

**CITATION ANALYSIS OF PH.D THESES IN
LIBRARY AND INFORMATION SCIENCE
SUBMITTED TO NAGPUR UNIVERSITY**

SUMMARY OF

UGC Minor Research Project

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SUMMARY

INTRODUCTION

Citation Analysis is one form of bibliometric study as a method of research has wide range of application. It can be applied to any library for various purposes based on use of literature on the subject, appeared in specific journals, books, theses etc. In fact, citation study is one of the effective and indirect method to understand the information requirement of users.

Citation Analysis is as a technique, which can rank the authors, books and journals in the order of their preference among the fellow workers. The researchers while conducting investigation generally refer to the earlier works done in the field, quoted as citations, at the end of research publication. Therefore the citation, which are generally cited repeatedly. The analysis thus helps to find out the highly cited authors, journals and books in a specific area of study. Bradford first introduced the core concept while ranking the journals subsequently this area of bibliometric analysis becomes a very popular study.

Bibliometric analysis is the application of mathematics and statistical method to books and other records of communication. In other words, it is the quantitative treatments of the properties of bibliographic units. Researchers may use bibliometric methods of evaluation to determine the influence of a single writer or to describe the relationship between two or more writers or works.

Library and Information science is an interdisciplinary or multidisciplinary field that applies the practice, perspectives and tools of management, information technology, education and other areas to libraries: the collection, organization, preservation and dissemination of information resources and the political economy of information. In India, the various universities taught different LIS courses with their own curriculum and the students who come out of these universities falls to gain the knowledge of advance technology and research.

ORIGIN OF THE RESEARCH PROBLEM

Sometimes, the research scholars do not get the adequate information of the books, journals, periodicals etc. related to their research subject. The paucity of required information may hamper their research activities. Thus, citation analysis will be useful in this regard. Books and journals are the most dependable sources of information. Although journals form the major part of the literature consulted by researchers/scholars, rising cost of journals and the increasing number of journals are making it more difficult for libraries to provide researchers with all the information they need. Citation analysis is a useful tool for evaluating the use of library collections.

INTERDISCIPLINARY RELEVANCE

The recent year witness the advancement in every sphere of life. This advanced development is to be seen in each subject field also. Naturally, the books, periodicals etc. of today are highly advanced and update. That is why if in each discipline, the citation analysis can be introduced; it will be easy to get the highly cited documents, journal or periodical to research scholars. Therefore nobody can deny that citation analysis is not only related to Library and Information Science but also essential and important in each discipline.

NATIONAL AND INTERNATIONAL STATUS

The present age is an age of research and development. In every field of knowledge, research activity is to be carried on a large scale. Library and Information Science is also no exception to these things. Citation analysis is originally the topic of study in Library and Information Science. It is useful for research scholars to find out the highly cited books, journal etc. in specific area of study. With this, one can understand the popularity of the books, journals etc. of their subject field on national and international level. Further, it brings in notice the innovative ideas in articles published in national and international journals and periodicals. Citation analysis is also helpful to prepare the national and international bibliographies.

SIGNIFICANCE OF CITATION ANALYSIS

Citation analysis is useful to find out the core journal/core document in a specific subject field. The importance of citation analysis is as follows:

- To lead the readers to further studies in the field.
- To prepare bibliographies.
- To study the use pattern of different type of documents.
- To study the scattering of subjects.
- To decide the obsolescence rate of documents in different subjects.
- To analyze the scientific journal.

STATEMENT OF THE PROBLEM

Though the researchers of library and information science and other disciplines have been using different books, journals etc. for their research purposes, they are generally using the references to establish their study. There is much confusion how to quote the references along with proper citation, which may lead to non-authenticity of their work. Citation analysis is a useful tool for evaluating the use of library collections. In order to bring out meaningful suggestions to the library for developing collection development policy, this research work carried out. The theses submitted in Library and Information Science in Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur during the time span of 1992 and 2009 have been taken into account for the Citation Analysis. In present project, citation method is used to understand the information needs, use pattern and use behaviour of research scholars in the field of Library and Information Science

OBJECTIVES

The study has carried out with following objectives.

- 1 To trace out Ph.D. theses in Library and Information Science submitted in Nagpur University, Nagpur.
- 2 To study the details of these Ph.D. theses.

