

A BIBLIOMETRIC STUDY OF DESIDOC JOURNAL OF LIBRARY AND INFORMATION TECHNOLOGY (2010-2019)

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The present study provides detailed bibliometric investigation of 542 articles published in *DESIDOC Journal of Library and Information Technology (DJLIT)* during the period 2010-2019. The study analyses the various bibliometric parameters such as, chronological distribution of articles and references, geographical distribution, distribution of Intellectual output, and pagination pattern. According to the study the maximum number *i.e.* 258 (47.60%) articles are double authored, followed by single author 172 (31.73%) articles. The gap between receipt and publication of the articles and highly cited papers are also examined in this study.

Keywords: Bibliometric study, citation analysis, authorship pattern, Defence Research & Development Organisation, DESIDOC Journal of Library and Information Technology, etc.

INTRODUCTION

The *DESIDOC Journal of Library and Information Technology* is a peer review open access Journal of Library and Information Science (LIS) in India. This journal is being published bimonthly since 1981 by *Defence Scientific Information and Documentation Centre (DESIDOC)*, a constituent establishment of *DRDO (Defence Research and Development Organisation)*. It has been observed that articles published in this journal are based on original research and review papers related to Library and Information Science and Information Communication & Technology (ICT) applications in library activity, services and products. The major subject field viz. Information system, knowledge management, collection building and management, Information behavior and retrieval, Library and Information services are covered in this journal. Presently, this journal also indexed in Emerging Source Citation Index, ProQuest, EBSCO, Scopus, LISA, LISTA, Open J-Gate, Library Literature and Information Science Index/Full-text, The Informed Librarian Online, WorldCat, Google Scholar, Indian Citation Index, Indian Science Abstracts, etc.

The term bibliometrics was coined by Alan Pritchard (1969) in a paper published in 1969, i.e. *Statistical Bibliography or bibliometrics?* Bibliometrics is widely used by researchers in the evaluation of research articles or other publications of scholars, academic institutions, countries or regions. Bibliometrics has two roots: “biblio” and “metrics”. The word “biblio” is derived from the combination of Latin and Greek word “biblion” meaning book. The term “metrics”, which indicates the science of meter, i.e. measurement, is derived from the Latin or Greek word “metricus” or “metrikos” respectively, each meaning measurement. Bibliometrics studies can be applied to any discipline to find out trends and growth of the literature and to find out productivity of a journal.

LITERATURE REVIEW

Keeping in view the objectives of the study, some of the articles are reviewed between 2014 & 2020. Garg and Anjana (2014) made a bibliometric analysis of the papers published in the *Journal of Intellectual Property Rights (JIPR)* during 1996 to 2012. The study highlights that academic institutions are the most significant contributors to the journal, followed by research institutions. The study also shows the single-authored pattern. Garg and Bebi (2014) analysed the “number of articles published in *Annals of Library and Information Studies (ALIS)* and *DESIDOC Journal of Library and Information Technology* during 2010-2013 and the citations obtained by these articles during 2010-2014 (April) using Google Scholar”. Findings revealed that “both the journals are more or less on equal

footing in terms of citations per paper as well as impact factor”. However, *DJLIT* had better immediacy index than *ALIS*. Harinath and Singh (2014) examined the various Bibliometric components of articles published in the *Indian Journal of International Law (IJLI)* from 1960 to 2010. The study revealed that in its initial year in 1962 it received the highest number of references. The year 1997 witnessed the maximum number of articles published i.e. 23 (7.06%) and followed by 1977 with 18 articles (5.52%). The study also found that most of the articles were contributed by a single author i.e. 318 articles (97.55%) out of 326 articles and 53 articles (16.26%) contained journal self-citation.

Rubinandhini and Gomathi (2015) examined the articles published from 2005 to 2014 in the *Annals of Library and Information Studies*. The study discussed the authorship pattern, citation exploration, publication efficiency index, article word counts, and year-wise distribution of citations. The paper evaluates the geographical distribution of scripts with time series analysis of articles contributed during the above mentioned period. Mondal and Saha (2015) analyzed the bibliometric aspects of the *Journal of the Indian Library Association*. The study covered 115 articles published from 2008-2014. The authors found that the significant articles published in the journal to Users Study (17.4%), followed by ICT and Library Automation (11.30%). The study also found that the authors from only two countries i.e., India (98.96%) and Thailand (1.04%) contributed to the Journal.

