

A BIBLIOMETRIC STUDY OF POSTGRADUATE THESES COLLECTION ON LIBRARY AND INFORMATION SCIENCE IN THE UNIVERSITY OF COLOMBO

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ABSTRACT

Bibliometrics is the statistical analytical process of bibliographic information of research outputs and publications. This type of research is used more effectively to overcome problems faced by librarians such as selection and weeding out of information resources in the field of Library and Information Science. Further, bibliometric analytical research demonstrates the impact of researches on researchers. These studies identify the emerging areas of research as well as strengths and weaknesses, top performing journals and researchers in a subject area and finally inform future research priorities too. The purpose of this study is to investigate the pattern of references in theses. Current study examined 50 theses submitted to the Faculty of Graduate studies in the University of Colombo during the period from 1999 to 2009 as a partial fulfillment of the Master's Degree in Library and Information Science (MLS). Total of 3349 citations were found from 50 postgraduate theses. Study revealed that journals were the most heavily used source of material with 41% of the citations. The second most heavily used source of material was books accounting for 34% of the citations. Most heavily used journal was "College and Research Libraries" while most heavily used book was the "Encyclopedia of Information and Library Science". Among those citations, Authorship contribution for journal articles, single author contribution accounts for 973 citations (70%) and two authors contributions were 806 citations (22%) while three authors contribution of citations were 58(4%). More than three authors contribution accounts for only 40(3%) while corporate author contribution was 9(1%). Half-life of overall reference sources is approximately 09 years. Recommendations were made to strengthen the quality of postgraduate research encouraging using more current journal articles in the printed and electronic versions as well.

KEYWORDS

Bibliometrics, Library and Information Science, Citations, Authorship pattern, statistical analysis

BACKGROUND OF THE STUDY

Bibliometric analysis is a research technique used by researchers in different subject disciplines. University scholars are carried out research studies and research findings usually come out as reports, conference papers, theses, dissertations and articles. To produce a quality research output these researchers use various types of reference materials. Therefore, the role of the librarians would be to determine researcher's information seeking behavior and accordingly provide their needs. Librarians have to develop collection management tools to manage the library collection in an effective and an efficient manner.

This study is based on the bibliographies and content pages in the postgraduate theses available in the field of Library and Information Science. Bibliographies of the theses submitted for Masters of Library and Information Science (MLS) in the University of Colombo. The study is limited to 11 year period from 1999 to 2009.

Master of Library and Information Science programme in the University of Colombo started in 1992. This programme was successfully conducted up to year 2009. In 2009 this programme was terminated and a new degree programme, Masters in Information Systems Management has been introduced.

As the present study uses the theses of Library and Information Science it would help identify prominent sources of information related to this particular field. Based on the results of bibliometric studies librarians can develop collection development policies to manage information resource needs and limited library budget effectively.

THEORETICAL BASIS OF THE STUDY

Rule of 20/80 used by Bibliometric researchers in order to select information sources in various subject disciplines. Eighty percent of the total resources requirement can be extracted from just 20% of the total collection. That means librarians can fulfill 80% user requirement by identify this 20%. In order to discard library materials librarians used bibliometric studies to identify half-life of publication. Half-life of the publication varies according to source materials.

RESEARCH PROBLEM

It is observed that in the field of Library and Information Science bibliometric research is used more effectively to overcome problems faced by librarians such as selection and weeding out of information resources. Further, bibliometric analytical research demonstrates the impact of researches on researchers. These studies identify the emerging areas of research as well as strengths and weaknesses, top

performing journals and researchers in a subject area and finally inform future research priorities too. Also, the studies in this pattern are very rare in Sri Lanka. Therefore, this study is important to the field of Library & Information Science.

OBJECTIVES OF THE STUDY

- To determine bibliographic form of reference materials in the field of Library and Information Science.
- To determine authorship pattern of cited documents/ articles.
- To identify core journals used in postgraduate research studies in the field of Library and Information Sciences.
- To identify heavily used books in the field of Library and Information Science
- To find the half-life of reference sources in the field of Library and Information Science.

LITERATURE REVIEW

Literature reveals that researchers have carried out number of bibliometric studies in the field of Library and Information Science. Bibliometric researchers have used various types of information sources. Among these are databases, web sites, theses and dissertations.

Mamdapur, Govanakoppa, and Rajgali (2011) conducted a research study titled "Baltic Astronomy (2000-2008) - A Bibliometric study". In this study authors have analyzed distribution of contributions, authorship pattern, distribution of references and the length of papers. This research study was based on Baltic Astronomy during the period 2000 to 2008. Within this time period 8489 references were analyzed. Most number of references was appended in the year 2004(17.92%). Degree of collaboration was 0.89 that means single authored contribution was very low compared to multi authored contribution. Journals were the primary reference source and authors from USA have contributed the maximum number of papers.

