Publication Pattern of the Journal "Trends in Information Management": A Bibliometric Analysis

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Abstract - *The present bibliometric study has been conducted to evaluate the pattern of growth of research output published in the 'Trends in Information Management'' journal. The study focus on the analysis of authorship pattern, most prolific authors, most prolific institutions and geographical affiliation of contributors of the articles published in the journal during the period 2005 – 2013. There are 145 articles published in 'Trends in Information Management'' in 9 years. The study result found that the majority of articles 103(74.60 %) were research article and the highest numbers of articles 87(63.04%) were single authored publication. Authors from India have contributed the majority of articles 154(68.14%) followed by Nigeria 20(8.85%) and Saudi Arabia 15(6.64%). Among the total contributors S M Shafi has contributed highest number of publications 22(9.73%) whereas his major contributions 15 articles is editorial material and remaining 7 papers are research articles, followed by Zahid Ashraf Wani 6(2.65%). The highest number of the articles 22(15.17%) published in the year 2011. Majority of institutions which have contributed to the journal are academic institutions. Out of 226 institutions, the 'University of Kashmir, India' (87) leads with first rank followed by 'Taibah University, (15), Aligarh Muslim University' (9). The highest number of the papers were published on the subject area of 'Digital Library, Digitization & Institution Repository' and 'Scholarly Publications & Open Access Resources' which represent 17(11.72%) each. The majority of the articles' 44(30.34%) citations range between 10 to 19 per article and the type of majority of citations 1003(62.38%) were journal article.*

Keywords: Bibliometric, Citation analysis, Trends in Information Management, Quantitative Techniques, LIS journals.

Introduction:

Bibliometric analysis is an important area of study in the field of Library & Information Science. It has purposeful application in measuring the coverage and quality of various types of resources and thus helps in collection building policies of the libraries, more particularly in the selection process (Satpathy, Maharana, & Das, 2014). Bibliometric study is the application of mathematics and statistical methods to books and other media of communication (Pritchard, 1969). The Bibliometric study helps us to develop a scientific acumen towards the potential of research trend in a particular science (Pandita, 2013). The present study is conducted to examine the research output of a particular subject during the particular period. The prime aim of study is to analyse the research output of the journal 'Trends in Information Management (TRIM)' which has been published since 2005 and available free on the web. The journal Trends in Information Management is a well-known biannual open access journal devoted to the field of library and information science and information and knowledge management'. It has been serving as a forum for new research in information dissemination and communication processes in general and in the context of the information and knowledge management in particular. The Trends in Information Management journal is indexed by major databases. Here in this paper an attempt has been made study the quantitative nature of the journal in terms of article type, authorship pattern, most prolific author, most prolific institutions geographical affiliation of contributor, ranking of journal and other bibliographic parameters of the articles published in the journal during the period 2005 – 2013.

Literature Review:

Many studies have been conducted for bibliometric analysis of journals to evaluate research output of a particular subject and understand authorship pattern, most prolific authors, and productivity of institutions, reference range, and geographical distributions during the particular period. Hussain, Fathima & Kumar (2011) analysed the bibliometric parameters of the 'Electronic Library' journal. The study revealed that the highest number of articles type was research paper (40.83%) followed by 23.01% case study and authors from universities and academic institutions contributed 72.15% papers followed by 13.15% from research institutions. A study on bibliometric analysis of output and visibility of science and technology in Singapore during 2000-2009 carried out by Rana (2012) who analyzed 83,439 papers that were published in different ISI-listed periodicals during the period. The researcher found the majority of papers (61%) were journal article and 91.9% of papers were multi-authored. Maharana (2014) conducted study on research growth and development at Sambalpur University during 2008 – 2012. The researcher identified that The University's publication ranges from 38 to 83 papers with an annual average growth rate percent of 11.29 papers and the maximum number of papers were three authored publications. Swain (2012) analyzed 315 scholarly articles published in Interlending & Document Supply for a period of 10 years ranging from 2001 to 2010 and found that the highest numbers of articles are single authored contributions and the authorship productivity pattern partially complies with Lotka's Law. The half life of cited documents is found to be one year. Singh (2013) evaluated the bibliometric parameters of the articles