Khan (2016) analysed papers published article entitled “Scientometric analysis of

DESIDOC Journal of Library & Information Technology (2010-2014)". According to this study Delhi to be the state that published the highest number of papers followed by Maharashtra and Karnataka with highest share of two authored papers. The majority of the authors preferred journals as their major source of information, providing the highest number of citation totaling 2,447 (51.89 per cent), while websites attained the second position with 1,015 (21.52 per cent) citation, followed by book with 613 (13 percent) citation. The study further reveals that maximum number of citation totaling 1,109 (23.52 percent out of 4,716 were received in the year 2013, whereas least citations totaling 700 (14.84 per cent) were recorded in the year 2010. Bansal (2016) highlights a Bibliometric analysis of the *DESIDOC Journal of Library & Information Technology* for assessing the pattern of growth of the search output, subjects covered and citation analysis of the references. The study reveals that there is significant increase in the number of articles published from 2001 to 2012 in the *DESIDOC Journal of Library & Information Technology*. The study also shows that the maximum number of papers (61%) has been jointly authored.

Bapte (2017) examined 4821 citation appended to papers published in *DESIDOC Journal of Library and Information technology (DJLIT)* during 2011-2015. The author found that "dominance of single authorship with 1912 (39.68%). 1152 (23.89%) citation with two authors, i.e. 456 (9.54%) citations with three authors and 386 (8%) citations with more than three authors. The Degree of Collaboration of this

study was 0.51. Verma and Brahma (2018) compared *DESIDOC Journal of Library and Information Technology (DJLIT)* and *SRELS Journal of Information Management (SRELS)* in terms of distribution of articles, authorship pattern of articles, geographical distribution, and major contributors to the two journals. The study revealed that *SRELS* published more articles than *DJLIT*. *SRELS* published less number of foreign authored papers than *DJLIT*. More references were cited in *DJLIT* compared to *SRELS*.

Lamba and Madhusudhan (2019) mapped the topics of papers published in *DJLIT* during 1981-2018. The review of literature indicates that the above mentioned studies have analysed data that varied between five to twelve years and no study has analysed the data covering a period of 28 years reported in the present study. Bapte and Gedam (2019) concluded in their study entitled "*SRELS Journal of Information Management: A Bibliometric Study*". The *SRELS Journal of Information Management* published 526 papers during 2010-2018. Each volume published almost 58 articles. Each issue published 9.74 research papers on the whole. 1790 cited documents were found the authors contributing to the source journal did not use too many source to justify their study. The average citation rate of almost 14 is not so great. Kannan and Thanuskodi (2019) studied "Bibliometric Analysis of *Library Philosophy and Practice*: A study based on Scopus Database". According to this study the *Journal of Library Philosophy and Practice* is a top ranking open access journal in the field of Library and Information Science. The geographical coverage of Journal is high with 46

foreign countries coverage. It is a popular journal of international researchers, which constitutes 22.11% publications of Indian authors.

Singson et al. (2019) concluded in their paper entitled “Comparative Citation Analysis of Articles of Select Indian Open Access LIS Journals” that how research paper published in different journal impacted the citation rate of a particular research paper. Based on the results of the study, a sound theoretical research paper attracted citations as observed in the case of Eisenberg whose research paper published in *DJLIT* has been widely cited by authors in different language (224 citations). Garg, Kumar and Geeta (2019) concluded in paper entitled “Malaysian Journal of Library and Information Science: A bibliometric study” that highest number (28) articles were published in the year 2011 (volume 16) and the number of articles published by the journal stabilized during the later period of 2015-2018. It is also indicated that among all the countries, Malaysia produced the highest number of publications contributing about one-third of the total output. However, the value of CPP was highest for UK.

