

## International Journal of Innovative Research in Science, Engineering and Technology

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# A Bibliometric Analysis of LIS Journals Available in DOAJ Database from the Year 2004-2014

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**ABSTRACT:** Bibliometric is a technique or a tool of information management, which is also called quantitative science. Bibliometric has practices applications in the evaluation of Library operation and survey through statistical techniques to make the quantitative analysis possible. It is helpful for the measurement of publication pattern of different form of literature, and also useful in the study of productivity of authorships pattern of articles. The techniques Bibliometric have extensive applications equally in sociological studies of science, information management, librarianship, history of science policy. Study of science and scientists, etc. The Present study on DOAJ database shows that how many articles published in a particular area of Library and Information Science subject and also shows that authors' contribution in that subject. The present study helps to indentify the research scenario and the lacking areas of research.

**KEYWORDS:** Bibliometric Analysis, DOAJ, Library and Information Science

### I. INTRODUCTION

Bibliometrics is a statistical analysis of books, articles and other publications. Bibliometric analysis use data on numbers to measure the "output" of individuals/research teams, institutions, and countries, to identify national and international networks, and to map the development of new (multi-disciplinary) fields of science and technology. Directory of Open Access Journals is a service that provides access to quality controlled Open Access Journals. The aims of DOAJ is to cover all open access scientific and scholarly journals that use an appropriate quality control system, and it will not be limited to particular languages or subject areas.

### II. OBJECTIVES

The major objectives of this bibliometric study are as follows:

- To identify year wise productivity of articles;
- To identify the authorship pattern;
- To identify thirist area of research;
- To locate a new research area for researchers.

### III. SCOPE AND COVERAGE

The Present study is limited within the 13 selected LIS journals in DOAJ database. The articles which were published in English language published from the year 2004 to 2014 were only taken into consideration. Analysis has been done to know the authorship pattern and subject area of LIS which has maximum productivity and also find out year-wise productivity of articles. Name of the 13 Selected LIS journals from Directory of Open Access Journals (DOAJ) are given below-

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- Bulletin of the American society for Information science and technology
- Cybermetrics international journal of scientometrics
- D lib magazine
- DESIDOC journal of library and information technology
- Informing science the international journal of an emerging trans discipline
- Issues in science and technology librarianship
- Journal of digital information
- Journal of electronic publishing
- Journal of southern academic and special librarianship
- Library and information research into practice for information
- Libres library and information science research electronic journal
- Singapore journal of library & information management
- Webology

## IV. LITERATURE REVIEW

*Stenson (2012)* argued for the value of the directories, mainly focusing on two of them: DOAJ and DOAB. It provides an introduction to the services, containing a brief history and status report, and addresses the differences between OA journal publishing and OA monograph publishing. It also highlights the value of these services and discusses whether the financial models behind them are sustainable

*Koohang (2006)* demonstrated that advanced technologies and the increasing acceptance of academic open access e-journals offer an opportunity to reconsider their form and function as a medium to enhance scholarly communication. The academic open access e-journal is envisioned as a platform and a portal within the context of an open source community including a format and functions that enable it to achieve that objective. A working model for academic open access e-journals is presented. This model is intended for open source communities involved in designing, developing, and/or improving open access academic e-journals.

*Kumar (2013)* stated that there are many online databases available on internet that provides open access journals of various disciplines. The facility to access of these journals that is freely available on internet should be launch in the libraries. The present study deals with open access journals accessible from Directory of Open Access Journals (DOAJ) in the subject of library science. Analyzed based on country, keywords, frequency, etc. The analysis indicates that there was only one open access journal i.e. Bulletin of the Medical Library Association was available before 1990 in the field of library and information science (LIS). Only 19.04% journals have their EISSN. Almost one fourth journals were publishing on half yearly basis.

*Walter (2011)* examined the characteristics of 663 Open Access (OA) journals in biology, computer science, economics, history, medicine, and psychology, and then compares the OA journals with impact factors to comparable subscription journals. There is great variation in the size of OA journals; the largest publishes more than 2,700 articles per year, but half publish 25 or fewer. While just 29 percent of OA journals charge publication fees, those journals represent 50 percent of the articles in our study. OA journals in the fields of biology and medicine are larger than the others, more likely to charge fees, and more likely to have a high citation impact. Overall, the OA journal landscape is greatly influenced by a few key publishers and journals.

