

Library Herald Journal: A Bibliometric Study

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Abstract

This paper presents a bibliometric analysis of the journal titled "Library Herald" for the period between 2011 to 2014. The analysis cover mainly the number of articles, authorship pattern, subject wise distribution of articles, average number of references per articles, forms of documents cited, year wise distribution of cited journals etc. All the studies point towards the merits and weakness of the journal which will be helpful for its further development. The result showed that out of 114 articles single author contributed 65 (57.01%) articles while the rest 49 (42.98%) articles were contributed by joint authors. Study reveals that most of the contributions are from India with 89.47 % and the rest 10.52 % only from foreign sources.

Introduction

The subject of bibliometrics was first defined by Pritchard (1996) as "the application of mathematical and statistical methods to books and other media". It involves the analysis of a set of publications characterized by bibliographic variables such as the author(s), the place of publication, the associated subject keywords, and the citations. The methods of bibliometrics (and the closely related specialism of informetrics, scientometrics and webometrics (Hood and Wilson 2001)) are used to investigate an increasing range of topics, including: the frequency distributions that characterize the use of words and phrases in text databases; the extent to which websites are linked together; longitudinal studies of the development of academic disciplines; and the extent to which individuals, research groups or institutions are published or cited in the literature (Bar-Ilan 2008; Borgman and Furner 2002; Cronin 1984; Garfield 1979; Thelwall, Vaughan and Björneborn 2005; Wilson 1999). This last application is of particular current importance as publication and citation measures are increasingly being used as performance indicators relating to the quality of the research of an individual or of an institution. There have been several previous bibliometric studies of information science. One of the very first such studies sought to identify the principal subject areas in the discipline (Salton and Bergmark 1979) while, more recently, Goodrum et al. (2001) and Katerattanakul, Han and Hong (2003) have reviewed the discipline's literature. There have also been several bibliometric analyses of specific subject areas, such as XML (Zhao and Logan 2002), computer supported collaborative work (Holsapple and Luo 2003) and information science (Cai and Card 2008). The very basic attribute of bibliometrics governing the relationships between information items and activities has thus made librarians and statisticians to conduct the bibliometric studies. Hence, we are witnessing large number of bibliometric studies for over last two decades. The present study has been undertaken in order to know the nature and contents of articles in the Library Herald Journal.

Review of Literature

Kljakovic systematically reviewed cases in 9 general practice journals and 4 general medical journals and found that just over 7% of 10,607 publications involved single cases in both journal groups. Single cases were mainly published as reports or reviews in general practice journals and letters in general medical journals. Two percent of all single cases were published as original research papers in general medical journals, and none were published in general practice journals. Aoki retrieved 4,487 articles with the publication type "Practice Guideline" from MEDLINE and analyzed them. The results showed that 108 articles were published in 1991 and 436 in 1992 for a 4-fold increase. Additionally, 55.8% of articles were from the United States and 82% were in English. The most common topics included HIV infection, breast neoplasms, mass screening, asthma, and hypertension.

Pratt utilized MEDLINE to perform a bibliometric analysis of the literature of AIDS for the period of 1981 to 1990. That study reported growth statistics for AIDS literature, number of different languages, countries of publication, and number of periodical titles. The AIDS literature grew from fewer than 700 entries from 1981 to 1983 to a cumulative total of 29,077 entries by the end of 1990. The greatest relative expansion came in 1983 with a 24-fold increase compared to the previous year. Gillaspay and Huber also employed Bradford's law to identify core journal publications for a collection focusing on AIDS in women. That study found that journal scatter for this subset of AIDS literature varied from the scatter in the general literature.

Hasbrouck et al. examined the scientific literature by analyzing citation patterns of specific journal articles to and by the American Journal of Epidemiology (AJE): 178,396 journal citations to and 126,478 citations by AJE were made from 1983 through 1999. They sorted citations based on the subject category of the referencing or referenced journal. Clinical medical journals accounted for 50.6% of all citations combined (both referenced to and referenced by AJE). General and internal medicine (17.9%), cancer (10.4%), and cardiovascular (4.9%) journals had the highest number of citations. Not many citations to and by AJE were found in publications specializing in dermatology, gastroenterology, orthopaedics, allergy, anaesthesiology, surgery, rheumatology, and other areas.

Hazarika, Goswami, and Das (2003) opined that, "It is used to identify the pattern of publication, authorship citation and coverage of journal papers in terms of geographic, subject, organization and other related parameters. In their study of authorship patterns, Perianes-Rodriguez, Omelda-Gomez and Moya-Anegon (2010) opined that," Detection and identification of communities with factor analysis is a useful tool for experts in bibliometric and scientometric studies. Likewise the networks obtained are a useful framework for decision making." The result could help in library resource management and planning strategies for documentation service to the user community of that particular literary discipline. Similarly, Glover and Bowen (2004) hold the view that, "There are many ways with which bibliometrics and citation tools can be used. Bibliometric analysis can be used to take macro-view of research output." The generality of the usage are centered towards multidirectional approaches and studies on documents and authors taking in to consideration the appropriate mathematical and statistical analysis to be applied. Lo (2010) in his study of genetic engineering research says that, "During the past several decades, plenty studies were done to show the productivities and research impact. There are quite an amount of studies which applied the methods adopted from bibliometrics while periodical articles were used for analyzing." The result of the analyses done usually exhibits a lot of useful information that could be used in the proper handling of information sources and resources in a given library, information centre, organization or institution.

