

**BIBLIOMETRIC ANALYSES OF THESES AND DISSERTATIONS  
SUBMITTED BY STUDENTS OF LIBRARY AND INFORMATION  
SCIENCE, IMO STATE UNIVERSITY. OWERRI, 2017-2020.**

**By**

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**ABSTRACT**

*The study investigated bibliometric analysis of theses and dissertations submitted to the Department of Library and Information Science, Imo State University, 2017- 2020. The study was guided by three (3) specific objectives. The study adopted quantitative research design. The population of this study is 80 theses and dissertations of postgraduate students. A researchers- designed template was used to collect data collection. The data collected were tallied, converted to frequencies and the percentages worked out. Findings of the study revealed that: the most studied library is the academic library; the subject area mostly researched on is human resource development and the citation pattern mostly used is journal articles, books/monographs, internet. The researchers recommend that supervisors of postgraduate students should approved topics that have not been over-researched in order to extend research to other areas for a better coverage of all subject areas in Library and Information Science.*

## **INTRODUCTION**

A University is an institution of higher education and research which awards academic degrees in several academic disciplines. Simons, Vlieghe, Decuypere and Masschelein cited in Alemu (2018) assume that contemporary university include such activities as experiments and inventions, the projects, initiatives and reflections, research, teaching and community services. Universities typically offer both undergraduate and postgraduate programmes in different faculties of learning. Postgraduate education involves studying for degrees or other qualifications for which a first or bachelor degree is required and is normally considered to be part of tertiary or higher education. A postgraduate is a student who has completed an undergraduate degree course and is undertaking further studies at a more advanced level. They are expected to carry out research works before they are awarded certificates. In the university world there exist a plethora of students' research works, which reflects the intellectual base of the various disciplines and extent of research coverage of the course content in the field.

Research is a pursuit of truth with the help of study, observation, comparison and experiments, the search for knowledge through objectivity and systematic method of finding solutions to problems (Kothari, 2006). The essential features of academic research are that it should as far as possible, be controlled, rigorous, valid and verifiable, empirical, critical, reliable, systematic, arguable and challengeable (Kumar, 2011). Research works by postgraduates are called thesis and dissertation. Thesis and dissertation are defined as follows: A thesis is a preposition, a reasoned argument, which involves comprehensive research on a theme connected with the specialty of a candidate for any of certain academic degrees. A dissertation is a formal discourse, written or spoken, a treatise, especially an original piece of research together with coursework where research predominates over coursework and constitutes not less than two-third of the total credit load. In library and information science they are carried out on library related areas such as: their types, subject areas of the library using different research designs and method of data analysis.

Subject areas in theses and dissertations submitted to the department of library and information science are the specific areas of instruction in which research is carried out, the subject areas include: human resources, ICT, library use etc. To arrive at a convincing conclusion, research designs are adopted depending on the subject of study.

A citation is the way you tell your readers that certain material in your work came from another source. It also gives your readers the information necessary to find the location details of that source on the reference or works cited page. A citation must include a set of parentheses. Citation is a reference to a source. More precisely, a citation is an abbreviated alphanumeric expression embedded in the body of an intellectual work that denotes an entry in the bibliographic references section of the work for the purpose of acknowledging the relevance of the works of others to the topic of discussion at the spot where the citation appears.

Bibliometrics is the application of statistical methods to the study of the use made of books and other media within and between library systems. The Online Dictionary of Library and Information Science

(ODLIS, 2017) defines Bibliometrics as the use of mathematical and statistical methods to study and identify patterns in the usage of materials and services within a library or to analyse the historical development of specific body of literature, especially its authorship, publication and use. In the area of Library and Information Science bibliometrics deals extensively with quantitative analysis and statistics.

It is based on this background that the study examined a bibliometric analyses of theses and dissertations in Library and Information Science from the year 2017-2020 in Imo State University to determine the areas covered in research. This will help in directing future researchers in the field of librarianship.

### **STATEMENT OF THE PROBLEM**

Theses and dissertations contributes to the body of existing knowledge and enable researchers discover new ideas. Every year, postgraduate students submits research reports to the department and since much emphasis is not led on documentation of the research reports, it is very possible for the department to lose count of the research reports and there's every possibility to have lot of repetition in future research reports. There's insufficient knowledge of research areas studied and areas that are consistently not researched, and also there is no current bibliographic control mechanism to provide current bibliography on postgraduate research reports in Library and Information Science, Imo State University, Owerri. The lack of bibliometric analysis of theses and dissertations in the department, in the opinion of the researcher suggests that: There is need to update our knowledge on bibliometrics analysis of these research reports in order to make crystal clear, the types of libraries, subject areas and citation patterns covered in the research reports in order to forestall excessive repetition of some areas.