*Hulagabali (2012)* analyzed the Library and Information Science (LIS) journals with the aid of bibliometric methods. The study covers year-wise, country-wise and language-wise. Distribution of LIS journals archived in Directory of Open Access Journals (DOAJ). The year-wise growth of LIS journals, in DOAJ, started in the year 2003 with 21 journals. Till 2009, it has archived 97 LIS journals in its database. The LIS domain stands third position, under the social science stream, out of 960 journals listed under ten major disciplines in DOAJ database. In view of language-wise distribution of LIS journals, 71 journals are monolingual and only 15 journals are bilingual. Out 97 journals 40 journals are being published in english language.

*Jamdade (2013)* stated that the Directory of Open Access Journals (DOAJ) provides open access to scientific and scholarly journals, that meant high quality standard by exercising peer review and is free to all from the time of

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publication based on the Budapest open access initiative. In this paper authors made an effort to study the total 137 free full text with abstracts online journals were accessed through DOAJ and analyzed based on subject headings, languages, country their accessibility of archives of online journals in Library & Information Science.

*Mukherjee (2010)* made a study using 17 fully open access electronic journals published uninterruptedly during 2000–2004 in the field of Library and Information Science. It investigated the trend of LIS Open Access e-journals' literature by analyzing articles, authors, institutions, countries, subjects, & references. The analysis indicates that there were as many as 1636 articles published during 2000–2004 with an average increment of 23.75 articles per year. The subject coverage of these OA e-journals was very vast and almost all facets of information and library science were covered in these articles. There were 90.10% of articles of these e-journals contained references and on an average an article contained 24 references.

*Regolini (2013)* stated that Informing Science is a young Tran's disciplinary science. The essential characteristics of which were defined fifteen years ago. Publication data from Scopus were used. A bibliometric analysis based on citations to its papers may give clear indicators about the influence of this journal among institutions, countries, and researchers. It is also confirmed that after more than a decade the Informing Science Institute continues to bring together researchers working in IS from many disciplines and nations.

*Lone (2008)* stated that India has been a cradle of knowledge for thousands of years. Presently it has significant advantages in the 21st century knowledge race due to one of the largest higher education system in the world. It generates a lot of information in the form of research papers, project reports, books, conference papers, theses, dissertations, articles, and so on. Therefore, it is necessary to preserve, manage and make it accessible to the academic community and society for sharing and visualizing their innovations for the betterment of society as a whole. The present study attempts to evaluate the initiatives taken by India to make this intellectual output accessible for all by publishing them in Open Access resources like Open Access journals and archiving them in Open Access archives or repositories. The results revealed that India is continuously contributing in Open Access literature as some of the premier institutions, particularly in the science and technology area, are providing Open Access to their research publications. The position of India in terms of number of journals in the Directory of Open Access Journals (DOAJ) is 7th, well ahead of countries such as China, Australia, and Japan and is sharing 10th position with the Sweden and Spain in Directory of Open Access Repositories (Open DOAR) in terms of number of repositories in the world.

## V. METHODOLOGY

All the selected journal of Library and Information Science has been searched from Directory of Open Access Journals (DOAJ) data base only those journals which published in English language have been selected. After that all the issue of all volume has been collected from the journals published from the year 2004 to 2014. Collected articles have been arranged in chronological order after that it has been counted to know the authorship pattern of the article. Then a graphical representation have been made so that, a concept may be emerged about recent trend.

## VI. DATA ANALYSIS AND RESULT

### VII. SUBFIELD WISE DISTRIBUTION OF ARTICLES

After analysis of research articles productivity on subject subfields of LIS it was found that the field of Information and Communication Technology is more prominent in case of research article productivity. That was followed by Library society, Information services, and Information retrieval.