Thanuskodi (2010) discussed the research output performance of social scientists on social science subjects. The analysis cover mainly the number of articles, authorship pattern, subject wise distribution of articles, average number of references per articles, forms of documents cited, year wise distribution of cited journals etc. Yeoh and Kaur (2008) analyses the publication output of Research in Higher Education for subject support in collection development in the light of growing interest in diversified domains of research in higher education. Consequently, analysis of 40 issues of publications revealed a diversified usage pattern of bibliographic reference sources by contributing researchers, with a cumulative total of citations being 8,374. A positive trend in research collaboration of contributing authors, and a steady growth in the use of reference sources, periodicals and web documents in the citations signify the trend of scholarly communication of research works in the electronic age. Similar to other disciplines of research findings, journals and books were the most cited source materials for researchers thrash out.

Verma, Tamrakar and Sharma (2007) revealed that majority of the articles in the journal are two-authored and majority of the contributions are from New Delhi. Singh, Mittal and Ahmad (2006) conducted a bibliometric study of literature on digital libraries. The important findings are that most articles (61 percent) are singleauthored; author productivity is not in agreement with Lotka's Law, except in one case where the number of articles is three; the maximum number of articles were published in 2003 with English being the most productive language; maximum articles were published in the journal D-lib Magazine; distribution of articles nearly follows Bradford's Law; and USA ranked first for maximum number of journals. Tiew (2000) found that 53% of articles contained journal self-citations, and a tendency is noticed for authors affiliated to the institution publishing the journal to cite the journal. Patra, Bhattacharya and Verma (2006) analyzed the growth pattern, core journals and authors' distribution in the field of bibliometric using data from Library and Information Science Abstract (LISA) and found that the growth of literature does not show any definite pattern.

Dhiman (2000) has done ten year bibliometric study *Ethnobotany Journal* published during 1989-1998. In this paper examines year-wise, institution-wise, country-wise, authorship pattern, range of references cited and length of the articles.

Need for the Study

The periodicals are the indicators of literature growth in any field of knowledge. They emerge as the main channel for transmitting knowledge. Due to the escalating cost of the periodicals and lack of adequate library budgets the selection of any particular journal for a library should be done more carefully. Therefore, the library authorities are forced to reduce the number of journal subscriptions. Bibliometric analysis has many applications in the Library and Information science field in identifying the research trends in the subject, core journals, etc. and thereby framing new subscription policy for tomorrow. These studies will be helpful for librarians to plan a better collection development.

Library Herald Journal

The *Library Herald* (ISSN 0024-2292) is a quarterly organ of the Delhi Library Association which has recently completed 49 successful volumes. The Association places on record the honorary editorial service rendered by Prof. C. P. Vashishth, Dr Sunil Kumar and R.K. Sharma for *Library Herald*.

Objectives of this Study

The present study has been undertaken with the objective of analysing the following aspects:

Analysis of Articles

- To make an analysis of articles published in *Library Herald Journal* from 2011 to 2014.
- To identify the number of contributions published during the period of study
- To determine the year wise distribution of articles
- To study the authorship pattern
- To find out the ranking of leading contributors
- To identify geographical distribution of articles
- To study the length of articles
- To study the subject coverage of articles

Analysis of Citations

- To discover the number of cited documents and the average number of references per article.
- To identify the number and forms of documents cited.
- To identify the year-wise distribution of cited journals.

Methodology

Methodology applied in the present study is bibliometric analysis which is used to study in detail the bibliographic features of the articles and citation analysis of reference appended at the end of each article, published in *Library Herald Journal* from 2011 to 2014. The data pertaining to *Library Herald Journal* regarding 114 articles made from volume 49 in 2011 to volume 52 in 2014. Then they are tabulated and analysed for making observations.

Analysis

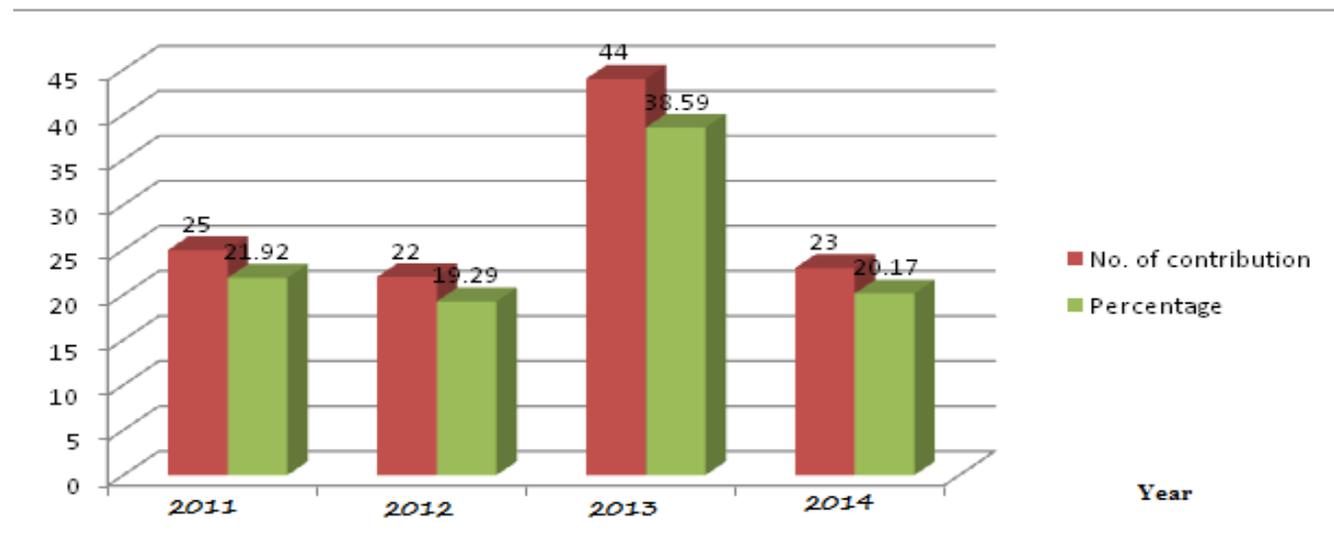
The analysis was done in two parts: a) Analysis of articles b) Analysis of citations.