Singh et al. (2020) studied “Bibliometric Analysis of *Journal of the Indian Law Institute (JILI)*: A study of Legal Scholarship published during 2000-2018” and found that the Journal receives the maximum research paper from Delhi based author or as 91 research papers (47.89%) of the total contributions have been received. The second most contributing state is Uttar Pradesh from where 20 articles (10.52%) have been received by Punjab with 16 (4.22%) articles. The journal has received the least author contribution

from Jammu and Kashmir i.e. 2 (1.05%) of the total author contributions. Seven States viz. Andhra Pradesh, Assam, Bihar, Orissa, Pondicherry, Rajasthan and Uttarakhand witnessed 3 author contributions each for the period under review. Donthu et al. (2020) studied “Forty-Five years of *Journal of Business Research*: A bibliometric Analysis from 1973-2017”. The study reveal the data/information of journal is available is Scopus (5131 published articles, 13 papers under press, 103 editorial notes, 79 notes, 12 reviews, 4 erratums, 1 conference paper and 1 letter). The study found the year 2016 was the most productive in terms of publications (765) and the number of cited publication (737). The year 2005 was most significant year with *h*-index (68), *g*-index (118) and *m*-index (0.58). The study also reveals that the University of Valencia of Spain with 87 publications, followed by Georgia State University of USA with 70 publications.

Garg et al. (2020) did “Bibliometric Analysis of Papers published during 1992-2019 in *DESIDOC Journal of Library and Information Technology*”. In the study 1698 research articles were examined and found that the flow of papers to the journal was low in the beginning, but it increased during the later years, reaching at the peak in the block 2012-2015. As the journal is published from India, hence the highest number of contributions is also from India with low impact in terms of CPP and RCI. Delhi though published highest number of papers, but had a low value of CPP and RCI as compared to Maharashtra; the state contributing second highest number of papers. Chaparwal, Teli, and Rajput (2020) indicated in their study of “Mapping of research

papers in *Malaysian Journal of Library and Information Science* 2010-2019: A Bibliometric Study” that total 7626 reference of 214 papers occur in his research. Out of 7626 references maximum number of references 945 (12.39%) are arise in the year 2019 and minimum references 582 (7.63%) are arise in the year 2013. Most of 30.84% contributions are from Malaysia which is the 1st rank, followed by 12.45% China at 2nd rank and 9.85% of Iran at the 3rd rank.

Gidhvi et al. (2020) studied the “Citation patterns followed in Research papers of the *DESIDOC Journal of Library and Information Technology*”. The study indicated that the most cited author of *DESIDOC Journal of Library & Information Technology* was Gupta, B.M. the study also highlighted that highest number of citations was single authored (51.59%), and 6.72% citations were from books and only 55.07% citations were from journals. Sahu and Parabhoi (2020) analyzed in the study “Bibliometric Study of Library and Information Science Journal Articles during 2014 2018: LIS Research Trends in India” that the majority of the 342 (25.2%) papers published in the year 2018. Favorite source for publications was *DESIDOC Journal of Library and Information Technology*. Similarly, LIS Indians professional more likely to published research papers collaboratively. Further noted that most frequently used keywords were Scientometric, Bibliometric, India and authorship patterns, etc. This study reviewed 1357 documents from 2014-2018 indexed in the Scopus database. Further, the study result revealed that out of 1357, journal articles 824 articles

received a total 4490 citation whereas 533 publications had no citation received.

OBJECTIVES OF THE STUDY

- To identify the number of contributors and the pattern of growth of articles published in the *DESIDOC Journal of Library and Information Technology* during 2010-2019;
- To identify the most prolific authors and their work affiliation;
- To examine the geographical distribution of articles;
- To examine the length of articles and number of references in an article;
- To examine the time gap between receipt of publication and its subsequent publication in the journal;
- To identify the highly cited papers.

SCOPE OF THE STUDY

The scope of the present study covers articles published in *DESIDOC Journal of Library and Information Technology*, a peer review, bimonthly, open access journal. The specific period of the study was limited to 10 years i.e. 2010-2019.

METHODOLOGY

The source journal is an open access journal and is available on the *DRDO-DJLIT website* (<https://publications.drdo.gov.in/ojs/index.php/djlit/issue/archive>). The data relevant to the study was downloaded from the website of 10 years from volume 30 to 39 which covers the period 2010 to 2019. Each volume consists six issues that means total 60 issues has been covered during

this study. The collected data were tabulated and analyzed to meet the above mentioned objectives.