### **PURPOSE OF THE STUDY**

The general purpose of this study is to examine the bibliometrics analysis of theses and dissertations submitted to the Department of Library and Information Science, Imo State University from the year 2017-2020. Specifically, the objectives of the study are:

1. to identify the types of libraries studied in the thesis and dissertations by Library and Information Science postgraduates of Imo State University;
2. to ascertain the subject areas covered; and
3. to determine the citation patterns used.

### **RESEARCH QUESTIONS**

To adequately conduct this study, the following questions are posed to guide the study:

- 1) What are the types of libraries studied by postgraduates of Library and Information Science in Imo State University?
- 2) What are the subject areas covered?
- 3) What are the citation patterns used?

## **LITERATURE REVIEW**

Bibliometric is an emerging thrust area of research in different branches of human knowledge since its inception. It has now become a well-established part of information research and a quantitative approach to the description of documents and examination of services is gaining ground both in research and practice (Chaurasia, 2018). Bibliometrics known earlier by many names from Librametry to Statistical Bibliography, the present term was coined by the Alan Pritchard in 1969 to study quantitatively the communication pattern of published literature in a given field. Bibliometrics has emerged as handy tool to study collection evaluation and building, ranking of journals, identification of core literature, to know the structure of literature, to know the prolific authors to observe the obsolescence of literature, to study user behaviour and forecast their further needs (Satija, 2016). The advantage of Bibliometric data on research document is that they have great informative value and systematic comparison of scientific institutions, countries and regions across, range as scientific fields.

Research has become a vital activity in every field of knowledge. Concept of research is concerned with the investigation, making enquiry, finding out, and discovery of phenomenon. It is the systematic method of enquiry into a given phenomenon so as to discover facts, thereby developing plan of action (Ibrahim, 2013). Regardless of any level of programme of the study, the essence of any research findings is to come out with findings and research findings are expected to be used for national development, contrary to this ideal situation, the pieces of research reports are usually submitted for the award of certificate. The role of research in national development is not far from those of economic, social, health status, etc. of a nation (Saka, Bida&Majinson, 2015).

Postgraduate students of Library and Information Science carry out researches as part of the requirements for the award degrees. To achieve this, they carry out researches on different types of libraries to ascertain their staff, resources, services and users. Nwosu and Udo-Anyanwu, (2015) see the academic library as a purpose driven organization which is the major support infrastructure for the tripartite function of higher education, teaching, research and extension. Mbagwu (2017) states that the school library is an integral part of the school, a part of the school where a collection of books, periodicals, magazines, newspapers, video tapes, study kits and other information materials are kept for use. To Obialor and Uwandu (2017) special libraries are libraries established to promptly serve the needs of a portion of the society or community requiring detailed or specific information on a limited subject field. The public library is an organization established, supported and funded by the community, either through local, regional and national government which provides access to knowledge, information and works of imagination through a range of resources and services and is usually available to all members of the community regardless of race, nationality, age, gender etc. (Udo-Anyanwu & Wegwu, 2017) while the national library is seen by Uche and (2017) as a library established by a government as a country's pre-eminent repository of information, it is often charged with the responsibility of collecting and preserving the literature of the nation, within and outside the country. Some researchers such as Kankam (2020), and Singh and Chander (2013) discovered that the academic library is mostly studied by Library and Information Science researchers. Saka and Ahmed

(2019) discovered that university libraries which are also academic libraries are the types of libraries studied.

Postgraduate students concentrate on subject areas when carrying out their researches depending on their areas of interest. Subject areas in theses and dissertations submitted to the Department of Library and Information Science are the specific areas of instruction in which research is carried out, the subject areas include but not limited to: Human Resources, Information communication and technology, library use and funding. Subject areas are also seen as the topics that researchers write on. The study of Saka and Ahmed (2019) revealed that the subject areas investigated more by Library and Information Science students is application of ICT in libraries. Udo-Anyanwu (2018) in her study discovered that Information and Communication Technology (ICT) is the most researched area. That of Singh and Chader (2013) revealed that the topic mostly studied by Library and Information Science researchers is Library Management which human resource development is part of.