- 3 To identify the average number of citations.
- 4 To identify distribution of citations by different forms of sources.
- 5 To identify authorship pattern.
- 6 To study chronological distribution of citations.
- 7 To rank highly productive journals in the field of Library and Information Science.
- 8 To study the half-life period of book citations and journal citations.

HYPOTHESES

The study has carried out with following hypotheses.

1. Journals are mostly cited sources by the researchers in the field of Library and Information Science
2. Web citations are also high in the theses of Library and Information Science
3. Single authorship is high compared to Collaborative authorship in the period of study.
4. The half-life value of journal citations is high compared to book citations in Library and Information Science.

SCOPE AND LIMITATIONS

The researcher has studied Ph.D. Theses in Library and Information Science submitted to and awarded by Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur during the year 1992 to 2009 for the present Project.

List of Ph.D holders during 1992 to 2009

Sr. No.	Title of Theses	Awardee Names	Awarded Year	Guide
1	Impact of Ranganathan on AACR2	Mrs. D Rajyalakshmi	1992	Dr. P.S.G. Kumar
2	Impact of library legislation on public library development in Maharashtra	Mr. R. S. Balekar	1994	Dr. P.S.G. Kumar

3	Public library provision and document problems in developing countries : A study in Kenya and Indian context	Mr M. O. Wanderi	1994	Dr. P.S.G. Kumar
4	Factors that need to be consider in creating a bibliographic dataset : A study with special reference in indexing of Indian scenario	Mrs. Shree Sinnarkar	1997	Dr. P.S.G. Kumar
5	Patent document as a source of technical information for industrial development : Indian scenario	Mr. R. Ramchandran	1997	Dr. P.S.G. Kumar
6	Design and development of an information system for soil survey and land use planning	Mr. Y. M. Patil	1998	Dr. P.S.G. Kumar
7	University library finance in Maharashtra	Dr. D. R. Deshpande	1998	Dr. P.S.G. Kumar
8	Perspective & Plan for the establishment of national information centre on Petroleum	Mr. A. V. Kawale	1999	Dr. P.S.G. Kumar
9	Working & finance of aided public libraries in Maharashtra with special reference to Nagpur division	Mr. U.P. Nahle	2002	Dr. P.S.G. Kumar
10	Structure and development of non-agricultural university libraries in Maharashtra : A critical Study	Mrs. Ashwini Paradkar	2003	Dr. P.S.G. Kumar
11	Security care and maintenance of books in university libraries in India : A critical study	Mr. Kishor Kale	2004	Dr. P.S.G. Kumar
12	Grey Literature in Indian Agricultural Research in relation to soil Science	Miss Jiji Cyraic	2004	Dr. P.S.G. Kumar
13	Growth and Development of	Mrs. A.P.	2004	Dr. P.S.G.

	NUL in the changing Scenario	Sambare		Kumar
14	Development of Ayurved college Libraries in India with special reference to Vidarbha Region	Mr. Pramod Dakhole	2004	Dr. P.S.G. Kumar
15	Indian Reference Source on Science & Technology : An evaluation	Mr. S. N. Gawali	2004	Dr. P.S.G. Kumar
16	Study of Customer satisfaction management in libraries and information centre of regional engineering colleges in India	Mr. R.M. Deshpande	2004	Dr. P.S.G. Kumar
17	Evaluation of websites of Indian university with special reference to Library web pages.	Mrs. Mangala Hirwade	2004	Dr. D. Rajyalakshmi
18	Coping with the News Technology Experience of university Libraries in Maharashtra	Mr. S. M. Nikose	2004	Dr. D. Rajyalakshmi
19	Role of BANSDOC in scientific technical information system and services in Bangladesh	Mr. S. A Basher	2004	Dr. P.S.G. Kumar
20	Patent Information Sources on Internet : An evaluation	Mr. Anil Hirwade	2006	Dr. P.S.G. Kumar
21	Study of libraries and their services of the rehabilitation institutes for the disabled in Gujrat & Maharashtra state	Miss S. R. Fulmali	2006	Dr. D. Rajyalakshmi
22	Evaluation of the role of UGC on Development of College Libraries	Mrs. Pratibha Taksande	2006	Dr. P.S.G. Kumar
23	Computerization in University Libraries of India : A critical study	Mrs. Amita Munshi	2007	Dr. D. Rajyalakshmi
24	Performance of College : A			

