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# LITERATURE USE PATTERN: A CITATION-BASED ANALYSIS OF IFLA JOURNAL PUBLISHED DURING 2006-2015

Dr. Anil N. Chikate<sup>1</sup> and Prakash Vijay Barve <sup>2</sup>

<sup>1</sup>Research Guide & I/C Director,

Knowledge Resource Center, North Maharashtra University ,Jalgaon Maharashtra,India .

<sup>2</sup> Researcher & Assistant Librarian , Yashwantrao Chavan Maharashtra Open Univeristy , Nashik .Maharashtra India.



#### **ABSTRACT**

This paper analyses the trends in authorship pattern and literature use pattern of the 370 articles of total 6040 citations collect form IFLA Journal during 2006-2015. The study of IFLA journal covered the various aspects of to know the total numbers of articles published in the journal, authorship patterns, degree of collaboration, length of article, its distribution of articles distribution of contributions by subject distributions, rank of cited authors, ranking of authors/contributors of articles and geographical distribution of authors. provides a comprehensive overview of authorship in Library and Information Science. An average 370 articles were published during the decade covered by this paper. This means about 23.40 per cent of the total articles are published per year. Highest number of articles were published in 2007 i.e., (45,12.16%) followed by 2009 i.e., (40, 10.81 %) and 2014 i.e., (45,10.54%)IFLA Journal is one of the premier official journals of the International Federation of Library Associations and Institutions. It is brought out by Sage publications as a quarterly publication.

**KEYWORDS**: Bibliometric Analysis, Authorship pattern, Content Analysis, LIS Journals, literature use pattern.

# **INTRODUCTION**

Bibliometric is an emerging thrust area of research and has now become a well established part of information research and a quantitative approach to the description of documents. Bibliometric has grown out of the realization that literature is growing and changing out of a rate with which no librarian or information worker equipped with traditional bibliographic skills and methods could keep abreast. The present study shows that journals are most cited form of communication amongst the library and information scientists and the source journal is the most cited publication.

The last fifty years have seen two major technological changes in scholarly publishing and two major changes in the way research can be quantitatively analyzed, alongside numerous less significant developments. The two publishing changes are the computerization of the printing process, reducing costs significantly and allowing more journals and books to appear in print; and the conversion of the entire publishing cycle (submission of articles, refereeing and publication) to the Internet, allowing faster and possibly cheaper communication throughout.

Historically, the first major change for the development of quantitative analysis of academic publishing (bibliometrics) was the creation of the Institute for Scientific Information (ISI, now Thomson Scientific) citation database, which began functioning in 1962 together with associated post-war sociological theory allowing it to be used to assess the impact of scientific work. Since then there has been a continuous increase in the computing power available in universities, which has helped to make increasingly many

bibliometric analyses possible. The second major development for bibliometrics was the web publishing of an increasingly broad range of research-related documents, from articles to email discussion lists, allowing the creation of a range of new metrics relating to their access and use. Thackray.B, (2000).

IFLA is an independent association that represents libraries and library associations around the world. At an international conference of librarians and booklovers in Prague in 1926 a proposal to set up an international committee with representatives of national library associations was accepted. This was acted upon during the British Library Association conference in Edinburgh, Scotland in 1927, when an international library and bibliographic committee was set-up by the representative associations from fifteen countries. IFLA was registered in Netherland in 1971. The name was changed to International Federation of Library Associations and Institutions in 1976. It's headquarter is located at The Royal Library, the National Library of the Netherlands, in The Hague. Membership in IFLA is open to associations and institutions; affiliation is available for individuals. Now it has 1700 members from 155 countries worldwide. The journal is published by SAGE group of publishing quarterly .

