



CITATION ANALYSIS OF JOURNAL OF LIBRARY AND INFORMATION SCIENCE (2004-2009)

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ABSTRACT

Citation analysis of all the journal articles published in the *Journal of Library and Information Science* (JOLIS) from 2004-2009 is carried out. 72 articles were published in the journal during five (5) years covered. Highest number of (14) articles were published in 2007 and 2008. A total of 998 references were generated by the journals, indicating that 13.7 average citation per articles. The result shows that journals were the most cited materials as it accounted for 37.14% of the total citations, followed by books with 33.14%. The individual articles that had the highest citation had 44 references and was published in 2008. The findings further show that 62 library and information science (LIS) journals cited produced 172 citations. *African Journal of Library, Archives and Information Science* led the ten (10) most cited library and information science journals (LIS) with 40 citations in the journal. 15(24.19%) of the (LIS) journals were published in Nigeria, 45(72.58%) were from outside African continent, while only 2 (3.22%) other journals were from Africa. The majority (38.2%) of materials cited was published in 1995 and beyond, authorship pattern shows that (79.85%) of the materials cited was written by single authors while only 8.8% of the total citations were Internet resources.

Keywords: Citation Analysis; Bibliometrics Studies; Librarianship; Information Science.

INTRODUCTION

The relevance of journals to academic community cannot be over emphasized as they serve as medium for exchange of ideas, experiences and dissemination of new knowledge among scholars. This assertion was corroborated by Aina and Mabawonku (1996) as they affirmed that journals serve as an information source for researchers, conference workshops and review of latest

publications in their disciplines. Writing on the importance of research communication, Okeh (2003) observed that without scholarly publications being generated there would neither be materials to study by those involved nor knowledge about what was done intellectually, while Oyesiku (1993) simply said scholarly publication is the cornerstone of academic.

Library and information science field profession like any other professions in Nigeria has been floating professional journals to serve as mouthpiece and promote interests of the profession. One of such journals in Nigeria is Journal of Library and Information Science (JOLIS), which the present study, has undertaken citation analysis.

Citation refers to the list of references to other works in a published work. Referring, means mentioning in the proper context and giving an explicit bibliographic statement in a list of references. That is why older articles are cited by or will receive citations from newer one (ROUSSEAU, 2008).

Citation analysis is a worthwhile area of research and it has been in the domain of library and information science field. Liu (1993) acknowledged this as he remarked that knowledge providers in library and information have been at the forefront of citation analysis research. Diadato (1994) defines citation as “a wide ranging area of bibliometrics that studies the citations to and from document. Such studies may focus on their authors, the journal (if the documents are journals articles in which the articles appear)”.

The relevance and usefulness of citation analysis are numerous, Nisonger (2003) acknowledged that citation analysis has been used for the following: journal subscription, cancellation, weeding, relegation to remote storage and filling-in-gap decisions; budgeting; a checklist for collection evaluation; defining the core; collection development planning concerning the age, language or formats collected; and comparing scholarly communication patterns among different disciplines. Glenn (1995), Lal and Panda (1996) revealed how this method of research enquire are used to evaluate library collection and take crucial collection development decision in libraries. Citation analysis is also useful in showing information seeking behavior and usage of various information sources (JAN, 2009).

Journal of Library and Information Science (JOLIS) with the International Standard Serial Number (ISSN) 15975843 is a publication of academic Librarians Forum of Olabisi Onabanjo University Ago-Iwoye (OOU), formerly known as Ogun State University), Nigeria. The journal intends to provide opportunity for young and time honored researchers in the field of Librarianship, Information Science, Archival studies, Information technology, Publishing and Education in Nigeria, Africa and the World. The journal started publication in Dec. 2004; its intention is to be publishing bi-annually in June and December of every year (JOLIS, 2004).

The journal has been enjoying patronage and gaining ground as reputable journal in library and information profession in the country. The journal is currently on volume 6, number 2, which is expected to get to the press very soon. The journal has since then gone through six (6) volumes comprising of eleven (11) issues during six (6) of its existence. This study intends to carry out citation analysis of (JOLIS) with the view to finding out characteristics and patterns of citations used by authors of articles in the journal .The study becomes imperative as literature survey revealed that no study of this nature has been conducted on the journal and this make the study worthwhile. The main objectives of this study are:

- 1.To assess the quantitative growth of article by volume.
- 2.To investigate the various sources cited by authors of articles in JOLIS.
- 3.To find out the individual article that has the lowest and highest citations.
- 4.To prepare a ranked list of library and information science journals based on the frequency of the use by authors of articles in the journal.
- 5.To ascertain geographical location of library and information journals cited.
- 6.To determine subject – wise distribution of the citations.
- 7.To ascertain the age and recency of cited materials in the journal.
- 8.To examine the authorship pattern of citations.

2 LITERATURE REVIEW

A review of related literature reveals that a considerable number of studies have been carried out on bibliometrics and citation analysis on various disciplines including library and information science literature.

A scholarly publication cannot exist in a vacuum; rather, each article is set within the context of the research that both precedes and follows it (SMITH, 1981). Smith explains the “embedded” nature of scholarly publications in terms of reciprocal relationships: A reference is the acknowledgment that one document *gives* to another; a citation is the acknowledgment that one document *receives* from another. In general, a citation implies a relationship between a part or the whole of the cited document and a part or the whole of the citing document (SMITH, 1981).

