

Bibliometric Analysis of Postgraduate Dissertations and Theses Research Output of the Departments of Library and Information Sciences 2007-2022 in the Universities in North-West, Nigeria

**¹NAFI'U MAHARAZU & ²MOHAMMAD TUKUR LAWAL
TOKAWA**

^{1&2}Department of Library & Information Sciences Umaru Musa Yar'adua University Katsina Nigeria. Email: nafiu.maharazu@umyu.edu.ng & mohammed.tukur@umyu.edu.ng

Abstract

The present study bibliometric analysis of postgraduate dissertations and theses research output of the Departments of Library and Information Sciences 2007-2022 in the universities of North-west Nigeria. The investigators attempted to reveal the distribution of Postgraduate Dissertations and Theses research output, examine the differences between the Masters and PhD research output and the year-wise distribution between dissertations and theses of the Departments understudy. Using a descriptive survey approach, the study sampled 651 from the three universities that offered postgraduate degrees in library and information science through a census method. The study employed self-designed content analysis checklists with descriptive statistics and frequency-based data presentation in tables. The Results showed that, the greatest percentage of dissertations and theses submitted between 2007 and 2022, 354 (54.37%) were from Ahmadu Bello University (ABU) in Zaria. Bayero University (BUK) Kano came second with 290 (44.55%) and Umaru Musa Yar'adua University (UMYU) emanated the least with 7 (1.08%) submission. The differences between the number of dissertations and theses, ABU has the highest number of MLS dissertations 299 (45.92), while UMYU has the least numbers 7 (1.07). Meanwhile, ABU has also the highest number of PhD theses 55 (8.44%). The findings also reveal that the highest 67 (10.29%) submissions of the dissertations and theses were produced in 2022 while the least 10 (1.53%) were produced in 2008. The study recommended among other things that there should be more documentation librarians attached to these university libraries whose duty should be tracking down research reports.

Keywords: Bibliometric, Dissertations, Theses, Postgraduate, Library

Introduction

Allan Pritchard coined the phrase "bibliometric analysis" in 1969 replaced the term "Statistical Bibliography." The term 'bibliometrics' comes from the Latin word 'biblion' and the Greek word 'metrics.' the word "Biblion," which means "Books" while the word "Metrics" is derived from the Latin word "Metricus," which means "Measurement." Etymologically, it means the application of mathematics to the study of bibliography. Bibliometrics measures advancement of science by analyzing the number of scientists produced using statistical methods by determining the various documents that scientists use to conduct

studies on how much information is consumed. Bibliographic references of publications from a specified time period that are found in the lists and information sources that are used to carry out these studies. These bibliographic tools support the application of quantitative approaches to assess the production processes and offer sufficient information about the main document to enable effective bibliometric research. Numerous sources, including bibliographies, bibliographic databases, and citations, are used to generate bibliometric data. Any sufficiently substantial publication list that has been assembled and released, citations from particular journals, and citation indexes can all be used as the basis for bibliometric analysis. These bibliometric methods describe publication patterns within a field or body of literature by using quantitative analysis and statistics. According to Hertzfel (2003), bibliometrics is the study of books and other communication media via the use of statistical and mathematical techniques. In its most basic form, bibliometrics refers to the use of mathematics to the study of bibliography. Makama, (2016) defined the term bibliometrics as the study and quantification of the publication patterns of all written forms of communication and their authors. In scientific terms, it is the analysis of recorded communication. Bibliometric analysis, according to Sengupta (2012) as cited in Kannan and Thanuskodi, (2019), is the process of organizing, classifying, and quantifying the publications pattern of micro and macro publications through mathematical and statistical computations. It is a set of methods to quantitatively analyze scientific and technological literature (Bellis 2009). Based on the aforementioned definitions of the term, it is inferred that bibliometrics study the patterns of authorship, publication, and literature used by applying various statistical analyses. Bellis Further described bibliometrics as the study of publications and communication patterns in the distribution of information by using mathematical and statistical techniques, from counting to calculus. Bibliometrics therefore serve as the application of quantitative techniques in order to evaluate the processes of production, communication, and use of scientific information. It is also perceived by Hawkins (2001) as the application and quantitative analysis in the bibliographical references of the body of literature, with the aim of contributing to the analysis and evaluation of science and research.

