

Citation Trends in Library and Information Science: A Bibliometric Study of "Library Trends" from 2012 to 2016

Jyoti Devi, Deepak Kumar and Rohit

PhD Scholar, Department of Library & Information Science, Kurukshetra University, Kurukshetra, India
Librarian, Gandhi Memorial National College, Ambala Cantt. (Haryana)

PhD Scholar, Department of Library & Information Science, Central University of Gujarat, Gandhinagar

ABSTRACT

It is an accomplished study regarding the subject of bibliometric under which the citation trends have been evaluated of the scholarly publication in the journal 'Library Trends' during the period 2012 to 2016. Bibliometric analysis has been used to study in detail the bibliographic features of the articles pertaining to Annals of library and information studies Journal regarding 219 articles made from volume 60 in 2012 to volume 64 in 2016. The maximum 60 numbers of articles were published in the fall issue. . It was found that highest author productivity with single author had 135 (61.64%) number of articles and joint authored papers were 84 (38.36%). Regarding the length of articles, it was found that maximum 29 number of articles were paginated in 11 to 21 pages' scale. In reference to range, it was observed that 0-20 range had 58 articles. . USA ranked 1st position with 109 number of contributions and UK ranked 2nd number with 22 articles. Journal articles ranked number one with 3497 (39.18%) citations. Rayward W. B. ranked number one among all authors with the 177 number of contributions. Among of all the journals Library Trends ranked 1st position with a number of 153 citations.

Keywords: Bibliometrics, Citation Analysis, Articles, Journals, Authors, Library Trends

■ INTRODUCTION

The subject of bibliometrics was first defined by Pritchard in the year 1969. Bibliometrics is a branch of information theory, which analyses quantitatively the recorded knowledge to know its properties and behaviour. If an article is published in a journal with a high impact factor, which is determined in part by the number of citations to articles within a particular journal, this raises the publishing profile of the author (De Bellis, 2009). The number of citations to that article over time are also a key measure of the productivity and the impact of that scholar.

Library Trends has been selected as the source journal for the present study. It is an essential tool for professional librarians and educators alike. It is a quarterly peer-reviewed academic journal (Jan, 2009). Library Trends published quarterly by the Johns Hopkins University Press, the USA in summer, fall, winter and spring by Graduate School, of Library and Information Science at the University of Illinois since 1952 edited by Boyd Rayward and Alistair Black [1] [2]. Therefore, a bibliometric study of this journal is of immense significance.

■ OBJECTIVES OF THE STUDY

The present study aims to evaluate the scholarly publication trends in the journal 'Library Trends' during the period 2012 to 2016. The main objectives of the study are:

- To study the year wise contribution of articles;

- To study the authorship pattern of the contributions;
- To study the Authorship Pattern of Contributions (Volume wise);
- To find out the authors' degree of collaboration;
- To study the length of contributions;
- To find the age of citations;
- To study the citation pattern of contributions;
- To find the ranking of top 5 cited authors; and
- To find the ranking of top 10 cited journals.

