

## International Journal of Information Dissemination and Technology (IJIDT): A Bibliometric Study

**Ramesh Kuri**

Assistant Professor

Department of Library and Information Science

Rani Channamma University, Belagavi

e-mail:Rameshkuri.rcu@gmail.com

**Tayappa Aadin**

Librarian

Bharatesh College of BCA

Bharatesh Educational Trust, Belagavi

Email: tayappaadin123@gmail.com

***Abstract** - The paper brings out the results of a Bibliometrics analysis of the journal titled "International Journal of Information Dissemination and Technology (IJIDT)" for the period of 2011-2015. The result showed that there are 254 articles are published during in study period. Among 254 articles the study found that 93.69% of papers are multi-authored. The degree of collaboration is found to be 0.59%. The average author productivity is 1.86%. More than 26% of articles appeared on domain of "Information technology" and "Library Technology. The geographical contributions reveal that India is the highest (98%) contributing nation among the other nations of the world. Nearly 60% of papers contributed by the university representative, the average citations per paper are 13.4. All the studies point towards the merits and weakness of the journal which will be helpful for its further development.*

**Keywords:** *Bibliometrics, Degree of collaboration, Authorship Productivity, Quantitative Methods, Geographical Distribution*

## INTRODUCTION

The term "Bibliometrics" was first coined by, Pritchard (1969) in preference to existing terminology 'statistical bibliography'. The word 'bibliometric' has been derived from the Latin and Greek words 'biblio' and 'metrics' respectively which refer to the application of mathematics to the study of bibliography. But its usage and practice started much before its origin in the second decade of this century. Sengupta I N-1985 The term 'Bibliometrics' is just parallel to Ranganathan's Librametrics', FID's 'Informetrics' and to some other well established sub-disciplines like 'Econometrics', 'Psychometrics', 'Sociometrics', 'Biometrics', 'Technometrics', 'Chemometrics', 'Climetrics', where mathematical and statistical techniques have been systematically applied to study and solve problems in their respective fields. (Ratan G K-2012)

Now-a- days the term 'Scientometrics' is used for the application of quantitative methods to the history of science and apparently overlaps with bibliometrics to a considerable extent. Bibliometrics is a type of research method used in Library and information science and an emerging area of research in this field. (Ratan G K-2012)

The quantitative and statistics methods are utilized to describe the patterns of publication within a given field of literature. It can also be used to study regional patterns of research, the extent of cooperation between research groups and national research profiles, influence of a single author or to describe the relationship between two or more authors or works. (Sethi 2015) Bibliometrics involves the analyses of a set a publication characterized by bibliographical derivatives such as author(s), place of publication, the associated subject keywords, citations, co-citation analysis etc. (Thanuskodi 2011)

## REVIEW OF LITERATURE

This article reviews a few studies conducted abroad as well as in India on bibliometric study in chronological order.

According to R & T (2011-2015) the majority of articles of bibliometric study contain bibliographic references to journals, magazine, books, news paper, conference proceedings, dissertations, web links etc. Mulla, K.R. & Dhanamjaya, M.(2000-2009) Bibliometrics analysis of 412 research articles appeared in the srels journal of information management during period of 2000 to 2009 this paper gave review on authorship pattern degree of collaboration author productivity and further it revealed that out of total 686 contributors 360(52.48% contributors contributed a joint authored paper that amount to 180 (43.69%) articles<sup>1</sup>. Neeraj Kumar Chaurasia and Shankar B. Chavan (2001to 2010) their study describes the growth, contribution and impact of research carried out by the faculty members and researchers of IIT Delhi. It also attempts to analyze the growth and development of research activity of IIT Delhi as reflected in publications output covered by ISI Web of Science during the year 2001 to 2010<sup>2</sup>. Gurjeet Kaur Rattan and Kamini Gupta (2007-2011) The present study is a Bibliometric Analysis of the journal titled Malaysian Journal of Library and Information Science from 2007-2011. Covers mainly the number of articles, authorship pattern, geographical distribution of authors, pattern of references etc. The results show that out of 100 articles, single authors contributed 27 (27%) articles while the rest 73 (73%) articles are contributed by joint authors. It has been revealed that most of the contributors are from Malaysia<sup>3</sup>. Kotti Thavamani (2007 to 2013) examines the authorship trends of contributions in the “Indian Journal of Forensic Medicine & Toxicology” during 2007 to 2013. A total of 456 contributions and 1425 authors were examined by year wise contributions, author productivity, year wise single and multi authored papers and Degree of Collaboration<sup>4</sup>. Velmurugan C and Radhakrishnan N (2007-2013) analyzed and used scientometric techniques on Indian Journal of Biotechnology during 2007- 2012. The maximum articles were contributed by Indian authors i.e. (18.99 %), followed by Australia and Iran (12.64%) with second rank. The maximum research output i.e. 40 contributions (50.64%) by multiple authors and the minimum research outputs of 39 contributions (49.36%) have been contributed by single author<sup>5</sup>. Rabindra K. Maharana, Ashok Kumar Dasand Bijay Kumar

