

A Bibliometric Analysis of Research Productivity of Librarians Published in Library and Information Science Journals Available in Academic Libraries in Imo State, Nigeria, 2004- 2013

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ABSTRACT

This research paper studied the bibliometric analysis of research productivity of librarians published in library and information science journals available in the academic libraries in Imo State, 2004-2013. The methodology applied in the present study is bibliometric analysis. A total of 119 journals and 1,022 articles published within the time frame available in the libraries studied were analyzed to achieve the objectives of the study. Simple tables and percentages were used to analyze the data collected for the study. Findings of the study showed that Imo State University has the highest number of journals which is attributed to the presence of a library school in the institution though the numbers available are generally low; library and Information Communication Technology (ICT) is the most researched area; most of the articles were authored by single authors, librarians working in universities published more than their counterparts mainly for the fact that their promotion depends on their number of publications quite unlike their counterparts in other institutions of higher learning; librarians working in tertiary institutions in South East published more and journal sources are cited more than other information sources. Based on the findings, the researchers made some recommendations which included; acquisition of adequate number of library and information science journals by tertiary institutions, librarians should carry out researches in those areas of librarianship, multiple authorship should be encouraged, increased research productivity by librarians in polytechnics and colleges of education and librarians from other zones apart from South East etc.

Keywords: *Bibliometrics, Subject Coverage, Citation Pattern, Institutional Affiliation, Geographical Distribution, Authorship Pattern, Library and Information Science, Journals)*

INTRODUCTION

Bibliometrics is a research method used in library and information science. It is a quantitative study of various aspects of literature on a topic and is used to identify the pattern of publication authorship and secondary journal coverage to gain insight into the dynamics of growth of knowledge in the areas under consideration. This can lead to better organization of information resources which is essential for effective and efficient use.

Periodicals are the primary source of information and an important media for communication. They are the indicators of literature growth in any field of knowledge.

With the high cost of periodicals and inadequate library budgets, the selection of any particular journal should be carefully done. Bibliometric

analysis has many applications in the library and information science field in identifying the research trends in the subject, core journals etc and thereby framing new subscription policy for tomorrow. Literature produced by Library and Information Science researchers is important for future development of the profession.

It should be analyzed to observe prevailing trends in the profession but analysis cannot be done unless the literature is properly documented. Bibliometric analysis of existing literature acknowledges the efforts made by people and organizations involved in the research process. It also provides useful guidance for future research as it points out the areas which need future consideration. 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 they are veritable sources of scholarly research findings that are of interest to researchers, corporate bodies, librarians, donor agencies, publishers, editors, producers, information brokers, universities and research institutes etc. The term “Bibliometrics” was coined by Pritchard in 1969. In 1948, the great library scientist S. R Ranganathan, coined the term “librametry”, which historically appeared first and was intended to streamline the services of librarianship. Bibliometrics is analogous to Ranganathan’s librametrics, the Russian concept scientometrics, informetrics and sub disciplines like econometrics, biometrics etc, where mathematics and statistics are applied to study and solve problems in respective fields.

In contrast to the other two terms (scientometrics and informetrics), Brookes (1990) says: “I have no doubt that Bibliometrics must now be conceded to library studies only. Its works is not yet ended as libraries continue to adapt to the changing world around them”.

It is against this background that this study focuses on bibliometric analysis of research productivity of librarians published in library and information science journals available in the academic libraries in Imo State, 2004-2013.

STATEMENT OF THE PROBLEM

Following the general awareness that bibliometric data can be used to describe and evaluate journals to determine their availability and the extent of contribution of such journals to scholarship, the need for continued re-appraisal of these journals become imperative.

However, the literature reviewed shows that many bibliometric studies on single journal or up to five journal literature in the field of Library and Information Science have been conducted but no such study on the total journal literature in Library and Information Science available in a particular library has been conducted. Therefore, there is need to analyze the journal literature available in the academic libraries under study in order to fill this gap in knowledge.

OBJECTIVES OF THE STUDY

The following objectives guided this research:

- To ascertain the quantity of journal literature in Library and Information Science (LIS) available in the libraries under study.

- To examine the subject coverage of the articles.
- To identify the institutional affiliation of the authors.
- To identify the geographical distribution of the journals.
- To examine the authorship pattern.
- To find out the citation pattern.

