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An Analysis of a Nigerian Library and Information Science Journal: A Bibliometric Analysis

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AN ANALYSIS OF A NIGERIAN LIBRARY AND INFORMATION SCIENCE JOURNAL: A BIBLIOMETRIC STUDY.

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Abstract

The purpose of the study is to evaluate a Nigerian Library and Information Science journal in order to assess its performance viz-a viz importance index, influence weight and popularity index. Citation analysis was carried out on *"Information Impact: Journal of Information and Knowledge Management"* ISSN: 2141-4297. The study examined articles and authors published in Information Impact: Journal of Information and Knowledge Management (IIJIKM) over a four year period of 20110-2013. The study revealed that journal is the most preferred source of citation in LIS research. Library Philosophy and Practice, an e-journal topped the list of journals most cited in IIJIKM. A significant revelation of this study is the use of Internet resources, which is fast gaining ground amongst scholars and academics in Nigeria. Findings also revealed that information technology was the most researched subject. There was clear absence of international collaboration among authors published in the journal. Majority of the authors prefer multiple authorship as against single authorship and are mainly from academic institutions especially the University. The paper concludes that the journal influence and popularity index is high in the South, where it is based and Northern part of the country. It is therefore recommended, amongst others that publishers of journals in Nigeria should explore the opportunities and infrastructure provided by international bodies such as INASP to publish their journals online, in order to increase their global visibility.

Introduction

The term bibliometrics was coined by Alan Pritchard in 1969 to describe the application of mathematics and statistical methods to books and other media of communication (Bellis, 2009). Since then, bibliometrics has continued to evolve as what Hoang, Kaur and Menczer (2010) terms computational bibliometrics. Bellis (2009) stated that "bibliometrics is a set of methods to quantitatively analyze scientific and technological literature" (p.147). Citation analysis is one of such methods.

Citation analysis involves the collection of bibliometric data to assess research activities of mankind. These research activities could be in universities, research institutes, corporate bodies, journals and even specific research topics and disciplines. As observed by Hoang, Kaur and Menzcer (2010), data from citation analysis can be used to determine the popularity and impact of specific articles, as well as gauge the importance of an author's work. Citation analysis has been used to quantitatively assess the core journal titles and watershed publications in particular disciplines; interrelationship between authors from different institutions and schools of thought (Sommer, 2005). There is no gainsaying the fact that, citation analysis is increasingly being used to assess the impact of research, and also track and evaluate research findings in journals. According to Ocholla and Ocholla (2007) journals provide a platform on which the research output and impact of individual authors, institutions or countries are measured. This is because journals are veritable sources of scholarly research findings that are of interest to researchers, corporate bodies, librarians, donor agencies, publishers, editors, database producers, information brokers, universities, research institutes, etc.

In Africa, various studies have been conducted in library and information science to evaluate journals using various measurement indicators such as number of articles, characteristic of authors, impact factor, average number of citations, citation age (age-weighted citation rate), cited journal half life, co-citedness, consumption factor, importance index, influence weight, popularity factor and h-index (Ocholla & Ocholla, 2007, Jacobs, 2006, Oyancha, 2008, Tsay, 2006, Oyancha ,2009, Sam, 2008, Okiy, 2003, Aina and Mabawonku, 1997).

In a study of the structure and bibliographic control of the literature of librarianship in Ghana during the period of 1950-2000, Fosu and Alemna (2002) used citation analysis to determine the most popular, format of publications, major subjects covered and the extent of usage of non-library science journals in Ghana library journal. The findings of that study among others indicated that the Ghana library journal contributed immensely to library literature in Ghana. Similarly, drawing its data from Google Scholar, Oyancha (2009), compares the performance of 13 library and information science journals using the following indicators: number of publications, average number of records, number of citations, citations per year, citations per article, citedness and uncitedness of the records published in each journal, h-index and citation

impact factor. Results indicate that a number of journals have not published any issue for close to 5 years; some journals have ceased publications and irregular publication of journals. African Journal of Library, Archives and Information Science (AJLAIS) was the most highly cited journal. Aina (2002) investigated the frequency with which the African Journal of Library, Archives and Information Science is consulted by examining the references of articles published therein and in three other Library and Information Science journals. In the same vein, Olalude (2007) conducted a study to ascertain the extent to which librarians and other information professionals in sub- Saharan African countries are sourcing information from the Internet for their academic and professional publications from 2000-2005.

