

Publication Pattern of Library and Information Science  
Digest Journal: 2007 – 2016: A Bibliometric Analysis

**Information Impact:**

Journal of Information and  
Knowledge Management  
2018, Vol. 9 (1) Pg 68 - 79  
ISSN: 2141 – 4297 (print)  
ISSN: 2360 – 994X (e-version)

**Ebele N. Anyaoku**

*Nnamdi Azikiwe University, Nigeria.*

**Ifeyinwa N. Okonkwo**

*Nnamdi Azikiwe University, Nigeria.*

### Abstract

This study is a bibliometric analysis of *Library and Information Science Digest*. This is the official journal of Nigerian Library Association, Anambra State Chapter. The journal was launch in 2007 as an annual publication of the Association. The bibliometric analysis covered ten year period from 2007 to 2016. A total of 9 volumes of the journal containing 82 articles were analyzed. Findings showed that half (50%) of the articles published were research articles reporting on original research while the other half (50%) were reviews and feature articles. Majority (76.5%) of the authors was affiliated to universities and highest percentage (35.7%) was from institutions situated in Anambra State which is the place of publication of the journal. Other contributors were from seventeen states of Nigeria. Results of the bibliometric analysis also showed that journals, books and web pages were the highest cited sources in the published articles. Information and Communication Technology / Internet use and school library services were the two major themes of the articles for the period reviewed. Based on the findings, it was recommended that the frequency of publication of the journal be increased and there should be innovative marketing of the journal to create awareness and attract more diverse authors.

**Keywords:** Bibliometric Analysis, Journal Bibliometrics, Library and Information Science Digest, Nigerian Library Association, Citations

### Introduction

Academic or scholarly journals are knowledge sharing tools that are published for disseminating research findings, opinion, news and reports in a given professional field. Journals contribute to intellectual development and also serve as awareness tools that keep scholars and researchers up to date in developments in their fields.

Library and Information Science Digest is the official journal of the Nigerian Library Association, Anambra State Chapter. It was originally published as ‘*Anambra State Library and Information Science Digest*.’ The journal was launch in 2007 as an annual publication of the Association. The first issue was published in the same year. The name of the journal was

changed to *Library and Information Science Digest* with the publication of the 5<sup>th</sup> volume in 2011. The journal was envisioned to be an intellectual contribution to the growth of knowledge in the era of globalization and information exchange (Editorial 2007). The aim was to publish research findings and general knowledge in library and information science. Subject coverage for the journal is therefore the broad field of librarianship.

There is a recent increase in evaluation of journals to determine publication patterns, and contributions to knowledge. Bibliometric analysis is one research method used in library and information science to evaluate publishing pattern of journals. Roasting, Barts and Valerie (2007) defined bibliometrics as a set of techniques devoted to the quantitative analysis of scientific and technical activities. These techniques implement mathematical and statistical methods to measure the data that represent researcher contributions to science and technical development. The data used for bibliometric studies mainly stem from information produced by the activity of researchers' communication. These quantitative studies of researchers' communication activities try to have a better understanding of phenomena of construction, dissemination and use of scientific and technical knowledge. Bibliometric analysis is an important tool to measures a journal's growth pattern and performance in relation to its aims and frequency statements. It describes a literature by bringing out the various facets of its published output such as publication consistency, subject coverage, authorship pattern, and reference distribution. This can help to ascertain the research trend and knowledge exchange that occur in the professional field of the journal.

Bibliometric analysis is important to library and information science services because it can be used to assess journal's performance in relation to other similar journals in the field. It is an evaluative method that can help identify core periodicals for building a library's collection. A journal with good all round metrics such as publication consistency, efficient subject coverage and authorship will be considered as important and highly accessed by its intended audience. This information can help in collection development especially in selecting and deselecting journal titles. Sharma and Rana (2016) noted that bibliometrics as a technique is useful in estimating the comprehensiveness of periodicals, studying the productivity, characteristics of subject literature including structure of knowledge and helpful in formation of need based collection development policy, weeding and stacking policy and many others. Bibliometrics has

also been widely adopted by other professional fields to measure growth pattern of subject areas, impact of publications and individual's contributions to knowledge. According to Koskinen, Isohanni, Paajala, Jaaskelainen and Nieminen (2008) the analysis of publication data can help quantify the performance and impact of a given set of publications produced by an entity as it relates to the exchange and dissemination of results<sup>4</sup>.