Dissertations and Theses demonstrate both an original contribution to knowledge and significant subject expertise in a discipline, as well as significant scholarly achievement (Kushkowsky et al. 2003). For these reasons, studies on doctoral and masters dissertations in various

disciplines have garnered a lot of interest. Research reports are not simply partial fulfillment for degree awards, but rather a purposeful response to questions posed by society; they have much to give to its progress. Research reports are reflections of researchers' areas of interest in a field of study. Theses and Dissertations are not just a measure of research output, but also of the generation of qualified workforce, which is critical in today's knowledge society (Andersen and Hammarfelt 2011). Academic staff members who are knowledgeable with the research process and the area chosen by the students for research supervise and guide the researchers. The report also highlights the intellectual foundation and the breadth of research coverage of course content in the topic. It is also used to assess National research performance in an International perspective, as well as to characterize the evolution of a scientific area.

Nkiru (2010) conducted a study on “Bibliometric Analysis of Postgraduate Research Reports in Library and Information Science in Nigerian Universities from 1993-2006” discovered that the distribution of research in Library and Information Science in Nigeria from 1993 to 2006 by productivity of the research output in the field of library and information science in Nigeria, broken down by university and ranked from most to least in number of reports. 358 research reports, or (47.9%) of the total production of 747 research reports throughout the ten Nigerian universities, were produced by the University of Ibadan. The Universities of Nigeria Nsukka (12.3%), Ahmadu Bello University (8.7%), Bayero University Kano (8.6%), Imo State University (7.4%), University of Maiduguri (5.1%), University of Uyo (4.0%), Delta State University (2.3%), Abia State University (2.0%), and University of Calabar (1.7%), were the next in position. In light of the quantity of research output, it can be said that University of Ibadan was the most productive university. The University of Calabar produced the fewest research papers, although its Department of Library, Archival and Information Studies is Nigeria's most productive academic department in the subject of library and information science. This study is similar to the current research but differs in scope, the study covered the whole country while the current research focuses on a particular region which is North-west.

Study conducted by Adaora (2013) titled “A bibliometric research productivity of librarians published in Library and Information Science Journals available in Academic libraries of Imo State Nigeria 2004-2013” According to analysis, librarians employed by South-East geographical zone tertiary institutions publish more than their

counterparts in other zones. The South-East 582 (38%) response rates it received demonstrate the highest in research productivity. South-West librarians came in second place with 369 (24%), followed by South librarians with 219 (19%). While North-central 203 (13%) came fourth, North-West and foreign librarians came in last with 49 (3%) and 49 (3%) respectively. This could be taken to indicate that, librarians employed by South-East tertiary institutions are more successful in their research endeavors. This analysis is similar with the current study though differs in design and the scope.

Muhammad and Ozioma (2019) study titled “Bibliometric analysis of Nigeria’s Library and Information Science literature: A Journal of Applied Information Science and Technology (JAIST)” the results showed that the distribution of authorship in JAIST across the six geographical zones of Nigeria. The South-East, South-West, North-Central and North-West geographic regions are the main hubs for authorship in JAIST, according to the data. 39.8% of the written articles published in JAIST are from the South-East geographical zone, whilst 23.8%, 19.3% and 17.1% come from the South-West, North-Central and North-West geographical zones, respectively. The findings of this study corroborate with Adaora (2013).

Chukwuma (2018) titled “Research output of librarians in the field of library and information science in Nigeria: a bibliometric analysis” As 2018, there were approximately 153 number of universities officially approved by the National Universities Commission (NUC) in Nigeria (NUC, 2018). The findings show the distribution by universities of the 1,106 articles analyzed, 195 (17.6%) are credited to University of Ibadan, followed by University of Nigeria, Nsukka with 113 (10.2%) articles, Delta State University, Abraka with 99 (9.0%) articles, and Federal University of Agriculture, Abeokuta with 73 (6.6%) articles. University of Ilorin 57 (5.2%), Covenant University 56 (5.1%) while University of Lagos 55 (5.0%), Obafemi Awolawo 47 (4.2%) and Bayero University, Kano 32 (2.9%). The remaining universities scoring lower frequencies (34.2%). It is surprising to report that only a few universities, such as University of Ibadan, University of Nigeria, Nsukka; Delta State University, Abraka; Federal University of Agriculture, Abeokuta; and University of Ilorin, are among the top universities in Nigeria in terms of productivity. This analysis is similar with the current one, they differ from methodology, this study used cross-sectional while the current study used census to draw the sample.

