

A BIBLIOMETRIC STUDY OF SRELS JOURNAL OF INFORMATION MANAGEMENT THROUGH INDIAN CITATION INDEX (ICI) DURING 2004-2012

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Abstract *Purpose: The purpose of the study is to explore the publication trends of the scholarly journal "SRELS journal of information management", and highlights its various important aspects.*

Design/methodology/approach: For the analysis of the study, data was collected from the Indian publication "SRELS journal of information management" retrieved from the ICI citation database for the period 2004-2012.

Findings: It was found that there were approximately 12 citations per paper. Out of 4796 citations appended, 794 (16.56%) citations appeared in the year 2012 closely followed by 781 (16.28%) citation in the year 2010. Out of 753 authors who contributed a total of 407 papers, and 95.68% were affiliated to institution located in India.

Research limitations/implications: The data required for analysed was only collected from the Indian Citation Index (www.indiancitationindex.com) citation database from the period of 2004-2012.

Originality/Value: As yet these have been no such studies conducted that investigate the various aspects of "SRELS journal of information management" and this paper is relevant and useful to those who are interested in bibliometric and it provide a comprehensive study of scholarly communication of the "SRELS journal of information management" from 2004-2012 for comprehending essential publishing traits of this journal during the stated period.

Keyword: *Bibliometric, Journal Analysis, Author Collaboration, Citation Analysis, Obsolescence Study, SRELS Journal of Information Management, Indian Citation Index*

INTRODUCTION

Allan Prichard was the first man who coined the term Bibliometric in 1968 but it become more popular during 1980s. This Bibliometric is a set of techniques or a tool of information management, which is also called Quantitative science. And the data used for bibliometric studies mainly stem from information produced by the activity of researcher's communication activities tend to have a better understanding of phenomena of construction, dissemination and use of scientific and technical knowledge. Bibliometric is considered as a standard tool of science policy and research management in the last decades. Today, Bibliometric is one of the rare truly interdisciplinary research field extended to almost all scientific fields.

A research in bibliometric has also given birth to a couple of other terms, viz., Scientometric, Informetrics and webometric, which are used today in place of Bibliometrics. (Santhi 2008)

Scientometric is a branch of the science 'science of science'. Haitun treats 'Scientometric', as scientific disciplines, which performs reproducible measurements of scientific activity and reveal its objective quantitative regularities. According to him, Scientometric methods include statistical and thesaurus methods, and indicators as to the number of citation, term etc.

There are many bibliometric studies available in the literature including several studies published in the literature including several studies published in Indian Journals on single journals. But there are no studies carried out on the journal SRELS Journal of Information Management".

The journal "SRELS Journal of Information Management" is a bi-monthly publication published by Sarada Ranganathan Endowment. It was started as a quarterly journal "Library Science with a slant to Documentation" since 1964. The title of the journal was changed to "Library science with a slant to Documentation and Information Studies" from vol 25 in

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1988 and to “SRELS Journal of Information Management” from vol 37 in 2000. This journal has been publishing scholarly articles and articles of practical use in the field of library and information science and services. It was founded by Dr. S. R. Ranganathan. The journal’s home page is <http://srels.org/>.

Aims and Objectives of SRELS journal of Information Management:

- To improve the library and information services in India
- To train library and information service personnel
- To promote the provision of efficient library and information service
- To apply research results of library and information studies

And Indian Citation Index is a fully web-based abstract and citation database covering R&D literatures across all disciplines published in journals or in other documents emanating from India. It intends to cover about 1026 Indian scholarly journals based on their defined parameters (Giri and Das, 2011). Presently, it covers journals from 2004 onwards. The contents of ICI are organized in 12 subject groups with 51 main subject classes. And this citation database covers case study, observation (R&D), opinion paper, patent, proceedings paper, report (R&D), research article, research method, research note, review article, short communication, special articles etc that have appeared in the journals. ICI provides wide search features such as basic search, cited reference search, advance search, subject category search and refine search capabilities.