■ LITERATURE REVIEW

Santhi and Jayaprakash did a scientometric study on Thyroid Cancer Research. In their study they found that, 12,801 were total articles out of which highest and lowest were published in the year of 2015 and 2010. Schlumberger M was ranked one among all of the authors; Tuttle RM ranked 2nd position. In this study, there were total number of 9623 journal articles, 1391 reviews, 827 meetings abstract etc. [3]. Baeesa, Maghrabi, Msaddi, and Assaker analysed a metrics study on Quality of Spine Surgery Research in the Arab Countries. A total number of 2358 articles were selected, out of which 434 articles appeared between the period of 2000 to 2015. The Impact Factor of journals in this abstraction ranged within 0.089 - 6.87 with a median of 1.426. On the ranking basis of contributing countries, Egypt ranked 1st among all participated countries with a number of 114 articles [4]. Muhammad, Ahmed, Kafilah, Mikail Usman, and Ale Ebrahim conducted a bibliometric abstraction on Trade Liberalization. They found that articles authored by 2 authors got a lot of citations a part of 100 proficient cited online writing with a number of 41% followed by one author article with 39%. Four authored articles begun to accept admiring the atomic with 6% in this class while three authored articles produce just 14% [5]. Fiala and Ho did a metrics analysis on twenty years of Czech science. In this study, results represented that Academy of Sciences of the Czech Republic with 41,530 publications and 40% contribution in the Czech Republic's publications, followed by Charles University in Prague with a number of 26,301 having 25% publications and Masaryk University in Brno with a number of 7,252 having 6.9% publications [6]. Kramer, Onetto, Flores, Borges, and Feldens did a metrics study on the primary dentition on Traumatic Dental Injuries. Out of 1159 articles, a number of 152 articles with 13.1% focused on TDI in the primary dentition. The topmost countries with the ranking of their contributions are, Brazil ranked number one with 38.8%; Turkey ranked 2nd position with 11.8% of articles and Israel contributed a number of 6.6% articles [7]. Pouris and Ho conducted a bibliometric study on Ebola in Science Citation Index (SCI) Expanded. there were 1623 abstracts from 12 certificate types were indexed. Out of these articles, a total number of 70% were analysis articles, 10% were reviews, 7.8% were account items, and 4.7% were affair abstracts.

A total number of 1133 articles were analysed added thoroughly and appear that the majority with a number of 96% were in English [8]. Kolle did a bibliometric abstraction in natural hazards on the mapping of scientific abstract appear. In this study, it was apparent that between the years 2013 and 2014, there appeared 463 - 498 a lot of articles respectively. It was rigid that a number of references cited for anniversary commodity were added from 25.96 to 41.35. The page counts per commodity were hardly added in the year 2014 and the articles appear in the year 2005 with the 22.11 counts per citations and articles appeared in 2014 The 'Indian Institute of Technologies' was the top ranked institution with a number

of 84 articles [9]. Lee and Sohn conducted a metrics study in communication on mapping the Social Capital Research. On average, anniversary commodity had 3.66 citations, that is, total commodity either cited or was cited by 3 - 4 and others. A part of the 171 articles in the network, a number of 108 articles were not cited by the others, a number of 75 articles cited no added articles in the arrangement and 55 had neither in amount nor out-degree citations at all [10]. Yu, Wei, Tang, Mi, and Pan did a bibliometric abstraction on appraisal of the analysis trend of low-carbon activity technology investment. Activity Fuel was the most accepted responsible with 1224 records, accounting for 57.52% of the absolute number, followed by Environmental Sciences Ecology and Engineering, with a number of 33.04% and 24.34% of the absolute records [11]. Ma and Ho conducted a bibliometric abstraction on the allegory of ecology laws publications in Science Citation Index-expanded and Social Science Index. In this study, a number of 474 online articles appeared in both SCI-EXPANDED and SSCI journals. A total number of eighty-five percentage of abstracts in SCIEXPANDED and seventy-nine percentage of abstracts in SSCI were articles. The USA has a lot of individual countries in the contribution of articles and internationally collaborative articles, followed by UK and Canada [12].

■ SCOPE OF THE STUDY

The present study analyses the contributions in the volume ranging from 60 to 64 (Year 2012-Year 2016) of Library Trends Journal. This study has been done while keeping in view the growth and development of the journal believed to be significant for publishing an article.

■ METHODOLOGY

Methodology applied in the present study is bibliometric analysis which is used to study in detail the bibliographic features of the articles published in Annals of library and information studies Journal from 2012 to 2016. The data pertaining to Annals of library and information studies Journal regarding 219 articles made from volume 60 in 2012 to volume 64 in 2016.

■ ANALYSIS OF THE STUDY

The analysis of the articles and references cited in each article published in the journal has been done.