LITERATURE REVIEW

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). He states that “bibliometrics is a set of methods to quantitatively analyze scientific and technological literature”. Citation analysis is one of the methods involved in bibliometrics. It involves the collection of bibliometric data to assess research activities of mankind. There is no gain saying the fact that citation analysis is increasingly being used to assess the impact of research and also track and evaluate research findings in journals.

Mahapatra (2001) defines bibliometrics as “the quantitative analysis of the characteristics, behavior and productivity of all aspects of written communication, library staff and information users”. The word bibliometrics substituted the earlier term “statistical bibliography” which was used for the same concept. Bibliometric is now popular among library professionals and researchers. Bibliometric study is helpful in evaluating library services, collection development, policy refinement, decision making, and resource allocation and even weeding. It has been considered useful for curriculum analysis (Juznic and Urbanija, 2003) and to establish a theory (Nwakanma, 2003).

Two types of studies are included in bibliometrics: descriptive and evaluative studies. “Descriptive studies” are the productivity count achieved by counting the papers, books and other formats of communication while “Evaluative studies” are the literature usage count made by counting the references/citations in research papers, books and other formats of communication (Naser and Mahmood, 2009).

Library and Information Science (LIS) research in Nigeria has been on a steady increase and 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 (Okoye, 2003). It therefore behoves academic libraries to ensure the acquisition of the needed journals which will lead to availability of required current information and will help students and researchers to conduct effective research and sound comprehensive work.

Publications in referred journals are more acceptable for academic staff promotion and tenure than mere assessment of punctuality in lecture rooms and level of commitment to non-academic curricular activities. Hence, the common slogans in tertiary institutions “publish or perish” (Awolola, 2003). Oyesiku (1993) identifies a worthy academic as a producer of knowledge through publications. This simply means that researchers are recognised based on their contributions to knowledge in the global academic community.

In an unending search for breakthroughs in areas of their specializations, researchers constantly strive to keep abreast of scholarly publications with a view to further extending the frontiers of knowledge. Writing on the importance of research communication, Okeh (2003) observes that without scholarly publications being generated, there would neither be materials to study by those involved nor knowledge about what was done, the effect of what was done, what should be done and how it should be done. He concluded that scholarly publications form the cornerstone of academic life in all disciplines and professions. The relevance of journals to the academic community cannot be over emphasized as they serve as a medium for exchange of ideas, experiences and dissemination of new knowledge. Aina and Mabawonku (1996) state that journals serve as an information source for researchers, conference workshops and review of latest publications in their disciplines.

The wider implication of this is that journals expose researchers to new development in their disciplines and at the same time allow for planning and implementations of programmes that will improve the life of the people and enable them make positive contributions to national development.

The use of bibliometric methods has become the norm in Library and Information Science

research for analysis and evaluation process. The bibliographic analysis of subject literature was first pioneered in Nigeria by Aiyepoku (1973) and that was the bibliometric documentation of geographical literature in Nigeria 1901-1970. Since then various studies have been conducted in Library and Information Science to evaluate journals using various measurement indicators such as number of articles, characteristics of authors, impact factor, citation pattern etc.

Koehler et al (2000) present an analysis of select print and electronic journals in Information Science published in the 1990. He discovered that majority of articles published in the select journals have had but one author, although the trend is toward a growing multi-authorship. This is because multiple authorship is a sign of a mature discipline publishing complex articles addressing complex issues. Thanuskodi's (2011) study reveals that maximum number of articles was contributed by single authors.

On geographical distribution, Edewor (2013) reports that majority of the authors that published in Information Impact: Journal of Information and Knowledge Management are from the South. This he attributed to the fact that the journal is based in the south and attracts more patronage from there.

The importance of journal in research can be seen from the result of the study carried out by Echezona et al (2011) where journal citation got the highest average citation of 33% of all information resources used by post graduate students in Library and Information Science. The study of Edewor (2013) confirms this. This he attributed to journals being a veritable platform for dissemination of current research findings.

Thanuskodi (2010) and Edewor (2013) both discovered in their study that majority of the articles were contributed by authors working in the universities. On subject coverage of articles published in journals, the studies of Thanuskodi (2010), Hussain et al (2011) show library and internet as the most researched subject while that of Edewor (2013) indicates information technology as ranking highest.

