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Bibliometric Analysis of Papers Published During 1992-2019 in DESIDOC Journal of Library and Information Technology

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ABSTRACT

The study analyses papers published in *DESIDOC Journal of Library and Information Technology (DJLIT)* using bibliometric techniques for the period of 1992-2019 (28 years) and citations received by these papers until 20th March 2020 as reflected by Google Scholar. The study examined the pattern of growth, geographical distribution of the articles; identified the prolific authors & institutions, and their output; and the pattern of citations of the papers and identified most cited authors. The findings indicate that the highest number of articles was published during 2012-2015 followed by 2016-2019. The distribution of output by countries indicates that 39 countries contributed 1,698 articles, including India. Indian authors published the highest percentage (86.1 %) of articles followed by USA and had the highest value of CPP and RCI. Authors affiliated to different institutions of Delhi contributed the most (30.7 %) followed by Karnataka (13.1 %) and Maharashtra (10.5 %). Among the institutions, DRDO-DESIDOC and CSIR-NISTADS topped the list. Among the 26 most prolific authors, B.M. Gupta (CSIR-NISTADS) published the maximum number of articles. However, B.R. Babu (University of Madras, Chennai) had the highest value of CPP and RCI. During the studied period, 1,698 papers obtained 15,538 citations, of which 248 (14.6 %) articles did not receive any citation.

Keywords: Bibliometrics; Scientometrics; Citation analysis; DJLIT; Library and information science; India.

1. INTRODUCTION

Primary journals are a vital source of information and are considered as the main vehicle for disseminating research results and information about new ideas in a discipline. These help for the in-depth study of a subject in its totality and are the indicators of literature growth in any field of knowledge. Primary journals of a country reflect the quality of research being carried out in that country and the quantum of research in a country can be judged through its publications in primary journals. India publishes a large number of periodicals in the domain of Library and Information Science (LIS). During the last one hundred years, LIS periodicals in India maintained a steady growth which gained momentum from the third quarter of 20th century[1]. However, during these 100 years, it could not produce a journal which is truly international in nature. Three journals are indexed by Scopus database including the journal under study. Also, international abstracting and indexing services in LIS index few journals published from India and *DJLIT* is one of them which is indexed by all the four abstracting and indexing services[2].The present paper depicts the scholarly communication landscape of the DJLIT for a period of 1992-2019.

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2. LITERATURE REVIEW

During the last two decades, several authors have conducted bibliometric analysis of *DJLIT*. The published studies can basically be classified into three categories. The first type of studies dealt with bibliometric analysis of papers published in the journal during a particular period of time. These studies basically examined pattern of growth of the papers published, authorship pattern, subject analysis, geographical distribution of authors in published articles. The second type of studies dealt with analysis of references appended in the journal and third type of studies compared *DJLIT* with some other journals.

For firsts type of studies readers can refer to Kumar and Moorthy[3], Pandita[4], Bansal[5], and Khan[6]. Kumar and Moorthy, examined papers published in the journal during 2001-2010 (10 years), while Pandita and Bansal analysed papers published in the journal during 2003-2012 (10 Years) and during 2001-2012 (12 years) respectively. However, Khan analysed papers published during 2010-2014 (5 years). All these studies found Delhi to be the state that published the highest number of papers followed by Maharashtra and Karnataka with highest share of two authored papers.

For second type of studies readers can refer to Bapte[7] who made a bibliometric analysis of 4821 cited references appended in 295 articles published in DJLIT during 2011-2015.

"Ranked list of journals found *Scientometrics* to be the most cited journal by the authors cited in DJLIT. The source journal ranked second with 5.43 per cent cited references. Ranked core list of journals found that maximum journals are from foreign countries".