These giving and receiving relationships can be quantified through citation analysis. Edwards (1999, p.10) defines citation analysis as “[...] a procedure of counting and ranking the number of times documents are cited in bibliographies, footnotes, and/or indexing tools”.

The method of citation analysis is not without its weaknesses. Many authors may not reference works that are relevant to their own work. Again, Smith (1981) notes that it is impossible to know about and have access to all research, or speak all languages in which research is published. Tescione (1998) suggests that citation analysis can be an unreliable indicator of quality, as citation counts include references to articles that are cited as negative examples. Only published works can be included in citation data; the use of journals by undergraduate and graduate students, staff, faculty members, and any other unpublished user goes uncounted (DUY; VAUGHAN, 2006).

The treatment of self-citing behavior is another problematic issue; Nisonger (2004) states that self-citations, or citations made by an author to their own previous work, are often not included in citation analysis. This is because, as Bakri and Willet (2008, p.110) note, “[...] self-citations reflect in part an attempt to promote an author’s research credibility and standing in the discipline”, and therefore are often treated as less valid than citations to other authors’ works. Despite these valid criticisms, citation analysis is often utilized as a method to judge both author status and patterns within a field.

According to Tewolde (1992) citation analysis is useful for evaluating the literacy practices and structure of scientific literature, understanding the formal communication process, helping library administrators in managing collection development and organizing effective and efficient information services, helping to provide a concept to forecast future use of material and to describe current and past use of materials.

Oyediran-Tidings, S. Oyediran and O. Sunday (2003) used citation analysis as an operational variable in the study of four journals in the built environment. They found out among other things that the mean article per journal (MAPJ) was very low compared to journals in library and information profession. They also revealed that referencing styles of these journals were not standardized, that is why the study recommends peer-reviewing and strict adherence to editorial practices.

Citation analysis has been used to evaluate the use of library collection. One of such evaluation was done in the United State by Sylvia (1998) who analyzed the bibliographic citations of research papers by undergraduate and graduate students in the psychology department at St Mary's University and made a decision for subscription or discontinuation of journals on the basis of their use and cost effectiveness.

Bhat and Sampath Kumar (2008) analyzed citations of research articles from scholarly electronic journal published in 2000-2006. They focused on the extent to which scholars are using web- based sources in scholarly electronic journals. The result shows that 81.49% of articles published in selected 9 electronic journals during the period have web references. Out of 25730 references 56.54% are print journals and 43.52% are web references.

Citation analysis has also been used to show interdisciplinary nature of subjects and disciplines. Walcott (1994), Hurd (1992) and Henkel (1938) examined journal article citation patterns to uncover the interdisciplinary nature of scientific disciplines such as marine science, chemistry and biochemistry respectively. Youngen (1998) in his own contribution performed citation analysis on electronic preprint in the astronomy and astrophysics literature to show materials used in primary research. For scientists in those fields he argues that "preprints have become

a much common form of scientific information exchange". Youngen concluded that electronic preprint were cited in the most influential astronomy and astrophysics journals and were important primary research information.

Das and Sen (2002) also investigated 33 research articles pertaining to issue no 2-4 of 20 Journal of Biosciences of the year 2000. According to them, the authorship pattern of the citations shows that 18.68% per cent papers are single-authored, 52.71 per cent were double and triple-authored, and the remaining 28.61 per cent are joint contributions of four or more authors. As in the case of medicine, the team size of this field is also bigger than those in the fields of chemistry and physics as many as 25 articles were written by mega-authorship. The study further revealed that journal articles comprised 85.89 per cent and monographs 10.1 per cent. Indian contributions comprised 5.53 per cent of the citations. Of the citing articles 30 are by Indian authors, 3 by foreign authors, and 1 (2.94%) jointly by Indian and foreign authors. Of the total citations 10.87 per cent are author self citations and 0.57 per cent are journal self citations.

Citation analysis has been employed to show the pattern of library and information science communication, one of such studies was carried out by Mohanta (1992) which analyzed citations patterns in five Indian library and information science journals. The author found out that 47.31% of 4022 total citations were to periodicals and 35.28% to books. The 15 most frequently cited periodicals accounted for 45.83% of the periodical citations. The study further revealed that five of these titles were published in India, 5 from United State of America while analysis by age dignified a 7.7 years half-life for periodicals and 10.3 years for books.

Aina (1993) compares the author characteristics of local and foreign – based journals with reference to the periodic literature in librarianship. His study reveals no significant difference with respect to the quality between the two categories. The study clearly shows that time citation of papers published in Nigeria is not inferior to those published in foreign-based journals. Rather papers published locally seem to have more up-to- date references than those published in foreign countries.

Ramesh and Nagaraju (2000) carried out citation analysis of articles of Indian Journal of Information, Library and Society during 1995-1999. They revealed that the

journal received 7 citations per article. About 67.5% of the articles had 1-20 citations, more citations were from the books and periodicals than any other types of materials and authors seems to cite indigenous work more as compare to the documents published in other countries.