OBJECTIVES OF THE STUDY

- To know the year-wise distribution of papers
- To known the average length of papers
- To study the authorship pattern
- To calculate degree of collaboration among co-authors
- To know the year-wise citation of the publication
- To study different types of resources used by the author
- To know the different document types of papers
- To study distribution of authors by geographical location
- To know the highly contribution of institution to the publication

Methodology

The data required for the study was collected from the Indian Publication “SREAL Journal of Information Management”

retrieved from the Indian Citation Index citation database for the period 2004-2012. Following data has been noted: number of author(s), type of document, author(s) affiliation, page no of article(s), country/state of origin of the document, number of citation(s), and other data which required for analysis. And next sections discuss the analysis of the data, presented under different table headings as per objectives of the study.

Results and Discussion

Table 1 gives the year-wise distribution of articles and citations in the selected period of the journal. The number of articles varies from year to year and as per the observation, out of total 401 articles the maximum contribution of 64 papers (15.72%) was seen in the year 2012. The least contribution of 31 papers (7.62%) was made in the year 2006. And total 4796 citations are found appended to 407 papers. From table, it can be noted that the highest number of citations appeared in the year 2012, i.e., 16.56% with 794 citations, and 781 citations (16.28%) which appeared in the year 2010. The year 2005 recorded least number of citations, i.e., 320 (6.67%).

Table 1. Year-wise Distribution of Articles and Citations

Year	Articles	Citations	Articles %	Citations %
2004	34	358	8.35	7.46
2005	34	320	8.35	6.67
2006	31	340	7.62	7.09
2007	36	448	8.85	9.34
2008	48	528	11.79	11.01
2009	43	483	10.57	10.07
2010	58	781	14.25	16.28
2011	59	744	14.50	15.51
2012	64	794	15.72	16.56
Total	407	4796	100.00	100.00

DISTRIBUTION OF CITATIONS

The data presented in Table 2 shows the details of number of references that appeared at the end of papers during the years 2004-2012. From Table is revealed that all the 407 papers published have references. The maximum number of references per articles is 6-10 (34.64%) closely followed by 0-5 (24.82%) and minimum is between 26-30 (1.72%) of the total number of contribution. There are 14 (3.44%) papers having more than 36 citations.

Table 2. Distribution of Citations

No. of Citation	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total	%age
0 to 5	11	9	5	7	18	14	9	16	12	101	24.82
6 to 10	11	12	15	12	12	14	22	16	27	141	34.64
11 to 15	2	8	4	6	7	9	12	13	9	70	17.20
16-20	6	4	3	5	4	2	7	5	8	44	10.81
21-25	3	1	3	4	3	1	2	3	2	22	5.41
26-30	0	0	1	0	1	0	1	2	2	7	1.72
31-35	1	0	0	2	0	1	2	1	1	8	1.97
>=36	0	0	0	0	3	2	3	3	3	14	3.44
Total	34	34	31	36	48	43	58	59	64	407	100.00

Document types-wise Contribution

Table 3 depicts that articles of publication has been published in variety of document types. Majority of papers have published in the form of research articles with 353 articles (86.73%) and least number of document type is short communication with only one article (0.25%).

Authorship Pattern

Table 5 presents data on authorship of the papers. It is found from table 3 that out of 407 papers, the number of two authored papers are the highest and it accounts for 209 papers (51.35%). The number of single authored is second highest with 140 (34.40%) followed by three authored i.e., 44 (10.81%). And four authored is with 9 (2.21%).

Length of Paper

Table 4 shows that 215 papers had length in the range of 6-10 pages (52.83%), followed by 99 (24.32%) length between 11-15 pages, and at the same time it can be noted that 60 papers (14.74%) had length of more than or equal to 16 pages.

