

Citation Concentration in ASLIB Proceedings Journal: A Comparative Study of 2005 and 2015 Volumes

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Abstract

The present study tries to throw light on how citation is concentrated and distributed in the different parts of articles in ALSIB Proceedings Journal. In this present study we are trying to identify which part of an article attracts more citation. From the data it was found that the citation counts between 2005 and 2015 is increased in multifold. Further it is concluded that during 2005 citation concentration was in body and introduction part of the articles while in 2015 the citation was distributed across the articles but skewed in Introduction, Literature review and Methodology portion of the articles.

Keywords: Citation Concentration, Citation Distribution, ASLIB, Citation Trends, Citation Growth

1. Introduction

A "Citation" is the way of giving credit to the work a person has referred. In an academic writing citations are distributed across the article, starting from introduction to conclusion of the article. Citation concentration is also one of the bibliometric methods used to study citation in journal article. Citation concentration refers; concentration of the cited source in an article. Concentration of citations received are decreasing rather than increasing in today's online environment. (Larivière, Gingras, & Archambault, 2009) In the current study we are proposing citation concentration from another angle; it's how citation is skewed in different parts of an article. Citation concentration means to count and analyze the citations in different parts of the article (i.e., abstract, introduction, body, methodology, discussion, results, findings,

conclusion, etc.). Citation concentration helps in identify which part of an article receives more citation and how the trend is there in a particular journal.

ASLIB, the Association for Information Management is a British association of special libraries and information centers founded in England in 1924 as *Association of Special Libraries and Information Bureaux*. ASLIB Proceedings Journal is a reputed library and information science Journal. First published in 1928 and till today publish its journal articles. ASLIB Proceedings Journal is now published as 'ASLIB Journal of Information Management' (AJIM). ASLIB journal of Information Management (AJIM). Areas of interest include topics such as social media, data protection, search engines, information retrieval, digital libraries, information behaviour, intellectual property and copyright, information industry, digital repositories and information policy and governance.



The present study tries to analyze the citation concentration in each article of “ASLIB Proceedings”, journal of 2005 and 2015 volumes and to explore the fluctuation of the number of citations in each journal article during the year 2005 and 2015. It also explores the reference pattern, authorship pattern, subject of the cited article and sources of reference and median age of the references. This study covers 2 volumes (volumes published in the year 2005 and 2015), each volume consists of 6 issues and each issue contains 6 articles.

2. Literature Review

Lariviere and Yves (2009) conducted a study on “The Decline in the Concentration of Citations, 1900-2007” that has challenged recent research (Evans, 2008) and pointed out that the concentration of cited scientific literatures increases with the online availability of articles and journals. Yang et.al. (2010) conducted a study found decline in citing concentration or an increase in citation breadth because of (1) decreasing percentage of uncited published papers within a given year; (2) a higher percentage of papers required to account for the same proportion of citation than before; and (3) the steady decline in the Herfindahl-Hirschman index (HHI) of citation distribution. Haridasanand Kulshrestha (2006) employed the method of citation analysis in their research for identification of core documents and complex relationship between citing and cited documents for a particular scholarly community in geography. The study undertaken is limited to nine years, i.e. 1993-2001 and it reveals that the average number of citations is around 21 per article. The major source of information is books and documents published during the later half of the century (1982-91).

Dharanikumar (2014) in a paper investigated the research output performance of LIS Professionals and studied the citation analysis of all the journal articles published in the Library Management Journal during 2010-2012. A total of 139 articles published during 2010 to 2012 with 3053 citations and the study revealed that the journals (50.37% of citations) are the most preferred sources of information used by the researchers followed by Web resources with 19.26%, and remaining 30.37% of citations from books, proceedings, theses, reports and gazetteer. Kagra and Sharma (2014) carried out a study on “Reference analysis of doctoral thesis in the field ‘Education’: an interesting issue for librarians as well as scientometricians or bibliometricians”, during the year 1995-2008. 35 doctoral thesis of education and its 3,195 citations were analysed and found out that about 56.23% thesis were produced under single authorship and most of the literatures cited were about 20 years old. The periodicals were the major source of information and the largest number of total cited periodicals were of India origin (31.01%), followed by U.S.A. (17.83%) and U.K. (12.40%).