Analysis of Articles

All the details such as authors, title, and year of publication, pagination, and institutional affiliation etc of all articles published from 2011 to 2014 were recorded for the following analysis.

Distribution of Contribution**Table 1 :Year Wise Distribution of Articles**

Year	Vol. No.	No. of issues	No. of contribution	Percentage
2011	49	4	25	21.92
2012	50	4	22	19.29
2013	51	4	44	38.59
2014	52	4	23	20.17
Total		16	114	100

**Fig. 1.1. Year Wise Distribution of Articles**

The Library Herald Journal regularly publishes in international journals of repute. The journal published 114 research papers during the period of study i.e. from 2011 to 2014. The journal on an average has published 28 research papers per year. The above table showed that the maximum numbers of articles were published in the year 2013 and minimum in the year 2014 articles. The number of research publications of Library Herald Journal for the period 2011-2014 has been given year wise in table-1.

Table-2 Distribution of Articles (Issue-Wise)

Month	Vol No.				Total
	49	50	51	52	
March	7	7	6	6	26
June	7	6	6	7	26
September	5	6	26	4	41
December	6	3	6	6	21
Total	25	22	44	23	114

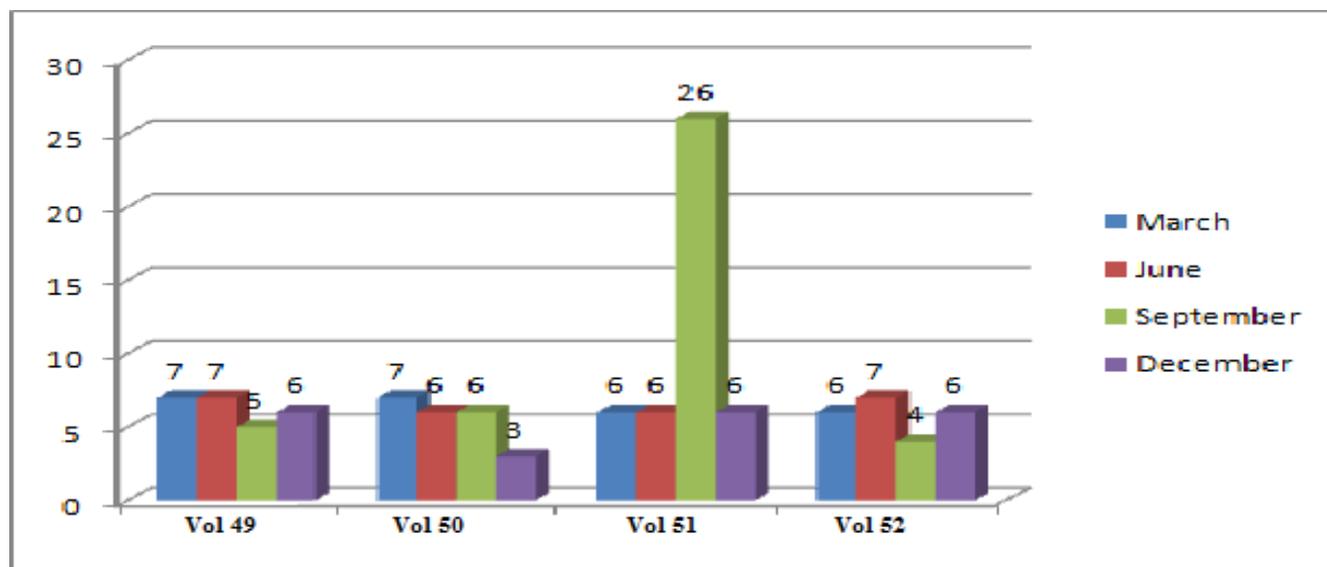


Fig. 1.2. Distribution of Articles (Issue-Wise)

The table 2 reveals distribution of articles (Issue-wise). Volume No. 51 shows the highest number of total articles. The second highest position is occupied by Volume No. 49. It is followed by volume 52. The lowest number of total articles in volume 50. The contribution of articles in volume 50 and 52 were more in March and June respectively.

Subject Wise Distribution of Articles

Table-3 Subject Wise Distribution of Articles

Subject	No. of Articles	Percentage
Library and Information Science & Information Literacy	19	16.67
Library Profession & Public/Special Libraries	12	10.52
Internet, Consortia & Web Technology	36	31.57
Bibliometric studies	17	14.91
Library Automation	23	20.17
User Studies	7	6.14
Total	114	100