DATA ANALYSIS

The data has been collected based on the objectives of this article and presented accordingly with the help of MS-Excel application software in tabular format.

Chronological Distributions of Articles and References

The table 1 presents the data on the number of articles published, number of references per volume and number of references per paper received by each volume during the period 2010-2019.

Table 1: Distribution of articles and references year wise (volume)

Year (Vol.) (Issues)	2010 (30) (1-6)	2011 (31) (1-6)	2012 (32) (1-6)	2013 (33) (1-6)	2014 (34) (1-6)	2015 (35) (1-6)	2016 (36) (1-6)	2017 (37) (1-6)	2018 (38) (1-6)	2019 (39) (1-6)	Total
No. of articles published	47	40	64	60	59	53	49	58	60	52	542
No. of references per volume	704	792	2459	978	915	879	806	1090	1349	1317	11289
Average No. of reference per volume	14.98	19.80	38.42	16.30	15.51	16.58	16.45	18.79	22.48	25.33	20.83

Articles Distribution

During the period under study, *DJLIT* published 542 articles in 60 issues in 10 volumes. Thus, on an average the journal published about 54 articles in each volume, which means approximately 9 articles per issue. The pattern of number of articles published in this journal is varying from 2010 to 2019. The maximum number of articles i.e. 64 published in the year 2012 and the minimum numbers of articles i.e. 40 published in the year 2011 (Fig. 1). It indicates that after reaching a peak in the year 2012, the number of articles published was declining continuously till 2016. It implies that the journal is losing its popularity among the community of researchers working in the area of traditional knowledge. But, in 2017 and 2018 more i.e. 58 & 60 articles were published compare to the last year (2016). It has been noticed that in year 2019

only 52 articles were published which less than last year.

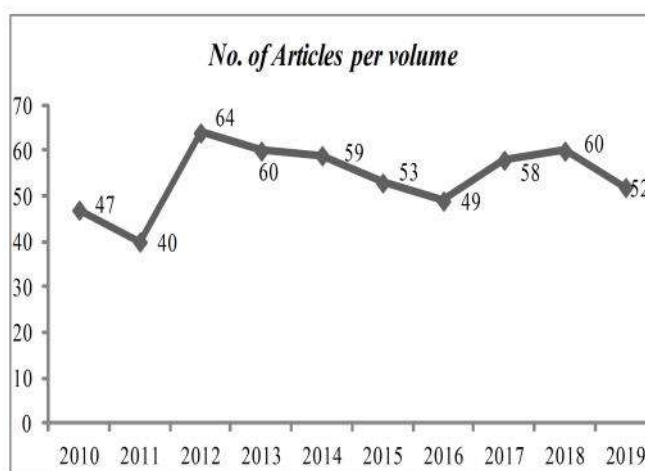


Fig.1: Pattern of articles published

Distribution of References

References are an important part of any publication. These provide the reader with the

background information about the topic being discussed in the paper. At the same time these assure the reader that the author(s) are familiar with the history of the topic being investigated and reported. The table 1 also provides data on the number of references cited in each volume. It reveals that the number of references per paper is increasing over the period of time. The average number of references was about 20.83. It has been noticed that the pattern of references in articles are varying from volume to volume during 2010 to 2019. Among all the years the highest number of references i.e. 38.42 per paper is for volume 32 (2012) and the lowest number of references i.e. 14.98 per paper is in volume 30 (2010) (Fig. 2). The number of references is lower in beginnings year 2010, which increased in subsequent years 2011 and 2012 but drastically reduced in the year 2013. However, the pattern of references per paper is chaotic.

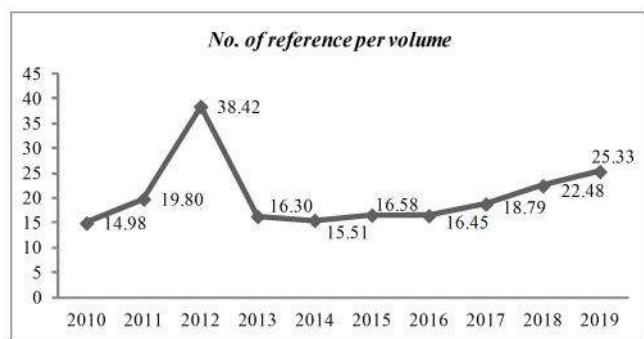


Fig. 2: Pattern of references per volume

Geographical Distribution of Articles Distribution by Country

The table 2 presents the total intellectual output came from 34 countries scattered all over the world. Of this 561 the highest 84.31% (473) papers originated from India and 15.69% (88) originated from Abroad (Fig. 3). Of these, the