Choudhury shows that the content of papers published during 2007- 2011, including the annual average growth rate (%), authorship pattern, degree of collaboration, length of papers, distribution of citations, keywords, geographical scatter, length of papers, most prolific author etc<sup>6</sup>. P Panneerselvam and A. Chitra Dhavaputhalvi analyzed the international journal of Information Dissemination and Technology published during 2004 to 2013 and found that above 96% of contributions were by multiple authors<sup>7</sup>.

## SOURCE JOURNAL

The International Journal Information dissemination and technology (IJIDT) is a double-blind peer-reviewed, academic journal publishing on theories, concepts, models, frameworks, and philosophies in library and information science. The journal provides a forum for the dissemination of scholarly articles, research reports and critical reviews. The scope of the International Journal Information dissemination and technology (IJIDT) is broadly library and information science, encompassing all of the academic and professional disciplines which deal with recorded information. These include, but are certainly not limited to information science, library science, and related disciplines, information and knowledge management, information and knowledge organization, information seeking, information retrieval, human information behavior, and information and digital literacy. IJIDT is published quarterly since five years (2011-2015). It is currently edited by Ashok Garag librarian of Patiyala university Panjab.

## NEED AND SCOPE

The present study tries to find out the literature growth, authorship and collaborative pattern, country wise contribution, Domain wise articles appeared, designation of contributors, institute affiliated of an author, average number references per paper etc. (Shankar P 2016) Volume 01 to 05 of International journal of Information dissemination and technology, published between 2011 and 2015 have been taken into consideration to the present study. A datasheet IJIDT 2011-15, 20 issues of 4 volumes was prepared in MS-Excel to record the data and then the data was entered manually into it from the journal itself. The details regarding number of papers, nature of author, nation-wise paper contribution details are collected to fulfill the objectives of the study. The collected data was analyzed with the following bibliometric indicators. (Rajendran P-2011)

1. Extent of Authorship Pattern
2. Degree of Collaboration
3. Co-Authorship Index

## OBJECTIVES

The objectives of the present study are:

1. To make an analysis of articles published in IJIDT during the period 2011-2015.
2. To study the year-wise distribution of articles.
3. To study the length of articles.
4. To study the authorship pattern of the contributors.
5. To identify the degree of collaboration.

6. To find out the year-wise distribution of articles.
7. Study of length wise distributions.

## METHODOLOGY

Bibliometrics is an emerging thrust area of research and has now become a well established part of information research and a quantitative approach to the description of documents. Bibliometrics has grown out of a rate with which no Librarian or information worker equipped with traditional bibliometric skills and methods could keep abreast. (Chourasia Kamal-2008) Methodology applied in the present study is bibliometric analysis which is used to study in detail the bibliographic features of the articles published in International Journal of Information Dissemination and Technology (IJIDT) from 2011 to 2015.

## ANALYSIS AND DISCUSSION

All the details such as authors, year of publication, pagination, subject domain, designation, Institution, etc. of all article published from 2011 to 2015 were recorded for the following analysis.

### Year/Volume-wise distribution

Table-1 shows the total number of papers published from 2011 to 2015 in IJIDT. On the whole, from five volumes and 20 issues of the journal under study, the total number of papers published is 254. The distribution of papers by volume shows that the number of papers was highest in 2013 (vol. 03) with 56 (22.04%) papers. The range of papers published per year during the period under study is in between 46 and 56. Further, it shows maximum 56 (22.04%) papers published in the 3rd issues of the journal. The annual average growth rate of the paper published ranges from 2.44% to – 0.22.