#### **OBJECTIVES OF THE STUDY:**

The purpose of present study intends to analyze the publication trends in IFLA Journal during the period 2006 to 2015. The major objectives of the study are:

- 1. To know the total numbers of articles published
- 2. To know the various forms of documents used by authors
- 3. To study the authorship pattern of the articles
- 4. To study the degree of collaboration
- 6. To study the ranking of authors/contributors of articles
- 7. To study the length of articles
- 8. To study the ranking of authors
- 9. To study the subject-wise distribution of the articles

### **METHODOLOGY:**

The methodology used in the present study is content analysis and bibliometric analysis, which is in fact used to study the bibliographic attributes of the articles published in the IFLA journal during the Ten-year period of 2006-2015. The research is confined to the applications of Bibliometric laws, citation analysis bibliometric stud of **370** articles of total **6040** citations,. The "Article" section was chosen as the unit of analysis due to the academic nature of articles published in this section. The time period covered will be of **10 years from 2006 to 2015.** 

This paper intends to cover Bibliometric study of SAGE published IFLA journals in Library and Information Science during 2006 to 2015. The data required for the present paper was retrieved from SCOPES database. All the details such as author(s), title, year of publication, , etc. of all articles have been used for the following analysis.

#### **SCOPE & LIMITATIONS:**

The study presents trends in authorship pattern and literature use pattern of the 370 articles of total 6040 citations collect form IFLA Journal during 2006-2015.

# LITERATURE REVIEW:

During the last few decades, many articles have addressed the bibliometric aspects of Journals across many fields across the world various authors have done bibliometric analyses of papers published in various journals in different fields.

journal with 5.43%, and the maximum journals are from foreign countries.

**Bapte, (2017)** investigated the bibliometric analysis of 4821 cited documents appended to the 295 articles published in DESIDOC Journal of Library and Information Technology (DJLIT) during 2011-2015. He made a study on various structures of bibliometric analysis such as, distribution of citations, authorship pattern, and degree of collaboration, distribution of reference sources, prominent authors and ranked list of core journals. The results of the study show that the highest number of contribution are contributed by single authorship with 1912(39.65%) citation, Dr. B. M. Gupta is the most prolific author with 52 citations,

journal is the mostly cited information source with 2560(53.10%) citations, Scientometric is the most cited

Jan, and Ridwana (2017) analyses the bibliometric analysis of Indian Journal of Fisheries, in his paper they find out the authorship pattern and citation pattern of articles appeared in Indian journal of fisheries from 1999 to 2012, and elaborates the various aspects such as year-wise distribution of articles, rank of cited authors etc have been analyzed. The results of the study were found that the maximum numbers of articles are in the year 2012 with 101 articles, majority of the articles in the Journal are more than three authored and majority of the contributions are from Kerala, the highest number of citations 11886(70.80%) out of 16787 citations were published journal citation, etc.

Nagasundara, Manjunatha and Kumar (2016) carried out a "Publication Pattern of the Journal "Webology": A Bibliometric Analysis". He studies on various parameters of Bibliometric analysis like, authorship pattern, most prolific authors, most prolific institutions and geographical affiliation of the contributors of the articles published in the journal during the period 2004 – 2013. Total 158 articles were published during the period of the study. The results of the study found that the majority of articles 114 (72.15 %) were research article and the highest numbers of articles 106 (67.10%) were single authored publication. Majority of the contributors contributed from India. Hamind R. Jamli has contributed highest number of research articles with 12 (3.66%) publication. The study also revealed that the majority of the articles' (25.95%) citations range between 10 to 19 per article and the type of majority of citations (43.11%) were journal article.

Manjunatha, Guruprasada and Varalakshmi (2016) carried out a "Publication Pattern of the Journal "Trends in Information Management": A Bibliometric Analysis". In the study they 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. Total 145 articles were published in the journal during the period of the study. The results of the study found that the highest numbers of articles were single authored publication. The majority of the contributors are from India, S M Shafi has contributed highest number of publications, the university of Kashmir, India leads with first rank publication, 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.

**Kuri and Aadin (2016)** made a study with the title "International Journal of Information Dissemination and Technology (IJIDT): A Bibliometric Study". The study deals with year/volume wise distribution of paper, length of articles, authorship pattern, and degree of collaboration. The result showed that there are 254 articles are published during 2011-2015. The 93.69% papers were published by multiauthored. India is the highest contributing country among the other country. The degree of collaboration is found to be 0.59%, and the average citations per paper are 13.4 counted.