METHODOLOGY

The methodology applied in the present study is bibliometric analysis, which is used to study in detail the bibliographic features of the articles published in the journal literature in Library and

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Information Science available in the libraries under study published from 2004-2013. A total of 119 journals and 1,022 articles published within the time frame available in the libraries under study were analyzed to achieve the objectives of the study.

Each issue of the journals was carefully consulted to record the exact bibliographic details. A template designed by the researcher which included certain columns for the necessary bibliographic details was used. Data

collected were analyzed using tables and percentages.

DATA ANALYSES, INTERPRETATION AND DISCUSSION.

Key: **IMSU** – Imo State University, Owerri. **IMOPOLY** – Imo State Polytechnic, Umuagwo. **FUTO** – Federal University of Technology, Owerri. **FPN** – Federal Polytechnic Nekede. **AIFCE** – Alvan Ikoku Federal College of Education, Owerri.

Table1. Number of Journals Available in the Libraries by Years

Years	IMSU	IMOPOLY	FUTO	FPN	AIFCE	Total
2004	4	1	5	2	1	13
2005	6	1	3	3	2	15
2006	4	6	1	1	-	12
2007	5	3	2	1	3	14
2008	5	5	3	3	2	18
2009	3	-	3	4	1	11
2010	4	3	-	2	-	9
2011	2	1	-	5	1	9
2012	3	1	-	4	2	10
2013	4	1	-	2	1	8
Total	40	22	17	27	13	119
Percentage	34%	18%	14%	23%	11%	100%

Table 1 above shows that Imo State University has the highest number of journals in Library and Information Science 40 (34%), followed by Federal Polytechnic Nekede 27 (23%) and Alvan Ikoku Federal College of Education ranking last with 13 (11%). The number of these

journals available in Imo State University and Federal Polytechnic Nekede can be attributed to the fact that these two tertiary institutions have library schools. However, the numbers of journals available are considerably low.

Table2. Subject Coverage

S/n	Subjects	Frequency	Percentage
1	Library and ICT	237	23
2	General librarianship	209	20
3	Library use/user education	95	9
4	Academic library	61	6
5	Information seeking/reading habit	68	7
6	Resource sharing/networking	14	1
7	Library personnel	62	6
8	Records/knowledge management	37	4
9	Technical services	11	1
10	Bibliometric studies	16	2
11	School library	30	3
12	Special library	19	2
13	Library statistics	3	0.3
14	Library crime/security	26	3
15	National library	29	2.4
16	Preservation/conservation	11	1
17	Social media	3	0.3
18	Library education/profession	26	3
19	Public library	19	2
21	Reference services	20	2
22	Book review	14	1
23	Publishing	12	1
	Total	1,022	100%

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The table shows that the subject that topped the list is Library and Information and Communication Technology with 237 (23%), followed by general librarianship 209 (20%), library use/user education 95 (9%) and library statistics and social media ranking the least researched area with 3 (0.3) each. This is not surprising because the trend in virtually every

field of human endeavour today is towards the application of Information and Communication Technology (ICT). This accounts for the attention it has attracted and got from librarians. This finding is in agreement with the findings of Thanuskodi (2010), Edewor (2013) and Hussain et al (2011) who discovered that library and internet/ICT is the most researched subject.

Table3. Institutional Affiliation

S/n	Institutions	Frequency	Percentage
1	University	1120	73
2	Polytechnic	191	12
3	College of Education	81	5
4	Research Institutes	42	3
5	Corporate bodies/special library	18	1
6	National Library	55	4
7	Public Library	29	2
	Total	1,536	100%

A look at Table 3 above reveals that librarians in universities publish more. This is evident in the 1120 (73%) response rate it got. Librarians in polytechnics followed with 191 (12%) while those in corporate bodies/special libraries ranked last with 18 (1%). The high rate of research productivity by librarians in the universities can be attributed to the fact that research and publications are strict conditions

for promotion in the academic libraries as librarians are classed as academic staff and are expected to publish just like their teaching counterparts. This is also in tandem with the findings of Thanuskodi (2010) and Edewor (2013). It also confirms the statement by Awolola (2003) that publications in referred journals are more acceptable for academic staff promotion.