Nicholas and Ritchie (1978) described two types of bibliometric study: descriptive studies and behavioral studies. Descriptive studies describe characteristics or features of a literature. Such studies bring out individuals and institutions responsible for the composition of information, form of presentation, subject matter, and quantity of information. Behavioral studies examine the bibliographical relationship between the components of different documents such as author, subject, citation etc. The present study is a descriptive bibliometric study of *Library and Information Science Digest (LISD)*. The Objective was to describe the publication pattern, authorship, types of articles and other trends of publication in the journal.

### **Research Questions**

The following research questions guided the study:

1. What is the yearly distribution of published articles in Library and Information Science Digest (LISD)?
2. What types of articles were published in the journal?
3. What is the authorship pattern in LISD?
4. What are the major subjects of the articles published in the journal?
5. What is the reference citation pattern for the published articles in LISD?

### **Methodology**

The study is a bibliometric analysis of Library and Information Science Digest: the official journal of Nigerian Library Association, Anambra State Chapter. The Study analyzed all issues published from volume 1 of 2007 to volume 9 of 2016. A total of 9 issues of the journal containing 82 articles were analyzed. A database of the required elements in the volumes was developed using the Microsoft Office Excel Software. Data contained in the developed database were analyzed using percentages and mean. Results are presented in tables.

## Findings and Discussion

### Distribution of Published Articles

The yearly distribution of published articles in LISD is shown in Table 1

**Table 1: Volume Wise Distribution of Articles.**

Year	Volume	No of articles	%
2007	1	12	14.7
2008	1(2)	6	7.3
2009	3	8	9.7
2010	4	6	7.3
2011	5	10	12.2
2012	6	8	9.7
2014	7	13	15.9
2015	8	10	12.2
2016	9	9	11
<b>Grand Total</b>		<b>82</b>	<b>100</b>

Analysis of distribution of number of articles per volume as shown in Table 1 reveals that the highest number comprising 13 (15.9) articles were published in year 2014. The lowest article publications were in 2008 and 2010 with 6 articles for each year. Total article publication by the journal from 2007 to 2016 is eighty –two.

**Table 2: Types of Article Published in LISD**

Year	Feature	Review	Research Report	Total
2007	4	4	4	<b>12</b>
2008	3	-	3	<b>6</b>
2009		3	5	<b>8</b>
2010		2	4	<b>6</b>
2011		6	4	<b>10</b>
2012		4	4	<b>8</b>
2014		8	5	<b>13</b>
2015		4	6	<b>10</b>
2016		3	6	<b>9</b>
<b>Grand Total (%)</b>	<b>7 (8.5%)</b>	<b>34 (41.5%)</b>	<b>41 (50%)</b>	<b>82</b>

Table 2 shows classification of published articles in terms of article type. Forty-one (41) articles representing (50%) of the articles published in LISD were research or empirical reports.

34 (41.5%) were review articles while 7(8.5%) were feature articles presented by invited guests during the Association’s annual conferences.

**Description of Authorship Pattern in LISD 2007 - 2016**

Tables’ 3 - 6 shows description of authorship in LISD. This include yearly authorship distribution, multiple article contribution by individual authors, author collaborations, and institutional affiliations

**Table 3: Yearly Author Count**

<b>Year</b>	<b>Volume</b>	<b>No of articles</b>	<b>Authors</b>	<b>Percentage</b>
2007	1	12	16	10.1
2008	1(2)	6	6	3.8
2009	3	8	13	8.2
2010	4	6	11	6.9
2011	5	10	22	13.8
2012	6	8	17	10.7
2014	7	13	27	17
2015	8	10	23	14.5
2016	9	9	24	15.1
<b>Total</b>		<b>82</b>	<b>159</b>	

Table 3 shows authorship pattern for articles published in LISD from 2007 to 2016. The year 2014 had the highest author contribution with 27 (17%) authors, writing 13 articles, this is followed by 2016 with 24 (15.1%) authors and 2015 with 23(14.5%). Vol.1 (2) had the least number of authors with 6 authors contributing 6 articles. Total author count is 159 authors for the 82 articles published in the journal. However, in determining the actual number of authors who contributed to the journal, authors’ multiplicity was analyzed. Table 4 shows author’s multiple contributions. 1 author contributed 5 articles, 4 authors wrote 4 articles each, 8 authors contributed 3 articles each and 12 authors contributed 2 articles each. When authors multiple contributions are considered, the actual number of authors who contributed articles for the journal was 115 authors.

