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# CITATION ANALYSIS OF DOCTORAL THESES IN EDUCATION, UNIVERSITY OF MAIDUGURI, NIGERIA

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## **Abstract**

This study presents citation analysis of fifty-two doctoral theses in education accepted by the school of postgraduate studies, university of Maiduguri, between 1987 and 2015. The title pages, abstracts and references of each thesis were photocopied and examined thoroughly in terms of name of the researcher, title of thesis, year of award, subject area covered, number of citations, types of works cited and the total of each cited work. Bibliometric techniques were used in the analysis, which involves counting and categorising works cited in each thesis according to the following: books and monographs, journal articles, theses and dissertations, conference proceedings, unpublished materials, reports, newsletters and online sources. The information gathered was collated and analysed using frequency counts and percentage scores, presented in tables. Findings of the study revealed that Curriculum and Instruction ranked highest as the most researched subject areas, while Educational Psychology and Educational Measurement and Evaluation were the least researched subject areas. Books and monographs were cited more than other forms of library materials in the theses analysed. Similarly, out of the 80 journals cited, twenty-four were identified as the most frequently cited. Most of the works cited by the researchers fall between 1980 and 1989.

**Keywords**: citation analysis; education; doctoral thesis; university of Maiduguri; Nigeria.

## Introduction

The Department of Education was one of the few departments that started with the establishment of the University of Maiduguri in 1976. Since then, it has grown in staff strength, student population and academic programmes. The Department of Education pioneered postgraduate education in the University of Maiduguri with the establishment of M.Ed. and PhD degree programmes and by the end of 1988/89 session; thus graduating one PhD and thirty M.Ed. candidates. The Department offers several PhD Programmes among which are: Educational Administration and Planning, Educational Administration and Management, Curriculum and Instruction, Educational Psychology, Educational Measurement and Evaluation, Guidance and Counseling, Philosophy and Foundation of Education. Every Ph.D student must submit to the school of postgraduate studies, a thesis as part of the requirements for the award of Doctor of Philosophy of the University of Maiduguri. This thesis must have been orally defended before a panel of internal and external examiners. (Faculty of Education Prospectus, 2010).

Citation analysis according to Aina (2002) is a popular method in library and information science research in Africa, where references cited are statistically analysed in order to find out the common journals cited by researchers in a particular discipline. It is generally assumed to be part of bibliometric studies. Bibliometric study is usually applied to the quantitative analysis of publications in

a particular discipline. Mathematical and statistical techniques are used to study the documents and to measure the patterns of publications. It is also used to measure the impact of publications through citation analysis. Bibliometric study also helps to find out the publication productivity, examine the authorship pattern for publications, identify the channels of communications used and ascertain the journal and language preference of an author. (Kousar and Mahmood, 2010.) Similarly, Bozimo (2006) stated that one of the librarian's primary tasks is to nourish the user's mind by providing information and, at the same time, observing the resources needed, requested and used. Perhaps no other type of study captures, in an unobtrusive manner, the resources used for teaching and research in universities than citation studies. Bozino (2006) further observed that, citations are references which researchers make because they consider that the cited paper have made some contribution to their thinking process in the course of writing a document. Accordingly, citations are "rewards" which individual writer accord to their colleagues whom they have personally assessed as having made some advancement to the store of information. Thus to be cited by a competent colleague is an honour truly deserved. While, for libraries, citation studies point to what documents should be acquired and also provide a peek into the way scholars seek information.

## **Literature Review**

There are literatures on citation analysis in different disciplines and have been growing fast in the field of library and information science. Sam and Tackie (2007) observed that citations drawn from student's dissertations or term papers were sources of checklist used in numerous studies, the earliest being that of Emerson's analysis of twenty- three engineering doctoral dissertations at the Columbia University between 1950-1954 to determine the percentage of references held or not held by the other campus libraries in the University.

An earlier study by Iya (1996) on citation analysis of education dissertations at the University of Maiduguri, Nigeria revealed that out of the fifty-six (56) masters dissertations analysed majority of the postgraduate students used textbooks (40.3%) more than any other forms of library materials in writing their dissertations. Furthermore, Journal of Science Teachers Association of Nigeria (STAN) was ranked first with 82 citations, followed by the West African Journal of Education (WAJE) with 35 citations.