The survey further shows that Dr. S. R. Raganathan is first in the rank of authors whose valuable books have been utilized by several authors more frequently and has 32 citations. They also reported that English language was dominating amongst the cited articles, only 14% citing authors had tendency of self-citation, co-citation cases were 110 and only a couple cases being repeated and more than 90% were from library and information Science journals.

Recently, (Jan. 2009) carried out the analysis of all the journal articles published in the Library Trends from 1994-2007. 593 articles were published in the journal during the 14 years. The finding further revealed among other things that highest numbers (52) of articles were published in 2004 and the journal generated a total of 15,662 references, out of these, 13,783 were p-citations and 1879 were e-citations. The average growth of articles is in the range of 23-52. Female contribution (52.34%) accounted for more male contribution (47.66%). Other related studies were on citation analysis of dissertations, theses and undergraduates project reports.

Buttlar (1999) conducted a citation analysis of 61 Library Science and Information Science dissertations to acquire knowledge about the information sources used in LIS doctoral research. Analysis reflected that about 80% of citations were single authors and LIS scholar relied heavily on Journal Literature for the research.

Momoh (1993) studied the statistical analysis of final year undergraduate library science projects at the University of Maiduguri between 1981 and 1990.

Similarly, Fosu and Alemna (2006) analyzed masters dissertations written on the Balme Library, University of Ghana by students of Department of Information Studies, University of Ghana between 1988 and 2005 with a view to ascertaining how the management of Balme library has implemented the recommendations from the dissertations.

Slutz (1997) also carried out a citation analysis of 16 Master theses. Each citation from the 16 theses was analyzed along the following criteria gender of citation and place of publication. It shows that more male authored citations were used; most sources were books, articles within books, and journal articles.

Megnigbeto (2006) studied the citations of dissertations on library and information science undergraduates and found that the number of citations to Internet resources was very low.

3 METHODOLOGY

Each and every article published during the study period was examined. Title pages and reference sections were photocopied from each of the 72 articles published by the Journal in the period (2004-2009) covered by the study. Data concerning total number of articles, total number of citation, and total number of different sources cited, and dates of publications of such references with authorship pattern for each article. The collected data have been analyzed and results are presented in the form of tables below.

4 RESULTS

Table 1 - Number of articles per volume.

Volume	Month & Year of Publication	Number of Articles	Percentage	Cumulative Total
Vol. 1	December, 2004	11	15.3	11
Vol. 2	December, 2005	08	11.1	19
Vol. 3	December, 2006	12	16.7	31
Vol. 4	December, 2007	14	19.4	45
Vol. 5	December, 2008	14	19.4	59
Vol. 6	June, 2009	13	18.1	72
Total		72	100	-

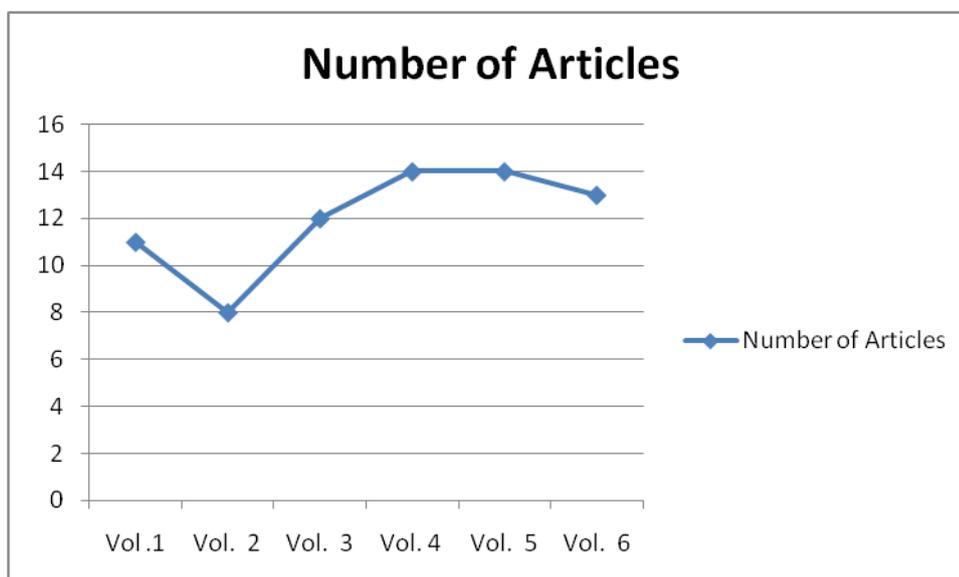


Figure 1: Number of Articles.

The table above shows the number of articles published per year and volume by the journal. In all, a total of 72 articles were published in the six years (2004 – 2009) covered by this research. The journal started in 2004 with 11 (15.3%) articles; the number declined in 2005 to 8 (11.1%), the number increased to 12 (16.7%) in 2006. It also increased to 14(19.4%) articles in 2007 and this number (14) was maintained in 2008 while it declined to thirteen (13) (18.1%) articles in 2009. It is noteworthy to mention that each year of the journal contains two (2) issues published together in all the volumes except in June 2009 (volume 6) which had one (1) issue, hence the journal has published eleven (11) issues in the period under review.

Table 2 - Distribution of forms of materials cited by volume in the journal.