**Table 4: Author’s Multiple Article Contributions to Determine Actual Author Number**

No of articles contributed by individual authors	No of authors	%
1	90	78.2
2	12	10.4
3	8	7
4	4	3.5
5	1	0.9
<b>Total</b>	<b>115</b>	<b>100</b>

### Authors Collaborative Practices

Analysis of patterns of collaborations in LISD was calculated. The results are shown in Tables 5-

**Table 5: Collaboration of Authors in Published Articles**

Year	Vol.	Collaboration n=82 articles		Degree of Collaboration n=82 articles					Institutional Collaboration n=46 articles	
		Single Author	Joint author	One	Two	Three	Four	Five	Collaboration of Authors in the Same Institution	Collaboration of Authors in Different Institution
2007	1	10	2	10		2			2	
2008	1(2)	6		6						
2009	3	4	4	4	3	1			3	1
2010	4	3	3	3	1	2			2	1
2011	5	4	6	4	1	4	1		3	3
2012	6	2	6	2	5			1	3	3
2014	7	4	9	4	5	3	1		5	4
2015	8	2	8	2	5	1	2		5	3
2016	9	1	8	1	2	5	1		3	5
Total		36(43.9%)	46(56.1%)	36	22	18	5	1	<b>26(56.5%)</b>	<b>20 (43.5%)</b>

A study of authors collaboration shows that number of authors contributing to each article ranged from one to five (Table 5). Thirty Six (43%) articles were written by single authors while Forty-six (56.1%) articles were the output of collaborative writing. Analysis of pattern of collaboration also shown in Table 5 indicates that the most frequent collaborations were 2 authors contributing 22 articles, and 3 authors contributing 18 articles. Only one article was written by 5 authors. Further analysis in terms of institutional affiliations of the collaborating authors also shown in Table 5 indicates that a total of 26 (56.5%) articles were written by collaborators from the same institution. 20 (43.5%) articles were authored by collaborators from different institutions.

**Table 6: Institutional Distribution of Authors**

	No of Institution	%	No of authors	%
University	25	58.1	88	76.5
Public Library	2	4.7	8	7
College of Education	4	9.3	7	6.1
Polytechnics	5	11.6	5	4.3
Special Library	4	9.3	4	3.5
LRCN	1	2.3	1	0.9
Others	2	4.7	2	1.7
	43	100	115	100

To determine institutional distribution of the authors in LISD, contributors were grouped according to institution type. As shown in Table 6 majority of authors who contributed to the journals work in Universities. This is followed by Public libraries (7%) and Colleges of Education (6.1%). To find out the geographical distribution of authors in LISD, authors were grouped according to their institution’s domicile states. The result is shown in Table 7.

**Table 7: State Wise Distribution of Authors**

	State	No of Authors	%
1.	Anambra	41	35.7
2.	Ogun	19	16.5
3.	Enugu	10	8.7
4.	Imo	8	6.9
5.	Abia	8	6.9
6.	Oyo	6	5.2
7.	Ekiti	4	3.5
8.	Lagos	3	2.6
9.	Edo	3	2.6
10.	Delta	3	2.6
11.	Akwa Ibom	2	1.7
12.	Ondo	2	1.7
13.	Abuja	1	0.9
14.	Ebonyi	1	0.9
15.	Kwara	1	0.9
16.	Nasarawa	1	0.9
17.	Osun S	1	0.9
18.	Rivers	1	0.9
		115	

As shown in Table 7, authors of articles published in LISD from 2007 – 2016 are affiliated to institutions situated in 18 states of Nigeria. Anambra State have the highest number 41(35.7%) of authors. This is followed by Ogun State 19 (16.5%) and Enugu state 10 (8.7).

### Reference Distribution Pattern

Tables 8 - 9 show reference distribution patterns for articles published in LISD. This includes total reference citations and types of sources cited.