For third type of studies, readers can refer to Garg and Bebi[8], and Verma and Brahma[9]. Garg and Bebi 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. Verma and Brahma 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. Besides, these studies Kumar, Bansal, and Dey-Kanungo[10] traced the historical account of *DJLIT* since its publication until 2014. Recently Lamba and Madhusudhan[11] 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. Also, studies by Kumar and Moorthy, Pandita, Bansal, and Khan did not use citation data to examine the impact of the papers published in the journal. Thus, the present study is an improvement of the above mentioned studies in terms of the number of papers examined as well as impact of output in terms of citations.

3. BIBLIOMETRIC INDICATORS USED

Authors used two absolute indicators in the paper. These are total number of publications (TNP) and total number of citations (TNC) for measuring scientific output and impact. The value of TNP was obtained from the published data, while the values of TNC were obtained from Google Scholar. Besides these two absolute indicators, authors also used citations per paper (CPP) and relative citation impact (RCI) as two relative indicators. CPP is defined "as the average number of citations per paper" and RCI is a "measure of both the influence and visibility of a nation's research on the global perspective" and was first used by May[12]. For details of CPP and RCI refer to Dwivedi, Kumar and Garg[13].Here CPP and RCI were used for comparing the impact of the research productivity for different countries, Indian states, prolific authors, and institutions. Calculation of RCI for India has been illustrated below. RCI for India in Table 2 is percentage of total citations / percentage of total papers = 85.5/86.0 = 1.0.

4. OBJECTIVES

The major objectives of the study are as follows:

- Examine the growth of articles published during the 28 years of 1992-2019 in block of four years each
- Examine the geographical distribution of articles in terms of countries and Indian States and the impact of their productivity in terms of CPP and RCI
- Identify the most prolific institutions and authors and impact of their productivity in terms of CPP and RCI
- Examine the citations earned by the articles and to identify highly cited authors.

5. METHODOLOGY

Data for the present study was downloaded from journal's website (https://publications.drdo.gov.in/ojs/index.php/djlit) for a period of 28 years 1992 (volume 12) to 2019 (volume 39). Authors downloaded only 910 research articles and excluded 49 editorials and three annual indexes. The data was downloaded in MS Excel sheet for ease of analysis. Downloaded data included the name of the authors and their affiliation, year of publication of the paper; and citations received by each paper. Google Scholar was used to examine the citations in the

Table 1. Distribution of contributions according to year and volumes

Years (volumes)	Number of articles (%)	Number of articles/volume
1992-1995 (12-15)	34 (3.7)	8.5
1996-1999 (16-19)	90 (9.9)	22.5
2000-2003 (20-23)	55 (6.0)	13.8
2004-2007 (24-27)	77 (8.5)	19.3
2008-2011 (28-31)	199 (21.9)	49.8
2012-2015 (32-35)	238 (26.2)	59.5
2016-2019 (36-39)	217 (23.8)	54.3
Total	910	32.5

Table 2. Geographical distribution of output

Country	TNP (%)	TNC (%)	CPP	RCI
India	1461(86.0)	13288(85.5)	9.1	1.0
Nigeria	40 (2.4)	223 (1.4)	5.6	0.6
USA	39 (2.3)	835 (5.4)	21.4	2.3
Greece	15 (0.9)	175 (1.1)	11.7	1.2
Iran	15 (0.9)	38 (0.2)	2.5	0.3
Saudi Arabia	13 (0.8)	148 (1.0)	11.4	1.3
Singapore	13 (0.8)	225 (1.4)	17.3	1.8
UK	10 (0.6)	64 (0.4)	6.4	0.7
Bangladesh	9 (0.5)	120 (0.8)	13.3	1.6
South Africa	9 (0.5)	25 (0.2)	2.8	0.4
Sub-total	1624 (95.6)	15141(97.4)	9.6	1.0
Other 29 countries	74 (4.4)	397(2.6)	5.4	0.6
Total	**1698	**15538	9.2	1.0

** The method of complete count inflates the output and citations. Hence, the publication and citations are more than the actual numbers.

month of March 2020. Data was analysed to meet the objectives mentioned above. A complete count method of output and citations has been used for the analysis of the data. Under this method, each country or state or institution or authors in multi-authored papers are given unit credit for their contributions, unlike first author count. The method of complete count inflates the number of contributions and citations. In the present case also, the actual number of papers was 910, which has increased to 1698 using the method of complete count.