3. Research Gap

From the literature review it is evident that majority of the citation concentration studies had been done on the basis of the concentration of the cited source. Till now no major research had been carried out to know how citations are distributed within a research article and which part of the document attracts more citation. The present is to bridge the gap and to come out with a micro picture on each articles of

ASLIB Proceeding Journals for the year 2005 and 2015.

4. Limitations

This study had some limitations which are as follows:

- ❖ The present study is limited to two years i.e. only 2005 and 2015 volumes of ASLIB Proceedings Journal.
- ❖ For authorship pattern, only the first three authors of the citing articles had been taken up and other authors were not considered for the present study
- ❖ Citations in other than English language were not taken into account for the study.

5. Objectives of the Study

The following are the objectives of the present study:

- ❖ To have a comparative study on citation concentration in different parts of the article of 2005 and 2015 volumes.
- ❖ To study the reference pattern, sources of reference and median age of the references.
- ❖ To identify most cited author.

6. Methodology

This study is based on the citation concentration in ASLIB Proceedings journals, comparison of two volumes of the journal i.e. 2005 and 2015. Citation concentration is a bibliometric methods employed in this study to analyze the objectives of the study.

The ASLIB Proceedings journal (with 0.68 impact factor) is chosen as it is one of the leading journal as well as one among the top ten journals based on

the impact factor of the Library and Information Science journal. 2005 and 2015 volumes of this journal have been taken for data collection to study the fluctuation of citation and references during the year 2005 and 2015. The data presented in this paper have been retrieved from the Emerald Group of Publishing, which is accessible from NEHU Central Library. The data had been compiled from the online journal 'ASLIB Proceedings' of 2005 and 2015 volumes. All the necessary information were compiled, recorded and tabulated in the MS Excel Worksheet, in two tables i.e. -

6.1 Data Collection

The following are the data collected:

- ❖ Total number of Volumes - 2
- ❖ Total number of Issues - 12
- ❖ Total number of Articles - 72
- ❖ Total number of References - 2,900
- ❖ Total number of Citation – 4,451

7. Data Analysis

The following data analysis has been done based on the objectives of study:

7.1 Citation Concentration in Different Parts of the Article of 2005 and 2015 Volumes.

The study was to find out the citation concentrated in different parts of the journal article and also find out the most cited part of an article.

Total number of citations for both years is 4,451. In 2015 volume the total number of citation is 3,237 and in 2005 volume the total number of citation is 1,214 which is very less as compared to 2015 volume.

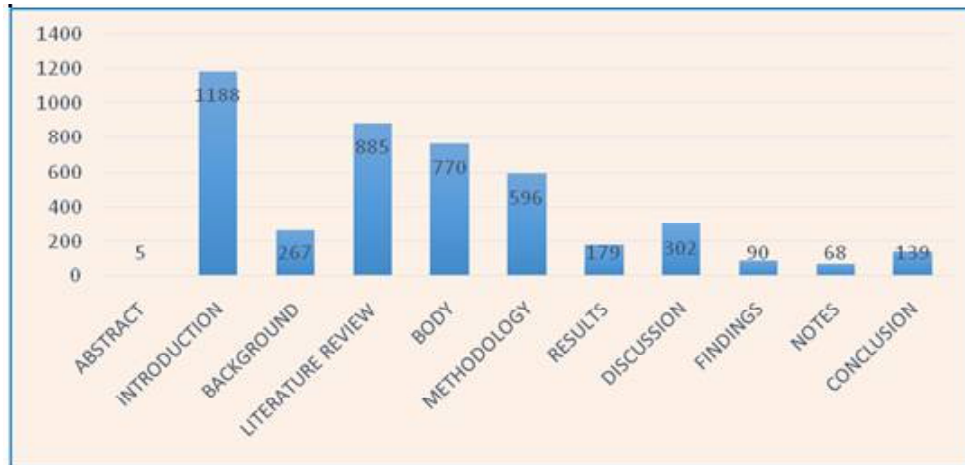


Figure 1: Citation Concentration of total Citations

The figure shows the concentration of citation in different parts of the article. Here, the most cited part is introduction with 1,188 citations followed by literature review part with 885 citations, next to it was the body portion with 770. The least cited part is abstract part with only 5 citations.