Types of Materials	Vol. 1	Vol. 2	Vol. 3	Vol. 4	Vol. 5	Vol. 6	Total
Journals	44	37	48	37	119	82	367
Books	54	29	37	98	56	53	327
Grey literature	17	14	26	22	11	18	108
Web resources	1	14	15	8	12	37	87
Dissertation/Thesis	1	3	5	1	15	7	32
Government Publications	3	3	3	4	-	2	15
Newspapers	-	-	4	5	1	6	16
Interview Reports	1	3	-	1	1	5	11
A/V	-	-	-	9	-	-	9
Not indicated	1	4	2	1	-	3	11
Unpublished papers	-	-	2	2	-	-	4
Total	122	107	142	189	215	213	988
Number of Articles	11	8	12	14	14	13	72
Average Citation	11.1	13.4	11.8	13.5	15.4	16.4	13.7

A total of 72 articles published by the journal in the period under review produced 988 citations that is an average of 13.72 citations per article. Cited materials were grouped into twelve (11) categories: Journals, books, newspapers, Web-Resources, audio-visuals, dissertations/Theses, Government Publications, Reports, grey literature, news papers, unpublished and interview. Journals and books were the most cited sources with journals being cited more than any other materials. The highest overall citation to journals was in volume 5 published in 2008 with 119 citations followed by 82 in volume 6 of 2009. Interview was the least cited sources.

Table 3 - Forms of publication used by authors in the journal.

Forms of Publications	Cumulative			
	Citations	Percentage	Citations	Percentage
Journal	367	37.14	367	37.14
Book	327	33.09	694	70.23
Grey Literature	108	10.93	802	81.16
Web	87	8.80	889	89.96
Dissertations	32	3.24	921	93.2
Newspapers	16	1.51	936	94.71
Government publications	15	1.61	952	96.32
Not indicated	11	1.11	963	97.43
Report	11	1.11	974	98.54
A/V	9	0.91	983	99.45
Unpublished	4	0.40	987	99.85
Interview	1	1.10	988	99.95
Total	988	99.95		

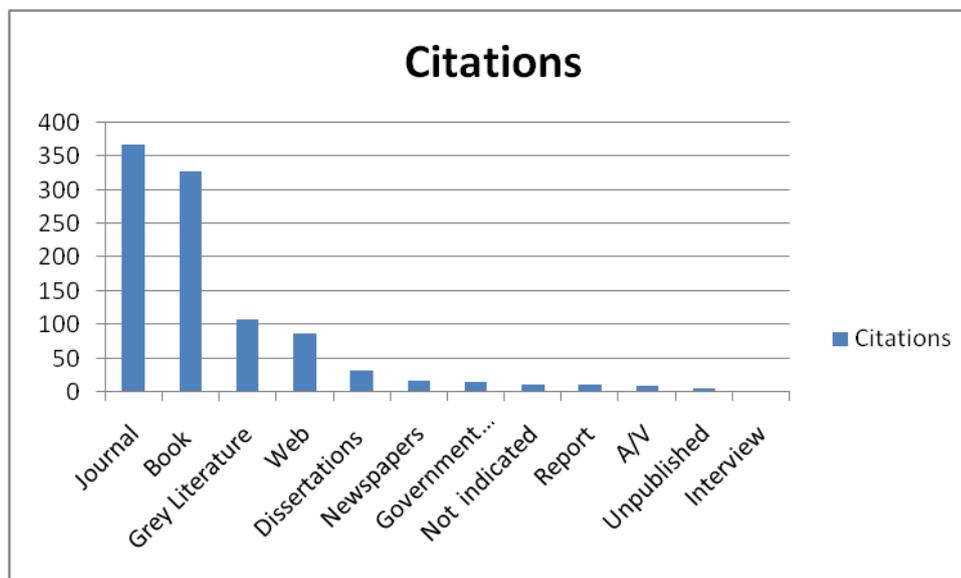


Figure 2: Citations.

The total of 72 articles published by the journal from 2004 – 2009 generated a total of 988 citations. Journals articles were cited most frequently with 367 citations (37.14%) followed by books (33.09%); Grey literature (10.93%); web resources came forth with (8.80%); Newspapers (1.61%); Government Publications (1.51%) publications with insufficient information accounted for (1.11%). Report also has (1.11%); audio visual materials (0.91) while only (1) interview is recorded representing (0.10%) of the total citations.

Table 4 - Highest and lowest citations by volume and individual article.

Volume Number	Total Citation	Percentage	Highest Citation	Lowest Citation	Number of Articles
Volume 1	122	12.3	21	5	11
Volume 2	107	10.8	19	8	8
Volume 3	142	14.4	22	5	12
Volume 4	189	19.1	22	8	14
Volume 5	215	21.8	44	6	14
Volume 6	213	21.6	37	6	13
Total	988	-	-	-	72