Table 1 Year-wise distribution of articles

Year	Volume	Issue	No. of Contributors	Percentage
2011-12	60	4	41	18.73
2012-13	61	4	44	20.10
2013-14	62	4	47	21.47
2014-15	63	4	47	21.47
2015-16	64	4	40	18.27
Total		20	219	100.00

A total number of contributions in 20 issues of 5 volumes of the source journal named Library Trends is 219. While consists of full articles and introduction. As indicated in table

1, it gives details regarding the distribution of 219 articles published in 5 years in the period of 2011-12 to 2015-16.

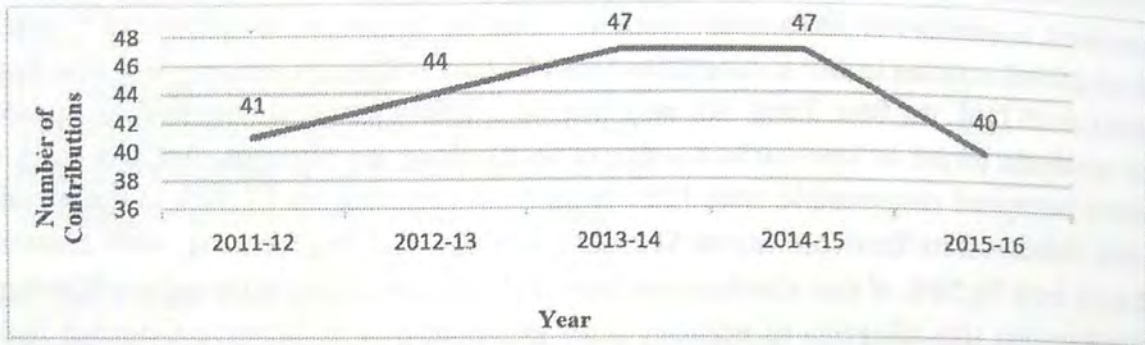


Fig. 1 Number of Contributions

Table 2 Issue-wise distribution of articles

Issue	Volume Number					Total
	60	61	62	63	64	
Summer	12	15	13	6	11	57
Fall	11	10	16	12	11	60
Winter	10	11	12	16	10	59
Spring	8	8	6	13	8	43
Total	41	44	47	47	40	219

Table 2 shows that issue wise distribution of articles. The maximum numbers of articles 60 were published in fall issue. The summer issue published 57 articles; winter issue has 59 articles. The minimum number of articles 43 were published in spring issue.

Table 3 Authorship Pattern

Year	Number of Authors				Total
	1	2	3	3 or more	
2011-12	29	8	3	1	41
2012-13	22	14	6	2	44
2013-14	30	10	6	1	47
2014-15	30	13	2	2	47
2015-16	24	14	2	0	40
Total	135	59	19	6	219
Percentage	61.64	26.94	8.67	2.73	100.00

Table 3 shows authorship pattern by author's contribution. There are 4 categories for determining the authorship pattern wide; 1, 2, 3, and more than 3 authors. It has found that most author productivity with single author having 135 (61.64%) number of articles. In this table, two authored papers are 59 (26.94%); three authored papers are 19 (8.67%), and three or more authored papers are 6 (2.73%).

Table 4 Year-wise authorship pattern

Year	Authorship		Total
	Single	Joint	
2011-12	29	12	41
2012-13	22	22	44
2013-14	30	17	47
2014-15	30	17	47
2015-16	24	16	40
Total	135	84	219
Percentage	61.64	38.36	100.00

Table 4 shows year wise authorship pattern. In year 2011-12, there is 29 single authored papers and 12 joint authored papers; in year 2012-13, there is 22 single authored and 22 joint authored papers; in year 2013-14 and 2014-15 respectively, there is 30 single authored and 17 joint authored papers. There is a total number of single authored papers is 135 (61.64%) and joint authored papers are 84 (38.36%).