Harwade and Dankhade (2002) carried out an analysis of doctoral research in Economics. Researchers have used 23 doctoral theses submitted to Nagpur University, India during the period 1996-1999. Most cited reference source was books accounting for 42.77% while journal reference stood at 32.81%. Remaining reference sources accounted for less than 15%. Single authored paper contribution recorded the highest number. Half-life of journals was 22 years.

Reddy (1999) conducted a citation analysis with 186 doctoral dissertations submitted to Sri Venkateswara University, Tirupati, India in the field of Chemistry. Most referenced form of information sources were journals (85.03%) followed by books (10.44%). All other sources of information recorded less than 10% references. This study also reveals the authorship pattern of reference sources. Collaborative author publications were the highest accounting for 77.50% of reference sources

and the remaining 22.50% of the references came from single author publications. Half -life of journal reference and book reference were more or less similar with 17.68 for book citations 17.84 years for journals.

Järvelin and Vakkari (1990) conducted a research study on content analysis of research articles in Library and Information Science. The main objective of this study is to find out how international research is distributed over various topics in this field and what methods have been used to investigate these topics. This research study used a sample of 833 articles from 37 core journals in library and information science during 1985. All 833 articles were analyzed and 54% of the articles were classified as research articles while 46% were professional articles. The fraction of LIS activities and information storage and retrieval among the topics of the article was almost 30% each. Information seeking was 6% and scientific communication was 7%. The proportion of empirical research method was 56% while survey method accounted for 22%. Argumentation was employed in 23% of the articles and system analysis description and design in 15% of the articles.

RESEARCH DESIGN

In this study, a literature survey was first carried out in order to gather related information. Bibliometric techniques are used as research methods. This kind of analysis produces more accurate results about the information behavior of researchers in any subject discipline. For this study 50 MLS postgraduate theses submitted to the University of Colombo within 11 year period from 1999 to 2009 have been considered as source documents. In order to collect relevant data, bibliographies and title pages of all 50 MLS theses were used. From these fifty theses a total of 3349 citations were recorded. Bibliographies of theses have been used to collect data such as material titles, article title, year of source material, total number of citations, source type, source format, and number of authors of each citation. Submission year and title of thesis were extracted from title pages. All these data was then fed in to excel worksheet and tabulate in order to extract Tables and Figures.

All reference materials were grouped in to 16 categories to identify the most heavily used reference materials in field of Library and Information Science. Scholars do their research studies as a collective effort or individually. To identify the level of collaboration of reference materials this study has analyzed authorship patterns of all citations. Degree of collaboration represents team work in any given field. The study considers only the degree of collaboration in journal articles.

Identification of different formats of reference materials is another fact the librarians should take note of. To identify the format of reference materials that is print or online, data is cross-classified. The usage of reference materials varies from one discipline to another the study therefore analyses average number of citations per thesis by reference materials. Year-wise distribution of citations and theses are

also analyzed to identify the submission pattern of theses and citation usage. Study checks the availability of core journals in the field of Library and Information Science in the University of Colombo.

Today a number of bibliometric laws are available for the use of researchers. Out of these laws the present study has used the Bradford's law. In order to identify archival usage of reference materials, this study has tabulated the age distribution and also calculated half-life of all citations. The study has identified the difference of half-life by type of material. In order to present the results of this study, Tables, Figures and formulae and statistical techniques are used extensively.

BIBLIOMETRIC ANALYSIS

Researcher has extracted relevant information from bibliographies as well as from content pages of theses. 3,349 citations were extracted from 50 theses submitted within a 11 year period from 1999 to 2009. In order to obtain necessary tables, graphs and other relevant information Excel worksheet was used. Using various statistical methods these citations were analyzed and presented below.

DISTRIBUTION OF CITATIONS BY TYPE OF SOURCE MATERIAL

Reference materials are categorized into sixteen groups. Books, Journals, Conference papers, Handbooks, Reports, Dictionaries, Theses & dissertations, Acts, Websites, Glossaries, Manuals, Pamphlets, Newspapers, Newsletters, Bibliographies, Others (Yearbooks, Abstract, Letters, Indexes, Gazettes)

According to source materials used by researchers in the field of Library and Information Science, when consider total of 3,349 citations, journals were the heavily used source material accounting for 41%. This was followed by books, accounting for approximately 34%. Approximately 75% of total citations were covered by the above two types of source materials.

ANALYSIS OF AUTHORSHIP PATTERNS FOR CITATIONS

Citations can be divided in to several categories based on authorship. It may be single author, collaborative authors (citations with more than one author) or corporate author (citations which are produced by organizations or institutions). Such an analysis would enable the researcher to find the nature of authorship pattern of reference sources in the field of Library and Information Science. It would reveal the portion of single vs multi author papers and would also determine the degree of collaboration.

