ANNALS OF LIBRARY AND INFORMATION STUDIES – 2009-2018: A BIBLIOMETRIC ANALYSIS

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Abstract

The paper brings out the results of a Bibliometric analysis of the journal "Annals of Library and Information Studies" for the period from 2009-2018. The data were observed from the journals. This study analysing the research output performance of information scientist and the subject experts. The study aims to analyse the International Journal of Library and Information Science for a period 2012 to 2017. In this study the issue wise number of articles, the authorship pattern and the degree of collaboration are analysed. The study also analysed the geographical distribution of articles and year wise distribution of cited articles. The result showed that out of 344 articles multi authors contributed 226 (65.70%) articles whereas 118 (34.30%) articles were contributed by single authors. Journal Articles were found most prevalent source of information for writing research papers and used in citation

Keywords: Bibliometrics, Authorship Pattern, Citation Analysis and Degree of Collaboration

1. Introduction

The term Bibliometrics was coined by Alan Pritchard to denote a new discipline which employed quantitative methods to the problem of scientific communication process to analyze the volume, the movement and the characteristics of the published documents, related activities and helps in the measurement of the pattern of all form of recorded information and their procedures. Bibliometric techniques are applied to measure the impact of scholarly publications and to determine the influence of a single author or to describe the correlation between two or more authors or works. According to Alan Pritchard (1969) the term Bibiliometrics is defined, "the application of mathematics and statistical methods to books and other media of communication". The present study of the paper has been undertaken in order to know the quality and contents of articles in the Annals of Library and Information Studies.

Annals of Library and Information Studies are a leading quarterly journal in Library and Information Science. This journal publishes research articles, survey reports, documentation notes and research reviews on library, documentation and information science, information systems, services, information technology, information users, bibliometrics, scientometric, education and other related subjects. It is an open access academic journal published since 1954 by the CSIR-National Institute of Science Communication and Information Resources (CSIR-NISCAIR). It contains library and information science, scientometrics and documentation and is listed in Library and Information Science: A guide to Key Literature and Sources. The founding editor was S R Ranganathan, who contributed to about 50% of the articles during 1954 to 1963.

2. Review of literature

Sunaina Khanna , Jivesh Bansal ,Seema Sood* ,Deepika Tiwari ,A.C. Joshi Library (2018) focused on the findings of 'Journal of Academic Librarianship' (JAL) during the period 2007-2016. Web of Science Citation database was used and 656 articles retrieved were analyzed on diverse parameters i.e. chronological distribution of articles, length of articles, authorship and citation pattern etc. More than half of the articles were published under joint authorship and average degree of collaboration was 0.56. A very large majority of articles (89.85 percent) were published by USA and top 14 countries published 94.36 percent articles in JAL from 2007-16. The most prolific authors were K. Coyle and G. Little with 9 articles each and highest contributed institutions were California State University System and University of Illinois System with 21 and 16 articles respectively. The average citation per paper was 4.35 and 8 papers received 31 and above citations.

Shipra Awasthi (2015) the study focused on the articles published in library trends journal from the year 2008-2014. The references cited in the articles have also been studied. Various parameters have been identified to study the journal articles and the references like Year wise publications, authorship pattern etc.

 S. Thanuskodi (2011) conducted a bibliometric analysis on the journal titled "Library Herald" for the period between 2006 to 2010. The findings covered mainly the number of articles, authorship pattern, subject wise distribution of articles, average number of references per articles, forms of documents cited, year wise distribution of cited journals etc. All the studies pointed towards the merits and demerits of the journal. The result showed that out of 138 articles single author contributed 72 (52.17%) articles

while the remaining 66 (47.83%) articles were contributed by joint authors. The Study revealed that most of the contributions were from India with 89.85 % and the rest 10.15 % only from foreign sources.

S. Jayaraman, N. Krishnaswamy,and B. Subramanian (2012) conducted Bibliometric analysis of all the journal articles published in the Annals of Library Information Studies from 1997-2011 was carried out. 362 articles were published in the journal during 15 years. Highest numbers (43) of articles were published in the year 2010. The journal contained 4949 references from 1997-2011. The study also contained the analyses of authorship patterns in citing article. In authorship pattern, two author citations are dominant than others and it was 152 (41.99%). This study also revealed that Annals of Library Information Studies was the most preferred journal used by authors in their study. The paper concludes that only 27 core periodicals can cover more than 2527 (51.06 %) references.

S.Parameshwar and Shankar Reddy Kolle (2016) aimed at analyzing the research output performance of Library scientists on library & information science subjects. The analyses included year-wise publication of articles, authorship patterns, institutions-wise publication of contributions, state wise, city wise and country wise publication of articles. A total of 335 articles were published in the journal with an average of 33.5 articles per year. The journal had received articles from 19 countries. The result showed that out of 335 articles, majority of the articles were contributed by joint authors (218; 65.07%). Most of the articles were contributed from Delhi and USA also has contributed 4 articles for the period.

3. Scope of the study
The scope of the study is confined to the bibliometric analysis of " Annals of Library and Information Studies" (ALIS) for ten years from 2009 -2018

4. Objectives
The primary objectives of the paper are to analyse the following aspects:
1. To examine the articles published yearly in the journal
2. To investigate the volume wise distribution of articles
3. To find out the authorship pattern followed in the journal
4. To study the year wise authorship pattern of articles.
5. To investigate the geographical details of articles published in the journal
6. To examine the year wise distribution of cited articles.