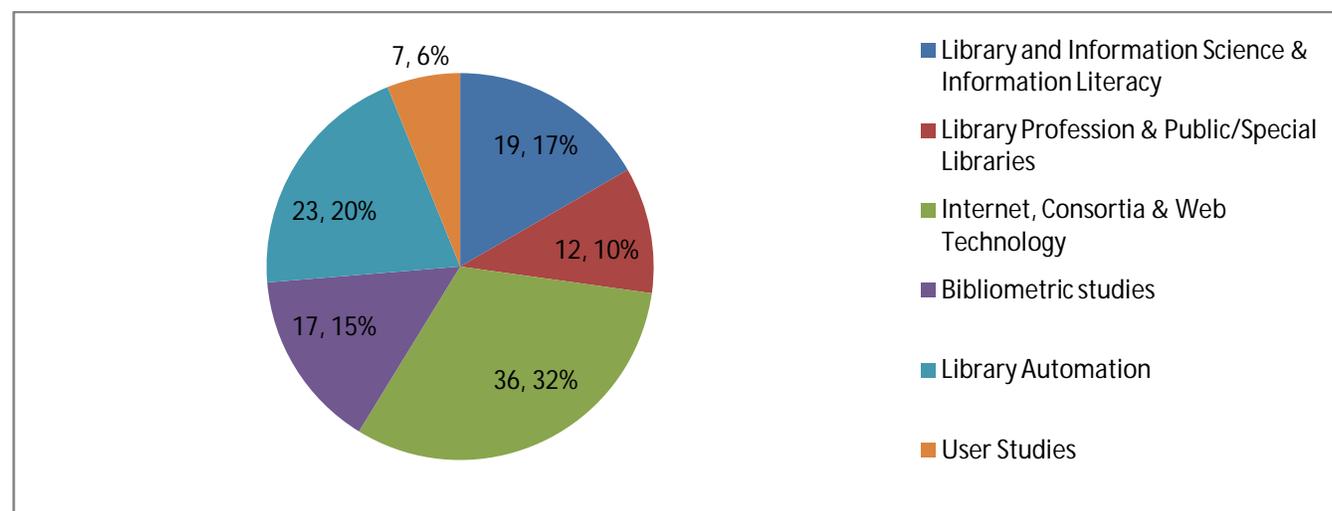


Fig. 1.3. Subject Wise Distribution of Articles

The table 3 above showed that majority of the contributions appeared under Internet, Consortia & Web Technology 36 (31.57%) followed by library Automation 23 (20.17%), Library and Information Science and Information Literacy 19 (16.67%), Bibliometric studies 17 (14.91%), Library profession and academic, public, special libraries 12 (10.52%) and user studies 7 (6.14%).

Authorship Pattern

Table-4: Authorship Pattern

Year	Number of Authors					Total
	1	2	3	4	5	
2011	12	6	6	1	0	25
2012	33	7	0	2	0	42
2013	10	7	5	1	1	24
2014	10	8	3	2	0	23
Total	65	28	14	6	1	114
Percentage	57.02	24.5614	12.28	5.2632	0.877	100

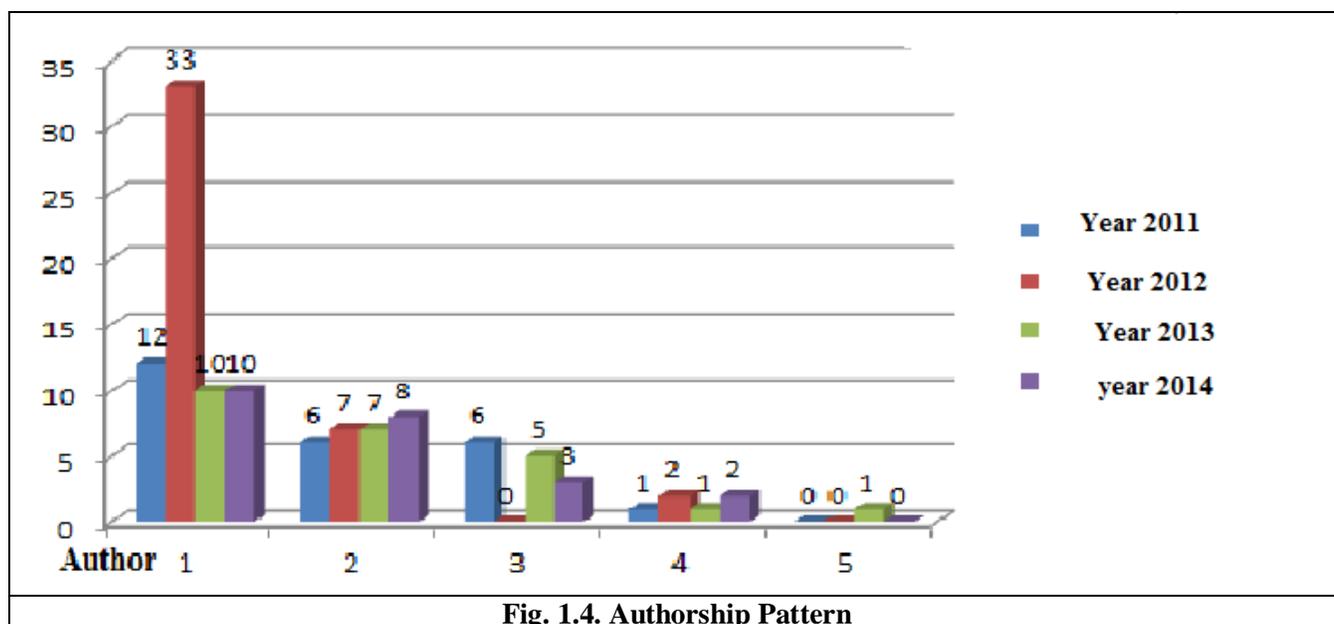


Fig. 1.4. Authorship Pattern

Collaborative research is very much a feature of the library and information Science especially during the 21st century. It is a natural reflection of complexity, scale and costs of modern investigations in Library and Information Science. Multi authorship provides different measures of collaboration in the subject. Table 4 reveals the authorship pattern of the articles published during the period of study. Maximum numbers of articles were contributed by single author 65 (57.01%). This is followed by two authors with 28 (24.56%) articles; three authors were contributed 14 articles (12.28%) of the total articles.

Table-5 Year-Wise Authorship Pattern

Authorship	Year				Total	Percentage
	2011	2012	2013	2014		
Single	12	33	10	10	65	57.01
Joint	13	9	14	13	49	42.98
Total	25	42	24	23	114	100

The above table-5 showed that out of 114 articles single author contributed 65 (57.01%) articles while the rest 49 (42.98%) articles were contributed by joint authors.