AUTHORSHIP CONTRIBUTION FOR JOURNAL ARTICLES

Present study generated authorship patterns of all journal article citations related to Library and Information Science during the selected period of study. It was analyzed to determine the percentage of contribution, whether it is single author, two authors, three authors, more than three authors and corporate authorship (CA). Single author

contribution accounts for 70%. Two authors contributions were 22% citations while three authors contribution of citations were 4%. More than three authors contribution accounts for only 3% while corporate author contribution was 1%.

CORE JOURNALS RANK

According to this research study journal articles are the most heavily used source material by the researchers in the field of Library and Information Science. Journal citations are scattered among 418 journals. Among them College and Research Libraries recorded rank one with 56 citations. Rank number 2 goes to "Aslib Proceedings" with 44 citations. Third highest number of citations was recorded "Library Management" and "Information Development" with 41 citations for each.

THE MOST HEAVILY USED BOOKS

Within this study has identified heavily used books in postgraduate theses in the field of Library and Information Science in given period. "Encyclopedia of library and Information Science" is the most used book with 13 references. There were eighteen books which have more than five citations. Total of 1,140 book citations were extracted from 50 theses. Out of these citations, 134 came from the list of heavily used books it's accounted for only 11.7% of total book citations.

AGE OF CITED MATERIALS

In order to calculate half-life of reference materials used by researchers in the field of Library and Information Sciences, theses submitted years and reference materials published years were recorded. This will clearly indicates librarians to whether the researchers are using recent publications or the old ones and also helps to manage library collection accurately. Half-life of reference materials were calculate in years, within this study half-life were calculated by obtaining age difference between theses submitted year and year of reference materials.

Findings reveal that the thirty two reference materials were published in the same year of the submission of theses. Less than half of the citations were nine years old and more than 75 percent of citations were 17 years old. Most number of citations (243) was 03 years old. More than 12 years citations of publications were used less than 100 citations. Half-life of overall reference sources is approximately 09 years.

According to this research study journals are the most frequently used reference material within this field. Half-life of journal citation is seven years old while seventy five percent of journal citations were 17 years old.

CONCLUSIONS & RECOMMENDATIONS

This research study reveals the following bibliometric features.

- Journals were the most heavily used referenced material in the field of Library and Information Science which is closely followed by books.

Reference material which were used by the researcher are written by single author or collaborative authors within this study contribution of single author references materials is higher compared to collaborative author contribution.

- Related to field Library and Information Science has identified the journal "College and Research Libraries" was the most referenced journal by researchers. When consider most heavily used book, the book title "College and Research Libraries" was the most heavily used reference book in the field of Library and Information Science.
- All reference materials half-life value was nine years. When consider half-life of journals references used by postgraduate researchers are 7 years.

Based on the bibliometric analysis, it is recommended to have training programme in literature searching for postgraduate researchers by the librarians. The library, University of Colombo must be pay considerable attention for this field when subscribing electronic databases

Compared to authorship pattern single author articles seem to be more popular in the field of Library and Information Science. Then it is better to encourage Postgraduate students to publish their research work as group work. This trend will helps to produced fruitful research studies within this field.

Core journals have been identified by this research study then it is necessary to subscribe these journals regularly. It is recommends to have proper marketing programme for the postgraduate students to use available journals for their research studies.

Considering half-life of library reference materials in the other fields too librarians can discard unused library materials from the library then it will enable to solve shelving problems in the library.

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INSTITUTIONAL REPOSITORIES IN INDIA

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ABSTRACT

The aim of this study was to analyze the institutional repositories in India. A total of 98 institutional repositories were selected from Open DOAR, ROAR and individual IRs. A checklist was used to evaluate the contents of the repositories. The analysis revealed that a majority of the repositories deposit content below 5000 and only a very few have deposited more than 50000 items. It is found that a majority of the repositories run on DSpace open-source software. Articles and theses and dissertations are the major items deposited in the repositories. Majority of the repositories registered with Open DOAR. Majority of the repositories are either affiliated to research institutions or universities. The number of institutions having specific institutional repository policies is very low.

KEYWORDS

Institutional Repository, Research Repository, Open Access

INTRODUCTION

Academic and research institutions are in the forefront in the research and development activities and they strive to bring research output to the community as a whole. They collect, preserve and make accessible to those who need it. This sharing of intellectual output brings fame and status to the institution. Research scholars prefer to publish their research output in the form of research articles in peer reviewed research journals whether print or electronic. The use of computer and other allied digital technologies revolutionised the way information is stored, preserved and disseminated.