Gomathi and Rubinandhini (2016) have examined "Bibliometrics Study on Breast Cancer Research During the year 2006-2015". For the study data were downloaded from web of science database. Total 4206 number of records was found during 2006 to 2015. For the study used various statistical tools such as, Authorship pattern, Relative Growth Rate, Time Series Analysis, Zipf Law, Exponential Growth Rate. The results of the study show that the highest number of publications 793 (18.85%) published in the year 2015. Multiple authors' more than single authors. Majority of the publication published in English language.

**Chaluvaiah, Giddaiah and Jagadeesha (2016)** studied the "Bibliometric Study of World Research Output on Horticulture Science during 1989-2016". In his study they focus on type of document, year wise distribution of horticultural science publication, prolific authors, top published country, funding agency of horticultural science research, and the prolific institution in, horticultural science research. The findings of the study show that, total 3074 papers were published during 1989 to 2016. USA contributes highest to

the study show that, total 3074 papers were published during 1989 to 2016. USA contributes highest to horticulture science publications. Among the funding agency the University of Florida contributed highest number of publications that is 2.05% (63). The most important research area in horticultural science publication is agriculture etc.

**Padma and Ramasamy (2016)** carried out a "Mapping the Research Output of 'e-Library Science Research journal': A Single Journal Bibliometric Study". In the study covering total 521 English articles published during 2013-2015 to identity the geographical and institutional affiliation and collaboration of the authors. The findings of the study reveal that, the highest 504(96.73%) articles are from India, out of 886 contributors, 857(96.73%) contributors are from India. Karnataka tops the list with 205 (23.92%) contributors, followed by Maharashtra with 141(16.45%) contributors etc.

Rajev and Joseph (2016) studies on A bibliometric analysis on Malaysian journal of library and information science, the study deals with, year wise distribution, length of articles, range of references, institutional affiliation of authors, subject categories, authorship pattern, demographic affiliation of author and number of citations. The findings of the study show that, total 142 articles covered in this journal during 2007 to 2013. The highest number of articles published in the year 2011, the multiple author articles were increased in comparison to the single authored articles and the maximum of 184 citations were received in the year of 2008.

In this paper articles and their citations published in IFLA journal articles published form 2006-2015 are analyzed. In this paper total there is 370 articles and 6040 citations is presented below in table s and charts .the analyzed data is interpreted with suitable reasoning.

#### **DATA ANALYSIS:**

This paper aims to cover 370 articles published in the IFLA journal during 2006-2015. The collected data is presented in table No 1.

Table 1: Year Wise Distribution of Articles during 2006-2015

IFLA Journal

Years	ears Vol.			f Artic e-Wis		No. of Articles	%
		1	2	3	4		
2006	32	8	7	10	13	38	10.27
2007	33	8	10	11	16	45	12.16
2008	34	11	7	7	10	35	9.46
2009	35	11	11	9	9	40	10.81
2010	36	11	10	7	8	36	9.73
2011	37	9	12	9	9	39	10.54
2012	38	11	6	6	8	31	8.38
2013	39	10	8	8	6	32	8.65
2014	40	8	8	11	12	39	10.54
2015	41	8	8	10	9	35	9.46
Total	10 Years	95	87	88	100	370	100.00

As shown in above mentioned table, Table 1. Total numbers of articles published during the period 2006-2015 on an average 370 articles were published. This means about 23.40 per cent of the total articles

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are published per year. Maximum number of articles were published in 2007 (i.e.,45,12.16%) followed by 2009 (i.e.,40, 10.81%) and 2014 (i.e.,45,10.54%)