6. RESULTS AND ANALYSIS

The results of the analysis on several parameters mentioned under the objectives have been described below.

6.1 Chronological Distribution of Contributions

Table 1 presents the distribution of contributions during 1992-2019 in blocks of four years each. During the period of study, the journal published 910 articles in 28 volumes. Thus, on average, the journal published 32.5 articles in each volume. Data presented in Table 1indicates that in the first four blocks, the journal published less than an average number of articles per volume, the lowest being in 1992-1995. The number of articles during the four-year block of 1996-1999 is quite high because, during this block, the journal published 18 special issues. However, in the remaining three blocks of 1992-1995, 2000-2003 and 2004-2007, only eight special issues were published. In the remaining three blocks of 2008-2011 to 2016-2019, the number of articles published was more than the average number of articles. The highest number of articles was published in the four-year block of 2012-2015, followed by 2016-2019. One possible reason for less number of publications during earlier four blocks may be that the bulletin changed to a regular journal only in 1992 which might have attracted less number of articles as compared to later period when the journal was rechristened as DJLIT in the year 2006 and started peer review of submitted articles.

6.2 Geographical Distribution of Contributions and Impact of their Output

Table 2 presents the distribution of papers published in the journal during 1992-2019 by different countries. Based on the complete count of articles, it is observed that 39 countries contributed 1,698 articles, including India. Table 2 lists ten countries that contributed nine or more papers, contributing 95.6 per cent of the total output. The remaining 29 countries contributed only 4.4 per cent of the total output. Further, out of the ten listed countries (Table 2), more than three-fourth (86 %) of the papers were contributed by Indian authors, and the remaining 14 per cent by authors from abroad located in 38 different countries. Among these 38 countries, the share of Nigeria and the US was almost equal. The authors also examined the impact of the output of the countries listed in Table 2 using CPP and RCI. The value of CPP for the entire output was 9.2. For all the listed countries in Table 2, the value of CPP was more than the average CPP for all countries except Iran, South Africa, Nigeria, and the UK in that order. It is highest for the US, followed by Singapore (17.3), Bangladesh (13.3), Greece (11.7), and Saudi Arabia (11.4). A similar trend is followed for the values of RCI. The authors explored the reason for the high value of CPP and RCI for the US and Singapore. A raw analysis of data indicates that 10 papers published by US scholars were cited more than 20 times. Similarly, for Singapore, seven papers were cited more than 20 times, resulting in a high value of CPP and RCI for the US and Singapore. India had a low value of CPP because about 70 per cent of the total papers were cited less than ten times, of which 200 (13.7 %) did not get any citation. Moreover, a low value of RCI for different countries indicates that the output of these countries does not commensurate with their impact.

Table 3. Distribution of output by Indian States and Union Territories

States	TNP (%)	TNC (%)	CPP	RCI
Delhi	449 (30.7)	3578 (26.9)	8.0	0.9
Karnataka	191 (13.1)	1710 (12.9)	9.0	1.0
Maharashtra	154 (10.5)	1521 (11.4)	9.9	1.1
*Telangana / Andhra Pradesh	91 (6.2)	979 (7.4)	10.8	1.2
Uttar Pradesh	81 (5.5)	609 (4.6)	7.5	0.8
Tamil Nadu	67 (4.6)	1024 (7.7)	15.3	1.7
Kerala	51 (3.5)	627 (4.7)	12.3	1.3
West Bengal	47 (3.2)	272 (2.0)	5.8	0.6
Punjab	42 (2.9)	452 (3.4)	10.8	1.2
Chandigarh	37 (2.5)	420 (3.2)	11.4	1.3
Odisha	35 (2.4)	330 (2.5)	9.4	1.0
Gujarat	33 (2.3)	314 (2.4)	9.5	1.0
Haryana	32 (2.2)	291 (2.2)	9.1	1.0
Jammu & Kashmir	30 (2.1)	191 (1.4)	6.4	0.7
Sub total	1340 (91.7)	12318(92.7)	9.2	1.0
**Other 15 states	121 (8.3)	970 (7.3)	8.0	0.9
Total	**1461	**13288	9.1	1.0

*Telangana and Andhra Pradesh clubbed together as Telangana was bifurcated from Andhra Pradesh.
**The value of TNP and TNC is less as given in Table 1, because it does not include contributions made by countries other than India.