Degree of Collaboration

In order to calculate the degree of collaboration among the authors, formula given by Subramanyam was used which is expressed mathematically as:

Table 3. Document Types of Papers

Document types	Articles	Cumulative No. of Articles	Percentage	Cumulative Percentage
Research Articles	353	353	86.73	86.73
Case Study	22	375	5.41	92.14
Editorial	19	394	4.67	96.80
Review Articles	12	406	2.95	99.75
Short Communication	1	407	0.25	100.00

Table 4. Length of Papers

No. of Pages	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total	%age
0 to 5	2	4	1	3	3	1	7	6	6	33	8.11
6 to 10	17	13	13	17	31	27	28	32	37	215	52.83
11 to 15	13	3	12	11	9	10	15	11	15	99	24.32
>=16	2	14	5	5	5	5	8	10	6	60	14.74
Total	34	34	31	36	48	43	58	59	64	407	100.00

Table 5. Authorship Pattern

No. of Authors	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total	%age
Single	15	9	7	18	15	16	18	19	23	140	34.40
Two	16	22	17	14	27	24	27	32	30	209	51.35
Three	2	3	5	2	5	3	10	5	9	44	10.81
Four	1	0	1	1	1	0	3	2	0	9	2.21
Five and above	0	0	1	1	0	0	0	1	2	5	1.23
Total	34	34	31	36	48	43	58	59	64	407	100.00

Degree of Collaboration, $DC = \frac{Nm}{(Nm+Ns)}$

Where Nm = No. of Multi-author publications during a specific period in a discipline

Ns = No. of single-authored publications in a discipline during a given period of time

Table 6 reveals that the value of the highest degree of collaboration (DC) was 0.77 during the period of 2006. It is interesting to note that the degree of collaboration for the years 2008 and 2010 is 0.69. And table 7 shows the maximum degree of collaboration among two authors was

0.65 in the year 2005 and the minimum was 0.02 among the four and five or more multiple-authored in 2008 and 2011 respectively, as shown in table.

Geographical Location of Authors

The distribution of publication with the rank is given in table. During analysis it is observed that most of the articles are contributed by Indian authors. The number of Indian contributions is 399 papers and the percentage is 95.68%, while foreign contribution is 18 papers (4.31%).

Table 6. Degree of Collaboration among Co-Authors

Year	No. of Co-Authors Publications	%age	Degree of Collaboration
2004	19	55.88	0.56
2005	25	73.53	0.74
2006	24	77.42	0.77
2007	18	50.00	0.50
2008	33	68.75	0.69
2009	27	62.79	0.63
2010	40	68.97	0.69
2011	40	67.80	0.68
2012	41	64.06	0.64

Table 7. Degree of Collaboration among Different Categories of Authors

Year	Degree of Collaboration of Two-Author Publications	Degree of Collaboration of Three-Author Publications	Degree of Collaboration of Four-Author Publications	Degree of Collaboration of Five or More Author Publications
2004	0.47	0.06	0.03	-
2005	0.65	0.09	-	-
2006	0.55	0.16	0.03	0.03
2007	0.39	0.06	0.03	0.03
2008	0.56	0.10	0.02	-
2009	0.56	0.07	-	-
2010	0.47	0.17	0.05	-
2011	0.54	0.08	0.03	0.02
2012	0.47	0.14	-	0.03

As maximum contributors are from India, the geographical spread of contributions from India was studied. From table 8 it is found that Karnataka contribution highest number of articles (169, 38.50%) followed by West Bengal (41, 9.34%), Tamil Nadu contributed 39 articles with 8.88% and occupied third position. Maharashtra contributed 29 articles with 6.61% and occupied fourth position. And least contribution of article is only one article with 0.23% from North Carolina.

Obsolescence Study of Citations

Table 9, exclusively represents the obsolescence of resources cited in the study period. A total of 4054 citations cited have been arranged up to the age of 30 and above 30, but 742 citations are also happened without any study period details which are not mentioned in this table. It is evident that overall 4796 citation in the publication, half of these citations come to 2398 that are approximately 10 years old.