**Table 8: Yearly Total Reference Citation**

Year	Vol.	No of Articles	Total Reference	Mean
2007	1	12	101	8.4
2008	1(2)	6	27	4.5
2009	3	8	80	10
2010	4	6	63	10.5
2011	5	10	180	18
2012	6	8	157	19.6
2014	7	13	208	15.6
2015	8	10	161	16.1
2016	9	9	218	24.2
<b>Grand Total</b>		<b>82</b>	<b>1201</b>	<b>100</b>

Table 8 shows the yearly reference distribution of references cited from 2007 to 2016. A total of 1201 references were cited in the 82 articles. Volume 1(2) had the lowest references citation with a total of 27 references cited in the 6 article published in that year. Vol. 9 had the highest citation with 218 references for 9 articles. Mean calculation to determine average reference per article for each volume shows that volume 9 had the highest average reference per article with 24.2 citations per article. Volume 1(2) had the lowest average reference per article with 4.5 citations per article.

**Table 9: Annual Distribution of Sources Cited:**

Sources	2007	2008	2009	2010	2011	2012	2014	2015	2016	Total	%
Journals	40	14	24	20	65	67	69	74	124	497	<b>41.3</b>
Books	16	4	36	11	60	41	50	43	15	276	<b>23</b>
Webpage/ Reports	7	4	3	18	20	34	56	23	58	223	<b>18.6</b>
Conference proceedings	23	-	11	11	25	11	14	13	11	119	<b>9.8</b>
Newspapers	4	2	4	2	4	1	10	3	1	31	<b>2.8</b>



Dissertation	5	1	2	-	2	-	1	3	3	17	<b>1.3</b>
Others	6	2	6	1	4	3	8	2	6	38	<b>3.2</b>
Total	<b>101</b>	<b>27</b>	<b>80</b>	<b>63</b>	<b>180</b>	<b>157</b>	<b>208</b>	<b>161</b>	<b>218</b>	<b>1201</b>	100%

Analysis of source of citations is shown in Table 9. Journals were the highest cited source with 497 citations representing 41.3%, followed by books 276 (23%) and web resources 223 (18.6%). Conference proceedings were cited 119 (9.8%) times.

**Table 10: Major Subjects of Published Articles**

	<b>Subject</b>	<b>No of Articles</b>
1.	ICT/ Internet use and services	11
2.	School library services	10
3.	Public Library services	7
4.	Librarianship and development	7
5.	Professional competencies	5
6.	Health information	3
7.	law library services	3
8.	Information literacy	3

Analysis of Key themes of the articles published in LISD (Table 10) shows that 11 articles have as their major subject Information and Communication Technology (ICT) related issues such as facility availability and use, Internet services including cloud computing and electronic resource management. This is very closely followed by 10 articles on School library services.

## **Discussion**

The research is a bibliometric analysis of articles published by *Library and Information Science Digest*: the official Journal of Nigerian Library Association from 2007 - 2016. It was explicitly stated in the first issue that the journal will be an annual publication. In line with this, an issue of the journal was published yearly except in 2013 which had no publication. From the analysis, a total of 82 articles were published in 9 volumes. Classification of published articles in the journal in terms of article type shows that only half of the articles published were research articles reporting on original research while the other half were review or feature articles. This shows a high rate of publication of review articles.

The analysis of authorship pattern for the journal shows that actual number of authors who contributed articles to the journal is 115 authors. However, due to authors' multiplicity of

contributions in the volumes, total author count is 159. This is an indication that a good number of the authors considered the journal adequate platform for disseminate their research findings or sharing their knowledge; hence the repeat of submissions for publication.

Findings also show high collaborating rate among the authors. More than half 46 (56.1%) of the articles published in the journal were contributed by joint authors. The most frequent collaborations were 2 authors contributing 22 articles. This is followed by 3 authors contributing 18 articles. One paper was written by 5 authors. Roy and Basak (2013) also found this high level of joint authorship in the bibliometric study of *Library Philosophy and Practice* journal. There is appreciable level of inter institutional collaboration with 20 (43.5%) articles authored by collaborators from different institution. This is an indication that the library professionals are engaging in inter- library cooperation that is essential for knowledge sharing.