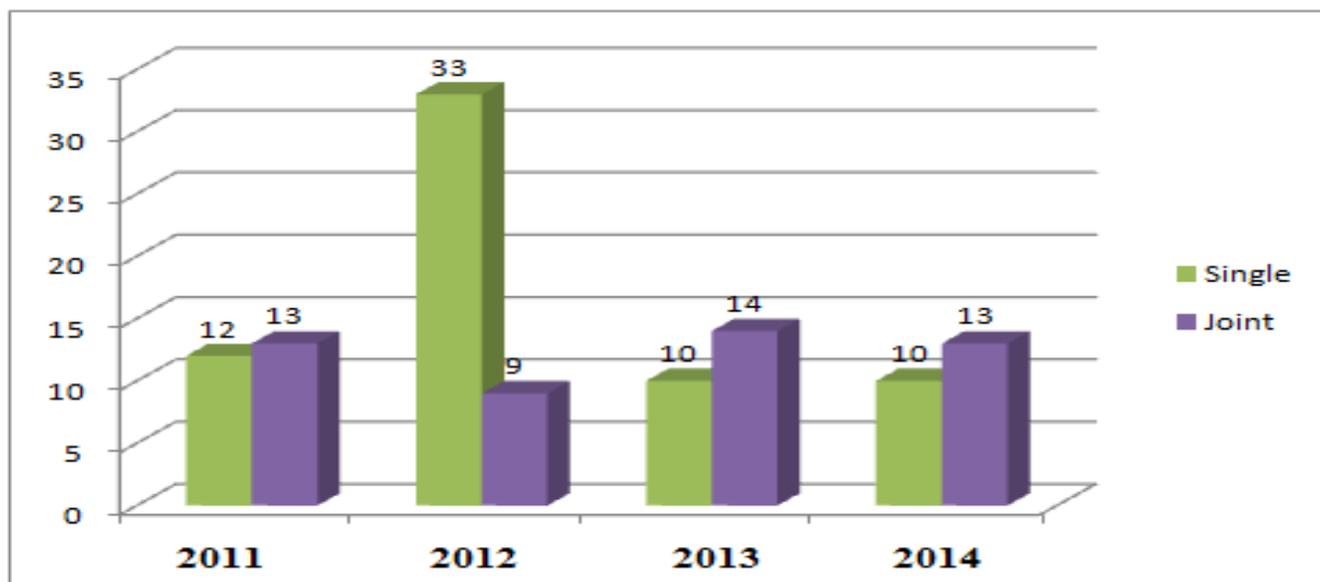


Fig. 1.5. Year-Wise Authorship Pattern

Institution Wise Contribution

Table-6: Institution-Wise Contribution of Articles

Name of the Institution	No. of Articles	Percentage
University	25	21.92
Colleges	18	15.78
Research Institutions	24	21.05
Govt. Departments	24	21.05
Societies	23	20.17
Total	114	100

The table 6 envisages the institution wise contributors. These sectors have been grouped into five distinct categories for the convenience of the study. The highest contributions were from universities with 25 (21.92%). This is followed by research institutions & Govt. departments with 24 (21.05%), Societies 23 (20.17%). The remaining 18 articles (15.78%) were contributed by colleges.