Similarly, Okiy (2003) conducted citation analysis of education dissertations at the Delta State University, Abraka, Nigeria which revealed that majority of postgraduate students in education used textbooks more than other forms of library materials in writing their dissertations. Egberongbe (2003) conducted a citation analysis of the literature used in political science doctoral theses in the University

of Lagos from 1990-2000. The results showed that researchers cited more textbooks than journals in their research works, and observed that the researchers' use of journals at this level is rather inadequate.

Also, Sam and Tackie (2007) conducted a citation analysis of dissertations accepted by the Department of Information Studies, at the University of Ghana, Legon, from 1998 to 2004, with a view to ascertaining pattern in the use of different types of information source formats, such as books, Journals, and so on. The study revealed that a total of sixty-seven (67) dissertations generated 2,212 citations. Books and monographs were cited more than journals, (969 or 43:8%) of the citations were books and monographs, followed by journal articles (550 or 24.9%), and unpublished materials (4 or 0.2%) being the least cited materials.

# Methodology

The study analysed fifty-two (52) doctoral theses in education accepted by the School of Postgraduate Studies, University of Maiduguri, between 1987 and 2015. It was limited to the theses housed in the Ramat Library and Department of Education, University of Maiduguri. The title pages, abstracts and references of each thesis was photocopied, and examined thoroughly in terms of the name of the researcher, title of thesis, year of award, subject area covered, number of citations and the total of each cited work. Bibliometric technique was used, which involves

counting and categorising works cited in each thesis according to the following: books and monographs, journal articles, theses and dissertations, conference proceedings, unpublished materials, reports, newsletters and online sources. The data gathered were collated and analysed using frequency counts and percentage scores, presented in tables.

# **Analysis of Data**

The results of the study presented in tabular form below.

Table 1: Distribution of Theses by Subject Area.

| Subject                                 | Area Frequency | Percentage |
|---|----------------|------------|
| Curriculum and Instruction              | 17             | 32.7       |
| Guidance and Counseling                 | 13             | 25         |
| Educational Administration and Planning | 9              | 17.3       |
| Philosophy and Foundations of Education | 8              | 15.4       |
| Educational Psychology                  | 2              | 3.8        |
| Educational Measurement and Evaluation  | 2              | 3.8        |
| Total                                   | 52             | 100        |

Table 1 shows the distribution of theses by subject area, ranked in the order of their scores from highest to lowest. Curriculum and Instruction ranked highest with seventeen scores, representing 32.7 percent, Guidance and Counselling with thirteen scores, representing 25 percent, Educational Administration and Planning followed with nine scores, representing 17.3 percent, Philosophy and Foundations of Education recorded eight scores representing 15.4 percent, while Educational Psychology and Educational Measurement and Evaluation recorded two scores each, representing 3.8 percent.

Table 2: Format of Literature Cited in a Rank Order.

| Format of Literature     | Frequency | Percentage |
|--------------------------|-----------|------------|
| Books and monographs     | 2,275     | 43         |
| Journal articles         | 1,768     | 33.4       |
| Theses and Dissertations | 413       | 7.8        |
| Conference proceedings   | 206       | 3.9        |
| Online sources           | 206       | 3.9        |
| Unpublished sources      | 160       | 3.0        |
| Reports                  | 134       | 2.5        |
| Newsletters              | 58        | 1.1        |
| Total                    | 5,220     | 100        |

Table 2 shows format of literature cited in the fifty-two theses analysed in the study in a rank order. Books and monographs were cited most frequently with 2275 scores, representing 43 percent, followed by Journal articles scoring 1768, representing 33.4 percent, theses and dissertations recorded 413 citations, representing 7.8 percent, conference proceedings and online sources recorded 206 citations, representing 3.9 percent each, unpublished sources cited 160 scores, representing 3.0 percent, Reports recorded 134 citations, representing 2.5 percent. While, news-letters recorded lowest scores of 58 citations, representing 1.1 percent.