published in the Chinese Librarianship: an International Electronic Journal between 2009 and 2012. The study identified that Most of the authors belonged to various non-teaching categories. India has contributed more articles than any other countries. Pandita (2013) examined 310 articles published in Annals of Library and Information Studies (ALIS) journal during the period of 2002 to 2012 and identified that 65.81 % articles contributed to the journal during the period were co-authorship pattern. In all, authors from 16 different countries, Indian authors have contributed the majority of paper (87.61 %) to the journal. Singh (2013) made a study on citation analysis of Collection Building journal and observed that in all 2,388 citations from 179 articles, 85 citations were self-citation and journal article was the highest (42.71 %) cited source of materials. 65.92 % of articles were published by single author and majority of contributors 69.96 % were from US. Garg & Anjana (2014) have undertaken a bibliometric study on Journal of Intellectual Property Rights and analysed the 605 papers published in the journals, about one-fourth of the papers published in the journal were from abroad and the rest from India, among the performing sectors, academic institutions were the largest contributors to the journal followed by research institutions. Bansal (2013) evaluated the 391 papers were published in the DESIDOC Journal of Library & Information Technology. The maximum number of contribution (61.4%) was published by joint collaborations, and most of the contributions 88% were from India. Satpathy, Maharana, & Das (2014) examined the top ten open access journals of Library & Information Science through bibliometric measures. The study indicates that a good number of papers have been published in these ten open access journals and these papers were mostly contributed by a single author. The degree of collaboration of authors also seems to be encouraging. Most of the contributors belong to the developed countries and the open access journals are yet to be popular in developing and under developed countries.

Objectives of the Study:

The present study has been carried out with the following objectives.

1. To find out type of the article published in the ''Trends in Information Management'' journal during 2005 - 2013;
2. To identify the number of contributions and year-wise growth of the articles during the period of study;
3. To examine the authorship pattern of the articles and the top ranking of leading authors;
4. To identify the geographical affiliation of the authors;
5. To find out the contributions of the most prolific institutions.
6. To identify subject-wise distribution of the publications.

Methodology:

The data for the study was collected from the journal 'Trends in Information Management' (TRIM) website. The articles published in the journal during 2005-2013 were scanned. There were 145 articles scanned from the 9 volumes of the journal comprising research papers, book reviews and editorial papers. The bibliographic parameters of the articles were analysed to meet

objectivities of the study. The Microsoft Excel was employed for analysis, interpretation and tabulation of the recorded data.

Findings and Analysis:

1. Type of the Articles:

The Table 1 reveals the type of articles published in the journal 'Trends in Information Management'. It may be seen from the Table that the majority of papers are research articles 103(74.60%). The second highest number of the article is 'Book reviews' which represent 25(18.10%) followed by 'Editorials' 17(12.30%).

Table 1: Type of the Articles

S/N	Type of Articles	No. of Articles	Percentage
1	Book Review	25	18.10 (%)
2	Editorials	17	12.30 (%)
4	Research Articles	103	74.60 (%)
	Total	**145**	**100 (%)**

2. Year Wise Distribution of Papers:

The Table 2 depicts the year-wise distribution of the papers published in the 'Trends in Information Management' journal during 2005 to 2013. There were 145 articles published in 17 issues of the 9 volumes during the period. It may be seen from the table that the highest number of the articles 22 (15.17%) published in the year 2011, followed by 19 (13.10%) articles in 2008, 18 (12.41%) articles in 2006 and 2009 each. The year 2012 and 2013 published lowest number of articles which represent 14(9.66%) and 12(8.28%) respectively whereas the year 2005 has contributed very least articles 10(6.90%) due to only one issue published in the journal. It may be seen from the table that there was irregular in number of the articles published in the journal from 2005 to 2013.

Table 2: Year Wise Distribution of Paper

S/N	Year	Volume	Issues	No. of Articles	Percentage
1	2005	1	1	10	6.90(%)
2	2006	2	2	18	12.41(%)
3	2007	3	2	17	11.72(%)
4	2008	4	2	19	13.10(%)
5	2009	5	2	18	12.41(%)
6	2010	6	2	15	10.34(%)
7	2011	7	2	22	15.17(%)
8	2012	8	2	14	9.66(%)
9	2013	9	2	12	8.28(%)
	Total		**17**	**145**	**100 (%)**

3. Authorship Pattern of Articles

The Table 3 depicts the authorship pattern of articles published in the journal. It may seen from the table that the majority of articles 87(63.04%) were single authored publications. Among 87 articles, 17 papers were editorial materials. The second majority of the paper 40(27.54%) were joint-authored publications followed by 12(7.25%) articles were three-authored publication and only 6 (5.07%) articles were published by more than three author. It may be clearly seen from the above table that the distribution of the authorship pattern of the papers is unequal from 2005 to 2013.