Library and information science (LIS) research in Nigeria has been on a steady increase with the publication of the first LIS journal named-"Nigerian Libraries" in 1963. Since then, many LIS journals have been established for the purpose of disseminating results of research by scholars in the field. This is particularly so, as librarians and library educators use the platform provided by these journals to exchange ideas and experiences on professional practice, thereby kept abreast of new knowledge and innovation in the profession (Okiy, 2003).

Following the general awareness that bibliometric data can be used to describe and evaluate journals to determine the extent of contribution of such journals to scholarship and promotion of academic ethos and knowledge, the need for continued re-appraisal of journals using citation analysis becomes imperative. It is against this background that this study focuses on a Nigerian library and information science journal-"Information Impact: Journal of Information and Knowledge Management (IIJIKM), ISSN: 2141-4297. This journal was chosen for the bibliometric study to determine its importance index, influence weight and popularity index since its introduction in2010.

Information Impact: Journal of Information and Knowledge Management, herein referred to as IIJIKM is a refereed journal of high repute published two times in a year by Information Practitioners Network, Nigeria. The journal is broad based, providing a forum for scholars, researchers, academics, and practitioners to share leading edge knowledge in library and information science. It was chosen for this study because it is amongst the few LIS journals of high repute that publishes peer reviewed articles of original research in the areas of information and knowledge management in Nigeria.

Research Objectives

The purpose of this research is to evaluate a Nigerian library and information science journal named "Information Impact: Journal of Information and Knowledge Management (IIJIKM) from 2010-2013, in order to assess its performance vis-à-vis importance index, influence weight and popularity index. Specifically, the study is aimed at analyzing citations of the journal under review in order to:

- Determine the sources of citations in IIJIKM from 2010-2013.
- Identify journals cited in IIJIKM from 2010-2013.
- Identify number of publications and authors per year.
- Identify geographical distribution of authorship and citations.
- Identify authors and their affiliations in IIJIKM.
- Identify major subjects/topics covered within this period.

It is hoped that this study will provide more insight into the current sate of LIS research in Nigeria and provide some basis for future projections.

Methodology

The study examined articles and authors published in Information Impact: Journal of Information and Knowledge Management (IIJIKM) over a four year period of 2010-2013. All articles and bibliographic references were carefully and thoroughly examined to obtain relevant data. Collected data were analyzed using frequency counts and percentages.

Findings and Discussion

Table 1: Publication trend of IIJIKM

Year	IIJIKM		
	Vol.	**No.**	**No. of Issues**
2010	1	1&2	2
2011	2	1&2	2
2012	3	1&2	1
2013	4	1	1

Table 1 above shows the issues of the journal from 2010-2013. It revealed that IIJIKM published two issues in 2010 and 2011. Only one issue was published in 2012. As at the time of writing, only one issue has been published in 2013. This shows some level of irregularity in publishing the journal.

Table 2: Sources of Citations in IIJIKM

Sources	Number of times cited	Percentage
Journals	335	42
Books	208	26
Internet	162	20
Conference proceedings	43	5

Thesis /Dissertations	22	3
Reports	16	2
Newspapers	8	1
Encyclopedia/Dictionary	8	1
TOTAL	**802**	**100**

From the above table, it can be seen that most of the items cited were journal articles (42%), with books accounting for 26%, followed by Internet sources (20%). Newspaper (1%) and Encyclopedia/Dictionary (1%) had the least sources of citation as reflected in the table. It is crystal clear that books and other information materials were cited less frequently than journals. Journals accounted for almost half of the citations in IIJIKM.