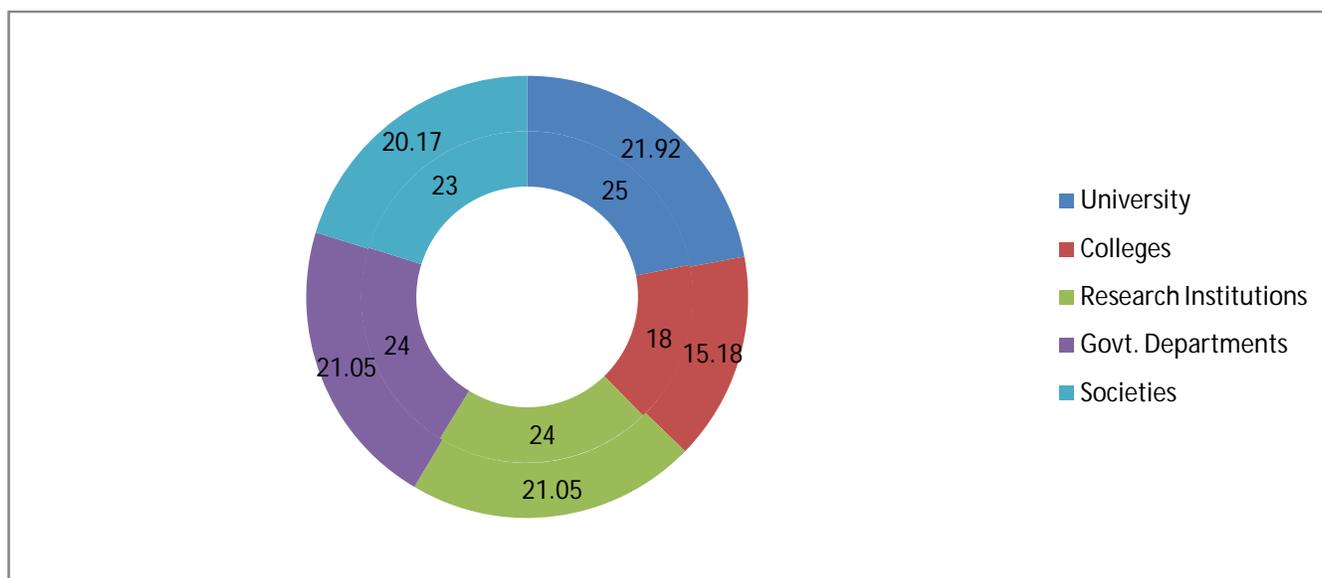
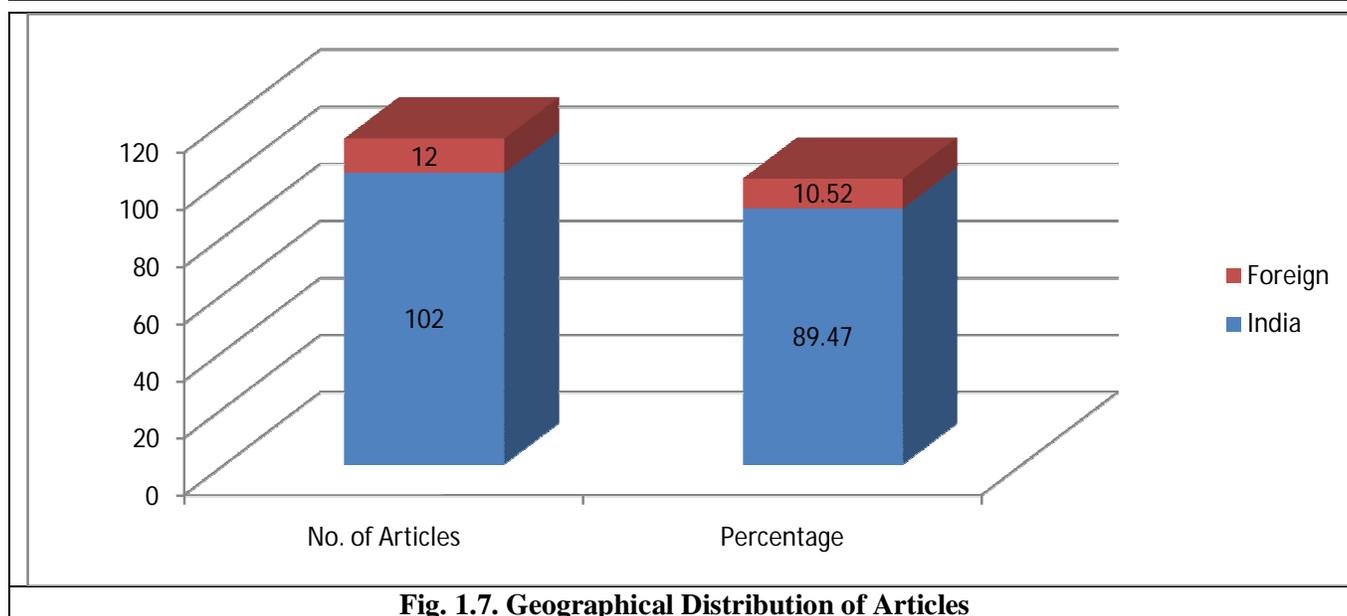


Fig. 1.6. Institution-Wise Contribution of Articles

Geographical Distribution of Articles**Table-7 Geographical Distribution of Articles**

Name of the Institution	No. of Articles	Percentage
India	102	89.47
Foreign	12	10.52
Total	114	100

**Fig. 1.7. Geographical Distribution of Articles**

The table 7 showed that most of the contributions are from India with 89.47% and the rest 10.52% only from foreign sources.

Table-8 Length of Articles

Pages	Year				Total	Percentage
	2011	2012	2013	2014		
1_5	4	18	2	2	26	22.80
6_10	10	9	8	8	35	30.70
11_15	11	7	6	5	29	25.43
16 and more	2	5	8	9	24	21.05
Total	27	39	24	24	114	100

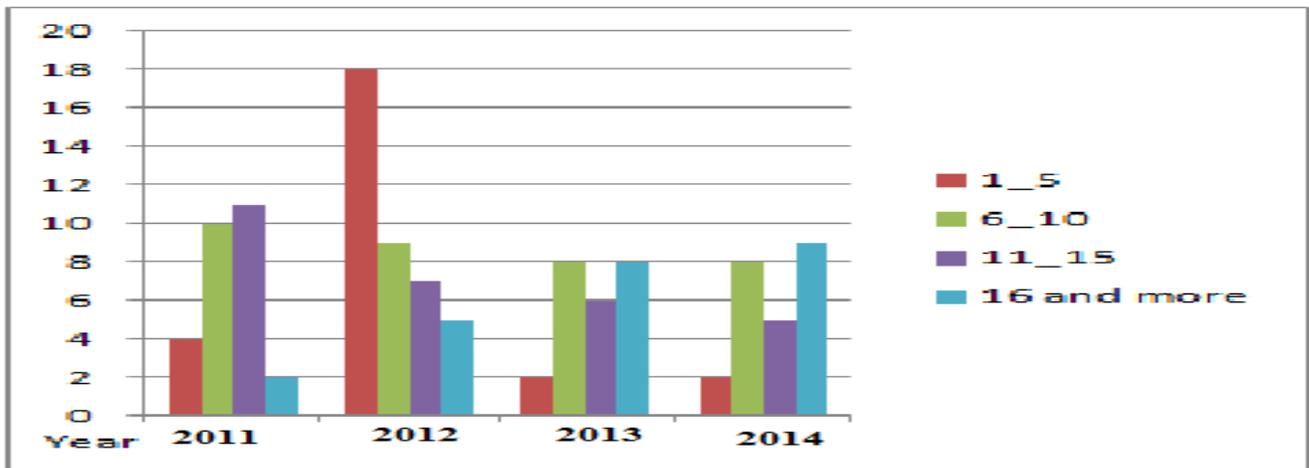


Fig. 1.8. Length of Articles

Table 8 reveals that the majority of articles 35 (30.70%) have the length of 6-10 pages followed by 29(25.43 %) articles with 11-15 pages, 26 (22.80%) articles with 1-5 pages and the remaining 24 (21.05%) articles have the length of 16 and more pages.