Statement of the Problem

Postgraduate dissertations and theses are conducted as a prerequisite for the award of Masters and PhD degrees by universities with a large number of them produced every year particularly from the departments of Library and Information Science. There's still no existing data over how many postgraduate dissertations and theses in Library and Information Science are produced from North-West universities in Nigeria; Bibliometrics analysis is a mathematical and statistical process for determining and identifying the characteristics of documents as well as analyzing the historical growth of a particular topic area: productivity, authorship, publications, and use, among other things. Sengupta as cited in Kannan and Thanuskodi, (2019) defined the term bibliometric as the process of organizing, classifying, and quantifying the publication, pattern of micro and macro publications. Bibliometric analyses have been employed to examine several aspects of the subject literature, including the authors' work as well as the productivity of research output generated in the field. The approaches are the sole way to determine the productivity and utility of a specific resource within a given field.

However, despite the existence of postgraduate degrees offered by the departments of Library and Information Science in the North-west universities it is not known how many dissertations and theses were submitted and yearly distributions, it is not known the differences between the number of dissertations and theses submitted to these universities, it is also not known which university has the highest number of dissertations and theses submitted. The present study investigated the distribution of dissertations and theses output submitted to the Departments of Library and Information Sciences from universities of North-West, Nigeria from 2007-2022.

Objectives

The following are the objectives of the study

- I. To find out the Distribution of Dissertations and Theses Research output of the Departments of Library and Information Science in Universities of North-West Nigeria from 2007-2022 by Postgraduate Students
- II. To Examine the Differences between the Masters and PhD Research output of the Departments of Library and Information

Science in North-West universities Nigeria from 2007-2022 by Postgraduate Students

- III. To Study the Year-wise Distribution of Dissertations and Theses of the Departments of Library and Information Science in North-West universities Nigeria by Postgraduate Students.

Methodology

The survey research method was chosen for the study because it was the most practical and appropriate, especially given the characteristics of the respondents. Survey research does not just seek the present status of population characteristic, but also tries to discover relationship among variables. This study used the content analysis research approach. According to Prasad (2008), content analysis is the scientific study of communication content with the aim of transforming "raw" occurrences into data that can be studied scientifically and used to build up a body of knowledge.

In the North-West Nigeria, there are three (3) universities that offer postgraduate programs in library and information science, those are Ahmadu Bello University (ABU) Zaria, Bayero University Kano (BUK) and Umaru Musa Yar'adua University (UMYU) Katsina, constituted 651 number of dissertations and theses overall in a pilot research that was recently carried out in the institutions using phone calls and in-person visits. However, considering the number of the general population, the researcher considers census population. "If the general population of the study is manageable, the use of the entire population will yield more reliable research result" (Toluhi, 2001).

Results and Discussions

Distribution of Dissertations and Theses Research output of the Departments of Library and Information Science in Universities of North-West Nigeria from 2007-2022 by Postgraduate Students

Table 1: Dissertations and Theses output Submitted

S/NO	UNIVERSITY	MLS	PHD	Total	%
1	Ahmadu Bello University (ABU), Zaria	299	55	354	54.37
2	Bayero University (BUK), Kano	270	20	290	44.55
3	Umaru Musa Yar'adua University (UMYU), Katsina	7	0	7	1.08
	Total	576	75	651	100

Table 1 presents the amount of research output produced by postgraduate dissertations and theses from universities in North-West

Nigeria from 2007 to 2022. Out of the 651 total output, dissertations were 576 higher than the theses which accounted for 75. ABU, Zaria produced 354 dissertations and theses accounting for 54.37%. Subsequently, BUK generated 290 dissertations and theses representing 44.55%, of the total. UMYU Katsina came third with total number of 7 masters' dissertation and no single PhD Dissertation from this university, which is because the department is not yet start the PhD program at the point of conducting this study. This finding corroborates with the Nkiru (2010) study in which ABU and BUK were ranked second and third most research productive universities in terms of dissertations and theses output.