Figure 2: Citation Concentration in 2005 and 2015 Volume

The figure 2 shows how citations are distributed in the two year namely 2005 and 2015. From the data it was found that during 2005 body part of the article had received 533(40%) citation followed by the introduction part with 282(23%) , these two part

shares a major chunk of 66% . The rest 36 % is shared by the methodology part, literature review portion, notes etc., and for the whole period only 1214 works was cited. When it comes to 2015 the citation distribution trend was different from 2005.

During this period 3237 sources were cited it's an increase by two- fold. This phase introduction part of the article had cited the maximum with 906 sources which is around 29% of the total, next to it was literature review part which has 24.5 % of share with 794 source cited , in the third position was methodology part with 495 which 15% from the total share. The other parts of the articles had cited less than 10% in their respective portion of the document.

In a comparative study between 2005 and 2015 the citation concentration pattern has seen a paradigm shift. First the citation count has increased from 1214 to 3237 which is an increase by 250%. The trend in 2005 the major share of citation was in the body and introduction part of the article. While 2015 the major share is with introduction part, literature review, methodology, discussion and background portion of the article. Which means in 2015 almost all the parts of the articles had cited various sources in an increased manner when compared to 2005 time period.

7.2 Reference Pattern

7.2.1 Total Number of References

A total of 2,900 references were obtained from 72 articles of two volumes i.e. 2005 and 2015 volumes. 2005 volume includes 851 references, out of which 13 references are in different language other than English and 10 references are without proper information. 2015 volume includes 2049 references, out of which 7 references are of other language. So the total number references which are analyzed are summarized in the following table:

Table1: Total number of Reference

Sl. No.	Year	Total References
1.	2005	828
2.	2015	2042
Total		2870

7.2.2 Sources of Reference

The various sources of references were identified and the most prominent sources taken into consideration, and listed in the following table:

Sl. No.	Name of source	2005	2015	Total
1	Journal	416(55.2%)	1342(66.9%)	1758(63.7%)
2	Book	128(17%)	227(11.3%)	355(12.9%)
3	Website/webpage	149(19.8%)	168(8.4%)	317(11.5%)
4	Conference Proceeding	37(4.9%)	231(11.5%)	268(9.7%)
5	Reports	16(2.1%)	8(0.4%)	24(0.9%)
6	Dictionaries	1(0.1%)	1(0.0%)	2(0.1%)
7	Encyclopedia	2(0.3%)	2(0.1%)	4(0.1%)
8	Handbook	0(0.0%)	10(0.5%)	10(0.4%)
9	Thesis	1(0.1%)	12(0.6%)	13(0.5%)
10	Dissertation	3(0.4%)	5(0.2%)	8(0.3%)

From the table above it is found that the Journals are the most referred sources of information with 1,758 counts followed by Books with 355 counts and Website/Webpage with 317 counts and Conference Proceeding with 268 counts. Reports, dictionaries, encyclopedia, handbooks, thesis and dissertation have less than 1% contribution to cited sources. For both the years of study (2005 and 2015) the journals are the most referred source of document.

7.2.4 Most Cited Author

In this study many authors writing had been quoted in ASLIB Proceedings. After analyzing both years (2005 and 2015) volume articles, we found out that D. Nicholas is the most cited author with a frequency of 3, followed by Barrie Gunter with a frequency of 2, Peter Williams with a frequency of 2, Ian Rowlands with a frequency of 2 and Mostafa Jafari with a frequency of 2.