Table4. Geographical Location

S/n	Geographical zone	Frequency	Percentage
1	South East	582	38
2	South West	369	24
3	South South	219	14
4	North East	75	5
5	North West	49	3
6	North Central	203	13
7	Foreign	39	3
	Total	1,536	100%

Analysis from Table 4 shows that librarians working in tertiary institutions in South East geographical zone publish more than their counterparts in other zones. This is shown by 582 (38%) response rates it got. Librarians in South West ranked second with 369 (24%), followed by South South 219 (19%) while

librarians from North West and Foreigners ranked last with 49 (3%) and 39 (3%) respectively. This may be interpreted to mean that as far as this study is concerned, librarians working in tertiary institutions in the South East are more productive in research activities.

Table5. Authorship Pattern

S/n	Authors	Frequency	Percentage
1	Single	618	60
2	Joint	404	40
	Total	1022	100%

From the analysis above, there is every indication that most of the articles 618 (60%) were published by single authors. This finding is in agreement with that of Koehler et al (2000) who discovered that the majority of the articles published in Information Science Journal have

one author. The implication of this result is that most of the researchers are working alone and it is a pointer that the spirit of collaboration is not strong among the librarians that contributed articles in the journals.

Table6. Citation Pattern

S/n	Sources	Frequency	Percentage
1	Books/monographs	3912	28
2	Journal articles	7217	53
3	Internet sources	1714	12
4	Conference papers	520	4
5	Technical reports	230	2
6	Others	147	1
	Total	13,740	100%

From the table, the highest citations were from journal articles 7217 (53%), followed by books/monographs 3912 (28%), internet sources 1714 (12%), conference papers 520 (4%), technical reports 230 (2%) and others 147 (1%). This could possibly mean that the journals are more current and readily available than books and monographs. This finding agrees with the findings of Echezona et al (2011) and Edewor (2003) who discovered that journal citation is the highest of all information sources cited.

CONCLUSION

Research productivity by librarians has been seen as a *sine qua non* for growth in library profession. This is due to the fact that librarians especially those working in higher institutions are seen as academic staff and hence are required to published in referred journals before they can be promoted. In this study “The bibliometric analysis of research productivity of librarians published in Library and Information Science journals available in academic libraries in Imo State, 2004-2013”, the researcher discovered that librarians have been making efforts to conduct and publish their research findings in journals. Based on the analysis, it was discovered that Imo State University has the highest number of journals which conclude be attributed to the institution having a library school but the low number of journals in other libraries is not accepted because these libraries have librarians who write papers and further their studies. This implies that these journals should be acquired for their use to justify the saying that “charity begins at home”. Of all the subject areas in librarianship, Library and Information Communication Technology (ICT) is the most researched area, though we in the ICT era, librarians should try and explore other areas so as to acquire more knowledge in those areas; most of the articles were authored by single authors and this does not encourage collaboration among librarians. The discovery that librarians working in universities published more than their counterparts in other higher

institutions, could mean that the issue of “publish or perish” syndrome is taken more serious in universities. It was also discovered that librarians working in tertiary institutions in South East publish more and journal sources are cited more than other sources.

RECOMMENDATIONS

From the findings of the study, the research recommends that:

- The institutions studied should acquire more journals for their libraries whether they have library schools or not.
- Since journals have been seen as a means of disseminating current trends in any area of study, all the tertiary institutions in Imo State should endeavour to acquire more issues of journals. Not having a library school should not be an excuse because librarians working in the libraries also need the journals and students from library schools can come and make use of them if they are aware of their availability.
- Though Information and Communication Technology (ICT) is the current trend, other aspects of librarianship should not be neglected. Librarians should carry out researches in those aspects.
- Multiple authorship should be encouraged because it is a sign of maturity and collaboration of ideas. The state of Information and Communication Technology (ICT) today has made networking easy and as such, it is expected that more works of joint authorship should be encouraged.
- Librarians in tertiary institutions are treated as academic staff and for them to grow in the profession, they need to publish, therefore librarians working in other tertiary institutions such as polytechnics and colleges of education should improve on their publication status.

- Librarians working in tertiary institutions in other geographical locations other than South East should publish more than they have been doing before.

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