Table 3: Distribution of Sources of Citations on an Annual Basis

Sources	2010	2011	2012	2013	Total	Percentage
Journals	100	89	57	89	335	42
Book	77	84	22	25	208	26
Internet	55	45	27	35	162	20
Conference proceedings	15	16	8	4	43	5
Thesis/Dissertation	8	10	1	3	22	3
Report	8	8	-	-	16	2
Newspaper	4	4	1	-	8	1
Encyclopedia/Dictionary	3	4	1	-	8	1
TOTAL	**270**	**260**	**116**	**156**	**802**	**100**

Table 3 above shows the distribution of sources of citations on an annual basis, with journals (42%) as the most cited source over the three year period. In similar studies (Crowley-Low, 2006, Sam, 2008), journals have been proven to be the most preferred source of citation. Perhaps this is because; it's a veritable platform for the dissemination of current research findings. A significant revelation of this study is the use of Internet resources, which accounted for 20%. This finding however, contradicts Sam (2008) in an analysis of articles published in the Ghana library journal over a seven year period, from 2000-2006. The use of Internet resources in that study was not significant, as it accounted for only 4%. The use of on-line resources amongst academics and scholars in Nigeria is fast gaining ground especially with the advent of various Open Access (OA) initiatives, and this is perhaps why Library Philosophy and Practice, an on-line journal topped the list of journals most cited in IIJIKM, as revealed in table 4 below.

Table 4: Ranked List of Journals Cited in IIJIKM

Rank	Journal	Number of citations
1.	Library Philosophy and Practice	24
2.	African Journal of Library, Archives and Information Science	11
3.	The Information Technologist	8
4.	College and Research Libraries	9
5.	Library Management	7
6.	Communicate: Journal of Library and Information Science	6
6.	Nigerian Libraries	6
6.	Gateway Library Journal	6
6.	Borno Library, Archival and Information Science Journal	6

The study also sought to find out how many journals were cited more than 5 times in IIJIKM from 2010-2013. As indicated in table 4 above, nine journals made the list with Library Philosophy and Practice, an e-journal, cited 24 times. This was followed by African Journal of Library, Archives and Information Science. The journals cited were more of African descent, without much international visibility. More than half of Nigeria's LIS journals do not have global visibility. This fact was buttressed by Gbaje (2009) that, Nigerian publishers of scholarly journals are yet to embrace electronic publishing. According to Gbaje (p.32), only one Nigerian journal was indexed by Social Science Citation and four by Scopus citation index.

Table 5: Number of Articles and Authors per Year

Year	Number of Articles	Number of Authors
2010	21	27
2011	18	37
2012	8	12
2013	9	16
TOTAL	**56**	**92**

Table 5 above, shows the number of articles and authors per year. Because some individuals authored more than one article, they were counted more than once. The table reveals that 2010 and 2011 had the highest number of articles and authors respectively.

Table 6: Distribution of Authors according to form of Authorship per Year

Year	No. of Articles	No. of Single Authors	Percentage	No. of Multiple Authors	Percentage
2010	21	15	58	6	20
2011	18	4	15	14	47
2012	8	4	15	4	13
2013	9	3	12	6	20
TOTAL	**56**	**26**	**100**	**30**	**100**

The results from table 6 above reveal that authors prefer to collaborate with their colleagues in writing articles. 2011 witnessed the highest proportion of multiple authorship, while 2010 recorded the highest proportion of single authorship. The proportion of the distribution by number of single author and number of multiple authors, vis-à-vis the small numbers of articles remained relatively constant in 2012 and 2013. However, the small number of articles and authors in 2012 and 2013 may be due to the fact that only 1 issue was published in 2012 and 2013 as at the time of writing. On the other hand, there was no international collaboration among the authors who published in the journal. This is worrisome, given the fact that LIS is a borderless, multidisciplinary and transnational field of learning.

Table 7 below, shows the geographical distribution of authorship for articles published between 2010 and 2013. The overall geographical classification in Nigeria is North, South, West and East. The South, with 32 (57%) papers had the largest number of authored papers. The reason for this could be linked to the fact that, IIJIKM is based in the South and attracts more patronage from there. This is followed by the North (18%), East (14%) and West (11%), in that order. This may be an indication that the journal is not yet well known outside the South, and therefore not attracting authors from other parts of the country. In a related study of the characteristics of authors in Nigerian librarianship journals, Okiy (2003) reported that majority of the authors that published in Lagos Librarian, the Nigeria Library and Information Science Review and African Journal of Library, Archives and Information Science were from the West. This may be, because the journals investigated are based in the West. The data generated from table 7 and further buttressed by the data emanating from Okiy (2003) show a trend in Nigerian LIS journals.

