

Library and Information Science Research: A Bibliometric Study of Library Philosophy and Practice, 1998 to 2005

Muhammad Anwar, PhD scholar, school of Management and Economics UESTC, China.
mohammad.anwar76@yahoo.com

Professor: Dr.Tang Zhiwei, School of Political Science and Public Administration, UESTC, CHINA.
tangzw@uestc.edu.cn

Abstract

Bibliometrics is a set of mathematical and statistical methods used to analyze and measure the quantity and quality of books, articles, and other forms of publications. This study aims at analyzing the research performance output in library and information science research articles, published in an online journal, *Library Philosophy and Practice* (LPP). This study covers the papers published during the years 1998 to 2005. Country contributions, author collaborations, paper lengths and individual author contributions during the period of January 1998 to December 2005 have been analyzed and included in this paper.

Key words:

Bibliometrics; Research Collaborations; Author Ranks, Library & Information Science (LIS) Research

Definition of Key Terms

1. **Bibliometrics:** Bibliometrics is a set of mathematical and statistical methods used to analyze and measure the quantity and quality of books, articles, and other forms of publications.
2. **Collaboration:** Collaboration is working with each other to do a task. It is a recursive process where two or more people or organizations work together to realize shared goals.
3. **Rank:** A number of persons forming a separate class in a social hierarchy or in any graded body.
4. **Research:** A systematic way of finding truth and facts which in order to increase the knowledge and new application.

Introduction:

The research process is sign of progressive of any society and the outcomes of any research are durable benefits for any academia and people. Research is also used as a basic tool for development of a particular area. The bibliometrics was first defined by Allan Prichard in 1969 that'' the application of mathematical and statistical methods of books and other media of communication, it is associated with different set of instructions to find out authors works, publications ratio, and so many one. Kawatra (2000) the Bibliometric is a field based on analysis of books, and others like materials on quantitative base no use in qualitative one. There are number of laws applied in different fields but bibliometrics is related to library and information science. There are three laws which are Lotka's Law, Bradford's Law and Zifp's Law. Lotka law deals with the frequency of publication by authors on a given fields. Bradford law deals with the number of core journals in given fields of study. Zipfs law deals with to product the frequency of words within a text.it concerns with ranks of words. Kousar & Mehmood (2008) the term bibliometric study is used in quantitative analysis of publications of a single or corporate body or any like fields. Sauvageau, Desnoyers and Godin (2009) stats that the bibiometric study is increased during last few years a so, it covers different aspect of any publication which need to evaluate e.g. authors patterns, collaboration works, papers length as well as impact factors to be test with the help of the bibliometrics study.

This study has been conducted for a bibliometric analysis of papers appeared in *Library Philosophy and Practice (LPP)*, one of well-known open access online journals of LIS, published by University of Nebraska, Lincoln, USA. The study covers all the issues that have been published, starting from 1998 to 2005.

Objectives of the Study

This study has been conducted to serve the following objectives:

1. To know the research articles published from 1998 to 2005 in LPP.
2. To find out the country wise contribution in the publication of research articles in the field of library and information science during the studied period, i.e., January, 1998 to December, 2005.

3. To identify the author collaborations during the studied period.
4. To recognize the length of papers published during the studied period.
5. To explore author ranks who have published their research papers in LPP during the studied period.

Research Methodology:

The issues of the online Journal, *Library Philosophy and Practice* (LPP) from January, 1998 to December, 2005 have been taken into consideration for this study. Papers appeared in the journal, during this period have been collected as data and analyzed according to the criteria as per objectives of this study. Manual computation of statistics has been made with the help of computer programs like MS Excel and calculator.

Review of Literatures:

Sauvageau , Denoyers and Godin (2009) .In research paper under the title'' Mapping the literature in forensic science: A Bibliometric Study of North American Journal from 1980 to 2005.they describes the overall situation of that particular journal which is published from said area. The study has covered 25 years of the periods. They stated the contribution of United States which has increased from 19.2% to 61.0%. They also justify the contribution of literatures which has increased from 10.5% to 40.7% includes anthropology and biology.

Thansukodi (2011) In his research article under the title '' Bibliometrics Analysis of India Journal of Chemistry'' He ascribes the number of articles were published in the period of his work that was 974. The majority numbers of article were published in 2005 which is 26.80%. He also describes the joint authors' contribution round about 90.25% and most of them from India. Most of the authors used this journal for concern source which were in 45.23%. Last but the least he stats that majority paper length were from 5to 8 pages which has 38.20% in number.