In every field today, new research is being built upon previous works and the process of acknowledging those previous works in a research paper is the concept of citation for acknowledging those works. Therefore, citation count of a research paper can be assumed to be a proxy for research impact as well as for its quality. Citations, among others according to Thanuskodi (2011) is a widely used technique in bibliometrics, citation analysis employs citation patterns in documents to draw the relationships that exist between the documents and the original sources. As opined by Folkers (2013) citation analysis, which involves examining an item's referring documents, is used in searching for materials and analyzing their merit. These may involve journals, textbooks, conference proceedings, web materials, book chapters, seminar papers, technical reports among others. The studies of Udo-Anyanwu (2018) and Kankam (2020) identified that Library and Information Science researchers rely heavily on journal articles in their research works. On the other hand, that of Angamma and Jayatissa (2015) discovered that books are the main source material for research studies in Library and Information Science fields.

## **THEORETICAL FRAMEWORK**

The study adopted the Zipf's Law of Word Occurrence Model to explain bibliometric analysis of thesis and dissertation in library and information science.

### **ZIPF'S LAW OF WORD OCCURRENCE**

This bibliometric law was propounded by George Kingsley Zipf in 1935. The law states that in a relatively lengthy text, if you list the words occurring within that text in order of decreasing frequency, the rank of a word on that list multiplied by its frequency will equal a constant. The equation for this relationship is:  $r \times f = k$  where  $r$  is the rank of the word,  $f$  is the frequency, and  $k$  is the constant. Zipf showed that the tenth most frequent word occurred 265 times, the two hundredth word occurred 113 times, and so on. Zipf found out that the rank of the word multiplied by the frequency of the word equals a constant that is approximately 26,500. Zipf's law, again is not statistically perfect, but is very useful for indexes and is also often used to predict the frequency of words within a text. The

application of this law in practical documentation has usually been in association with Bradford's law. Zipf was not interested in cumulating frequencies of words but Bradford was concerned with the cumulative totals of papers constituting his bibliography. So, the Bradford law can be said to generate a Bradford-Zipf distribution, a description, which stressed the double nature of the distribution and the fact that it is essentially a Zipf distribution modified by the Bradford nucleus. The Bradford-Zipf distribution or bibliography is a mathematical model that has been used in bibliometric studies for the analysis of subject literature as an aid of useful journals to specific subject field, but its use has been extended to library circulation of items, the use made of items, indexing and abstracting coverage of journal articles and productivity output rates of authors. The Bradford-Zipf distribution arises in situations in which a large number of independent sources each contributing at random item to a particular field.

The model is related to the present work in that it ascertains the titles, which constitute the core of a subject in so far as quantity (not quality) of research paper is concerned, determine the number of research titles required to cover a specified fraction of the total research literature of a given subject area, the database revealed the output of postgraduate research reports by the Department of Library and Information Science, Imo State University, Owerri, thereby producing ranking of theses and dissertations in terms of research reports output. This theory has been applied to many fields of study as indicators of research output including Library and Information Science as a field of study.

## **RESEARCH METHODOLOGY**

The study adopted quantitative research design/bibliometrics. The population of this study is 80 theses and dissertations of postgraduate students in Library and Information Science. This is made up of 29 Ph.D and 51 MLS postgraduate research reports submitted to the Department of Library and Information Science, Imo State University, Owerri from 2017- 2020. The eighty theses and dissertations were also used as the sample. A researcher designed template was used as instrument for data collection. The researcher personally used the instrument to collect the data required. The data collected were tallied, converted to frequencies and the percentages worked out.

## **DATA ANALYSES AND PRESENTATION**

**Research Question 1:** What are the types of libraries studied?

**Table 1: Types of Libraries Studied**

<b>S/N</b>	<b>Types of libraries studied</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>1</b>	National	-	0
<b>2</b>	Academic	53	66
<b>3</b>	Public	14	18
<b>4</b>	School	13	16
<b>5</b>	Special	-	0
	<b>Total</b>	<b>80</b>	<b>100</b>

Table 1 above shows the percentage of the types of libraries studied by postgraduate students

of Library and Information Science in Imo State University, Owerri. The analysis revealed that the most studied library is the academic library. The type of libraries studied as confirmed by 80 (100%) indicated academic library 53 (66%), public library 14 (18%) school library 13 (16%), special library 0 (0%) and national library 0 (0%). However, the table indicates that no research was carried out on special and national libraries within the period studied.