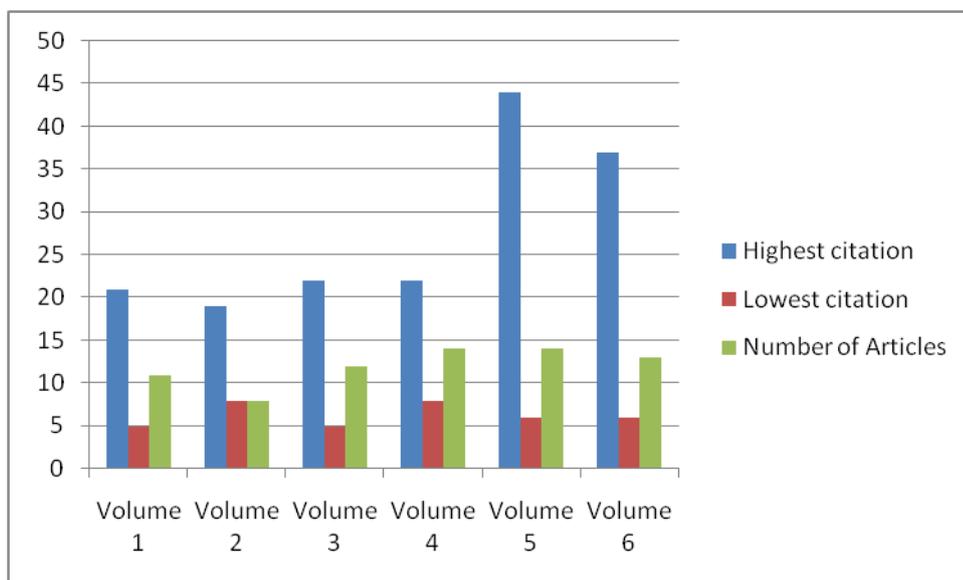


Figure 3: Highest and Lowest Citation – Number of Articles.

The table above shows citations by volume. The volume that has the highest number of citations is volume five (5) published in 2008 with 215 (21.8%) of the total citations, this is closely followed by volume 6 of June, 2009 with 213 (19.1%), volume 3 has 142 (14.4%) citations; volume 1 has 122 (12.3%) while volume 2 has the least with 107 (10.8%).

As depicted in the table above, the individual article with the highest citation has 44 and it was published in volume 5 in December 2005. There are two (2) articles that have lowest citation of five (5) each. They were published in volume 1 (December, 2004) and volume 3 in (December, 2006).

Table 5 - Rank order of Library and Information Science journals cited.

S/No	Journal Title	Citation	%
1	African journal of Lib, Archive & Information Sc.	40	23.25
2	Nigerian Libraries	12	6.97
3	Gateway Library Journal	11	6.39
4	Nigerian School Lib Journal	6	3.48
5	Journal of Information Science	6	3.48
6	Journal of Library and Information Sc.	6	2.90
7	Owena Journal of Library & Information Science	5	2.90
8	College Research Library	5	2.90
9	Nigeria Library & Information Review	5	2.90

10	International Library Review	4	2.32
11	Journal of Academic Librarianship	3	1.74
12	The Information Technologist	3	1.74
13	Lagos Librarian	3	1.74
14	Information Development	3	1.74
15	Library review	3	1.74
16	Collection Management	2	1.16
17	Communicate	2	1.16
18	Lagos Journal of Library and Information Science	2	1.16
19	Annual Review of Information Science & Technology	2	1.16
20	Middle Belt journal of Library & Inf. Science	2	1.16
21	Library Acquisition Practice & Theory	2	1.16
22	Library Progress	2	1.16
23	Library Bulletin	2	1.16
24	Information Science	2	1.16
25	International Library Movement	2	1.16
26	Library Journal	1	.58
27	Reference Librarian	1	.58
28	Library Philosophy & Practice	1	.58
29	Information Processing and Management	1	.58
30	Evidence based Library & Information Practice	1	.58
31	Nigerian Library Association, Abuja chapter	1	.58
32	Library Resources & Technical Services	1	.58
33	Niger Biblios	1	.58
34	The Electronic Library	1	.58
35	Information Department	1	.58
36	Record and Management Journal	1	.58
37	The International Information & Lib, Review	1	.58
38	Library Management	1	.58
39	International Journal of Information Management	1	.58
40	The Law Libraries	1	.58
41	Nigeria Journal of Library & Information Studies	1	.58
42	Education Library Journal	1	.58
43	Journal of Librarianship & Information Science	1	.58
44	Drexel Library Quarterly	1	.58
45	Journal of Documentation	1	.58
46	The Interoperability Report	1	.58
47	The Library Association Records	1	.58
48	Library Herald	1	.58
49	Ghana Library Journal	1	.58
50	Special Libraries	1	.58
51	OCLC System and Services	1	.58
52	Integrated Library Review	1	.58
53	Anambra State School Library Bulletin	1	.58
54	Curriculum Journal of Education for Lib. & Inf. Sc.	1	.58
55	Briefvol Journal of Librarianship	1	.58
56	American Journal of Information Science	1	.58
57	Collection Development	1	.58
58	Chiqwa Research Chronicles	1	.58
59	SCONUL Newsletter	1	.58
60	South African Journal of Lib. & information Science	1	.58
61	Rochester Study Bulleting Medical Lib. Ass. Journal	1	.58
62	Cataloguing & Classification Quarterly	1	.58

Total	172	100
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The table above shows that a total of sixty-two (62) Library and information science journals generated 172 (46.86%) of the total citations from the journals. The table also reveals that the most cited Library and Information Science Journals by authors of articles in the journal is African Journal of Library, Archives and Information Science, which was cited 40 times, representing about (24.41%) of the journals cited in library and information fields, Nigerian Libraries came next with (12) twelve (6.97%); Gateway Library Journal 11 (6.39%); Nigerian School Library Association Journal; Journal of information science and Journal of Library and Information Science, had six (6) citations each; Owena Journal of Library and information Science; College and Research libraries, Nigerian Library and information science Review had five (5) citations each and International Library Review has four (4) (2.28%) citations; 4 journals have (3) three citations each; ten (10) journals have (2) two citations each while other 37 library and information science journals have (1) one citation each.