6.3 Distribution of output by the Indian States

Table 3 lists 14 Indian States and Union Territories (UT) that contributed about two percent of the total output along with their citations and the values of CPP and RCI. Among these, the Union Territory of Delhi topped the list with 449 (30.7 %) publications followed by Karnataka and Maharashtra. These three states and UTs together produced more than half (55.3 %) of the total papers. The remaining research output came from other 11 states and UTs. Among these, Telangana/ Andhra Pradesh and Uttar Pradesh published about 10 per cent of the papers. The authors examined the impact of the output of these states and UTs using CPP and RCI. The average value

Table 4. Distribution of output by institutions

Name of the institution	TNP (%)	TNC (%)	CPP	RCI
*DRDO-DESIDOC, New Delhi	128 (7.5)	785 (5.1)	6.1	0.7
*CSIR- NISTADS, New Delhi	74 (4.4)	669 (4.3)	9.0	1.0
University of Delhi, Delhi	65 (3.8)	415 (2.7)	6.4	0.7
BARC, Mumbai	43 (2.5)	577 (3.7)	13.4	1.5
Banaras Hindu University, Varanasi (UP)	24 (1.4)	165 (1.1)	6.9	0.8
*DRTC, Bangalore	21 (1.2)	196 (1.3)	9.3	1.1
IIT, New Delhi	20 (1.2)	569 (3.7)	28.5	3.1
University of Mysore, Mysore	20 (1.2)	236 (1.5)	11.8	1.3
*DRDO-DRDL, Hyderabad	20 (1.2)	206 (1.3)	10.3	1.1
Jawaharlal Nehru University, New Delhi	19 (1.1)	123 (0.8)	6.5	0.7
Aligarh Muslim University, Aligarh (UP)	19 (1.1)	219 (1.4)	11.5	1.3
Panjab University, Chandigarh	19 (1.1)	249 (1.6)	13.1	1.5
*CSIR-NPL, New Delhi	18 (1.1)	121 (0.8)	6.7	0.7
Pondicherry University, Pondicherry	17 (1.0)	113 (0.7)	6.6	0.7
*CSIR- NISCAIR, New Delhi	17 (1.0)	160 (1.0)	9.4	1.0
*IGNOU, New Delhi	17 (1.0)	221 (1.4)	13.0	1.4
Karnataka University, Dharwad	17 (1.0)	163 (1.0)	9.6	1.0
University of Madras, Chennai	17 (1.0)	265 (1.7)	15.6	1.7
Guru Nanak Dev University, Amritsar	17 (1.0)	162 (1.0)	9.5	1.0
University of Calicut, Kerala	16 (0.9)	226 (1.5)	14.1	1.7
University of Kashmir, J & K	16 (0.9)	95 (0.6)	5.9	0.7
Sub total	624 (26.7)	5935(38.2)	9.5	1.4
Other 511 institutions	1074 (73.3)	9603(61.8)	8.9	0.8
Total	1698 (100)	15538(100)	9.2	1.0

*DESIDOC: Defence Scientific Information and Documentation Centre; NISTADS: National Institute of Science, Technology and Development Studies, BARC: Bhabha Atomic Research Centre, DRDL: Defence Research and Development Laboratory, NPL: National Physical Laboratory, DRTC: Documentation Research and Training Centre, NISCAIR: National Institute of Science Communication and Information Resources, IGNOU: Indira Gandhi National Open University.