Swain and Panda (2010) In their research article under the title of '' journal of the intellectual property right, 2002-2010: A Bibliometric study'' they studied the said above journal from the selected period of 2002 to 2010. They search the number if articles have 332 which carried the 1541 journal citations in nine years of time. The numbers of authors contributed were 471. They justified that the collaborative work were very less in the said period of study. They found the average number citation of related article were in 0.66. They also describe the self-citation articles were in 22.01% in numbers. They justify these journals were cited mostly e.g. Journal of

Intellectual Property Right, European Intellectual Property Review, Research Policy, World Patent Information, Trademark Reporter, and Current Science.

Data Analyses and Interpretation:

After collection of the data, it has been analyzed and interpreted statistically in this section. Descriptively presentation has been included in order to clarify findings. These findings will be helpful for researching and measure of the importance of bibliometrics in the field of library and information sciences as well as exploring the contributions made by different authors and geographical locations.

Growth of Literature: The year wise publication of the papers that have been published in the journal (Library Philosophy and Practice), during the period that counts Eight years; a total number of 85 papers were published. The highest number of papers was published in 2005, which was 21 and least number of articles was published in the year of 1998 that was 03 in numbers. Frequency of publication of papers from 1998- 2005 has been shown in table1.

Year wise Publication of Articles Table

| S.NO | YEAR | Articles Published | Percentages |
|--------------|-------------|---------------------------|--------------------|
| 1 | 1998 | 03 | 4.4776 |
| 2 | 1999 | 08 | 8.9552 |
| 3 | 2000 | 09 | 10.4477 |
| 4 | 2001 | 06 | 8.9552 |
| 5 | 2002 | 12 | 16.4179 |
| 6 | 2003 | 11 | 11.9402 |
| 7 | 2004 | 15 | 14.9253 |
| 8 | 2005 | 21 | 23.8805 |
| Total | | 85 | 100.00% |

Country wise Contributions: This section shows from 1998 to 2005 which country contributed more research articles in the fields of library and information science. USA is the country which contributed most papers, i.e., 56; India is at number two with 19 articles, preceding Nigeria having 03 papers and Russia with 03 papers. France is ranked number four with a mere number of 01. Top 08 contributing countries have been displayed along with their number of papers contributed in figure 1, while table 2 presents a detailed view of contributing countries.

Countries Rank Table

| Sr.NO | Country name | Published paper | Rank | Percentage |
|--------------|--------------|-----------------|------|----------------|
| 1 | USA | 56 | 1 | 65.8823 |
| 2 | INDIA | 19 | 2 | 22.3529 |
| 3 | NIGERIA | 03 | 3 | 3.5294 |
| 4 | RUSSIA | 03 | 3 | 3.5294 |
| 5 | FRANCE | 01 | 4 | 1.1764 |
| 6 | SCOTLAND | 01 | 4 | 1.1764 |
| 7 | GERMANY | 01 | 4 | 1.1764 |
| 8 | GREECE | 01 | 4 | 1.1764 |
| Total | | 85 | | 100.00% |

Author collaborations: The collected data shows that the author collaboration in their respective subject areas has increased with passage of time as a whole, although at some points it is found decreasing. Single authored papers are dominant in quantity with 61 papers in number that calculates 71.76percent of total papers. Maximum number of authors is five who have collaborated for writing up the papers during the eight years and it occurred only one times. A comprehensive statistical presentation in this regard has been given in table 3, whereas figure two represents an author wise graphical view of the data on solo efforts by single authors compared with collaborative efforts by multiple authors. It can be concluded by these findings that the contribution of the authors who have been working individually is slightly more than half of the total number papers, nevertheless, this trend decreased with passage of time. Figure 2 shows that during the eight years, single author papers remained in majority.

Author's Collaborations

| Authors | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Total | % |
|---------|------|------|------|------|------|------|------|------|-------|---|
|---------|------|------|------|------|------|------|------|------|-------|---|

| | | | | | | | | | | |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|
| One | 3 | 6 | 6 | 6 | 7 | 8 | 7 | 18 | 61 | 71.76 |
| Two | 0 | 0 | 0 | 0 | 5 | 3 | 8 | 2 | 18 | 21.17 |
| Three | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 05 | 5.88 |
| Four | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 00 |
| Five | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 01 | 1.17 |
| More | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 00 |
| Total | 03 | 08 | 09 | 06 | 12 | 11 | 15 | 21 | 85 | 100.00 |

Paper Length: When we look at length of the papers, we find that most of the papers' length is between 6 to 10 pages, i.e. 38 articles; preceded 20 articles, of which length is 1 to 5 pages. Longer papers with a length of more than 30 pages per paper are only seven in number, i.e., 8.23% percent of the total number of papers. A complete year wise frequency distribution in this regard has been included in table 4.