Table 3: Top twenty-two Core Journals Cited in a Rank order.

| S/N.  | Title of Journal                                 | Frequency | Percentage |
|-------|--|-----------|------------|
| 1.    | The Counsellor                                   | 77        | 18.6       |
| 2.    | Journal of Counseling Psychology                 | 57        | 12.3       |
| 3.    | Nigerian Journal of Educational Psychology       | 38        | 9.2        |
| 4.    | British Journal of Educational Psychology        | 32        | 7.7        |
| 5.    | West African Journal of Education                | 20        | 4.8        |
| 6.    | Journal of Research in Education                 | 20        | 4.8        |
| 7.    | Maiduguri Journal of Educational Studies         | 20        | 4.8        |
| 8.    | Journal of Teacher Education                     | 19        | 4.6        |
| 9.    | African Journal of Educational Research          | 18        | 4.4        |
| 10.   | Zaria Journal of Educational Studies             | 13        | 3.1        |
| 11.   | Nigerian Journal of Counseling and Devt.         | 13        | 3.1        |
| 12.   | Journal of Educational Administration            | 11        | 2.7        |
| 13.   | Journal of Curriculum Studies                    | 10        | 2.4        |
| 14.   | Nigerian Journal of Applied Psychology           | 10        | 2.4        |
| 15.   | Nigerian Educational Forum                       | 09        | 2.2        |
| 16.   | Educational Forum                                | 08        | 1.9        |
| 17.   | Education Today                                  | 08        | 1.9        |
| 18.   | Journal of Research in Curriculum                | 08        | 1.9        |
| 19.   | Review of Educational Research                   | 08        | 1.9        |
| 20.   | Educational Research and Review                  | 07        | 1.7        |
| 21.   | Journal of Science Teachers Association of Niger | ia 07     | 1.7        |
| 22.   | Nigerian Journal of Guidance and Counselling     | 06        | 1.5        |
| Total |  | 413       | 100        |

Table 3 presents the top twenty-two core journals cited in a rank order. Out of the 80 journal titles cited, 22 journals were identified as most frequently cited. The Counsellor a Journal of the Counselling Association of Nigeria recorded highest scores of 77 citations representing 18.6 percent, Journal of Counseling Psychology recorded 51 citations, representing 12.3 percent, while, Nigerian Journal of Guidance and Counselling recorded the lowest scores of six citations, representing 1.5 percent respectively.

Table 4: Distribution of Citation by Decade.

| Years      | Frequency |      |
|------------|-----------|------|
| Percentage |           |      |
| 1950- 1959 | 29        | 0.6  |
| 1960-1969  | 237       | 4.5  |
| 1970-1 979 | 1081      | 20.9 |
| 1980-1989  | 1368      | 26.4 |
| 1990-1999  | 1314      | 25.4 |
| 2000-2009  | 900       | 17.4 |
| 2010-2015  | 253       | 4.8  |
| Total      | 5,182     | 100  |

Table 4 shows distribution of citations by decade. Majority of the works cited 1,368 (26.4%) fall between 1980-1989, followed by 1990-1999 with 1314 (25.4%). Also, 1970-1979 recorded 1081 citations (20.9%) and 2000-2009 works recorded 900 citations representing 17.4 percent, while 2010-2015 works recorded 253 (4.8%) citations, 1960-1969 works had 237 (4.5%) citations followed by 1950-1959 works with 29 citations, representing 0.6 percent.

# **Discussion**

The distribution of theses by subject area, ranked in the order of their scores from highest to lowest as shown in table I reveals that Curriculum and Instruction ranked highest with seventeen scores representing 32.7 percent, while, Educational Psychology and Educational Measurement and Evaluation were the lowest recording two scores each representing 3.8 percent.