Table 6 - Ten most ranked journals in Library and Information Science.

S/No	Journal Title	Citation	Rank Order
1	African Journal of Lib, Archive & Information Sc.	40	1
2	Nigerian Libraries	12	2
3	Gateway Library Journal	11	3
4	Nigerian School Lib Journal	6	4
5	Journal of Information Science	6	4
6	Journal of Library and Information Sc.	6	4
7	Owena Journal of Library & Information Science	5	5
8	College Research Library	5	5
9	Nigerian Library & Information Review	5	5
10	International Library Review	4	6

The table above depicts ten (10) most cited journals of library and information science fields.

Table 7 - Geographical location of journals.

Geographical Location	No. of Journals	%	No of Citations	%
Nigeria	15	24.19	104	60.46
Africa	2	3.22	2	1.1

Outside Africa	45	72.58	66	38.37
Total	62	100	172	100

The study reveals that out of 62 library and information science journals, 45 (72.58%) of library and information journals were from outside African continent (mainly from Europe and America), 15 (24.19%) were from Nigeria while only 2 (3.22%) others were from African continent; the two (2) journals were from Ghana and South Africa. The 62 library and information science journals generated 172 citations in the journal. Out of this, journals from Nigeria accounted for the highest share of the citations (104) representing (60.46%), journals outside the shore of Africa accounted for 66 citations (38.37%) while journals from other two African countries have just (2) citations (1.1%).

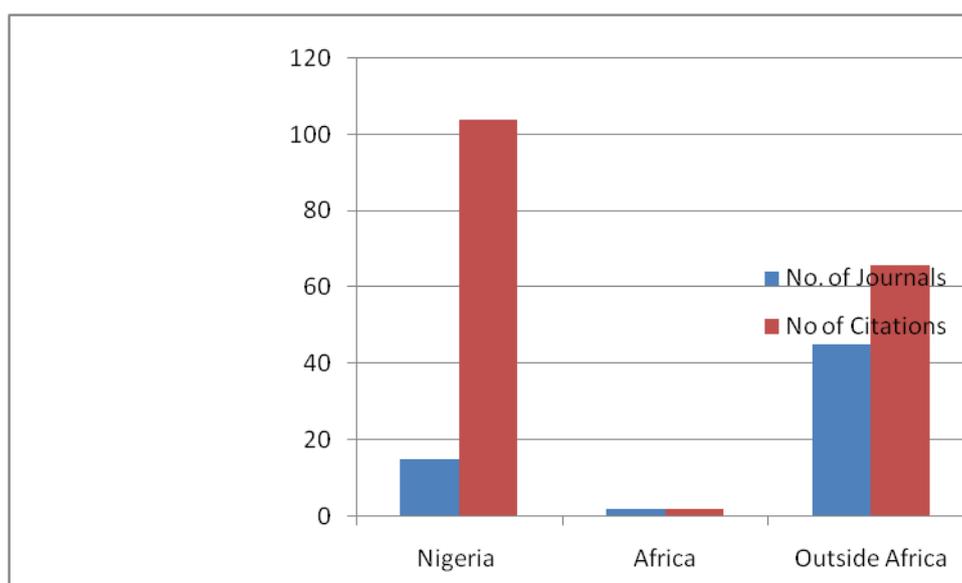


Figure 4: Geographical Location – Journal's Citations.

Table 8 - Subject distribution of citations in the journal.

S/No	Subject	No of Citation	Cumulative Total
1	Library & Information Science	392(39.67%)	392
2	Education	210(21.25%)	602
3	Management/Administration	124(12.55%)	726
4	Computer and Information Technology	51(5.16%)	777
5	Communication	3(.30%)	780
6	Medical Sciences	31(3.13%)	811
7	Politics	25(2.53%)	836
8	Arts	19(1.92%)	855

9	Research	15(1.5%)	870
10	Publishing and Book Trade	14(1.41%)	884
11	Economics	13(1.31%)	897
12	Yoruba	11(1.11%)	908
13	English Literature	9(.91%)	917
14	Sociology	8(.80%)	925
15	General	7(.70%)	932
16	African History	7(.70%)	939
17	Security	5(.50%)	944
18	Civil Engineering	2(.20%)	946
19	History	2(.20%)	948
20	Agriculture	2(.20%)	950
21	Sports	1(.10%)	951
22	Technology	1(.10%)	953
23	Law	9(.90%)	961
24	Psychology	27(2.73%)	988

Note: Numbers in parentheses indicate percentage.