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Table 1: Name of the subfield covered in 13 LIS journals

Sl. no.	Subfield	Frequency of occurrence	Percentage (%)
1	Information and Communication Technology (ICT)	497	23.49
2	Library society	275	13
3	Management	231	10.92
4	Information services	231	10.92
5	Information retrieval	208	9.83
6	Information science	152	7.18
7	Bibliometrics and scientometrics	97	4.58
8	Library cataloging	82	3.87
9	Preservation and conservation	80	3.78
10	Research methodology	72	3.4
11	Digital library	45	2.12
12	Library service	39	1.84
13	Academic library	36	1.7
14	Library classification	24	1.13
15	Special library	12	0.56
16	Public library	10	0.47
17	Altmetric	9	0.42
18	Webometric	9	0.42
19	Library association	6	0.28
	TOTAL	2115	100

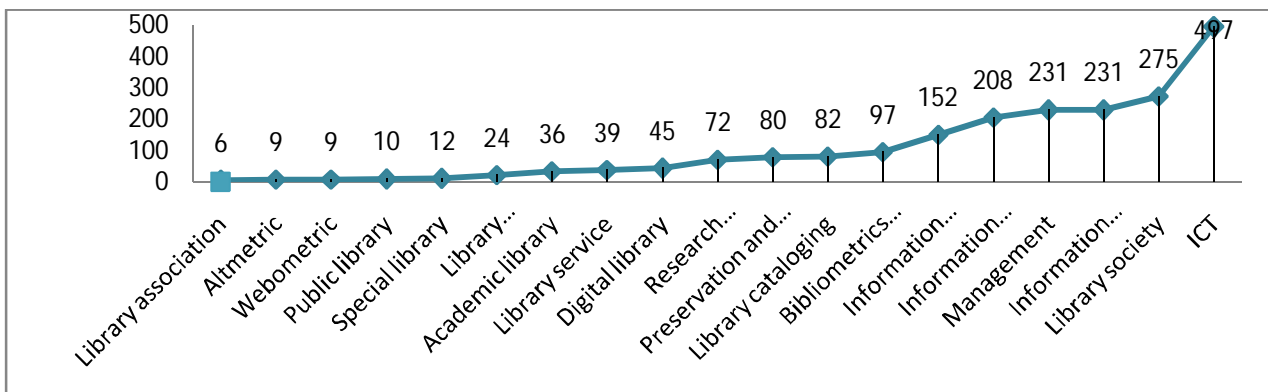


Figure no. 1 showing the Subject wise distribution of articles

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But among the sub fields some of them have very less productivity like Library association (6), Altmetric (9), Webometric (9), Public library (10), Special Library (12), Library classification (24).

### VIII. DISTRIBUTION OF AUTHORS CONTRIBUTION PER JOURNAL

Table no. 2 depict the details about the different pattern of authorship collaboration was held during the study period for contributing an article. Out of 2115 articles, individually responsible authorship owned about 1047 (50%) and it was maximum score in the overall productivity during the study period.

Table 2: Distribution of Authors contribution per journal

Sl. no	Name of the journal	Single author	Two authors	Three authors	More than three authors
1.	Bulletin of the American society for information science and technology	262	67	20	8
2.	Cybermetrics international journal of scientometrics	10	9	10	3
3.	D lib magazine	149	96	54	90
4.	Desidoc journal of library	173	170	64	24
5.	Informing science the international journal of an emerging transdiscipline	43	35	18	14
6.	Issues in science and technology librarianship	61	27	14	11
7.	Journal of digital information	39	48	30	35
Sl. no	Name of the journal	Single author	Two authors	Three authors	More than three authors
8.	Journal of electronic publishing	92	22	8	6
9.	Journal of southern academic and special librarianship	50	22	8	4
10.	Library and information research into practice for information	46	26	9	5
11.	Libres library and information science research electronic journal	25	11	2	4
12.	Singapore journal of library & information management	18	20	5	3
13.	Webology	79	40	18	8
	Total	1047	593	260	215