Table 3: Authorship Pattern of Articles

S/N	Authorship	2005	2006	2007	2008	2009	2010	2011	2012	2013	No. of Articles	Percentage
1	Single	7	13	16	13	11	7	3	9	8	87	63.04(%)
2	Two	2	3	1	5	4	6	13	3	2	40	28.26(%)
3	Three		2		1		1	5	2	1	12	7.25(%)
4	More than three	1				3	1	1		1	6	5.07(%)
	Total	10	18	17	19	18	15	22	14	11	145	100 (%)

4. Degree of Author's Collaboration

The Table 4 shows that the degree of author's collaborations in the journal. It was calculated by using the Subramanyam's mathematical formula. The degree of collaboration among authors is the ratio of the number of multi-authored papers published to the total number of papers published in a discipline during definite period. It may be seen from the table that the single authored papers is highest 87(60.00%) as compared to collaboration of multiple authored paper 58(40.00%). The degree of author's collaboration was highest 0.87 in the year 2011 whereas it is lowest 0.28 in the year 2006.

Table 4: Degree of Author's Collaboration

S/N	Year	Single author	Multiple author	Degree collaboration
1	2005	7	3	0.30
2	2006	13	5	0.28
3	2007	16	1	0.60
4	2008	13	6	0.31
5	2009	11	7	0.39
6	2010	7	8	0.53
7	2011	3	19	0.87
8	2012	9	5	0.35
9	2013	8	4	0.33
Total		87 (60.00%)	58 (40.00%)	

5. Top Ranking of Author

The Table 5 indicates the top ranking of authors who have contributed to the journal 'Trends in Information Management' extensively. It may be seen from the table that the total 226 authors have contributed 145 articles. Among 145 papers, 17 papers are editorial material. S M Shafi has contributed highest number of publications 22(9.73%) whereas his major contributions 15 articles is editorial material and remaining 7 papers are research articles, followed by Zahid Ashraf Wani 6 (2.65%) and M Ahamed 5(2.21%) In remaining articles, seven authors have contributed 4 articles each, three authors have contributed 3 articles each, nineteen authors have contributed 2 and remaining 118 authors have contributed only one article each.

Table 5: Top Ranking of Author

Sl. No.	Rank	Author Name	No of articles contributed	%
1	1	S M Shafi	22	9.73
2	2	Zahid Ashraf Wani	6	2.65
3	3	M Ahamed	5	2.21
4	4	Tariq Ahmad shah	4	1.77
5	4	Shabir Ahmad Ganaie	4	1.77
6	4	L. Sharif	4	1.77
7	4	M. P. Satija	4	1.77
8	4	Rosy Jan	4	1.77
9	4	S. M. K. Quadri	4	1.77
10	4	Sumeer Gul	4	1.77
11	5	A Alharby	3	1.33
12	5	Mahammad Hanief Bhat	3	1.33
13	5	Nadim Akhtar Khan	3	1.33
14	6	A A Siddigi	2	0.88
15	6	Ahamed Mohammed	2	0.88
16	6	A Issa salwe	2	0.88
17	6	A A Maidabino	2	0.88
18	6	Amjad Ali	2	0.88
19	6	Asmat Ali	2	0.88
20	6	Bappah Magaji Abubakar	2	0.88
21	6	Delphine Cavallo	2	0.88
22	6	Durga Toshniwal	2	0.88
23	6	Y M Alginahi	2	0.88
24	6	Vivek Yadav	2	0.88
25	6	Edgardo Civallero	2	0.88
26	6	Fayaz Ahmad Loan	2	0.88

27	6	Ishrat Majeed	2	0.88
28	6	Kimmo Kettunen	2	0.88
29	6	Mehtab Alam ansari	2	0.88
30	6	Mahammad Yousuf	2	0.88
31	6	Sahibzadah Shaukat Ali Khan	2	0.88
32	6	Sangith Gupta	2	0.88
33		Other	118	52.21
		Total	**226**	**100.00**