Table 8. Geographical Location of Authors

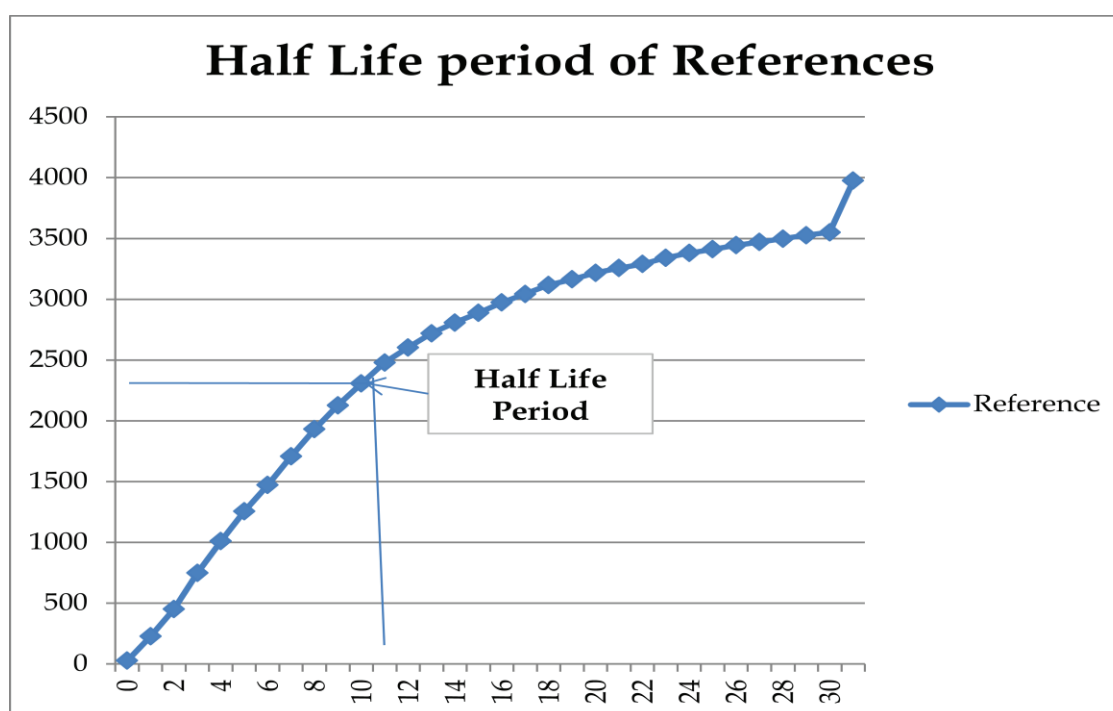
State	No of Articles	Cumulative No. of Articles	Percentage of Contribution	Cumulative percentage of contribution
Karnataka	169	169	38.50	38.5
West Bengal	41	210	9.34	47.84
Tamil Nadu	39	249	8.88	56.72
Maharashtra	29	278	6.61	63.33
Kerala	28	306	6.38	69.71
Punjab	24	330	5.47	75.17
Uttar Pradesh	18	348	4.10	79.27
Delhi	15	363	3.42	82.69
Madhya Pradesh	12	375	2.73	85.42
Andhra Pradesh	11	386	2.51	87.93
Gujarat	10	396	2.28	90.21
Rajasthan	10	406	2.28	92.49
Uttarakhand	6	412	1.37	93.85
Orissa	5	417	1.14	94.99
Jammu and Kashmir	4	421	0.91	95.90
Chhattisgarh	4	425	0.91	96.81
Haryana	3	428	0.68	97.50
Chandigarh (UT)	3	431	0.68	98.18
Assam	3	434	0.68	98.86
Jharkhand	2	436	0.46	99.32
Puduchery (UT)	2	438	0.46	99.78
North Carolina	1	439	0.23	100.00