**Table 1: Year, Volume & Issue-wise Contribution of Papers**

Year	Vol.	Issue-wise no of contributions				Total	Annual Average (AA) growth rate (%)
		1	2	3	4		
2011	01	11	10	10	14	45(17.71)	-
2012	02	14	13	12	16	55(21.65)	2.22
2013	03	16	11	15	14	56(22.04)	2.44
2014	04	14	19	11	08	52(20.47)	-1.55
2015	05	13	10	12	11	46(18.11)	-0.22
<b>Grand Total</b>						<b>254 (100)</b>	

Note: Annual average growth rate = (Ending Value - Beginning Value) / Beginning Value

### Authorship Patterns of Papers Published during 2007-11

Table 2 gives a detailed overview of authorship pattern of papers published from 2011(vol. 01) to 2015(vol.5). It reveals that out of 254 contributions, a total of 113 (44.48%) contributions

have been contributed by two authors, followed by 95 (37.40%) contributions by single authored, 34(13.38%) contributions by three authors and 12 (4.72%) contributions by four and more than four authors respectively. Also maximum 25 numbers of paper containing two authors have been published in vol. 3, 4 & 5 (2013, 14 and 15 respectively).

**Table 2: Authorship pattern Paper Published during 2011-15**

Year	Vol.	One	Two	Three	≥ four	Total
2011	1	19	18	6	2	45(17.71%)
2012	2	25	20	5	5	55(21.65%)
2013	3	21	25	10	-	56(22.47%)
2014	4	15	25	7	4	51(20.07%)
2015	5	15	25	6	1	47(18.50%)
<b>Grand Total</b>		<b>95 (37.40)</b>	<b>113 (44.48)</b>	<b>34 (13.38)</b>	<b>12 (4.72)</b>	<b>(254) 100 %</b>

Note: Figures in parentheses represents percentage.

### Author Productivity

Data related to author productivity have been presented in table 3, which shows that the total average number of authors per paper is 01.86. The average productivity per author is 0.53 during the period under study. The year 2011 and 2015 have the relatively equal productivity per author when compared to the average productivity per author. The value of x statistics for the data in table 3 is 0.478 (as against a critical value of 3.357 for four degrees of freedom). Hence, it is concluded that there is no statistically significant difference between the numbers of authors with number of papers published during the period under study.

**Table-Author Productivity Distribution Volume-wise**

Year	Volume	Total Papers	Total Authors	AAPA	Productivity per author (PPA)
2011	1	45	81	1.80	0.55
2012	2	55	100	1.81	0.55
2013	3	56	101	1.80	0.55
2014	4	51	103	2.01	0.49
2015	5	47	88	1.87	0.53
		<b>254</b>	<b>473</b>	<b>1.86</b>	<b>0.53</b>

Note: Average Authors per Paper (AAPP) = Number of authors/ Number of papers. Productivity per author= Number of papers/ Number of authors.

### Degree of collaboration

An examination of the degree of collaboration, a prominent area of inquiry in bibliometric studies, indicates the trend in patterns of single and joint authorship in IJLIT during 2011-15, as shown in table 4. The degree of collaboration ranges from 0.29 to 0.55. The average degree of collaboration is 0.59 during the period under study. The degree of collaboration is highest in volume 1 (2011) and lowest in volume 4 (2014). It can be seen that the degree of collaboration in

the journal “Journal of Documentation” is 0.59. This brings out clearly the prevalence of team research in library and information science field.

**Table 4: Volume wise Degree of Collaboration**

Year	Vol*	Single Author Contributions	Multi Author contributions	Nm+Ns	Degree of collaboration (DC)
2011	1	19	26	45	0.55
2012	2	25	30	55	0.44
2013	3	21	35	56	0.37
2014	4	15	36	51	0.29
2015	5	15	32	47	0.31
<b>Total</b>		<b>95</b>	<b>159</b>	<b>254</b>	<b>0.59</b>

The extent of collaboration in research can be measured with the help of the formula given by Subramanyam<sup>8</sup>.

$C = Nm / (Nm + Ns)$  Where,

C=Degree of Collaboration

Nm=Number of Multi Authored Contributions

Ns= Number of Single Authored Contributions

In the present study the value of C is:  $95/159=0.59$

## Domain wise Distribution of Article

We have identified twelve domains adopted in “Eprints for LIS”, to classify all the source items of IJIDT Journal.

- A- Information Technology and Library Technology.
- B- Information Use and Sociology of Information
- C- Information Source Support Channels
- D- Libraries as Physical Collection
- E- Theoretical & General Aspects of LIS
- F- Library Management
- G- Users Literacy and Reading
- H- Industry Profession & Education
- I- Technical Service in Libraries, Archives, Museums
- J- Information Treatment & Information Services
- K-Publishing & Legal Issues
- L-Miscellaneous

The above Table- depicts the domain wise contribution of articles published in the IJIDT journal. during the period of study (2011-2015), majority 68 (26.77%) of articles appeared in the domain (A) "Information Technology & Library Technology" followed (B) "Information Use and Sociology of Information" domain with 57 (22.44%) articles; The domain (C) "Information Source Support Channels" with 48 (18.89%) articles, (D) "Libraries as Physical Collection" with 27 (10.62%) articles, (E) Theoretical & General Aspects of LIS 13 (05.11%) articles, (F) Library Management 9(03.54%) articles, The domain (G&H) Users Literacy and Reading and Industry Profession & Education each 8(3.31%) articles, (I) Technical Service in Libraries, Archives, Museums5(1.96%) articles, (J) Information Treatment & Information Services 4 (1.57%) articles and the domain (K&L) Publishing & Legal Issues and Miscellaneous each 3(1.18%) articles.