The distribution of format of literature cited in the fifty-two theses analysed in a rank order as shown in table 2 reveals that books and monographs were cited most frequently with 2275 scores, (43%), followed by journal articles scoring 1,768 citations (33.9%) while reports and newsletters recorded lowest scores of 134 (2.6%) and 58 (1.1%) each. Iya (1996) and Okiy (2003) found similar results in citation analysis of education dissertations at the University of Maiduguri and education dissertations at the Delta State University, Abraka respectively. These studies revealed that majority of postgraduate students used textbooks more than other forms of library materials in writing their dissertations. Thus, the use of journals and online sources by postgraduate students in their research works seem to be low, considering the fact that these are the sources of information through which researchers particularly at the Doctoral level can get current research findings that would assist them in conducting their researches. Thus, the predominance of textbooks and monographs usage among postgraduate students particularly at the Doctoral level at the expense of journals and online sources leave much to be desired in the quality of theses produced by the students in the university.

The top twenty-two core journals cited in a rank order as shown in table 3 reveals that out of the 1768 journal articles cited, twenty-two journal titles were identified as most frequently cited. Furthermore, The Counsellor-publish by the

Counselling Association of Nigeria recorded highest scores of 77 citations, representing 18.6 percent. While, Nigerian Journal of Guidance and Counselling recorded the lowest scores of six citations, representing 1.5 percent respectively. This finding is consistent with the studies of Iya (1996) which revealed that 2, 377 citations recorded from master of education dissertations at the University of Maiduguri. Out of these, 959 citations were books and monographs while 553 citations were journal articles. Furthermore, the top ten ranked journals and their availability at the University Library shows that Journal of Science Teachers Association of Nigeria (STAN) was ranked first with 82 citations, followed by the West African Journal of Education (WAJE) with 35 citations. However, it was observed that these two journals that ranked first and second were not available in the University Library. Similarly, Educational Administration Quarterly that rank third was also found to be heavily used by students was absent from the University Library. This means that these students must have consulted the journals either from personal collections or other libraries. Thus, the finding of this study on the availability of the core journals cited is not different from the previous study by Iya (1996). Apart from Maiduguri Journal of Educational Studies and Educational Forum published by the Department of Education and Faculty of Education, University of Maiduguri respectively, majority of the core journals cited were not available in the University Library.

The distribution of citation by decade span a period of seven decades as shown in table 4 reveals that majority 1364 (26.4%) of the works cited by the researchers fall between 1980-1989, while 29 (0.6%) of the works cited were from 1950-1959. Sam and Tackie (2007) in a citation analysis of 67 dissertations accepted in the Department of Information Studies, University of Ghana, Legon, from 1998 to 2004, reported that majority of the materials cited spanned a period over sixty years were from the mid-1990s to late 1990s, while (7.9%) of the citations were pre-1970. Thus, the result shows the currency of the materials cited in the dissertations is encouraging. Also, Egberongbe (2003) reported the frequency level of the sources of information cited in political science doctoral theses in the University of Lagos, from 1999-2000, indicating that majority of monographs cited were between 1957 and 1989, while the intensity of citation was between 1976 and 1990. Furthermore, majority of journal articles cited were published between 1964 and 1997. This indicates that most of the journal articles cited were published within thirty years of the time of research.

## Conclusion

The study analysed the citation pattern of doctoral theses in education at the University of Maiduguri, Nigeria. The major findings of the study revealed that Curriculum and Instruction was the most researched subject area, while Educational Psychology and Educational Measurement and Evaluation were the least researched subject areas. Textbooks and monographs were cited more than journal articles and other forms of library materials in theses analysed.

## **Recommendations**

Based on the findings and conclusion of the study, the following recommendations were made:

- That there is the need for University Library to improve on its journal collection in the field of education in particular;
- That the University Library should subscribe to online journals, as the result indicated that the use of online journals by the postgraduate students in their research works seems to be unencouraging, considering the fact that these are the sources of information through which researchers particularly at the doctoral level can get current research findings that would assist them in conducting their research.
- That there is the need for the Department of Education to encourage prospective candidates into doctoral programme to take interest in

conducting research in the less researched subject areas such as: Educational Psychology and Educational Measurement and Evaluation

 The University Library should ensure that one copy of each PhD thesis is deposited in the university library by the School of Postgraduate Studies, University of Maiduguri for the purpose of reference and documentation.

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