Table 9. Obsolescence Study of References

Age	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total	Cumulative Total
0	1	4	6	6	2	1	11	0	2	33	33
1	13	17	11	21	37	2	56	31	14	202	235
2	15	13	24	24	34	14	41	32	34	231	466
3	24	13	27	26	22	14	104	37	45	312	778
4	17	19	25	30	30	18	36	51	38	264	1042
5	16	19	22	21	28	31	41	42	29	249	1291
6	24	7	23	14	19	24	39	38	33	221	1512
7	22	8	20	23	28	23	27	52	36	239	1751
8	19	15	15	26	28	34	28	27	36	228	1979
9	17	20	12	11	26	26	33	31	27	203	2182
10	14	11	13	12	25	16	42	31	23	187	2369
11	6	8	18	11	26	23	17	43	27	179	2548
12	6	8	7	9	18	15	18	23	20	124	2672

13	7	8	5	12	17	14	13	21	20	117	2789
14	8	2	5	6	7	10	9	21	21	89	2878
15	8	6	3	6	11	7	10	15	14	80	2958
16	4	8	7	4	11	3	13	17	20	87	3045
17	3	6	4	10	4	6	14	14	10	71	3116
18	7	9	6	10	8	5	8	8	13	74	3190
19	2	5	3	3	4	5	8	7	10	47	3237
20	1	5	6	6	7	5	4	10	9	53	3290
21	2	4	3	4	5	7	6	4	5	40	3330
22	1	3	2	5	7	2	2	5	6	33	3363
23	4	2	5	4	5	8	10	4	10	52	3415
24	6	3	1	1	12	1	7	9	2	42	3457
25	0	3	1	6	5	4	3	4	5	31	3488
26	0	0	2	3	4	7	10	1	8	35	3523
27	2	3	1	2	4	2	6	3	3	26	3549
28	2	0	1	1	1	5	2	5	10	27	3576
29	3	5	1	2	5	1	2	3	7	29	3605
30	1	2	1	3	3	1	4	5	4	24	3629
Above 30	15	11	5	74	16	78	57	28	141	425	4054
Total	270	247	285	396	459	412	681	622	682	4054	

Figure 1. Half Life Period of References



INSTITUTION-WISE CONTRIBUTION

Table 10 shows the data on institution-wise contribution of articles. Institutions are categorized into three main categories, Universities, Colleges and Research Institutions. It is found that the highest contributions 92 were from the authors affiliated to universities followed by research

institutions (such as DRTC, CFTRI, ICRI, ISI, ISRO etc) with 77 and colleges with 70. The remaining 15 articles % were found the other organizations such as societies, associations etc.

And ranking list of institutions those give the contribution in publication, overall are 254, in which “University of Mysore” has got highest contribution with 61 articles, “Guru

Nanak Dev University” ranked second with 23 articles, and “Gulbarga University” ranked third with 21 articles. In below Appendix 1 shows the ranking list of fifty institutions.

Reference Resources

Table 11 presents the reference resources of the papers. It is found that mostly journals 41.60% are used by authors for reference resources. Then after closely followed by books with 24.40% and after it, web resources 20.73% are third highest reference resources which are used by authors.

Table 10. Types of Institutional Affiliations of Contributors

Type and Name	No.	%age
Universities	92	36.22
Colleges	70	27.56
Research Institutions	77	30.31
Others	15	5.91
Total	254	100.00