Differences between the Masters and PhD Research output of the Departments of Library and Information Science in North-West universities Nigeria from 2007-2022 by Postgraduate Students

Table 2: Differences between the Masters and PhD research output

YEA R	ABU ZARIA				BUK KANO				UMYUKATSINA				TOT AL
	MLS	%	Ph .D	%	M LS	%	Ph .D	%	M LS	%	Ph .D	%	
2007	17	5.68	2	3.63	7	2.49	1	5.0	-	-	-	-	27
2008	-	-	2	3.63	8	2.96	-	-	-	-	-	-	10
2009	40	13.37	2	3.63	10	3.70	1	5.0	-	-	-	-	53
2010	42	14.04	2	3.63	14	5.18	-	-	-	-	-	-	58
2011	30	10.03	6	10.9	15	5.55	2	10.0	-	-	-	-	53
2012	41	13.71	3	5.45	14	5.18	1	5.0	-	-	-	-	59
2013	12	4.01	1	1.81	19	7.03	1	5.0	-	-	-	-	33
2014	18	6.02	4	7.27	17	6.29	1	5.0	-	-	-	-	40
2015	9	3.01	2	3.63	17	6.29	2	10.0	-	-	-	-	30
2016	13	4.34	7	12.72	21	7.77	1	5.0	-	-	-	-	42
2017	8	2.67	8	14.54	18	6.66	2	10.0	-	-	-	-	36
2018	2	0.66	1	1.81	17	6.29	1	5.0	-	-	-	-	21
2019	17	5.68	3	5.45	19	7.03	1	5.0	-	-	-	-	40
2020	21	7.02	6	10.9	21	7.77	1	5.0	-	-	-	-	49
2021	3	1.07	1	1.81	27	10.0	2	10.0	-	-	-	-	33
2022	26	8.69	5	9.19	26	9.81	3	15.0	7	1	-	-	67
Total	299	100	55	100	270	100	20	100	7	100	0	0	651
%	45.92		8.44		41.47		3.10		1.07		0		

Table 2 shows the differences of research output between dissertations and theses distributed annually between 2007 and 2022 in the departments of library and information science. Out of 354 research produced by ABU, 299 (45.92%) were postgraduate Masters' dissertations, whereas 55 (8.44%) represent PhD theses. A total of 270 (41.47%) of masters dissertations and 20 (3.10%) PhD theses research was produced by BUK. However, UMYU produced its first doctoral research reports in 2022 and produced 7 (1.07%) masters dissertations.

Year-wise Distribution of Dissertations and Theses of the Departments of Library and Information Science in North-West universities Nigeria by Postgraduate Students.

Table 3: Year-wise Distribution of Dissertations and Theses output

YEAR	ABU		BUK		UMYU		TOTAL	%
	MLS	Ph.D	MLS	Ph.D	MLS	Ph.D		
2007	17	2	7	1	-	-	27	4.14
2008	-	2	8	-	-	-	10	1.53
2009	40	2	10	1	-	-	53	8.14
2010	42	2	14	-	-	-	58	8.90
2011	30	6	15	2	-	-	53	8.14
2012	41	3	14	1	-	-	59	9.06
2013	12	1	19	1	-	-	33	5.07
2014	18	4	17	1	-	-	40	6.14
2015	9	2	17	2	-	-	30	4.60
2016	13	7	21	1	-	-	42	6.45
2017	8	8	18	2	-	-	36	5.52
2018	2	1	17	1	-	-	21	3.22
2019	17	3	19	1	-	-	40	6.14
2020	21	6	21	1	-	-	49	7.59
2021	3	1	27	2	-	-	33	5.07
2022	26	5	26	3	7	-	67	10.29
Total	299	55	270	20	7	0	651	100

An attempt was made to calculate the productivity of research from 2007 to 2022. The number of theses and dissertations produced each year is presented in Table 3. In total, 651 theses and dissertations have been analyzed. Dissertations and theses in the field of research have been produced at a gradually increasing rate. The analysis found that out of 651 dissertations and theses, 67 (10.29%) were published

in 2022 and received the highest ranking. The second most productive year was 2012, with 59 (9.06%) dissertations and theses produced, followed by 58 (8.90%) in 2010. In the same way, 53 (8.14%) were generated in 2009 and 2011, respectively. Furthermore, 49 (7.59%) were produced in 2020. However, 2008 saw the fewest submissions, with 10 (1.53%) theses and dissertations, among other submissions.