**Table 3: Domain wise Distribution of Article**

Domain	No. of Articles	%age	Cumulative Articles (CA)	%age
A	68	26.77	068	2.76
B	57	22.44	125	5.00
C	48	18.89	173	7.20
D	27	10.62	200	8.12
E	13	05.11	213	8.65
F	09	03.54	222	9.01
G	08	03.31	230	9.34
H	08	03.31	238	9.66
I	05	01.96	243	9.87
J	04	01.57	247	10.03
K	03	01.18	250	10.15
L	03	01.18	253	10.27
<b>Total</b>	<b>254</b>	<b>100%</b>	<b>2462</b>	<b>100%</b>

### Country-Wise Distribution of Contribution

On the whole 473 authors belonging to 7 countries contributed a total of 254 papers. The study shows that 245(96.45%) of the authors are geographically affiliated to India, followed by Switzerland, Soudi Arabia and Dubai-UAE 2 each (0.78%), and 1 each (0.39%) Africa, California and Sri Lanka contributed

**Table- : Country-Wise Distribution of Contribution**

Rank	Country	Total	%age
1	India	245	96.45
2	Switzerland	2	0.78
2	Saudi Arabia	2	0.78
2	Dubai- UAE	2	0.78
3	Africa	1	0.39
3	California	1	0.39
3	Sri Lanka	1	0.39
	<b>Total</b>	<b>254</b>	<b>100%</b>

## Designation Wise Contributions

The table 6 shows the number of contributors 253(55.973%) are from Librarian. The second highest contributions are from Lecturers 117(25.884).The is followed by Scientists 13 (2.212%) contributions and others 8(1.769%).The lowest number of contributions from the category of Principal, students i.e. 1(0.442%) each.

**Table 6: Designation Wise Contributions**

Designation of the contributors	No. of Contributions	Rank	%age
Librarians	253	1	55.973
Lectures	117	2	25.884
Research Scholars	54	3	11.946
Scientist	10	4	2.212
Others	08	5	1.769
Students	08	5	1.769
Principal	02	6	0.442
<b>Total</b>	<b>452</b>		<b>100</b>

## Most Productive Institution

The distribution of published papers by institution wise the table 7 reveals that, out of 439 contributors, the highest number 262 (69.68%) of contributors are contributed from the Universities. The institutes stand the second place with 80 (18.22%) contributors. The various types of college stand on third place with 55 (12.52) contributors. The research institutes 20 (4.55%) government organization with 16 (3.64%) and other with school have contributed with (0.91%) to (0.45%)Contributions respectively.

**Table 10: Most Productive Institution**

Institution	Total	%age
Universities	262	59.68
Institutions	135	30.55
Colleges	55	12.52
Research Center	20	4.55
Government Organization	16	3.64
Others	04	0.91
Schools	02	0.45
<b>Total</b>	<b>439</b>	<b>100</b>

## Length of paper published

Table 6 reveals the length of paper published in different issues of IJIDT during 2011-15. Out of 254 papers more than half of the papers are in between 1-5 pages in length i.e. 131(51.74%),

while 120(47.24%) papers covered 06-10 pages and only 3(1.18%) have covered 11-15. The table also shows length of papers volume and year wise.

**Table 8: Length of papers published during 2011-2015**

Year	Vol.	Page Range			Total
		1-5	6-10	11-15	
2011	4	26	19	-	45
2012	4	26	29	-	55
2013	4	32	24	-	56
2014	4	23	28	1	52
2015	4	24	20	2	46
<b>Grand Total</b>		<b>131</b> <b>(51.74)</b>	<b>120</b> <b>(47.24)</b>	<b>3</b> <b>(1.18)</b>	<b>254</b> <b>(100)</b>

**Distribution of citations and articles by volume**

Table 7 gives a detailed over view of citations published in IJIDT during 20011-15, which shows that maximum number of citations have been published in volume 4, 2014 (771 nos.) and also stood first position with having more average no. if citations per paper followed by volume 3, 2, 5, and 1 respectively.