6. Geographical Affiliation of Authors

The Table 6 shows the geographical affiliation of authors who contributed the articles in 'Trends in Information Management'. It may be seen from the table that out of 226 contributors, the highest number of the contributors 154(68.14%) were from India followed by Nigeria 20 (8.85%) and Saudi Arabia 15(6.64%). America has contributed 9 (3.98%). Ahmadabad has contributed 5 (2.21%) Contributor from Argentina contributed 4 (1.77%) and Canada contributed 3 (1.33%) each country, followed by Finland, Swaziland and UK 2 (0.88) each country and the remaining 10 contributor were from other countries have contributed 1 (0.44%) each country.

Table 6 – Geographical Affiliation of Authors

Sl. No.	Country	No of contribution	Percentage
1	India	154	68.14
2	Nigeria	20	8.85
3	Saudi Arabia	15	6.64
4	America	9	3.98
5	Ahmadabad	5	2.21
6	Argentina	4	1.77
7	Canada	3	1.33
8	Finland	2	0.88
9	Swaziland	2	0.88
10	UK	2	0.88
11	Ludhiana	1	0.44
12	Malaysia	1	0.44
13	Mohali	1	0.44
14	Montgomery	1	0.44
15	Pune	1	0.44
16	Roorkee	1	0.44
17	Shillong	1	0.44
18	Tailand	1	0.44

19	Turkey	1	0.44
20	Washington	1	0.44
	Total	**226**	**100.00**

7. Most Prolific Institutions

The Table 7 depicts that the institutions wise distribution of contributions in the Journal. It may be seen from the table that the institutions from various countries have contributed 145 papers to the journal. The majority of institutions are academic institutions. Out of 226 contribution, the 'University of Kashmir,' leads with first rank by contributing 87 papers, followed by 'Taibah University' 15 papers, 'Aligarh Muslim University' 9 paper, 'University of Jammu' and 'University of Punjab' have contributed 7 papers each, followed by 'University of Delhi' 5 papers, Three institutions contributed 4 papers each, followed by Five institutions contributed 3 papers each, followed by one institutions contributed 2 papers each, and the remaining 67 institutions contributed 1 paper each. As shown in the above table that the 'University of Kashmir' has contributed highest number of articles 87 whereas among them 17 articles are editorial material.

Table 7 – Most Prolific Institutions

Sl. No.	Rank	Name of the University	No of contributions
1	**1**	University of Kashmir	87
2	**2**	Taibah University	15
3	**3**	Aligrah Muslim University	9
4	**4**	University of Jammu	7
5	**4**	University of Punjab	7
6	**5**	University of Delhi	5
7	**6**	University of Mysore	4
8	**6**	Electronics & Computer Engineering, IIT Roorkee.	4
9	**6**	Bayero University	4
10	**7**	Abia State University	3
11	**7**	Mahasarakham University	3
12	**7**	Guru Nanak Dev University	3
13	**7**	University of Pune	3
14	**7**	University of Swaziland	3
15	**8**	Edgardo Civallero National University of Cordoba	2
		Total	**159**
		Number of institutions contributing 63 papers each =1	67
		Grand Total	**226**

8. Subject area wise

The Table 8 reveals that the subject wise distribution of the papers published in the journal 'Trends in Information Management'. It may be seen from the table that the majority of the papers published on the subject area of 'Digital Library, Digitization & Institution Repository' and 'Scholarly Publications & Open Access Resources' which represent 17(11.72%) each followed by 'Library Automation, Cloud Computing & Open Source Software 12(8.28%). Some of the papers are focused on the area of Public Library, Academic Library, Oriental Library 10(6.90%). 'Information Retrieval, Catalogue, Metadata & Search Engines' and 'Library Services & Information Services' have appeared in 9(6.21%) papers each, followed by 'Information Seeking Behavior and Information Literacy' 8(5.52%), 'Knowledge Organisation and Library Classification' 7(4.83%), 'Librarianship and Library and Information Professional' 7(4.83%), 'Information and Communication Technology' 6(4.14%), 'Library Collection and Information Resources' 6(4.14%), 'Citation Analysis and Bibliometric Study' 5(3.45%) and 'Plagiarism and Copyright' 4(2.76%). Few papers are published on the area of 'Internet Usage' and 'Data Mining' which represent 3(2.07%) and 2(1.38%) respectively.