of CPP for all states and UTs was 9.1. Among these states and UTs, all had a higher value of CPP than average value except Delhi, Uttar Pradesh, West Bengal, and Jammu & Kashmir. The value of RCI for these states is also less than 1. This indicates that the research output of these states and UTs did not commensurate with their impact as the value of RCI is less than one. Among all the states, Tamil Nadu had the maximum value of CPP and RCI, followed by Kerala, UT Chandigarh, and Odisha. An analysis of raw data indicates that 11 papers published by scholars from Tamil Nadu were cited more than 40 times, resulting in the highest value of CPP among all the states and UTs. On the other hand, the state of West Bengal had the lowest value of CPP and RCI, because only two papers published by the state were cited 20 times.

6.4 Most Prolific Institutions

Total research output came from 539 institutions located in India and abroad. Of these, 424 institutions were located in different states of India and 115 in other different countries of the globe. Table 4 lists 21 institutions that contributed one per cent or more papers along with the citations received by these papers. These 21 institutions published around one-fourth (26.7 %) of the total research output and received 38.2 per cent of total citations. Among these 21 institutions, the output is mainly concentrated in three institutions, namely DRDO-DESIDOC, CSIR-NISTADS, and the University of Delhi. These three institutions contributed about 16 per cent of the total output. For all the published articles, the average CPP was 9.2. Among the 21 institutions listed in Table 4, it is observed that eight institutions had a lower value of CPP than the average value of CPP and RCI less than one. Most of these institutions were academic institutions except DRDO-DESIDOC and CSIR-NPL. The value of CPP for CSIR-NISTADS was almost equal to the average value of CPP and the value of RCI = 1. For the remaining institutions, the value of CPP was higher than the average value of the entire output. The highest value of CPP and RCI were for the Indian Institute of Technology, New Delhi, because one paper published by scholars from IIT, New Delhi, was cited 128 times. Institutions having RCI less than one implies that the output of these institutions was not proportional with their impact.

6.5 Most Prolific Authors

The total output was contributed by 1185 authors. Thus, the average number of authors per paper is 1.4. Table 5 lists 14 authors who published half percent or more papers. These 14 authors published 262 (15.4 %) papers. Rest 84.6 per cent papers were published by 1171 authors suggesting a highly dispersed output amongst the authors. Of these 1171authors, 970 (86.6 %) authors produced one paper only, and the remaining 201(13.4 %) authors produced two to seven papers. Compared to other authors, B.M. Gupta topped the list. The authors examined the impact of the output of the prolific authors. Among the 14 authors listed in Table 5, the value of CPP was higher than

Table 5. Highly prolific authors

Author	Institution	TNP (%)	TNC (%)	CPP	RCI
B.M. Gupta	CSIR-NISTADS, New Delhi	42 (2.5)	433 (2.8)	10.3	1.1
S.M. Dhawan	CSIR-NPL, New Delhi	20 (1.2)	152 (1.0)	7.6	0.8
C.K. Ramaiah	Pondicherry University, Puducherry	18 (1.1)	149 (1.0)	8.3	0.9
A. Kumar	DESIDOC, New Delhi	15 (0.9)	74 (0.5)	4.9	0.6
M Singh	DESIDOC, Delhi	11 (0.6)	66 (0.4)	6.0	0.7
**Alka Bansal	DESIDOC, Delhi	10 (0.6)	63 (0.4)	6.3	0.7
M.P. Satija	Guru Nanak Dev University, Amritsar	10 (0.6)	83 (0.5)	8.3	0.8
B.S. Kademani	*BARC, Mumbai	10 (0.6)	141 (0.9)	14.1	1.5
**Ritu Gupta	Sri Venkateshwara University, Meerut	9 (0.5)	52 (0.3)	5.8	0.6
M. Madhushudhan	University of Delhi	9 (0.5)	40 (0.3)	4.4	0.6
K.P. Singh	University of Delhi, Delhi	8 (0.5)	105 (0.7)	13.1	1.4
S. Goswami	DESIDOC, New Delhi	8 (0.5)	25 (0.2)	3.1	0.4
**AdarshBala	*GMCH, Chandigarh	8 (0.5)	93 (0.6)	11.6	1.2
**M. Tripathi	Jawaharlal Nehru University, New Delhi	8 (0.5)	50 (0.3)	6.3	0.6
Total		186 (10.9)	1550 (9.9)	8.4	0.9
Other authors contributing papers in the range of 1-7		1512 (89.1)	13988 (90.1)	9.3	1.0
Total		1698	15538	9.2	1.0