Nigeria 2.50% (14), USA (8), South Africa and Kingdom of Saudi Arabia (7 each), Fiji (6), Iran (5), Singapore (4), Bangladesh, Malaysia and Spain (3 each) and Argentina, Greece, Indonesia, Sudan and United Arab Emirates (2 each). Eighteen countries, whose name has not been listed in the table, contributed one paper each.

Table 2: Distribution of Intellectual output by Country

Sl. No.	Name of the Country	Total
1.	India	473 (84.31%)
2.	Nigeria	14 (2.50%)
3.	USA	8 (1.43%)
4.	South Africa	7 (1.25%)
5.	Kingdom of Saudi Arabia	7 (1.25%)
6.	Fiji	6 (1.07%)
7.	Iran	5 (0.89%)
8.	Singapore	4 (0.71%)
9.	Bangladesh	3 (0.53%)
10.	Malaysia	3 (0.53%)
11.	Spain	3 (0.53%)
12.	Argentina	2 (0.36%)
13.	Greece	2 (0.36%)
14.	Indonesia	2 (0.36%)
15.	Sudan	2 (0.36%)
16.	United Arab Emirates	2 (0.36%)
17.	18 countries with 1 paper each	18* (3.21%)
Total		561**

*Australia, Belgium, Botswana, Brazil, Netherlands, Germany, Iraq, Jordan, UK, Portugal, Romania, Russia, Slovenia, Sri Lanka, Sultanate of Oman, Swaziland, Thailand and Turkey.

**Total number of the country is more than the actual number of papers published, because it has been noticed that a single article contributed by two or more than two authors, who belongs to different countries.

Distribution by Indian States

The table 3 shows the distribution of contributions by Indian States and Union Territories (UT). Only those states have been listed which have contributed 10 or more papers.

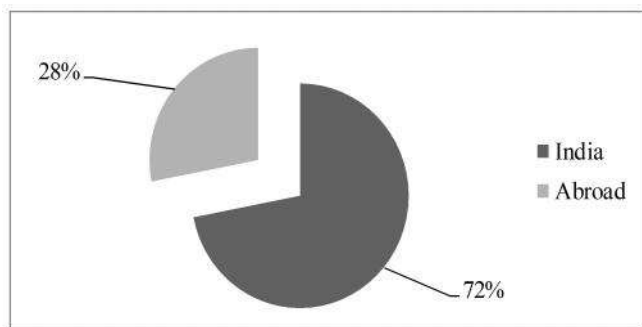


Fig.3: Distribution of Intellectual output by Country

Table 3: Distribution of intellectual output by Indian States

Sl. No.	Name of the state	Total
1.	Delhi	132
2.	Karnataka	60
3.	Maharashtra	60
4.	UP	41
5.	Punjab	28
6.	West Bengal	26
7.	Kerala	25
8.	Odisha	20
9.	Telangana	20
10.	Tamil Nadu	19
11.	Jammu & Kashmir	18
12.	Andhra Pradesh	16
13.	Haryana	16
14.	Rajasthan	13
15.	Pondicherry	12
16.	Gujarat	10
17.	Other States and UT's	55*
Total		571**

*Himachal Pradesh (8), Chandigarh, Chhattisgarh and Madhya Pradesh (7) each, Uttarakhand (6), Bihar, Jharkhand and Mizoram (4) each, Assam (3) & Goa, Manipur, Meghalaya, Sikkim and Tripura (1) each.

**Total number of the Indian states is more than the actual number of papers published, because it has been noticed that a single article contributed by two or more than two authors, who belongs to different Indian states.

Among these, the state of Delhi topped the list with 132 publications, followed by Karnataka and Maharashtra contributing 60 publications each. Subsequently, UP and Punjab contributed 41 and 28 respectively. The top five states contributed 321 (48.56%) of the total output. Remaining output came from other states and UTs.