A high percentage (76.5%) of the authors was affiliated to the universities. Twenty-five different Universities in Nigeria were identified in the institutional affiliation statement of the authors. This is not unexpected because of the pressure to publish for academic advancement as obtained in the University system in Nigeria. Other institutions such as the public libraries, Colleges of Education, and Polytechnics were poorly represented. There was no contribution from authors in institutions outside Nigeria. Authors from eighteen states in Nigeria contributed articles to the journal. Majority (35.7%) of the authors were from institutions situated in Anambra State which is the place of publication of the journal while authors from seventeen states contributed 64. 3% of the articles published in the journal. This is consistent with findings from other bibliometric studies carried out by Hussain (2013) and Edewor (2013) which also showed that majority of the contributions were from the province of the journals.

For citation format, journal was the highest cited source. This is followed by books and web resources. There is a high increase in yearly average citation per article from 8.4 in 2007 to 24.2 in 2016. This might be due to the greater availability and accessibility of literature through the Internet granting researchers' easy platform to explore many literatures to support their research and writing processes. Subject of articles published in the journal encompassed many areas in library and information science. This is in line with the stated subject coverage of the journal. However, Information and Communication Technology / Internet use and services and school library services were the two major themes of the articles for the period reviewed. The

findings on Information and Communication Technology applications being the major theme of published articles in the journal reflect the high global attention on these tools for information storage and dissemination.

### **Conclusion and Recommendations**

The bibliometric analysis of *Library and Information Science Digest* has given an insight into the pattern of publication of the journal from 2007 to 2016. The journal maintained its frequency as an annual publication as stated in the first edition. Some indices of the journal were not too positive. Only half the articles were original research report. There is need for Nigerian Library Association, Anambra State Chapter to improve on the indices of the journal as recommended. This will help to position it on the same pedestal with high impact ranking journals in the field.

Bibliometric analysis of *Library and Information Science Digest* has outlined the many indices that define the mode of communication of the Journal over a ten year period. The following recommendations are made to help improve the journal publication

- The frequency of publication of the journal should be increased. Since the journal is not an annual report of the Association's activities, it is imperative that after ten years of publication, there should be an improvement on the frequency of publication to at least two issues in a year. This will enhance its status as a journal periodical.
- There should be innovative marketing of the journal especially through library professional social media forums. This will create awareness and attract more diverse authors. Also creating an online presence through hosting of its website will help increase its visibility and accessibility. This may help attract contributions from a wider audience both in Nigeria and outside the country as well as promote visibility for published articles.

## References

- Edewor, N. (2013). An Analysis of a Nigerian Library and Information Science Journal: A Bibliometric Analysis. *Library Philosophy and Practice (e-journal)* 1004  
<http://digitalcommons.unl.edu/libphilprac/1004>.
- Editorial (2007). Library and Information Science Digest.
- Roasting, H. Barts N. & Valerie (2007) Bibliometrics: Representation Instrument of the Multidisciplinary Positioning of a Scientific Area. Implementation for an Advisory Scientific Committee, Interdisciplinary and Trans disciplinaryity in the Organization of Scientific Knowledge Proceedings: 8th Conference of the ISKO Spanish Chapter, University of Leon, Spain, 18 to 20 April 2007 <https://hal-univ-tln.archives-ouvertes.fr/hal-01552255/document>
- Hussain, A. (2013) Annals of Library and Information Studies: A Bibliometric Analysis. *Journal of Library Metamorphosis* 1- 17
- Koskinen J, Isohanni M, Paajala H, Jaaskelainen E, Nieminen P. (2008). How to use Bibliometric Methods in Evaluation of Scientific Research: an Example from Finnish Schizophrenia Research. *Nordic Journal of Psychiatry*. 62:136–43
- Nicholas, D. & Maureen R. (1978), Literature and Bibliometrics. London: Clive Bingley,  
<http://en.wikipedia.org/wiki/Bibliometrics>
- Roy, S. B. & Basak, M. (2013) Journal of Documentation: a Bibliometric Study. *Library Philosophy and Practice (e-journal)* 945. <http://digitalcommons.unl.edu/libphilprac/945>
- Thanuskodi S. (2010). Bibliometric Analysis of the Journal Library Philosophy and Practice from 2005-2009. *Library Philosophy and Practice*  
<http://.webpages.uidaho.edu/~mbolin/thanuskodi-lpp.htm>
- Sharma, A & Rana, M. S. (2016) Application of Lotka's Law in the Field of Women's Studies Literature in India. *The International Journal Of Humanities & Social Studies* 4 (5) 212-217 <http://theijhss.com/wp-content/uploads/2016/06/38.-HS1605-089.pdf>