*BARC: Bhabha Atomic Research Center, GMCH: Government Medical College and Hospital,
** Female authors.

Table 6. Distribution of citations

Number of citations	Number of Papers (%)	Total citations
1	173 (10.2)	173
2	149 (8.8)	298
3	121 (7.1)	363
4	112 (6.6)	448
5	85 (5.0)	425
6-10	360 (21.2)	2810
11-15	143 (8.4)	1797
16-20	115 (6.8)	2052
21-25	75 (4.4)	1713
26-30	35 (2.1)	972
> 30	82 (4.8)	4487
Uncited	248 (14.6)	0
Total	1698 (100)	15538

9.2 for four authors, and for the remaining 10 authors, it was less than 9.2. Similar trends are followed for RCI. Among all the authors, it was highest (25.9) for B.R. Babu followed by K.N. Rao. These two authors had high values of CPP and RCI because both authors are among the highly cited authors. It was lowest for S. Goswami, from DESIDOC. The lower value of RCI implies that the impact of productivity by these authors was not proportional with their impact.

6.6 Pattern of Citations

Citation analysis was introduced by Eugene Garfield; the founder of the Institute of Scientific Information (now Clarivate Analytics, USA). It is the major thrust area of scientometrics and bibliometrics. Citation analysis got a boost after the publication of Science Citation Index (now Web of Knowledge). Citation analysis can be used to study the influence of the research output of a country on world science. The more an article is cited, the more significant becomes the paper. Citation impact is measured by counting the number of times these are cited by other articles. High levels of citation to a scientific publication are interpreted as signs of scientific influence, impact, and visibility. Table 6 shows the citation distribution of papers published in DJLIT during 1992-2020 (20th March 2020). During this period, 1,698 papers obtained 15,538 citations. Of the total papers included in the analysis, 248 (14.6 %) did not receive any citation, and the rest were cited one or more times. Most of the uncited papers were published by Indian scholars. Of the total cited papers, more than half (52.3 %) were cited between 1-5 times. The remaining papers were cited more than five times. Only a minuscule proportion (4.8 %) papers were cited more than 30 times.

6.7 Highly Cited Papers

Table 7 lists 18 highly cited papers. Of these, 15 papers were produced by authors from different states of India and