	critical study of college libraries under the jurisdiction of Nagpur University	Mr. P. B. Jain	2007	Dr. P.S.G. Kumar
25	Computerization of Library catalogue and OPAC services of Institute of Higher Learning in Maharashtra	Mr. Devendra Bhongade	2008	Dr. D. Rajyalakshmi
26	A Study of Dr. P.S.G. Kumar's Academic Contribution in Library and Information Science	Mr. Ajay Agashe	2008	Dr. D. Rajyalakshmi
27	A study of CAS Service in CSIR, ICAR and ICMR Libraries in India	Mr. Deepak Kapade	2008	Dr. D. Rajyalakshmi
28	Government information initiatives of India since 1995 : A Study	Mr. Anil Chikate	2008	Dr. P.S.G. Kumar
29	Metropolitan Networks for Nagpur City	Mrs. Veena Prakashe	2008	Dr. P.S.G. Kumar
30	Reading habits among science college teachers in Vidarbha Region	Mrs. Vaishali Ugle	2009	Dr. D. R. Deshpande
31	Application of IT in the Engineering College Libraries with special reference to Vidarbha Region	Mr. C. R. Tirpude	2009	Dr. D. R. Deshpande

RESEARCH METHODOLOGY

The research methodology followed is descriptive and evaluative. The literature cited in the Ph.D. theses in the field of Library Information Science was the principal base of information relating to the sources used by the researchers. In the context of the main objective, this study examined the citation pattern of researchers in Library and Information Science using the references appended to Ph.D. theses submitted to the Rashtrasant Tukadoji Maharaj Nagpur University,

Nagpur during the year 1992 to 2009. Total 31 Ph.D. these with 4201 citations were recorded giving an average of 136 citation per theses.

All references (bibliographies) were photocopied and each reference was categorised according to format or genre, i.e. book, journal, report, conference proceedings, newspaper, thesis/dissertations, reference book etc

CHAPTERIZATION

Chapter – 1: Introduction to the project.

Chapter – 2: Review of Literature.

Chapter – 3: Citation Analysis and Bibliometric

Chapter – 4: Analysis and Interpretation data

Chapter – 5: Findings and Conclusions.

Bibliography

Chapter 1 Introduction to the project- It is an introductory chapter deals with introduction to citation analysis, Library and information science concept, origin of the problem, objectives , hypotheses, scope and limitations, research methodology and chapter outline.

Chapter 2 Review of Literature- It is a study of literature search in the pursuit of reviewing the earlier work done on this subject. The researcher has carried out prior art search for the present study. While searching the prior art, the researcher has consulted various websites on citation analysis, theses and dissertations in library and information science submitted as project work in RTMNU.

Chapter 3 Citation Analysis and Bibliometric- This chapter deals with genesis of citation analysis and bibliometric, benefits of citation analysis, techniques of citation analysis, development of bibliometric, laws of bibliometric, types of citation analysis, web citation analysis, impact factor.

Chapter 4 Analysis and Interpretation – This chapter covers the detailed tabular presentation of the worksheets including the data collected from 31 Ph.D theses in library and information science. The data is analysed as citation per

theses, subject trend of Ph.D theses, forms of publication in Ph.D theses, authorship patterns of citations, ranking of journals, Chronological distribution of books and journals citations, Half-life of books and journals citations.

Chapter 5 Findings and conclusions – This concluding chapter provides overall findings and conclusions and the hypotheses have been validated.

FINDINGS

1. The analysis of citations according to the bibliographic forms reveals that the journal literature is the most preferred source of information compared to other sources for the Library professional. Books and Websites secured second and third places respectively.
2. Cited materials have grouped into nine categories such as journals, books, web conference proceedings, reports, reference books, theses and dissertations, newspapers and miscellaneous.
3. It has been observed that journals constituted the most frequently used form accounting for 1482 (35.3%) citations of the total (4201) citations. It is followed by citation to books (27.8%). The descending order of other materials cited as web articles (13.1%), Conference proceedings (10.7%), Reports (6.7%), Reference books (2.8%), Theses and Dissertations (1.8%), Miscellaneous (1.4%) and Newspapers (0.4%) citation of the total citations.
4. Out of the total 31 theses, highest 5 (16.12%) theses were related to research on university libraries.
5. The single authored papers are more in number and two authored papers are 18.1% of total 4201 citations. Single Personal authorship of the total cited papers of Ph.D theses were predominant accounting for about 50.7% of the citation.
6. Maximum number of single author paper is also found in journal citation. About 67.27% of cited papers have single authorship out of 1482 journal citations.