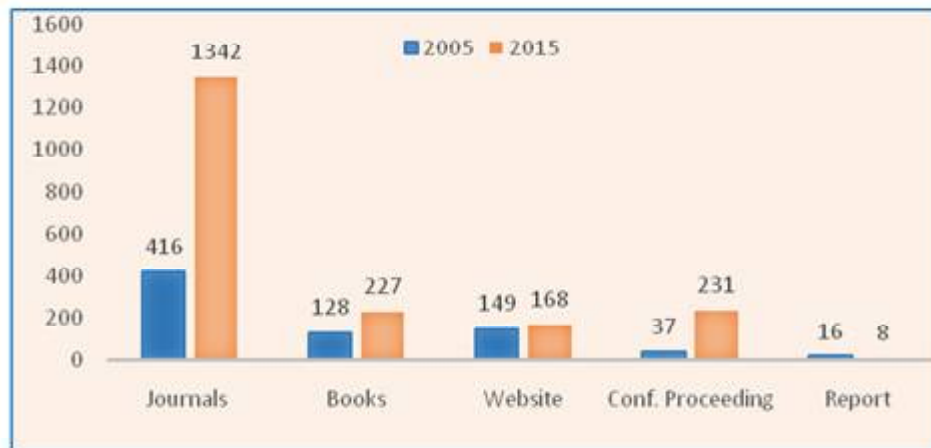


Figure3: Top 5 Sources of References in 2005 and 2015

7.2.3 Age of References

The average age of the total reference for both the years is 9.22 years. The most oldest reference is 261 years old (published in the year 1744) from the 57th volume, 2005, followed by 170 years (published in 1835), 152 years (published in 1853), 116 years (published in 1889) and 79 years (published in 1926).

The average age of the references to 2005 is 9 years, mode is 1 year and median is 5 years. The average age of references for 2015 is 9.45; mode is 1 and median in 6 years.

8. Results and Findings

From the observation made in this study the following points can be inferred. Finding reveals that:

- ❖ The 10 year gap between both volumes shows that the latest published papers include more citations and old published papers have less number of citations i.e. in 2015 volume the total number of citation is 3,237 and in 2005 volume the total number of citation is 1,214, which is very less as compared to 2015 volume.

- ❖ The analysis shows that in 2005 volume, citations are more concentrated in body of an article, followed by introduction and methodology whereas in 2015 volumes the citations were more concentrated in introduction part of an article, followed by literature review and methodology. The least cited part is abstract in both the two years.
- ❖ Journal has been found as the most referred source of Information in both the years of the study.
- ❖ The Median age of the references is 9 years.
- ❖ D. Nicholas has been found as the most productive author.

9. Discussion

The present research enables us to understand the importance of citation and its influence on an individual article and on a journal as a whole. This novel study carried to understand citation concentration on an individual journal. Average article size is from 5 to 15 pages and each article comprises of Abstract, Introduction, Literature review, Body of the article, Methodology, Results, Discussions and Conclusion part in both the time period of 2005 and 2015. For both years abstract part has least citations. In case of the introduction part in the first time period this part had only 282 citations while in the second time period it has 906. Citation during this period has been increased by 300%. The background part it was 24 Vs 243, the jump in the citation for this part is 10 fold. In the literature review part 2015 had 794 citations while 2005 had a meager of 91 citations. This through light that latest articles tend to review more articles on their research area compared to 2005. The body of

the article is one of the comprehensive parts of any academic writing. In this part the trend is reverse; in 2005 it had 533 citations while 2015 has only 237 citations, which around half in number when compared to 2005. The most important part of a research article; the methodology part, which is the backbone of any research work. In this part the citation was 101 during 2005 and 495 in 2015. So it's evident that the latest articles formulate their methodology on the basis of sound literature background and the other part like discussion, finding and conclusion 2015 articles has citing more sources than the counterpart.

From the empirical data it was found that journals constitute 63.7% of citing source, books are the next most used sources with 12.9% and webpage/website constitute 11.5%. Other sources like conference proceedings, reports, dictionaries, encyclopedia, handbook thesis and dissertation constitute 18% of the sources. The currency of the citation is around 9.22 year. In this part there is no major difference between 2005 and 2015.

10. Conclusion

The current study gives a clear picture on how citation is concentrated in each article of the ASLIB Proceedings. ASLIB Proceedings Journal which is now published as 'ASLIB Journal of Information Management' (AJIM) provides key insights into the latest international developments in the research and practice of information management and information science. From the research it can be concluded that citation trend had seen a positive change in 2005 majority of citation was concentration in body and introduction part of the articles while 2015 the concentration was distributed in all parts of the articles but most skewed in the

area of introduction, literature review, methodology and discussion.

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