Subject distribution of cited works by authors in this journal is presented in the table above. The literature used by authors scattered among various subjects and disciplines. The authors consulted multidisciplinary literature in their research. The literature covered subjects like Library and Information Science, Management, Sociology, Medical Sciences, Politics, Computer and Information Technology, Security, English/Literature, Economics, Psychology and Law. Library and Information Science accounted for the highest with 392 (39.7%); Education has (21.25%); Management/Administration (12.55%) Computer and ICT (5.16%); Medical Sciences (3.13%); Psychology (2.73%). This study shows that Library and Information Science is multidisciplinary discipline that makes use of different subjects and disciplines.

Table 9 - Age of citations in the journal.

S/No	Time Span	No of Citation	%	Cum. Citation	Cum. %
1	1930 – 1935	1	0.10	1	0.10
2	1940 – 1945	1	0.10	2	0.20
3	1960 – 1965	4	0.40	6	0.60
4	1966 – 1970	11	1.11	17	1.71
5	1971 – 1975	27	2.73	44	4.44
6	1976 – 1980	34	3.44	78	7.88
7	1981 – 1985	45	4.55	123	12.43
8	1986 – 1990	91	9.21	214	21.65
9	1991 – 1995	140	14.17	354	35.85
10	1996 – 2000	200	20.24	554	56.05

11	2001 – 2005	326	32.99	880	89.04
12	2006 – 2010	85	8.60	965	97.64
13	No date	23	2.32	988	99.96
Total		988			

Age is referred to as length of time material has existed, measured in years. This is done to determine the recency or otherwise of materials cited in the journal. The oldest materials cited was a journal titled *Achieves of Psychology* was published in 1932 (i.e. 78 years ago) and cited in the journals in 2008. The next in age was a book titled *Introduction to cataloging and classification of book*, published by American Library Association in 1943 but cited in volume 4, December, 2007. The most current materials were published in 2008 and cited in 2009. 326 (32.99%) of the materials was published between 2001-2005 i.e. less ten (10) years, followed by 1996-2000 with 200(20.24%) citations, in 2006-2010, (8.60%), 1981-85 accounted for about 4.5% of materials.

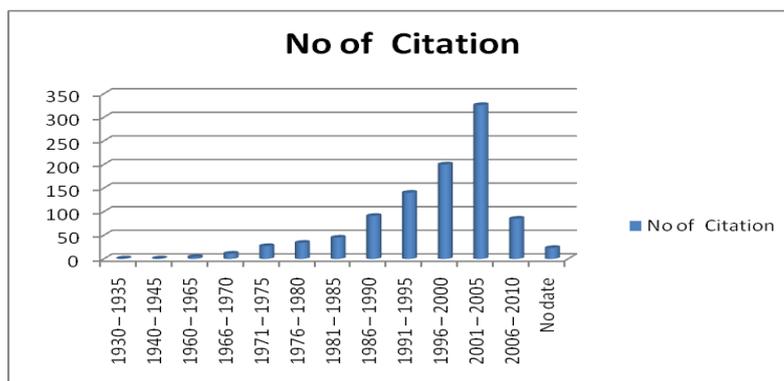


Figure 5: No of Citations.

Recency of citations was also investigated. In doing this, the researchers used the following year range to determine the level of recency as shown in the table below:

Table 10 - Recency of citations in the journal.

Year	Recovery	No of Citation	%
2006 – 2010	Very recent	85	8.6
2001 – 2005	Recent	326	33
1996 – 2000	Not very recent	200	20.2
1995 & below	Not recent	377	38.2

The findings reveal that the largest part of the total citations i.e. 377 (38.2%) were not recent, they were published in 1995 and beyond i.e. 15 years ago, next to that record is 326 (33%) of materials that were recent as they were published less than 10 years ago, 200 (20.2%) materials were categorized as not very recent, while 85 (8.6%) of the citations were very recent as they were published within the last five years.

Table 11 - Citation authorship pattern.

Authorship	Number of Articles						Total
	Vol. 1	Vol. 2	Vol. 3	Vol. 4	Vol. 5	Vol. 6	
Single Author	103	84	103	170	161	168	789
Two Authors	13	14	29	14	37	30	137
Three Authors	2	6	3	1	7	4	21
More than Three Authors	2	3	3	2	8	8	26
Author not indicated	2	-	4	2	2	3	13
Total	122	107	142	189	215	213	988

The authorship of cited various was analyzed to determine the authorship patterns. The table above shows the authorship pattern distribution of all the 998 citations in the 72 articles. The finding shows that most of cited works were written by single authors as they accounted for 789 (79.85%) of the total materials cited, citations by two authors were 137 (13.86%), 21 materials written by three authors representing (2.16%), materials by more than three authors were 26 (2.63%) while materials where authors were not indicated made up of 13(1.3%) of the citations in the journal.

5 DISCUSSIONS

The study reveals that journal is the most cited sources cited by authors of articles in this journal as it accounted for 37.14% of the total citations. This finding concurs with the other previous studies which confirm that Journals were the most cited forms of materials used by researchers and academics Patterson (1945); Rieb (1993); William and Fletecher (2005); Olatokun and Makinde (2009) however, it is at

variance with study of Ogunleye (1996), Nkiko and Adetoro (2007) that reported books were mostly cited by authors. The reason why journals are the most used material stem from the fact that journals carry most current research works which every scholar use to boost their works.