Table 11. Reference Resources

Reference Resources	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total	%	H-index
Books	132	74	106	157	116	94	130	113	247	1169	24.40	17.10
Journals	105	109	118	192	259	177	362	333	338	1993	41.60	22.32
Conference Proceedings	11	22	27	17	16	42	41	43	36	255	5.32	7.98
Standard	3	2	0	1	1	1	0	0	0	8	0.17	1.41
Workshop	1	1	1	3	1	0	1	5	3	16	0.33	2.00
Report	4	17	5	5	10	9	17	13	20	100	2.09	5.00
Web resources	91	74	71	52	97	91	197	200	120	993	20.73	15.76
Survey	2	0	3	2	4	0	4	1	1	17	0.35	2.06
Thesis/ Dissertation	1	7	0	8	7	5	16	16	8	68	1.42	4.12
Encyclopedia	6	0	0	2	6	5	0	5	1	25	0.52	2.50
Seminar	1	4	2	4	1	3	4	6	12	37	0.77	3.04
User Guide	0	3	0	4	1	0	0	0	0	8	0.17	1.41
Specification	0	2	0	0	0	2	0	0	0	4	0.08	1.00
Lecture Notes	0	2	0	1	0	0	1	0	0	4	0.08	1.00
Gazetteer	0	2	0	0	7	53	3	1	3	69	1.44	4.15
Symposium	1	1	2	0	2	1	1	3	0	11	0.23	1.66
Manual	0	0	2	0	0	0	1	2	1	6	0.13	1.22
Patent	0	0	1	0	0	0	0	0	0	1	0.02	0.50
Act	0	0	1	0	0	0	1	1	1	4	0.08	1.00
Personnel Communication	0	0	1	0	0	0	0	0	0	1	0.02	0.50
Institutional Repository	0	0	0	0	0	0	1	2	1	4	0.08	1.00
Paper	0	0	0	0	0	0	1	0	2	3	0.06	0.87
Total	358	320	340	448	528	483	781	744	794	4796	100.10	

CONCLUSION

From the observations made above, it is found that mostly papers are research articles 86.73% and average of papers per year is 45. It is also observed from the study that length of mostly article is between 6-10 pages (52.83 %) and the average citation per article has shown twelve, and half life period of citations that is approximately 10 years old. It is shown that among all document, the authors used more

journals accounting 41.56%. From the study, it is found that mostly paper are mainly from India (95.68%), with it 38.50% of papers from Karnataka. Maximum numbers of papers have written by two-authored (51.35%) which is shown the collaboration of double-authored. The study has highlighted the variety of bibliometric measures that can be used to understand the characteristics or portrait of the journal which in turn reflect the characteristics of the literature and the communication behavior.