**Table 7: Volume-wise Distribution of Citations**

Year	Vol	Rank (B/A)*	Number of articles	Number of Citations	Average no. of citations/paper	Cumulative	
						Citation	%age
2011	1	5	45	506	11.24	506	15.27
2012	2	4	55	683	12.41	1189	35.88
2013	3	3	56	727	12.98	1916	57.83
2014	4	1	52	771	14.82	2687	81.10
2015	5	2	46	626	13.60	3313	100
<b>Total</b>			<b>254</b>	<b>3313</b>	<b>13.04</b>	<b>3313</b>	<b>100</b>

\* Note: A= No. of papers, B= No. of citation.

**FINDING AND CONCLUSION**

This paper attempts to identify the Bibliometrics characteristic of IJIDT papers. Findings drawn from this study are:

- The range of papers published per volume during the period under study is 45-56 with an average of 13.04 citations per paper.
- The number of two authored papers is quite higher at 113(44.48%), followed by single authored paper 37.40 %; three authored 13.38%; and more than four authored 4.72% respectively.

- x statistics for the data of year/ volume with number of papers shows that there is no statistical significant difference.
- Out of 254 papers during the period under study, contains 3313 citations
- x statistics for the data of number of citations with number of papers published during the period under study shows that there is a statistical significant difference.
- Out of 473 authors who contributed a total of 254 papers, 245 (96.45%) are geographically affiliated to India.

This journal is one of the leading peer-reviewed quarterly periodical completely dedicated to the field of Library and Information Science serving the professional community by publishing papers in almost all fields of Library and information Science. The findings must reveal various aspects of the characteristics and patterns of contributions (Rameh Kuri-2016)

## REFERENCES

1. Sengupta, I N (1985). Bibliometrics: A bird's eye view. IASLIC Bulletin, 30(4), 167-174.
2. Rattan, G. K. & Gupta, K. (2012). Bibliometric analysis of Malaysian Journal of Library and Information Science: 2007-2011. International Journal of Information Dissemination and Technology, 2(4), 307-312.
3. Sethi, Bipin Bihari. & Maharana, Balu. (2015) Research Publication Trend of Two Periodicals, "Political Geography" and "Religion": A Bibliometric Perception. Library Philosophy and Practice, Paper 1277 <http://digitalcommons.unl.edu/libphilprac>
4. Thanuskodi, S (2011) Library Herald Journal: A Bibliometric Study, International Refereed Research Journal www.researchersworld.com 2(4), 68-76
5. Sankar P and Kavitha E.S (2016) Asia-Pacific Journal of Management Research and Innovation, 2004-2015: A Bibliometric Study. Library Philosophy and Practice (e-journal). Paper 1382. <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=3789&context=libphilprac>
6. Rajendran, P. Jeyshankar, R. & Elango, B. (2011) scientometric analysis of contributions to journal of scientific and industrial research, international journal of digital library services 1(2) 79-89
7. Chaurasia, Kamal Kumar *Bibliometric analysis of Annals of Library and Information Studies (2002-2006)*., 2008 . In MANLIBNET 9th Annual National Convention, New Delhi (India), 4-6 February 2008. <http://eprints.rclis.org/11756/>
8. Kotti, Thavamani (2015). Journal of Forensic Medicine and Toxicology: A bibliometric study. International Journal of Information Dissemination & Technology.(5) 2, 118-122
9. Velmurugan, C. & Radhakrishnan, N. (2015). Webology journal: a scientometric profile. *International Journal of Information Dissemination and Technology*, 5(2), 137-142.
10. Maharana, R.K., Das, A.K. & Choudhury, B.K. (2014). Bibliometric analysis of Defence Science Journal (DSJ) during 2007-2011. International Journal of Information Dissemination and Technology, 4(1), 55-64.

11. Panneerselvam, P. & Dhavaputhalvi, A.C. (2014). Scientometric analysis of the growth of Journal of Signal Processing and Systems. *International Journal of Information Dissemination and Technology*, 4(2), 192-196.
12. International Journal of information dissemination and technology. [www.ijidt.com](http://www.ijidt.com) accessed on 23-4-2016
13. Kuri Ramesh & Palled Savita (2016) Bibliometrics study of journal of Indian Library Association (ILA). *International Journal of Digital Library Services*, 6(1) 49-57
14. Kuri Ramesh & Venugopal Hajje (2014) Citation Analysis of Pearl: A Journal of Library and Information Science, *Asian Journal of Multidisciplinary Studies*, 2 (9), 8-13