Distribution of Intellectual Output by Institutions

The total intellectual output came from 799 institutions scattered in India and abroad (Fig. 4). The total 695 institutions are from India and rest 104 institutions are from abroad.

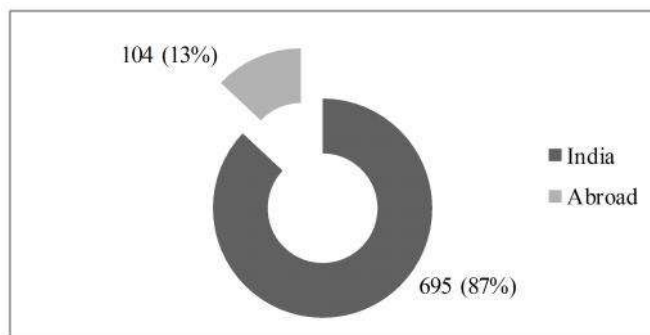


Fig. 4: Distribution of Intellectual Output by Institutions

Distribution of Intellectual Output by Sub-Disciplines

Subject Coverage of Articles

Based on the keywords used in the articles, sub-disciplines of research were identified. These have been listed in the table 5. It is observed that the highest number 'Bibliometrics/ Scientometrics/ Webometrics/ Altmetrics/ Citation Analysis' 76 (14%). Other sub-disciplines where 20 or more papers were published are 'ICT/ Internet/ Information Technology/ Web

Table 4: Distribution of intellectual output by institutions

Sl. No.	Name of Institution	No. of papers
1.	University of Delhi, Delhi	41
2.	CSIR-NISTADS, New Delhi	27
3.	DRDO-DESIDOC, New Delhi	24
4.	Jawaharlal Nehru University, New Delhi	16
5.	Banaras Hindu University (BHU), UP	12
6.	Indira Gandhi National Open University, New Delhi	12
7.	Pondicherry University, Puducherry	12
8.	University of Mysore, Karnataka	10
9.	Panjab University, Chandigarh	9
10.	University of Calicut, Kerala	9
11.	University of Kashmir, Jammu & Kashmir	9
12.	Aligarh Muslim University, UP	8
13.	Baba Ghulam Shah Badshah University, Jammu & Kashmir	7
14.	Bhabha Atomic Research Centre, Mumbai	7
15.	CSIR-NPL, New Delhi	7
16.	Indian Institute of Technology Delhi, New Delhi	7
17.	Jaypee University of Information Technology, Himachal Pradesh	7
18.	University of Calcutta, West Bengal	7
19.	University of Pune, Maharashtra	7
20.	Babasaheb Bhimrao Ambedkar University Lucknow, UP	6
21.	Fiji National University, Fiji	6
22.	Government Medical College & Hospital, Chandigarh	6
23.	Guru Nanak Dev University, Punjab	6
24.	Karnataka University, Karnataka	6
25.	Shri Venkateshwara University, UP	6
26.	Tata Institute of Social Sciences, Maharashtra	6
27.	University of Kerala, Kerala	6
Total		286
28.	Institutes contributing 5 papers each = 9	45
29.	Institutes contributing 4 papers each = 10	40
30.	Institutes contributing 3 papers each = 20	60
31.	Institutes contributing 2 papers each = 46	92
32.	Institutes contributing 1 papers each = 276	276
Total		513
Grand Total		799

Technology’ 43 (7.9%), ‘Website/ Web portal/ Web 2.0/ Blog’ 27 (5%), ‘Library resources/ services/ collection development’ 25 (4.6%), ‘E-books/ E-journals/ E-databases’ 24 (4.4%), ‘Digital library/ Digital preservation/ Digitisation’ 23 (4.2%) and ‘Social Network Sites/ Social

media/ Social tagging’ 20 (3.7%). These sub-disciplines contributed more than half (44.9%) of the total published papers. Other topics where more than 10% papers were published have been listed in Table 5.

