%)	SDA (%)
Helps in dissemination of scholarly research.	60	38	1	-
Open access promote global ranking of universities	57	37	3	3
Increases the research impact of authors	49	47	1	2
Open access content is beneficial to the scholarly community	49	40	6	4
Helps in international collaboration among Library	46	47	-	6
Influences recognition among researchers	40	48	2	9
Makes the process of reviewing and Publishing easier	40	53	6	-
Helps to avoid duplication of research	39	44	12	4
Influences the rate of citation	36	38	5	20

In table 4 above 60% of the respondent strongly agree that publishing in OA journals will help in dissemination of scholarly research and also 57% of them strongly agree that OA promote global ranking of universities. However only 36% of them strongly agree that articles in OA influence the rate of citation, this is a contradiction if OA helps the rate of dissemination then it should also influence the rate of citation. This was stressed by Garfield as cited in Bosce and Harnad (2005) who demonstrated that online access improves both readership and citation impact. Result from a larger study which looked at articles from seven thousand journals from ISI web of science database indicated a significance increase in research impact for open access articles in physics.

#### Problems that Inhibit Publishing OA

Problems that hinder librarians from publishing in OA as journals are shown in table 5 below.

**Table 5: Problems of Publishing in Open Access Journals**

Problems	SA (%)	A (%)	DA (%)	SDA (%)
Lack of awareness.	43	40	13	4
Lack of training among librarians in ICT skills.	41	45	10	4
Non availability of internet access.	31	45	16	7
Low internet bandwidth.	34	47	13	5
Irregular power supply.	48	40	10	2
Lack of adequate skills to publish in open access.	45	43	11	-
OA publication is likely to be used or plagiarized.	23	37	26	13
Long term availability of OA publication is not guaranteed.	28	29	35	8

From table 5 above one could observe the 88% of the respondents agree that irregular power supply and lack of adequate skills to publish in OA journal are major problems. This closely followed by lack of training among librarians in ICT skills 86%. Lack of awareness 83%, low internet bandwidth 81% and 76% of the respondents agreed that non-availability of internet access as a problem of not publishing in OA journals. The librarians can improve on lack of awareness and lack of skill in ICT through attendance to local, national and if possible international conferences. The librarians need to read books in their related areas, they should ask questions on areas they do not understand and they should be ready to learn from colleagues who know better.

**Table 6: Ways to Improve Librarians Publishing in OA Journals**

Strategies	SA (%)	A (%)	DA (%)	SDA (%)
Creating awareness on importance of publishing in OA journals	60	34	1	5
Training of librarians on the ICT facilities	59	37	1	3
Availability of internet facilities	58	31	1	10
Provision of regular power supply	59	34	1	6
Increasing the bandwidth of internet access	52	37	3	8
Publishing in open access exposes scholarly works; it is difficult to copy people's work.	42	37	12	9
Provision of information on available OA journals.	43	51	3	3

Table 6 above showed that 60% of the respondents strongly agreed that creating awareness on importance of publishing in OA journals will help the librarians to publish there while 59% of them also strongly agreed that training of librarians on ICT facilities and provision of regular power supply will help. This is followed by availability of internet facilities 58% and increasing the bandwidth of internet access 52%. One of the respondents added that mentoring of younger researchers as a way forward to enhance publishing of librarians in open access journals. Apart from suggested strategies that can improve publishing of librarians on OA journals, the librarians have to put extra effort to improve their web presence. In this era, the easiest way to know a researcher is to Google, the persons name and the extent of his web presence while show. It means that at present time that librarians should make effort to publish in OA journals, so that people can cite them and that will help to build their web presence.

#### Conclusion and Recommendation

Research is the bedrock of any growing nation, the extent of research that is going on determines the rate of growth of that nation in terms of human, technological and scientific development. If the nation is not growing as it should be like Nigeria, then research productivity should be part of the countries transformation. Unfortunately, nobody can give account of rate of research going on in any field in Nigeria because we do not have database. In the past, published research were treated as something secret, the owner submits them when he is due for promotion, if the publications are in international journals then they are lost because libraries will subscribe to few journals. On the other hand if they are in local journal it is the same problem if not worst because most of the local journals do not last and most libraries hardly subscribe to them. However, with the introduction of open access journals it is easier to access peoples publications and information in a special area because the information will be available in the internet and accessible because it is open to all. Therefore, making research work open and publishing in OA journals will transform the researchers in the nation through availability and accessibility of information in different fields and also transform the researchers themselves by being transparent in publishing and avoiding plagiarism. Publishing in OA journals increases information from the same amount of data, sharing of information, improves integrity and productivity. To achieve these, the researchers recommended the following:

- Creation of database for research work done by Nigerians and research work done in Nigeria by NUC or appropriate body.
- Universities and other higher institutions in the country should hasten to have their own institution repository.
- It is important to train the librarians and special educators in ICT skills.
- Institutions should improve on power supply and internet facilities.

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