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APPENDIX 1

S. No.	Institution of Publication	No of papers
1	University of Mysore (UM), Mysore, 570006, Karnataka, India	61
2	Guru Nanak Dev University (GNDU), Amritsar, 143005, Punjab, India	23
3	Gulbarga University (GU), Gulbarga, Gulbarga, 585 106, Karnataka, India	21
4	Mangalore University (MU), Mangalagangothri, Mangalore, 574 199, Karnataka, India	16
5	University of Calicut (UC), Department of Library and Information Science, Calicut, 683 574, Kerala, India	13
6	Bhabha Atomic Research Centre (BARC), Mumbai, 400085, Maharashtra, India	12
7	Kuvempu University (KU), Jnana Sahyadri, Shankaraghatta, 577541, Karnataka, India	12
8	Annamalai University (AU), Annamalai Nagar, 608002, Tamil Nadu, India	11
9	Bangalore University (BU), Bengaluru, 560 056, Karnataka, India	10
10	University of Burdwan (UB), Burdwan, 713104, West Bengal, India	10
11	University of Kerala (UK), Thiruvananthapuram, Kerala, India	8
12	Indian Institute of Science (IIS), Bengaluru, 560012, Karnataka, India	7
13	Karnatak University (KU), Dharwad, 580003, Karnataka, India	7
14	Rashtrasant Tukadoji Maharaj Nagpur University (RTMNU), Nagpur, Maharashtra, India	7
15	Aligarh Muslim University (AMU), Aligarh, 202002, Uttar Pradesh, India	6
16	Documentation Research and Training Centre (DRTC), Bengaluru, 560059, Karnataka, India	6
17	Bishop Heber College (BHC), Tiruchirappalli, 620017, Tamil Nadu, India	5
18	Karnataka State Women's University (KSWU), Department of Library and Information Science, Torvi Campus, Bijapur, Karnataka, India	5
19	S K N College of Agriculture (SKNCA), Jobner, Jobner, Rajasthan, India	5
20	Sahyadri Science College (SSC), Shimoga, 577203, Karnataka, India	5
21	Central Food Technological Research Institute (CFTRI), Mysore, 20, Karnataka, India	4
22	H K B K College of Engineering (HKBKCE), Bengaluru, 560045, Karnataka, India	4
23	Indian Cardamom Research Institute (ICRI), Myladumpara, Kailasanadu, 685 553, Kerala, India	4
24	Indian Institute of Technology Kharagpur (IIT Kharagpur), Central Library, Kharagpur, 721 302, West Bengal, India	4
25	Institute of Education (IE), Kolkata, 731 235, West Bengal, India	4
26	Jadavpur University (JU), Kolkata, 700032, West Bengal, India	4
27	Manonmaniam Sundaranar University (MSU), Tirunelveli, 627012, Tamil Nadu, India	4
28	National Institute of Occupational Health (NIOH), Meghaninagar, Ahmedabad, 380 016, Gujarat, India	4
29	National Institute of Technology Tiruchirappalli (NIT Tiruchirappalli), Tiruchirappalli, 620 024, Tamil Nadu, India	4
30	Sahyadri Arts and Commerce College (SACC), B.H. Road, Vidyanagar, Shimoga, 577203, Karnataka, India	4
31	Saint Aloysius Institute of Management and Information Technology (SAIMIT), Mangalore, 575002, Karnataka, India	4
32	80, Shivalik Apartments, Alaknanda, New Delhi, 110019, Delhi, India	4
33	University of Kalyani (UK), Kalyani, 741 235, West Bengal, India	4

34	Alagappa University (AU), Department of Library and Information Science, Karaikudi, 630 003, Tamil Nadu, India	3
35	Banaras Hindu University (BHU), Varanasi, 221 005, Uttar Pradesh, India	3
36	Bharathidasan University (BU), Tiruchirappalli, 620 024, Tamil Nadu, India	3
37	Directorate of Distance Education (DDE), Department of Library and Information Science, Annamalai Nagar, 608 002, Tamil Nadu, India	3
38	Dr. Ambedkar Institute of Technology (AIT), Department of Electronics and Communication Engineering, Near Jnanabharathi Campus, Mallathally, Bengaluru, Karnataka, India	3
39	Guru Ghasidas Vishwavidyalaya (GGV), Bilaspur, 721302, Chhattisgarh, India	3
40	Indian Statistical Institute (ISI), Bengaluru, 560 059, Karnataka, India	3
41	Infant Jesus College of Engineering (IJCE), Thrikkakara, Thoothukudi, 628851, Tamil Nadu, India	3
42	Karnataka State Open University (KSOU), Manasagangotri, Mysore, 570006, Karnataka, India	3
43	Mahatma Gandhi University (MGU), Kottayam, 695043, Kerala, India	3
44	National Law School of India University (NLSIU), Nagarbhavi, Bengaluru, 560072, Karnataka, India	3
45	Raman Research Institute (RRI), Bangalore, 560080, Karnataka, India	3
46	Sambalpur University (SU), Department of Library and Information Science, Jyoti Vihar, Sambalpur, 768019, Orissa, India	3
47	Swami Keshwanand Rajasthan Agricultural University (SKRAU), SKNCOA, Jobner, Jobner, 303329, Rajasthan, India	3
48	University B D T College of Engineering (UBDTCE), Davanagere, Karnataka, India	3
49	Vikram University (VU), Ujjain, Madhya Pradesh, India	3
50	Vivekananda College of Engineering and Technology (VCET), Nehru Nagar, Puttur, Puttur, 574203, Karnataka, India	3