Table 5: Distribution of Intellectual output by sub-disciplines

Subject field	No of Articles	%
Bibliometrics / Scientometrics / Webometrics / Altmetrics / Citation Analysis	76	14.0
ICT / Internet / Information Technology / Web Technology	43	7.9
Website / Web portal / Web 2.0 / Blog	27	5.0
Library resources / services / collection development	25	4.6
E-books / E-journals / E-databases	24	4.4
Digital library / Digital preservation / Digitization	23	4.2
Social Network Sites/Social media / Social tagging	20	3.7
Information Literacy / LIS	16	3.0
E-resources / online resources	15	2.8
E-learning / Online learning	15	2.8
Open access	15	2.8
LIS Education	14	2.6
Virtual library / Virtual exhibitions / Online exhibitions	14	2.6
Others	215	39.7
Total	542	100.00

Most Prolific Authors

The total Intellectual output came from 1064 authors working in Indian institutions i.e. 894 (84.02%) as well as in institutions abroad i.e. 170 (15.98%). The table 6 lists 10 authors who contributed 5 or more papers. Of these B. M.

Gupta of the CSIR-NISTADS, New Delhi contributed highest (21) papers followed by C.K. Ramaiah of Pondicherry University, Pondicherry. The 10 authors listed in the table 6 contributed 95 papers.

Table 6: Most prolific authors

Name of the Author	Institutional affiliation	No. of papers
Gupta, B M	CSIR- NISTADS, New Delhi	21
Ramaiah, C.K.	Pondicherry University, Pondicherry	11
Dhawan, S M	CSIR-NPL, New Delhi	9
Gupta, Ritu	Sri Venkateswara University, Meerut, UP	9
Madhusudhan, M.	University of Delhi, Delhi	9
Pandita, Ramesh	B.G.S.B. University, Jammu & Kashmir	8
Bhardwaj, Raj Kumar	University of Delhi, Delhi	7
Kumbhar, Rajendra	Savitribai Phule Pune University, Pune	7
Ram	JUIT, Solan, Himachal Pradesh	7
Tripathi, Manorama	Jawaharlal Nehru University, New Delhi	7
Total		95

Authorship Pattern

The table 7 shows the authorship pattern of articles published during 2010- 2019. It is obvious from the table 7 that maximum number (47.60%)

of articles are double authored followed by single authored (31.73%). The proportion of three authored, four authored, five authored and six authored contributions are very less as compared to single and two authored articles.

Table 7: Authorship pattern

Author (s)	Single Author	Two Authors	Three Authors	Four Authors	Five Authors	Six Authors	Total
No. of articles	172	258	83	19	9	1	542
%	31.73	47.60	15.31	3.51	1.66	0.18	100.00

Pagination Pattern

The table 8 presents the length of pages of various articles. The page lengths were divided into four categories. These were 1-5, 6-10, 11-15 and more than 15. Data presented in the table 8 indicates

that highest number of papers was published having page length in between 6-10 pages closely followed by articles having page length 1-5 pages. Only a minuscule number of papers were published with page length more than 15.

Table 8: Distribution of output by page length

Year (Vol.)	No of Pages				Total
	1-5	6-10	11-15	>15	
2010 (30)	7	27	10	3	47
2011 (31)	6	25	6	3	40
2012 (32)	12	50	1	1	64
2013 (33)	15	37	7	1	60
2014 (34)	10	44	4	1	59
2015 (35)	6	41	6	-	53
2016 (36)	12	33	4	-	49
2017 (37)	9	49	-	-	58
2018 (38)	9	51	-	-	60
2019 (39)	5	47	-	-	52
Total	91 (16.79%)	404 (74.54%)	38 (7.01%)	9 (1.66%)	542 (100%)

Time Gap between Receipt and Publication of the Articles

The table 9 presents the data on the gap between receipt of the papers and its subsequent publication in the journal for the period 2010-2019. It indicates that the average gap between

receipt of the paper and its publication for 542 papers was 3186 months. Thus, the average gap was 5.87 months. The gap was 3.92 i.e. lower than the average value for the year 2019. However, during 2012 the gap was 7.22 i.e. higher than the average value.