Conclusion

Based on the findings of this research, it can be concluded that research reports from PhD theses and master's dissertations in the departments of library and information science of North-West Nigerian universities vary in terms of productivity. According to the study ABU produced the highest amount of postgraduate dissertations and theses research, whereas UMYU produced the fewest. The quantity of research reports generated in the field of library and information science at these North-west universities fluctuated until 2009. After that, the number of research reports produced increased gradually. There were 53 research publications published in 2009, 58 in 2010 and 67 in 2022. However, 67 remained the uppermost figure of dissertations and theses research produced in a year.

Recommendations

The study recommended among other things that:-

- I. There should be more experienced documentation librarians in each university library whose duty should be tracking down research reports, ensuring proper documentations and upward delivery to the university library documentation or postgraduate unit.
- II. The number of PhD graduates are very small compared to Masters', therefore there's the need for increase the number of PhD admission so as to compete with other professions.
- III. The number of dissertations and theses distributions per year in these universities is too little to celebrate. There's the need to conduct a study to look in to the problem for better improvement.

Reference

Adaora, J., U. (2013) A bibliometric research productivity of librarians published in Library and Information Science Journals

- available in Academic libraries of Imo State Nigeria 2004-2013. *Research Journal of Library and Information Science*. 2(1) Retrieved via: <file:///C:/Users/comp/Downloads/bibliometrics.pdf>. Accessed on 19th august, 2023
- Andersen, O. K. & Hammarfelt S. (2011) Using time dependent citation rates (sales curves) for comparing scientific impacts. Available at: <http://arxiv.org/abs/physics/0611284>. Accessed on 17th March, 2022
- Bellis, D. (2009). Bibliometrics and Citation Analysis: from the Science Citation Index to Cybermetrics. *Scarecrow*. Retrieved via: <http://boook.google.com/books/about/blibliometricsandcitationanalysis.html>. Accessed on 19th September, 2022
- Chukwuma Clement O. (2018) Research output of librarians in the field of library and information science in Nigeria: a bibliometric analysis from 2000-March, 2018", *Collection and Curation*, Retrieved from <https://doi.org/10.1108/CC-04-2018-0012>. Accessed on 27th May, 2023
- Hawkins, D. T. (2001). Bibliometrics of electronic journals in information science. *Information Research*, 7(1), 7-1.
- Hertz, D., H. (2003). Bibliometric history. In M.A Drake (ed.) *Encyclopedia of Library and Information Science*. 1(2). New York: Marcel Dekker Inc. 288 – 327
- Kannan, P., & Thanuskodi, S. (2019). Bibliometric analysis of Library Philosophy and Practice: A study based on Scopus Database. *Library Philosophy and Practice*. Retrieved on <https://core.ac.uk/download/pdf/215160532.pdf>. Accessed on 11th February, 2022
- Kushkowski, J., D., Parsons, K.A. & Wiese W., H.. (2003). Master's and doctoral thesis citations: Analysis and trends of a longitudinal study. *Libraries and the Academy* 3 (3): 459-479
- Makama, A. (2016) Citation Analysis of Undergraduate Research Projects of Graduated Students of Abubakar Tafawa Balewa University Bauchi. Unpublished Dissertation Submitted to department of library and information science, Bayero University Kano.
- Muhammad, K., U. & Ozioma, E. (2019) A bibliometric analysis of Nigeria's Library and Information Sciences literature: A study of *Journal of Applied Information Science and Technology*, *COLNET Journal of Scientometrics and Information Management*, 13:1, 53-64, DOI: 10.1080/09737766.2018.1541042.
- Nkiru, J. O. (2010) Bibliometric Analysis of Postgraduate Research Reports in Library and Information Science in Nigerian

Universities. An unpublished Thesis submitted to the Department of Library and Information Science, University of Nigeria Nsukka.

Prasad, D.V. (2008). Content analysis: A method in social science research. Delhi: New world publishers.

Toluhi, J.O. (2001). Fundamentals of research methodology, Ilorin, Nigeria: Victory Publications.