Table 8 – Subject area wise

SN	Subject Area	Frequency	Percentage
1	Digital Library, Digital Preservation and Institution Repositories	17	11.72
2	Scholarly Publications and Open Access Resources	17	11.72
3	Library Automation, Cloud Computing and Open Source Software	12	8.28
4	Public Library, Academic Library, Oriental Library	10	6.9
5	Information Retrieval, Catalogue, Metadata and Search Engines	9	6.21
6	Library Services and Information Services	9	6.21
7	Information Seeking Behavior and Information Literacy	8	5.52
8	Knowledge Organisation and Library Classification	7	4.83
9	Librarianship and Library and Information Professional	7	4.83
10	Information and Communication Technology	6	4.14
11	Library Collection and Information Resources	6	4.14
12	Citation Analysis and Bibliometric Study	5	3.45
13	Plagiarism and Copyright	4	2.76
14	Internet Usage	3	2.07
15	Data Mining	2	1.38
16	Others	23	15.86
	Total	**145**	**100**

9. Range of Citation Per Article

The Table 9 presents the range of citations per article. It may be seen from the table that the majority of the articles 44 (30.34%) cited the range between 10 to 19 citations, followed by 40 (27.59%) articles not cited any sources; 31 (21.38%) articles cited 0 to 9 citations; 19 (13.10%) articles cited the range between 20 to 29 citations, 6(4.14%) articles cited the range between 30 to 39 citations; 3(2.07%) articles cited more than 50 citations. 2(1.38%) articles cited the range between 40 to 49 citations,

Table 9 - Range of Citation per Article

S/N	Citation range	2005	2006	2007	2008	2009	2010	2011	2012	2013	No. of Articles	Percentage
1	Nil	6	5	7	7	6	3	2	4		40	27.59
2	0 to 9	2	7	2	3	4	4	5	2	2	31	21.38
3	10 to 19	1	5	5	3	4	7	12	6	1	44	30.34
4	20 to 29	1		2	5	2	1	1	2	5	19	13.1
5	30 to 39			1	1	2		1		1	6	4.14
6	40 to 49							1		1	2	1.38
7	More than 50							1		2	3	2.07
Total Articles		**10**	**17**	**17**	**19**	**18**	**15**	**23**	**14**	**12**	**145**	**100**

10. Type of Source Materials

The Table 10 indicates the citation based bibliographic form of source materials used by author for their research/study. In all 1608 citations, the highest number of citations 1003(62.38%) were from Journal Articles, followed by 333(20.71%) were from Books. The conference Proceedings and Workshop were next majority forms of the citation which represents 145(9.02%) followed by 'Web Resources' 71(4.42%), Review 21(1.31%) and Reports 20(1.24%). 'Thesis' and 'Newsletter' were very least cited source materials which represent 11(0.68%) and 4(0.25%) respectively.

Table 10 – Type of Source Materials

S/N	Types of source materials	Frequency	Percentage
1	Journal Article	1003	62.38
2	Books	333	20.71
3	Conference Proceedings and Workshop	145	9.02
4	Web Resources	71	4.42
5	Review	21	1.31
6	Reports	20	1.24
7	Thesis	11	0.68
8	Newsletter	4	0.25
	Total	**1608**	**100.00**

Conclusion:

The journal 'Trends in Information Management'' has published 145 articles in the field of Library and Information Science during the period of 2005 – 2013. The journal is quarterly publication; the study result affirmed that the research article (74.60 %) is major form of articles published in the journal. The majority of articles (63.04%) were single authored publication. Among the contributors from various countries India is the foremost contributor for the journal. The year 2011 has contributed the highest number of the articles (15.17%). The majority of institution which has contributed to the journal was from India. Out of 266 institutions, the 'University of Kashmir, (87) leads with first rank. The journal Trends in Information Management has been published good number of articles on the subject area of 'Digital Library, Digitization, Institution Repository', 'Scholarly Publications, Open Access Resources', Library Automation, Cloud Computing and Open Source Software This study has provided a space for other countries to understand the Indian universities perspective on these subject areas.

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