Table 9: Time gap in receipt and publication of the articles

Year (Vol.)	2010 (30)	2011 (31)	2012 (32)	2013 (33)	2014 (34)	2015 (35)	2016 (36)	2017 (37)	2018 (38)	2019 (39)	Total
No. of papers	47	40	64	60	59	53	49	58	60	52	542
Total gap in months	274	251	462	388	369	246	219	366	407	204	3186
Average	5.83	6.28	7.22	6.47	6.25	4.64	4.47	6.31	6.78	3.92	5.88

Measurement of the Number of References

The references of a research indicate the mapping the research in their concerned area and also the acknowledgements to the researchers. The study indicates that the references are varied from article to article. However, on an average 21 references are found per article published during the specified period of study. The table 10 presents the data on the number of references in

the published articles in *DESIDOC Journal of Library and Information Technology*. Further analysis reveals that about 22.33 % articles have references less than average. Rest 77.67 % articles were having references more than the average. Study further found that there were 169 articles containing more than 20 references. There were 2 articles which were not containing references.

Table 10: Measurement of the number of the references

References	No. of articles	%	Total references	Average references per article
1-5	40	7.38	158	3.95
6-10	116	21.40	946	8.16
11-15	136	25.09	1751	12.88
16-20	79	14.58	1411	17.86
> 20	169	31.18	7023	41.56
Not found	2	0.37	-	-
Total	542	100.00	11289	20.83

Highly Cited Papers

Citation analysis is the major thrust area of bibliometric research. It deals with the analysis of the bibliographic references which generally appear at the end of the scientific communication. Citation analysis measures the impact of each article by counting the number of times they were cited by other articles. Table 11 lists 12 papers

which received 30 or more citations since their publication. Of the 16 highly cited papers, title of article “Websites of Central Universities in India: A Webometric Analysis” contributed by B. Ramesh Babu, Jeyshankar, R. and Rao, P. N. deals with web metric subject. This result shows that this topic is highly preferred by the LIS researcher community.

Table 11: Highly cited authors

Sl. No.	Authors	Bibliographic details	No. of citations
1.	B. Ramesh Babu, Jeyshankar, R. and Rao, P. N.	30 (4)2010, 33-43	70
2.	Satpathy, Sunil Kumar and Rou, Biswanath	30 (4) 2010, 11-16	69
3.	Kumar, Manoj and Moorthy, A.L.	31 (3) 2011, 203-208	64
4.	Thanuskodi, S. and Ravi, S.	31 (1) 2011, 25-30	59
5.	Koneru, Indira	30 (3) 2010, 23-34	51
6.	Babu, K. Surendra, Sarada, B. and Ramaiah, C.K.	30 (1) 2010, 26-31	51
7.	Sudhier, K.G.	30 (2) 2010, 3-14	48
8.	Bhat, Iqbal and Mudhol, Mahesh V.	34 (1) 2014, 28-34	43
9.	Baskaran, C.	33 (3) 2013, 236-242	43
10.	Kamble, V.T., Sangeeta and Raj, Hans	32 (5) 2012, 388-392	38
11.	Kamba, Manir Abdullahi	31 (1) 2011, 65-71	38
12.	Giri, Kaushal	31 (2) 2011, 116-120	34
13.	Mohindra, Rakesh and Kumar, Anil	35 (1) 2015, 54-60	34
14.	Bansal, A.	33 (5) 2013, 412-417	33
15.	Aqil, M., Ahmad, Parvez and Siddique, M. A.	31(5) 2011, 395-400	32
16.	Malathy S. and Kantha P.	33(5) 2013, 361-366	30
Total			737

SUGGESTIONS

It has been noticed that the gap between receipt and publication of the articles is 3.92 i.e. lower than the average value for the year 2019. However, during 2012 the gap was 7.22, i.e. higher than the average value. It is suggested that the time gap between receipt and publication of article may be reduced. The contributed article should review in maximum six months and reply may be send to the contributors. It is also noticed that 28.59% of the published papers remained un-cited. It is suggested that some mechanism must be developed for popularization of these articles among researchers.

CONCLUSIONS

This study conducted to know the numbers contributors and the pattern of growth of articles published during 2010-2019 (10 Years). The paper

also examines the most prolific authors, geographical distribution of articles, number of references is an article, etc. Based on above analysis and major findings it is concluded that in 2012, maximum number i.e. 64 articles were contributed. However, the number of papers declined from 2013 to 2016. Again, number of articles increased compared to 2016 and maintained the pattern till 2018. However, the number of papers again declined in the year 2019.

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