Table 7: Geographical Distribution of Authors

Zone	No. of Papers	Percentage
North	10	18
South	32	57
West	6	11
East	8	14%
TOTAL	**56**	**100**

Table 8 lists the top nine authors who published two or more articles. The listing is not in any particular order. Nine authors contributed eighteen articles representing 32% of the total number of articles. The table reveals that 4 were practicing librarians and the other 5 are library educators. This is to be expected, as they have to publish before they are promoted, in line with the "publish or perish" culture. Further analysis indicated that the top nine authors were all drawn from various universities in Nigeria (University of Nigeria, Nsukka; University of Ibadan; Federal University of Technology, Minna; Enugu State University, Enugu; and Delta State University, Abraka.)

Table 8: Top Nine Authors

Author	Number of Articles
Ekere, J.N	2
Ogbomo, E.S	2
Alhassan, J.A	2
Eguavoen, O.E.L	2
Asogwa, E.	2
Alakpodia, E.S	2
Ugwu, C.I	2
Akporhonor, B.A	2
Obaro, G.O	2
TOTAL	**18**

Table 9: Distribution of Authors according to type of Organization

Organization	No. of Authors	Percentage
Universities	76	82
Polytechnics	7	8
Colleges of Education	6	7
Research Institutes	2	2
Corporate Bodies	1	1
TOTAL	**92**	**100**

Table 9 above, reveal that universities accounted for76 authors, being 82%, while polytechnics and colleges of education accounted for 7 (8%) and 6 (7%) respectively. That more than 90% of the authors are from academic institutions is not unconnected with the fact that, research and publishing is a prerequisite for promotion for practicing librarians as well a library educators in Nigerian universities, polytechnics and colleges of education.

Table 10: Ranked List of Major Subjects Covered

Subjects	Frequency	Percentage
Information Technology	19	34
General Librarianship	13	24
Library Use	6	11
Academic Librarianship	5	9
Information Seeking Behavior	4	7
Resource Sharing	3	5
Library Personnel	3	5
Records Management	2	3
Technical Services	1	2
TOTAL	**56**	**100**

Table 10 above, shows the list of major subjects covered, during the period analyzed in this study. The subjects are ranked according to how often the subjects under consideration featured in each of the issues within this period. A total of 9 subjects featured prominently. Information technology ranked the highest (34%) in all the issues while resource sharing, library personnel, records management and technical services ranked lowest. This finding corroborate Abdoulaye (2002, Alemna (2001) and Sam and Tackie (2007) which indicated information technology as the most researched subject in LIS amongst scholars, academics and practitioners.

Table 11: Distribution of Authors by Gender

Year	Male		Female	
	No.	%	No.	%
2010	13	29	14	30
2011	20	43	17	37
2012	7	15	5	11
2013	6	13	10	22
TOTAL	**46**	**100**	**46**	**100**

Table 11 above, shows the distribution of authors by gender. An analysis of the authors revealed a proportionate balance between male (46) and female (46) authors within the period under review. There were however little differences when viewed per year.

Conclusion and Recommendations

The results of the study underscore the significance of journals as an important information resource, followed by books in the citation pattern of authors in LIS research in Nigeria. Information technology was the most researched subject. Though, a total of 56 articles were recorded, the number of published articles in IIJIKM in 2012 and 2013 is limited, when compared to the previous years.

The fact that IIJIKM has no global visibility and also not indexed or abstracted in any international indexing and abstracting database may account for the clear absence of international collaboration among authors published in the journal. The IIJIKM is not attracting enough pool of authors from the West and East. There is a high preponderance of authors from the South, where the journal is based. The reason for this could be linked to the fact that IIJIKM is not yet mature; and as it matures the author base will broaden. A majority of the authors had a preference for multiple authorship as against single authorship.

Nine journals were cited more than 5 times from 2010-2013 with Library Philosophy and Practice (an e-journal) recording the highest citation of 24 times. Only 3 of the most cited journals are either European or USA based, with the others mainly of African origin. Majority of the authors and articles were from academic institutions, especially the university.

It is therefore recommended as follows:

- Publishers of journals in Nigeria and indeed Africa should explore the opportunities and infrastructures provided by other international bodies such as INASP and AJOL to publish their journals online, thereby increasing their global visibility.
- Irregularity and delays in the publication of journals should be addressed by journal publishers.
- The journal should make deliberate efforts to source for articles from all the zones in Nigeria, for adequate representation in all the geographical zones.

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