Table 7. Highly cited papers

Bibliographic details of papers	TNC	CPY
Eisenberg, M. B., Information Literacy: Essential Skills for the Information Age, DJLIT, *28*(2), 2008, 39-47.	359	29.9
Patra, S.K., Bhattacharya, P. and Verma, N., Bibliometric Study of Literature on Bibliometrics,*DJLIT, 26*(1), 2006, 27-32.	128	6.4
*Rao, K. N., and **Talwar, V.G., Application Domain and Functional Classification of Recommender Systems-A Survey. *DJLIT, 28*(3), 2008, 17-35	94	7.8
*Kaur, Baljinder and **Verma, Rama. Use of Electronic Information Resources: A Case Study of Thapar University. *DJLIT, 29*(2), 2009, 67-73.	83	7.5
Ghani, S.R., Knowledge Management: Tools and Techniques. *DJLIT, 29*(6), 2009, 33-38.	72	6.5
*Babu, B. R., **Jeyshankar, R., and ***Nageswara Rao, P. Websites of Central Universities in India: A Webometric Analysis. *DJLIT, 30*(4), 2010, 33-43.	70	7.0
Kumar, M., and Moorthy, A.L., Bibliometric Analysis of DESIDOC Journal of Library and Information Technology from 2001-2010. *DJLIT, 31*(3), 2011, 203-208.	66	3.5
Satpathy, S. K., and Rout, Biswanath (2010). Use of E-Resources by the Faculty Members with Special Reference to CVRCE, Bhubaneswar. *DJLIT, 30* (4), 2010, 11-16.	66	6.0
*Mohamed Haneefa K., and **Sumitha, E. Perception and Use of Social Networking Sites by the Students of Calicut University. *DJLIT, 31*(4), 2011, 295-301.	66	7.4
Hulser, Richard P., Digital library: Content preservation in a digital world. *DJLIT, 17*(6), 1997, 7-14.	63	4.8
Thanuskodi, S., and Ravi, S., Use of Digital Resources by Faculty and Research Scholars of ManonmaniamSundaranar University, Tirunelveli. *DJLIT, 31*(1), 2011, 25-30.	62	6.9
Thanuskodi, S., Usage of Electronic Resources at Dr T.P.M. Library, Madurai Kamaraj University: A Case Study. *DJLIT, 31*(6), 2011, 437-445.	58	5.3
*Islam, A., and **Tsuji, K., Evaluation of Usage of University Websites in Bangladesh. *DJLIT, 31*(6), 2011, 469-479.	56	6.2
Connaway, L. S., Electronic Books (eBooks): Current Trends and Future Directions. *DJLIT, 23*(1), 2003, 13-18.	55	3.2
*Babu, K. S., *Sarada, B. and **Ramaiah, C.K. Use of Internet Resources in the S.V. University Digital Library. *DJLIT, 30*(1), 2010, 26-31.	51	5.1
Gupta, B M & Bhattacharya, S., A Bibliometric Approach towards Mapping the Dynamics of Science and Technology. *DJLIT, 24*(1), 2004, 3-8.	51	3.2
Koneru, Indira (2010). ADDIE: Designing Web-enabled Information Literacy Instructional Modules. *DJLIT, 30*(3), 2010, 23-34.	51	5.0
Ahmad, Naved, and Fatima, Nishat. Usage of ICT Products and Services for Research in Social Sciences at Aligarh Muslim University. *DJLIT, 29*(2), 2009, 25-30.	50	4.5
Total	1501	

three by the authors from the US. These 18 papers attracted 1501 (9.7 %) of all citations. Citations received by a paper vary according to the time period for which citations are calculated. To overcome the problem in variation of citations, authors have calculated Citation per Year (CPY) used earlier by Garg and Tripathi[14]. Based on the values of CPY, it is observed that the rank of authors arranged by total citations received changes considerably if arranged by CPY. For instance, the author ranked at # 7will change to rank 16 if arranged by CPY. Similarly, the paper ranked at 14 will also change. However, rank for first author remain unchanged.

6. CONCLUSIONS

DJLIT has gained a reputation among the LIS professionals in India and abroad. It started as a bulletin and is now considered as an important journal of library and information science published from India. The present study examined 1698 research articles published in the journal during 1992-2019 and their citations. The findings indicate 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 of 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. Among all the 39 countries, papers published by USA and Singapore had the highest value 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. The study indicates that LIS research in India is mainly undertaken by academic institutions. Besides, these, institutions funded by DRDO, CSIR, Department of Atomic Energy, and Documentation Research and Training Centre also contributed extensively to the output. Among, the most prolific authors, B.M. Gupta (CSIR-NISTADS) topped the list while B.R. Babu (University of Madras, Chennai) had the highest value of CPP and RCI. Most of the uncited papers which numbered 248 (14.6 %) were authored by Indian scholars. Thus, there is a need for Indian scholars to improve the excellence of LIS research. Though, the coverage of *DJLIT* is international in nature, but the papers published in the journal are mainly confined to India. It is suggested that the journal should make efforts to attract contributions from authors working abroad. It may help in enhancing reputation of the journal further. It is hoped that the present study will be of great interest to LIS professionals in India and abroad.

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