Table 5 Length of the published articles

Year	Number of Pages			Total
	1 to 10	11 to 20	21 & more	
2011-12	5	20	16	41
2012-13	4	24	16	44
2013-14	9	29	9	47
2014-15	3	31	13	47
2015-16	3	18	19	40
Total	24	122	73	219
Percentage	10.96	55.70	33.34	100.00

Table 5 shows the length of the articles which were contributed by authors in library Trends journal during the period of 2011-12 to 2015-16. Three categories were defined to find out the actual length distribution of articles. The maximum number of articles 29 is paginated in 11 to 21 pages' scale.

Table 6 Degree of Collaboration

Year	Volume	Single author	Multi-authors	DC
2011-12	60	29	12	0.29
2012-13	61	22	22	0.50
2013-14	62	30	17	0.36
2014-15	63	30	17	0.36
2015-16	64	24	16	0.40
Total		135	84	0.38

In the present study the value of DC is:

$$DC = 84 / 135 + 94$$

$$DC = 84 / 219 = 0.38$$

Table 7 Range of references

<i>Range of References</i>	<i>No. of Articles</i>	<i>Percentage</i>
141 or above	6	2.73
121-140	4	1.82
101-120	5	2.28
81-100	13	5.93
61-80	21	9.58
41-60	35	15.98
21-40	77	35.15
0-20	58	26.48
Total	219	100.00

Table 7 shows the range of all citation were referenced by authors in 219 articles in Library Trends journal which were selected for the present study. The outcome showed that 0-20 range had 58 articles; 21-40 range had 77 articles; 41-60 range had 35 articles; 61-80 range had 21 articles; 81-100 range had 13 articles; 101-120 range had 5 articles; 121-140 range had 4 articles, and 141 or more range had 6 articles.

Table 8 Contributing countries

<i>Rank</i>	<i>Country</i>	<i>No. of contributions</i>
1	USA	109
2	UK	22
3	Canada	17
4	China	10
5	South Africa	9

Table 8 shows top 5 contributing countries. USA ranked 1st position with 109 number of contributions. UK ranked 2nd number with 22 articles.

Table 9 Total References

<i>Year</i>	<i>No. of articles</i>	<i>Cited References</i>	<i>Avg. References</i>
2011-12	41	1592	39
2012-13	44	1775	40
2013-14	47	1894	40
2014-15	47	1562	33
2015-16	40	2102	53
Total		8925	41

Table 9 shows a total number of citations which were received by Library Trends journal during the period 2011-12 to 2015-16. The average number of citations is 41 which is derived out per article.

Table 10 Total number of citable items

Sr. No.	Type of Citation	No. of Items	Percentage
1	Videos	20	0.22
2	News	66	0.73
3	Thesis & Dissertation	82	0.91
4	Seminar Papers	175	1.96
5	Conference Proceedings	193	2.16
6	Reports	206	2.30
7	Others	347	3.88
8	Web Resources	1004	11.24
9	Books	3335	37.36
10	Journal Articles	3497	39.18
Total		8925	100.00

Table 10 shows types of cited items in present study during the period of 2012 to 2016. There is a number of 347 (3.88%) in other items category. The number of total web resources citations is 1004 (11.24%). The number of books citations is 3335 (37.36%). As well as journal articles ranked number one with 3497 (39.18%) citations.