Citation Analysis

The references provided by the authors at the end of their articles are the basis of citation analysis. Citation traces a connection between two documents, one which cites and the other which is cited. Citation analysis is one of the popular methods applied to derive the following benefits.

Year-Wise Distribution of Citations

Table-9 Year-Wise Distribution of Citations

Year	No. of Citations	Percentage
2011	292	25.08
2012	224	19.24
2013	345	29.63
2014	303	26.03
Total	1164	100

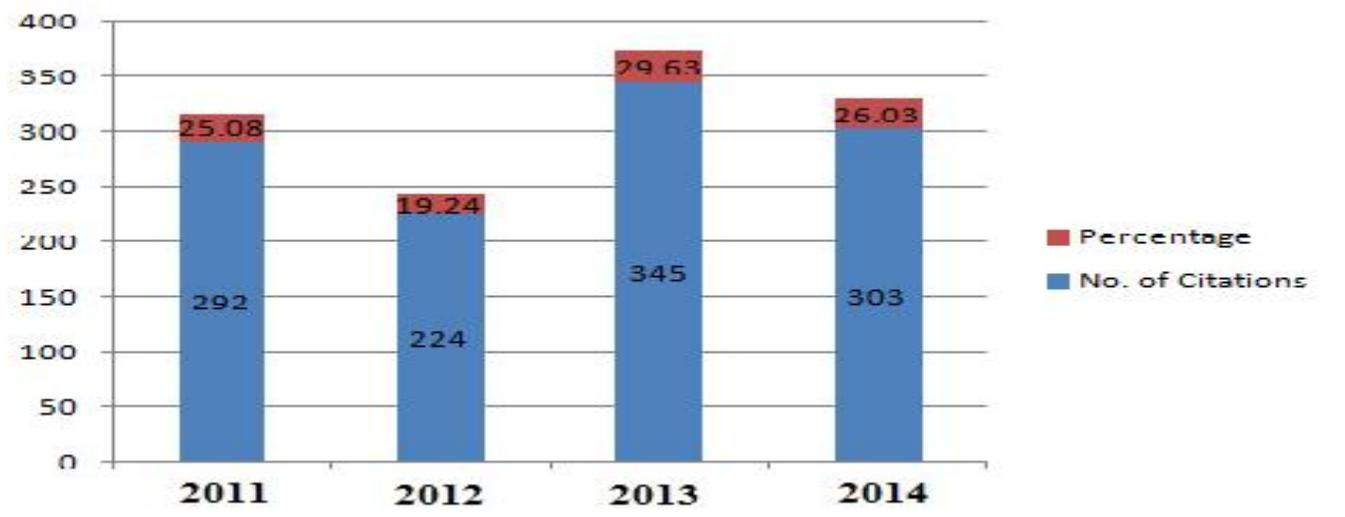
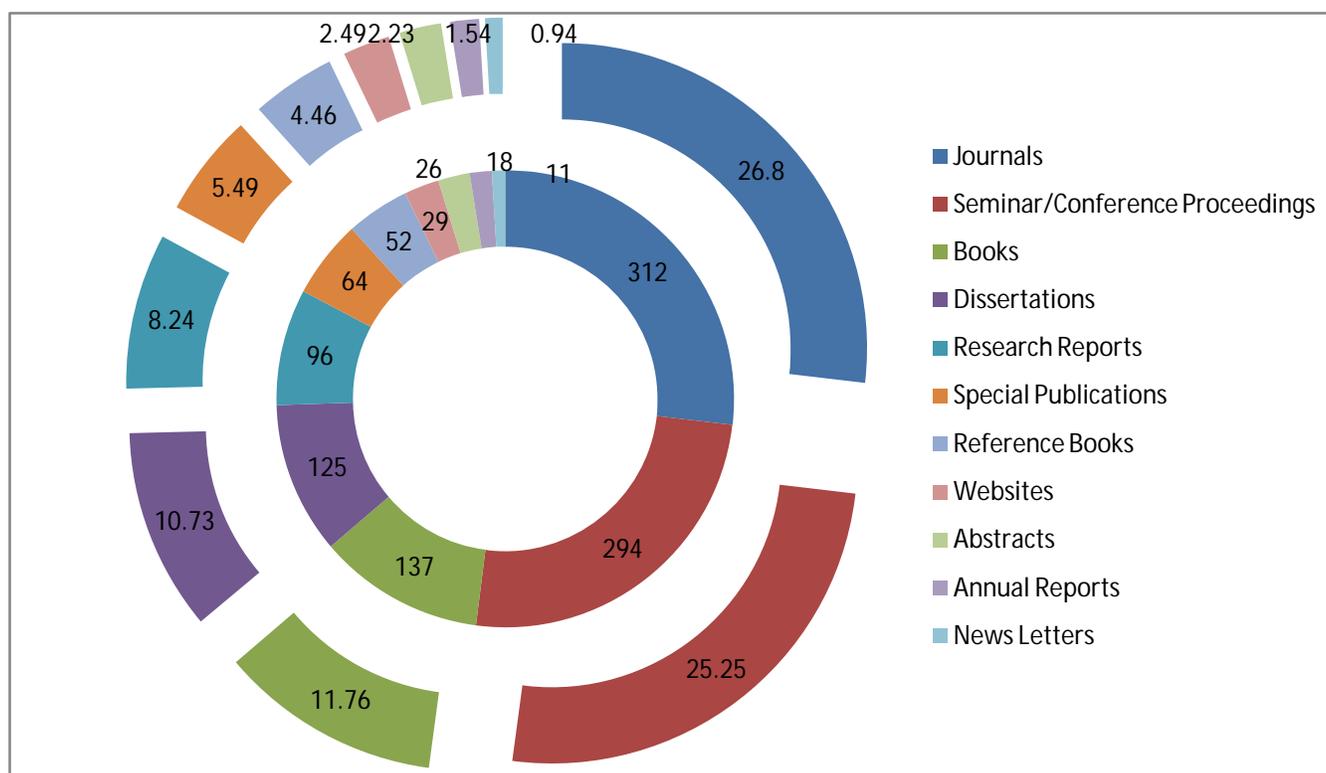


Fig. 1.9. Year-Wise Distribution of Citations

The above table 9 showed that maximum number of citations 345 (29.63%) produced in 2013 followed by 303 (26.03%) citations in 2014, 292(25.08%) citations in 2011 and 224 (19.24%) in the year 2012.