Papers Length

| Paper length | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Total | % |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|
| 1-5 | 2 | 00 | 0 | 1 | 5 | 4 | 1 | 7 | 20 | 23.5294 |
| 6-10 | 1 | 4 | 4 | 3 | 6 | 3 | 8 | 9 | 38 | 44.7058 |
| 11-15 | 0 | 2 | 1 | 2 | 1 | 0 | 5 | 4 | 15 | 17.6470 |
| 16-20 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 05 | 5.8823 |
| 21-30 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 07 | 8.2352 |
| 31-40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 00 |
| more | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 00 |
| Total | 03 | 08 | 09 | 06 | 12 | 11 | 15 | 21 | 85 | 100.00% |

Authors Ranks: Author ranks on the basis of number of their papers published during the period of study have been determined and shown in table 5. The basic qualifying criterion for inclusion in this table was set as publishing at least one paper in the studied issues of the journal. According to the findings, the first two positions have been occupied by USA authors. First two ranks are purely held by USA Ellen.D.Gilbert and Daniel.C.Casciato, with 03 and 03 papers respectively and 2nd rank is shared by Nine USA authors two form India and one each from Germany, Greece,

Nigeria and France. The authors who have qualified in the set criteria are 20 in numbers; there were nine authors who wrote two articles each in the said study period. Top twenty ranked authors have been displayed in table 5 to view them at one glance.

Authors Rank

| S.No | Authors | Country | Papers | Rank |
|------|------------------------------|---------|--------|------|
| 1. | Ellen D. Gilbert | USA | 3 | 1 |
| 2. | Daniel.C.Casciato | USA | 3 | 1 |
| 3. | Elaine A. Nowick | USA | 2 | 2 |
| 4. | Christy Donaldson | USA | 2 | 2 |
| 5 | Alessia Zanin-Yost | USA | 2 | 2 |
| 6 | John J. Doherty | USA | 2 | 2 |
| 7 | John Buschman | USA | 2 | 2 |
| 8 | Cecile Bianco | USA | 2 | 2 |
| 9 | Jim Kapoun | USA | 2 | 2 |
| 10 | Audrey Fenner | USA | 2 | 2 |
| 11 | Karl Bridges | USA | 2 | 2 |
| 12 | <i>M. Christina Vasanthi</i> | INDIA | 2 | 2 |
| 13 | <i>Parameswar .B</i> | INDIA | 2 | 2 |
| 14 | Robert L. Bolin | RUSSIA | 1 | 3 |
| 15 | Preeti Mahajan | INDIA | 1 | 3 |
| 16 | Elaine Peterson | GERMANY | 1 | 3 |
| 17. | Markos Dendrinis | GREECE | 1 | 3 |
| 19 | Ukoha O. Igwe | NIGERIA | 1 | 3 |
| 20 | Primoze Bizjek | FRANCE | 1 | 3 |

Major Findings of the Study

Following are the major findings of the study:

- The highest number of articles was published in year 2005, which counts 21, whereas least number of articles was published in the year 1998, i.e., 03.

- USA is the country that has maximum contribution of 56 papers (69.88 percent); 2nd number is India with 19 articles (22.35 percent); Nigeria contributed 3 papers (3.52) and Russia has furnished 3 papers (3.52 percent).
- Authors who have written their papers individually are in majority, i.e., 61 (71.76 percent). During the first year of the studied period, 1998, there was no collaborative effort and all 100 percent papers were contributed by single authors. As far as the time passed on, no collaborations were increased and during the last four years, single efforts were found in majority.
- The dominant group of papers by their length RANGES FROM 6 TO 10 PAGES, COUNTING 38 (44.70PERCENT). SEVEN PAPERS WERE FOUND TO BE OF A LENGTH OF MORE THAN 21-30 PAGES.
- As much as the prolific authors are concerned, the data shows that Ellen.D.Gilbert and Daniel.C.Casciato USA who wrote most number of articles. The 2nd highest number is also from USA and INDIA who wrote 2 articles each.

Conclusion

Since the publishing of the online journal library philosophy and practices it was not popular that now it is quite well known online journal in the field of library and information sciences. With short period of time it has done wonderful job in the field of library and information sciences with publishing related papers of different authors throughout globe. The most important of its specialties includes its free and open to all online availability, with no subscription requirements. Everyone can access the online journal of library philosophy and practice through internet and can download full text articles with their requirements which they need to subscribe.

This journal has attracted the LIS professionals, including faculty, specialists and students. The present indicates a wide range and quantity of papers are being contributed and published from all localities around the world. The numbers of articles published during the eight years, starting from January, 1998 up to December, 2005 are 85, with an average of almost 10 papers per annum, which is a remarkable contribution in the literature.

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