	IFLA Journal	
Table 2: Category	Wise Classification of Paper	s during 2006-2015

Document Type	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Grand Total	%
Research Paper	34	41	32	30	31	25	24	25	30	27	299	80.81
Conference Paper	-			1							1	0.27
Editorial	4	4	3	6	4	9	4	5	4	4	47	12.70
Erratum						1			1		2	0.54
Letter				3							3	0.81
Note					1		1				2	0.54
Review						4	2	2	4	4	16	4.32
Grand Total	38	45	35	40	36	39	31	32	39	35	370	100

**Table 2**: focuses on the category wise classification of the papers published during the period from 2006 to 2015. The study shows that the maximum number of articles were published as under the category of research paper i.e. 299(80.81%), whereas 47 (12.70%) articles were published under the category of Editorial. There were a small numbers of articles published under the Review i.e. 16 (4.32%)

**Table 3: Authorship Patterns during 2006-2015** 

Authors'	Years											%
Audiors	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Articles	70
Single Authors	29	38	23	28	25	26	18	19	25	15	246	66.49
Two Authors	4	5	6	10	7	7	10	8	6	13	76	20.54
Three Authors	4		5	1	3	5	1	1	6	4	30	8.11
Four Authors	1	2	1	1		1	1	3	1	2	13	3.51
Five Authors					1		1	1		1	4	1.08
More Than Five Authors									1		1	0.27
Grand Total	38	45	35	40	36	39	31	32	39	35	370	100.00

As shown in above mentioned table, Table 3 shows the authorship patterns of the articles published during the period of study. The largest number of articles has been published by single author 246(66.49%). This is followed by two authors 76 (20.54%), and three authors 30(8.11%). There were small percentage of articles published by four and five authors with 13(3.51%) and 4(1.08%) and more the five authors 1 (0.27%) of the total articles. The data clearly reflects that the large number of articles published S by single author.

Table 4: De	gree of Colla	boration (DC)
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Year	Vol.	Single Authored Papers (Ns)	Multiple Authored Papers (Nm)	N/A	Ns+Nm	Total	Degree of Collaboration
2006	32	27	9	2	36	38	0.25
2007	33	35	7	3	42	45	0.17
2008	34	23	12	0	35	35	0.34
2009	35	28	12	0	40	40	0.30
2010	36	24	12	0	36	36	0.33
2011	37	26	13	0	39	39	0.33
2012	38	17	13	1	30	31	0.43
2013	39	18	13	1	31	32	0.42
2014	40	23	14	2	37	39	0.38
2015	41	15	20	0	35	35	0.57
Tot	al	236	125	9	361	370	0.35

Table 4: Degree of Collaboration (DC)

Degree of Collaboration in respect of a discipline or an organization is the ration of multi-authored paper published during a year and total number of papers published during that year.

Formula given by the Subramanyam, (1983)

Where

**DC**= Degree of Collaboration

**Nm=** Number of multi authored papers

Ns= Number of single authored papers

DC= Multi Authored Papers 125

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Single Authored

125 + 236

N/A (9)

As a result the degree of collaboration in the IFLA Journal is 0.35 which clearly Indicates its dominance upon individual contribution.

Table 5: Journal wise length of Article during 2006-2015

No. of Pages	Year								Total	Dorcontago		
No. of Pages	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total	Percentage
15	11	21	13	18	12	14	9	6	15	4	123	33.24
610	18	18	13	11	18	15	11	14	16	17	151	40.81
1115	8	4	5	8	3	9	8	8	8	13	74	20.00
1620	1	0	2	2	3	1	2	4	0	1	16	4.32
2125	0	2	1	1	0	0	1	0	0	0	5	1.35
2630	0	0	0	0	0	0	0	0	0	0	0	0.00
3135	0	0	1	0	0	0	0	0	0	0	1	0.27
Total	38	45	35	40	36	39	31	32	39	35	370	100.00

As shown in above mentioned table Table 5 shows the length and range of page length of articles published in IFLA journal during 2006–2015. Out of 370 articles, 123 have between 1-5 pages, 151 have

between 6-10 pages74) 11-15 pages, 16 have been 16-20 pages, 5 21-25pages. There is one article in the range of more than 35 pages. The arithmetic mean of page length of all articles ranges from 6.00 to 11.27. Throughout the years the median values varied between 6-10, which means that the page length of 50 percent or more of the articles was 6/8 pages. It is worth considering whether or not it is appropriate to set a minimum page length for a publication in order to know the quality of contributions. One could even take

**Table 6.Ranking of Authors:** 

into account differences in the number of printed characters (or words) per page in any journal.