Forms of Documents Cited**Table-10 Forms of Document Cited**

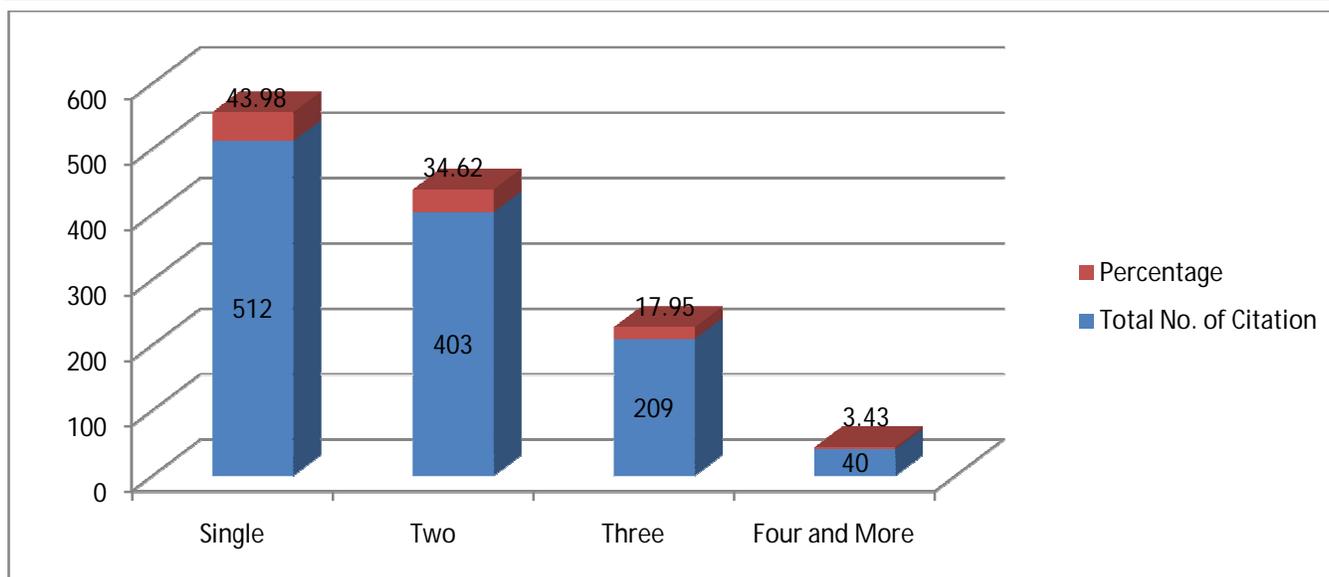
Forms of Document Cited	Total No of citation	Percentage
Journals	312	26.80
Seminar/Conference Proceedings	294	25.25
Books	137	11.76
Dissertations	125	10.73
Research Reports	96	8.24
Special Publications	64	5.49
Reference Books	52	4.46
Websites	29	2.49
Abstracts	26	2.23
Annual Reports	18	1.54
News Letters	11	0.94
Total	1164	100

**Fig. 1.10. Forms of Document Cited**

The table 10 above showed that majority of the contributors preferred journals as the source of information which occupied the top position with the highest number of citations 312 (26.80%) of the total 1164 citations followed by Seminar / Conference Proceedings with 294 (25.25%) citations, Books with 137 (11.76%) citations, Dissertations with 125 (10.73 %) citations, research reports with 96 (8.24%) citations, special publications with 64 (5.49%) citations, reference books with 52 (4.46%) citations, websites with 29 (2.49%) citations, abstracts with 26 (2.23%) annual reports with 18 (1.54%) citations and newsletters with 11(0.94%) citations . It is found that the researchers preferred journal articles more frequently for their research work, than any other types of communication channels.

Table-11 : Authorship Pattern of Cited References

Authorship Pattern	Total No. of Citation	Percentage
Single	512	43.98
Two	403	34.62
Three	209	17.95
Four and More	40	3.43
Total	1164	100

**Fig. 1.11. : Authorship Pattern of Cited References**

On analysing the extent of collaborations, it was found that only 43.98% citations (512) involved single authors followed by 34.62% citations (403) involved two authors, 17.95% citations (209) involved three authors and 3.43% citations (40) involved four and more authors.

Conclusions

Bibliometric techniques are being used for a variety of purposes like determination of various scientific indicators, evaluation of scientific output, selection of journals for libraries and even forecasting the potential of a particular field. The popularity in the adaptation of bibliometric techniques in various disciplines stimulated stupendous growth of literature on bibliometrics and its related areas. The journal has published 114 articles during the period of study. The maximum numbers of contributions are single authors with 65 (57.01%). The present study reveals that the highest number of articles have appeared in the Internet, Consortia & Web Technology in library and information science. Similarly most of the contributions are from India with 89.47 %, while foreign contribution is very less. The study revealed that the highest contributions were from universities with 25 (21.93%). Majority of the authors preferred journals as the source of information providing the highest number of citations (26.80%). Library Herald Journal is the highly preferred journal for communication by the library and information science professionals.

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