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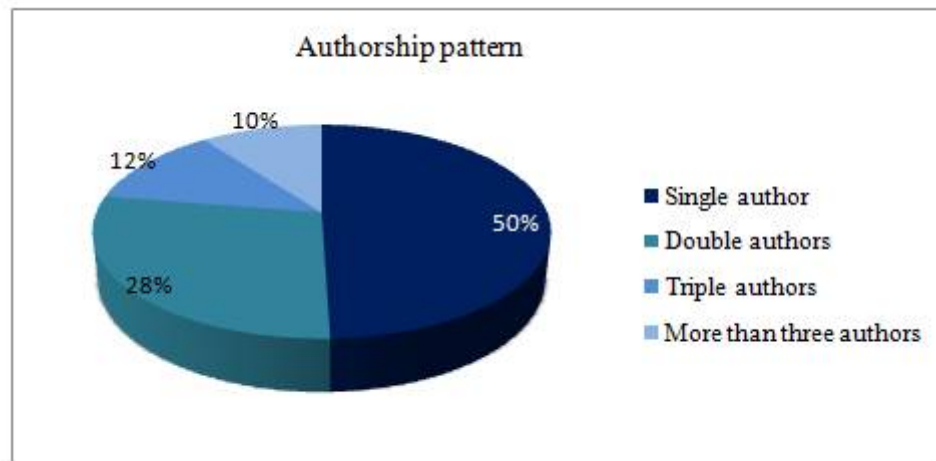


Figure no. 2 showing the authorship pattern

Next 593 (28%) articles were contributed by two authors collaboratively and followed by three authors contributed 260 (12%), more than three authors contributed 215 (10%).

## IX. YEAR WISE PRODUCTIVITY OF ARTICLES

The above table represents the year wise distribution of articles published in directory of Open Access Journal. it shows that deals regarding the distribution of 2115 articles was published in 2004-2014. Maximum 219 (10.35%) was published in 2008 and minimum number of contribution i.e. 170 (8.03%) in the year 2004.

Table 3: Year wise productivity of articles

Sl. no	Year	Article	Percentage (%)
1	2004	170	8.03
2	2005	201	9.50
3	2006	186	8.79
4	2007	206	9.73
5	2008	219	10.35
6	2009	213	10.07
7	2010	142	6.71
8	2011	181	8.55
9	2012	223	10.54
10	2013	181	8.55
11	2014	193	9.12
<b>Total 11 years</b>		2115	100

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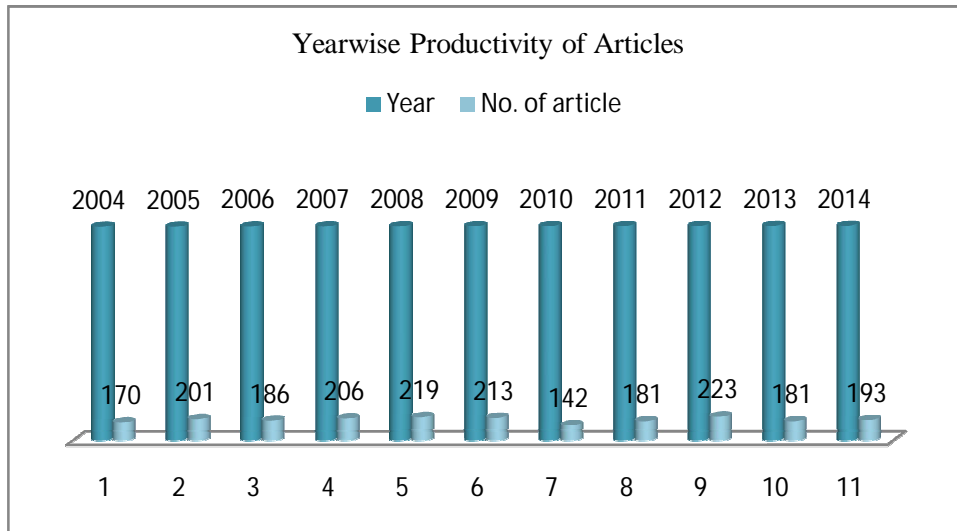


Figure no. 3 showing the Year wise productivity of articles

## X. CONCLUSION

The study found that maximum number of research productivity comes from Information and Communication Technology area, followed by Library and society, Library association and then by Management. The least number of productivity has been noticed in the field of Library association, Altmetric, Webometric, Public library, Special Library, and Library classification. Authorship pattern showed that contribution of single author's productivity on research articles is very high in numbers. So, we must try to concentrate on the fields where the research articles productivity is very low. Otherwise this subfield will be wiped out.

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