7. The rank list of journals in the field of Library and information science reveals that journal citations cited by researchers are scattered among 260 journals. Among them, 'Herald of Library Science' secured the first rank for being cited more number of times with 6.89% of total journal citations, followed by 'Annals of Library Science and Documentation' (6%) and 'IASLIC Bulletin' (5.47%). The first 6 journals in the rank list contribute nearly 25% of total journal citations.
8. The maximum number of journal citations belonged to the period 1989-1998 with 601(40.37%) citations.
9. The chronological distribution of book citations, maximum number of citations 494 (42.37%) are covered during the period of 1989-1998, followed by the period 1999-2008 accounting for 315 (27.02%).

TESTING OF HYPOTHESES

1. Hypothesis number one states that: Journals are mostly cited sources by the researchers in the field of Library and Information Science. This was put to test and found to be true. It is evident from Table 4.5 that the journals contribute the highest number of citations.
2. The second hypotheses states that: Web citations are also high in the theses of Library and Information science. This was put to test and found to be true. It is evident from Table 4.5 that the web citations are ranked third with 550 citations.
3. The third hypothesis states that: Single authorship is high compared to Collaborative authorship in the period of study. This was put to test and found to be true. It is evident from Table 4.6 and 4.7 that the single authorship is high compared to collaborative authorship.
4. The fourth hypothesis states that: The half-life value of journal citations is high as compared to book citations in Library and Information Science. This was put to test and found to be true. It is evident from Table 4.11 and 4.12 that the half-life value of journal citations is high compared to book citations

CONCLUSIONS

The wider application of Citation Analysis techniques is leading to the development of new and more precise techniques for economical and efficient management of the material and the Citation Analysis studies are carried out on well-established subject area.

1. Average citations 101-150 are in 15 (48.39%) theses. In 9 (29.03%) theses 51-100 citations and in 4 (12.90%) theses 0-50 citations are found. In 2 (6.45%) theses 151-200 citations are found. More than 200 citations are in only one thesis.
2. In the 31 these the topics most popular include; University Libraries (ranked first with 5 Ph.D. theses). College Libraries and Information & documentation centre (ranked second with 4 Ph.D. theses). Public Libraries (ranked third with 3 Ph.D. theses).
3. The citations formats used in the Ph.D theses include journals, books, websites, conference proceedings, reports, reference books, theses and dissertations, newspapers and miscellaneous. The most cited items are journals, which accounted for 1482 citations. The use of newspapers is very low. Other materials or citations format i.e. conference proceedings, theses and dissertations apart from books and websites that ranked second and third are moderately used in the Ph. D theses.
4. Web usage from various citation analyses carried out might simply indicate that its thorough utilization would be discipline independent and would anchor on the promotion of information technologies especially the internet by institution and government.
5. Authorship pattern of citations cited in the Ph.D theses indicates that out of total number of 4201 citations, 2129 (50.7%) are by single author. The findings show that highest citations are by single author. Two authors that show 759 (18.1%) citations follow it and 693 (16.5%) citations are by corporate authorship.

6. Authorship pattern of journal citations also show that highest citations are by single author. Two authors that show 298 (20.11%) citations follow it.
7. In all 260 journals, titles are found in 31 Ph.D theses. *Herald of Library Science* is the most cited journal having 102 citations. Citations to *Annals of Library Science and Documentation* is ranked as second in the list of most cited having 89 citations. IASLIC Bulletin is ranked third in the list of most cited journals having 83 citations.
8. The most frequently cited journals are actually Library and Information Science field, which is in line with the facts that any research discipline tend to cite more from the journals that are from core areas of that discipline.
9. The chronological distribution of book citations, maximum number of citations 404 (42.37%) are covered during the period of 1989-1998 followed by the period 1999-2008 accounting for 315 (27.02%).
10. The chronological distribution of journal citations, distribution for the 10 years period blocks indicates that the period 1989-1998 covers maximum citations figuring 601 (40.55%), followed by the period 1999-2008 figuring 46 (28.27%) citations.
11. Analysis of citations by age of the cited document can indicate the useful life of documents. This useful life has also been called as the 'Half Life' of that documents, sometimes expressed as the rate of Obsolescence. Half-life denotes the time during which half of the currently active literature was published. In this study half-life period for books is 15 years. Similarly, the half-life period of journal is 17 years.

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