This study also shows that Library and Information Science is a multidisciplinary discipline that makes use of different subjects and disciplines. This is obvious as about 392 (39.67%) of the citations was to Library and Information Science, 21.25% was to Education, Computer & Information Technology accounted for 5.16%. This finding corroborates Buttler (1999) and it contradicts previous studies by Bracken and Tucker (1989); Peritz (1981); Gaten (1991) that found out much lower levels of interdisciplinary research in Library and Information Science. The finding of this study shows that place of publication could have influence on citation as 60.46% of journal citations were from Nigeria. This result aligns to the submission of Lancaster et al. (1990); Das and Sen (2002).

This study also shows that there is low number of Library and Information Science journals in Africa and as such authors depend on publications from developed world for information. The study also revealed that journals published from other African countries were rarely used and cited by authors of articles in this journal as only (2) journals were cited from African. Many reasons could be adduced for this low- use of journals from African continent by authors of articles in this journal; it may be due to inadequate marketing and circulation of these journals to other African countries and the high rate of mortality of these journals. The situation could also be attributed to lack of viable library networks in Africa that could encourage the sharing of journals that emanate from Africa among libraries in the continent.

The finding also shows that the journal usually combines two (2) issues in one volume right from 2000-2008. It was only in June 2009 that it published one issue in a volume and ever since then, it has not published the second issue over a year behind schedule. This is against the editorial policy of the journal and this is not good enough for the journal. This is a sign of weakness on the journal and it confirms the problem of irregularity of most journals published in Africa as revealed by Ifidom

(1994); Azubuiké, Adeyemoye and Okojie (1994) in their studies on mortality rate of journals in Nigeria.

The outcome also shows that majority of the works cited was not recent; this could be due to limited accessibility of authors to recent works done on the field. This could also be linked to dearth of publications in Library and Information Science fields in this part of the world. The finding further reveals that most of the cited materials were materials that were authored by single authors; hence it confirms the same preference of single authorship found by Momoh (1996) and Momoh (1997).

The total number of Internet/web resources cited were just 87 or (8.8%) of the total citations. This shows that the impact of Internet/web resources citations on articles published in this journal was meager. This result is in consonance with the findings of Harter (1998); Megnigbeto (2006); Chikate and Patil (2008); Olatokun and Makinde (2009). Many reasons could be adduced for this, it might be that authors of articles in this journal were yet to appreciate the importance of the indication of web resources reference or lacked basic information literacy skills needed to use the web resources. It is also possible that some web-resources were used and not properly or wrongly acknowledged, thereby shooting up citations from other sources. It is however, noteworthy to mention that the use of web-resources by authors in this journal was on the rise. It started rising from initial (1) to (14) in volume 2 published in 2005, this trend continued in 2006 with (15) web-resources cited and by 2009 it has risen to (37) materials. This is a good sign that with time, more web-recourses of would be used by these Nigerian authors.

6 CONCLUSION AND RECOMMENDATIONS

This study carried out citation analysis of Journal of Library and Information Science (JOLIS) right from 2004 when the journal started publication. 72 articles were published by the journal in period under review and they generated 988 citations.

Journals articles were the most cited sources accounting for 37.14% of the total citations; this was followed by books, grey literature, web resources,

Dissertation, while Interview was cited ones in the journal. Individual article with highest citation contained 44 citations and was published in volume 5 of December 2008, while two articles that have the lowest citations had 5 citations each and were published in volumes 1 and 3. The findings also revealed that most of the cited materials were not all that recent as majority (38.2%) were published almost fifteen years ago, however, (20.2%) were considered very recent since they were published within the last five years. Out of the 367 journal citations, 172 (46.86%) were from library and information science journals. The study also affirmed that most of the materials cited were written alone by single author without collaborating and most (60.46%) of the library and information sciences cited were from Nigeria.

In view of the findings, there is need for the journal to come out with an editorial policy that would encourage usage and citing of electronic resources by would be authors of articles in the journal. This is necessary because the ratio of electronic citation to print citation is too low. Secondly, despite the fact that the editorial instruction stipulates that only American Psychological Association (APA) style of referencing is acceptable, some references used by some authors did not follow this in the journal. The editorial team has to put an end to this since uniformity, prestige, consistency and integrity which is known with other reputable professional academic journals. In similar vein, webliographic information of the web resources consulted were not documented properly by authors, bibliographic information of some cited materials was also incomplete; information omitted include types of materials consulted, place of publications and name of the author(s).

It is also recommended that the journal should also abide by the editorial statement by publishing bi-annually in June and December. The publisher should note that the frequency of journals has a long way in rating, reputation, and integrity of journal by researchers and academic community. The journal can also make an editorial policy that will encourage usage and citing of recent materials by authors of articles. This could be accomplished by making policy that before papers are accepted for publication, certain percentage of citations in such papers should not be less more than ten (10) years. This will make respective authors to be on their toes to search, use and cite most recent materials.

In conclusion, the journal has been able to meet some of its expectations, despite the few observations made above, the journal has proved itself to be one of the good library and information science journals in Nigeria and more importantly, the journal has been surviving despite the varying problems pervading journal publication in Nigeria. The journal should however look into some of the recommendations so that the journal would be more reputable and stand shoulder-to-shoulder with other international journals. Further studies could be on the content analysis of the journal and this type of study could also be carried out on the journal in next five years to see whether there has been changes or not.

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