1			Percentage
	Parker S.	33	5.82
2	Lux C.	11	1.94
3	Bihani S.K.	7	1.23
4	Tise E.R.	7	1.23
5	Shenton A.K.	6	1.06
6	Byrne A.	5	0.88
7	Lor P.J.	5	0.88
8	Bradley F.	3	0.53
9	Islam M.A.	3	0.53
10	Islam M.S.	3	0.53
11	Sturges P.	3	0.53
12	Witt S.W.	3	0.53
13	Adkins D.	2	0.35
14	Al-Muomen N.	2	0.35
15	Alqudsi-ghabra T.	2	0.35
16	Bossaller J.S.	2	0.35
17	Chakravarty R.	2	0.35
18	de Jager K.	2	0.35
19	Dorner D.G.	2	0.35
20	Gbaje E.S.	2	0.35
21	Gorman G.E.	2	0.35
22	Guerrini M.	2	0.35
23	Gupta D.K.	2	0.35
24	Hamilton S.	2	0.35
25	Ikeda M.	2	0.35
26	Jean M.	2	0.35
	Other authors that contributed 1 article	253	0.18
	Total	370	100

Table 6 shows the ranking of authors/contributors of articles. There are a total of 567 contributors or authors for 370 articles. Parker,33, Lux, C. 11, Bihani, S.K. 7 articles and others have contributed 2 articles each. 236 other authors have contributed 1 article each during the period of study. The total number of the article and the percentage as well that for other authors that contributed 1 article in Table 9 are higher than the actual numbers because some articles have co-authors. Bibliometrically, the value of place of publication point to the nationality of a document. Place of publication is the best guide available to nationality of a document.

**Table 7: Contributions by Country** 

Sr. No.	Name of Country	Total	Percentage
1	United States	110	19.40
2	United Kingdom	34	6.00
3	Indonesia	33	5.82
4	South Africa	33	5.82
5	Netherlands	31	5.47
6	India	29	5.11
7	Australia	22	3.88
8	France	20	3.53
9	Germany	19	3.35
10	Nigeria	14	2.47
11	Canada	13	2.29
12	China	11	1.94
13	South Korea	11	1.94
14	Finland	10	1.76
15	Japan	10	1.76
16	Italy	9	1.59
17	N/A	9	1.59
18	Iran	8	1.41
19	Namibia	8	1.41
20	New Zealand	8	1.41
21	Portugal	8	1.41
22	Sweden	8	1.41
23	Bangladesh	7	1.23
24	Belgium	7	1.23
25	Egypt	7	1.23
26	Norway	6	1.06

Table 7. shows the contributions in total nos. ten years of the journal by country. The study indicates that while the USA takes top position with its contribution 110. U.K. Indonesia 33, South Africa 33, Netherland 31, India 29, Germany 19, Australia22, and Nigeria have contributed 14, Sweden 8,Three countries7,onc country with 6 contributors, two countries with 5 contributors, two countries with 4 Contributors, eight countries have 3 contributors fifteen countries with 2 contributors and 10 countries with 1 contributor.

## **CONCLUSION**

The publishing trend totally depends on the output of contributors, patterns of contributions and the quality of research. The year 2007 shows the maximum number of contributions to the IFLA Journal. This study reveals that the categories of article distributions are remarkable in this technical paper. The majority of the articles were contributed by single authors. And most authors were faculty members or researchers affiliated with academic or research institutions and information/documents officers. The United States has contributed more articles than any other countries, such as South Africa, China, India, U.K., Korea, Canada,

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Australia, The Netherlands etc. IFLA Journal is notably a scholarly journal that stipulates or induces fruitful research for the library and information professional.

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