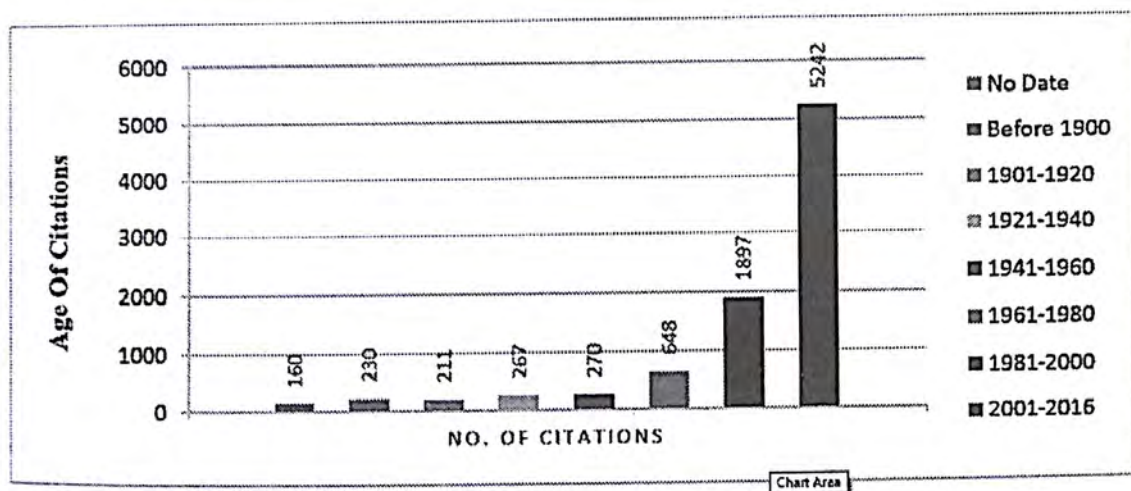
**Fig. 3** Age of citations

Figure 3 presents the age of cited references. The greatest number of citations covered in 2001-16 decade. The minimum number of citations were found in before 1900's decade.

Table 12 Ranking of top 10 authors

Rank	Author name	No. of contributions	Percentage
1	Rayward W. B.	177	18.76
2	Floridl L.	171	18.13
3	Hanauer J.	43	4.55
4	Usherwood B.	42	4.45

5	Williams D.	37	3.92
6	Black A.	31	3.28
6	Mehra B.	31	3.28
6	Smith L.	31	3.28
6	Wiegand W. A.	31	3.28
7	Otlet P.	30	3.18
8	Ostwald W.	28	2.96
9	Bruce C.	26	2.75
9	Lloyd A.	26	2.75
10	Wilson H. W.	24	2.54

Table 12 shows the ranking of most productive authors in present study during the period of 2011-12 to 2015-16. Rayward W. B. ranked number 1st among all authors with the 177 number of contributions. Floridi L. ranked 2nd number among all of the authors with 171 number of contributions. Hanauer J. ranked number 3rd number among all of the authors with 43 number of articles. Usherwood B. contributed 42 articles in the present study.

Table 13 Top 10 referred journals

Rank	Journal	Frequency
1	Library Trends	153
2	Library Quarterly	111
3	Library Journal	107
4	Journal of Documentation	94
5	College & Research Libraries	67
6	Journal of the American Society for Information Science & Technology	65
7	Journal of Academic Librarianship	60
8	Journal of Librarianship & Information Science	57
9	Journal of the American Society for Information Science	50
10	American Libraries	44

Table 13 shows ranking of the most referred journals in the present study during the year 2012 to 2016. Among of all the journals Library Trends ranked 1st position with a number of 153 citations. Library Quarterly ranked 2nd position with a number of 111 citations. Library Journal ranked 3rd position with a number of 107 citations. Journal of Documentation cited a number of 94 times. College & Research Libraries journal cited a number of 67 times.

■ CONCLUSIONS

Bibliometric study of a single journal provides a portrait of the concerned journal by indicating the quality, maturity and productivity of the journal. In this respect, a total of

219 articles in 20 issues is published in the journal 'Library Trends' during the period. On an average 10 articles are appended to each issue of the journal. The maximum numbers of articles are published in Fall and Winter. Single authors have contributed more in publishing the articles. The maximum length of pages among all of the articles between 11-21 pages. During the year 2013-14 and 2014-15 single authors have contributed more and during the 2012-2013 joint authors have contributed more. Total of 8925 citations are consulted with greater reliance and most of them are print citations with less consultation of e-citations. In ranking of authors, Rayward WB is on the 1st position. In ranking of journals, Library Trends ranked the 1st position among of all the cited journals. In the present study the value of DC is: 0.38

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