**Research Question 2:** What are the subject areas covered?

**Table 2: Subject Areas Covered**

S/N	Subject areas covered	Frequency	Percentage (%)
1	ICT	9	11
2	Human Resource Development	23	29
3	Information Resources	12	15
4	Library services	11	14
5	Information Needs and Seeking Behavior	10	12
6	Library security	3	4
7	Library Education	4	5
8	Entrepreneurship	1	1
9	Collection Development	3	4
10	Funding	-	0
11	Preservation/ Conservation	3	4
12	Marketing	1	1
13	Bibliometrics	-	0
	Total	80	100

Table 2 shows the percentage of the different subject areas studied by postgraduate students of Library and Information Science in Imo State University, Owerri. The analysis revealed that the most studied area is Human Resource Development. The subject areas studied as indicated are: ICT 9 (11%), human resource development 23 (29%) information resources 12 (15%), library services 11 (14%), information needs and seeking behaviour 10 (12%), library security 3 (4%), library education 4 (5%), entrepreneurship 1 (1%), collection development 3 (4%), preservation/conservation 3(4%), marketing 1 (1%). However, the table shows that no research work has been carried out on the area of funding and bibliometrics in the department.

**Research Question 3:** What are the citation patterns used?

**Table 3: Citation Patterns Used**

N=80

S/N	Citation Patterns Used	Frequency	Percentage (%)
1	Journal articles	80	100
2	Books/monographs	80	100
3	Internet sources	80	100
4	Conference papers	67	84
5	Technical reports	5	6
	<b>Total</b>	<b>80</b>	<b>100</b>

Analysis in Table 3 revealed that journal articles, books/monographs and internet sources are cited in all the theses and dissertations. This is shown by the 100% scored by all of them. Conference papers 67 (84%) while technical reports scored least with 5 (6%).

## **DISCUSSION OF FINDINGS**

The researchers present the discussion of the work according to the order of the findings.

### **Types of Libraries Studied**

The study revealed that the most studied library is the academic library while special and national libraries have not been studied within the period of study. The implication of this is that much emphasis is led on academic libraries at the detriment of other libraries since studies are not usually carried out on them. The finding is in line with the findings of Kankam (2020) who identified academic library as the most studied library in research projects by Library and Information Science students. The study of Singh and Chander (2013) also discovered that academic libraries are mostly studied by Library and Information Science researchers. Also the study of Saka and Ahmed (2019) discovered that the university libraries are the types of libraries mostly studied. This may be as a result of establishment of library schools in tertiary institutions as students tend to carry out researches in areas that are more convenient to them.

### **Subject Areas Covered**

The findings of this study revealed that the subject area that is studied most is human resource development while funding and bibliometrics have not been researched at all within this period. The areas of human resource development covered include motivation, staff development programmes among others. This implies that researches are carried out more on the staff of libraries than the resources, services and users. The findings corroborates that of Singh and Chader (2013) who discovered that the topic mostly studied by Library and Information Science researchers is Library Management which human resource development is part of. However, the finding disagrees with the finding of Saka and Ahmed (2019) and Udo-Anyanwu (2018) who discovered that Information and Communication Technology (ICT) is the most researched area.

### **Citation Patterns Used**

The findings of this study reveals that the citation patterns used are journal articles, books/monographs, internet sources, conference papers and technical reports, this study showed that journal articles are the most used citation pattern. This implies that postgraduate students explore so many sources in their



researches. This finding is in tandem with the findings of Udo-Anyanwu (2018) and Kankam (2020) who identified that Library and Information Science researchers rely heavily on journal articles in their research works. This finding is also in line with Angamma and Jayatissa (2015) who discovered that books are the main source material for research studies in Library and Information Science fields.

## **CONCLUSION**

Carrying out researches has come to stay as part of the requirements for the award of both undergraduate and postgraduate students in tertiary institutions. In doing this, it is expected that one aspect is not explored at the detriment of others. Diversification of research areas in Library and Information Science with regards to types of libraries studied, subject areas, research methods and others will enhance a wide coverage of all aspects of librarianship. To achieve this, all the stakeholders will be involved.

## **RECOMMENDATIONS**

Based on the findings of the study, the following recommendations were made.

1. More researches should be carried out on other types of libraries apart from academic libraries in order to shed light on their situations. This will help policy makers show more interest in improving these types of libraries.
2. Research has not been carried out on subject areas like funding and bibliometrics, students should be encouraged to carry out researches on these areas and other subject areas of least emphasis while areas like human resource development which have been over-researched should be de-emphasized in future studies in order to extend research to other areas for a better coverage of all subjects in Library and Information Science.
3. The citation pattern of postgraduate students of Library and Information Science is vast and should be sustained.

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