5. Methodology
The methodology applied in the present study is bibliometric analysis which is used to study in detail the bibliographic feature of the articles and citation analysis of the references and end of each article published in Annals of Library and Information Studies" (ALIS) from 2009 to 2018. The data pertaining to Annals of Library and Information Studies regarding 344 articles made from volume 56 in 2009 to volume 65 in 2018. All the bibliographic details IJF have been taken up for the study.

6. Data analysis and interpretation

Table 6.1: Year wise distribution of articles

YEAR	VOL.NO.	NO.OF.ISSUES	NO.OF CONTRIBUTION	PERCENTAGE (%)
2009	56	4	34	9.88
2010	57	4	43	12.5
2011	58	4	36	10.465
2012	59	4	27	7.84
2013	60	4	37	10.755
2014	61	4	35	10.17
2015	62	4	38	11.04
2016	63	4	32	9.30
2017	64	4	34	9.88
2018	65	4	28	8.139
TOTAL		40	344	100

The number of research publications of Annals of Library and Information Studies for the period 2019-2018 has been given year wise in Table -6.1. The ALIS journal published 344 research articles during the period of study. The journal on an average has published 35 research papers per year. The above table shows that the maximum no of articles were published in the year 2010 with 43 research papers and minimum in the year 2012 with 27 articles.

Table 6.2: Issue wise distribution of articles

ISSUE	Volume Number										TOTAL	%age
	56	57	58	59	60	61	62	63	64	65		
March	7	9	10	6	9	9	6	10	10	8	84	24.42
June	8	9	10	6	9	8	7	8	6	7	78	22.7
September	9	15	9	8	9	11	9	8	8	7	93	27.03
December	10	10	7	7	10	7	16	6	10	6	89	25.87
TOTAL	34	43	36	27	37	35	38	32	34	28	344	100

Table 6.2 displays the issue-wise publications of articles in ten volumes. On the observation, it has been found that during March & June issues, there were less number of publications to the journal i.e. 84 (24.42%)& 78 (22.7%) of total articles published in the journal. September issue of the journal has highest number of publications i.e. 93 (27.03%) to the journal. December issue of the journal has the second highest number of published articles with 89 (25.87% publications).

Table 6.3: Authorship pattern of contribution

| YEAR | NUMBER OF AUTHORS | | | | TOTAL |
	1	2	3	More than three	
2009	6	21	7		34
2010	18	17	8		43
2011	14	14	7	1	36
2012	11	10	6		27
2013	13	17	5	2	37
2014	12	18	4	1	35
2015	18	14	4	2	38
2016	8	18	3	3	32
2017	10	18	6		34
2018	8	16	2	2	28
TOTAL	118	163	52	11	344
% age	34.30	47.38	15.12	3.2	100%

The table 6.3 shows authorship pattern of research contributions published in the journal during 2009-2018. On the observation of table three, it has been found that 118 (34.30%) articles published by one author (single), 163 (47.38%) articles by two authors and 52 (15.12%) articles by three authors. Only 11 (3.2%) articles published by more than three authors. From the analysis, it has been found that two authorship pattern is most distinguished in the journal followed by single authorship and three authorship pattern respectively.

Degree of collaboration in the Annals of Library and Information Science

Collaborative research is essential aspect of the Library and Information Science. It is a natural reflection of complexity, scale and cost of modern investigations in the field of library science. Multi authorship provides different measures of collaboration in the subject. The degree of collaboration has been calculated for the year 2009-2018. Single author contribution is 118 and multiple authors' contribution is 226.

The Degree of Collaboration (C) of the contributors has been derived using the Subramanyam formula:

$$C = \frac{NM}{NM+NS}$$

where C = Degree of Collaboration
NM = Number of Multi Authored Papers
NS = Number of Single Authored Papers

In the present study

NM = 226

NS = 118

$$C = \frac{226}{226+118} = 0.657$$

Thus the calculated Degree of Collaboration of the journal is 0.657. The higher the Degree of Collaboration shows journal has good presence of collaborative research among authors.

Table 6.4: Year wise authorship pattern

| AUTHORSHIP | YEAR | | | | | | | | | | TOTAL | % |
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Single	6	18	14	11	13	12	18	8	10	8	118	34.30
Multi	28	25	22	16	24	23	20	24	24	20	226	65.70
TOTAL	34	43	36	27	37	35	38	32	34	28	344	100

The Table 6.4 showed that the out of 344 research papers, multi authors contributed 226 (65.70%) whereas 118 (34.30%) research papers were contributed by single author.

Table 6.5: Subject wise distribution of articles

SUBJECT	NO.OF ARTICLES	PERCENTAGE (%)
Bibliometric Analysis	27	7.85
Citation Analysis	15	4.36
Information Sources and Services	41	11.92
Information Need	30	8.72
IT & Digital Technologies	45	13.08
Research Publications	63	18.31
Scientometric Analysis	29	8.43
User Satisfaction	19	5.52
Webometrics	39	11.34
General	36	10.47
TOTAL	344	100

The table 6.5 showed that the majority of the contribution have appeared under research publications 63 (18.31%) followed by ICT and Digital Technologies 45 (13.08%), Information Sources and Services 41 (11.92%), Webometrics 39 (11.34%), General Information 36 (10.47%) and Information need 30 (8.72%)

Table 6.6: Institution wise distribution of contributions

NAME OF INSTITUTION	NO.OF ARTICLES	PERCENTAGE (%)
Universities	195	56.69
Colleges	40	11.63
Research Institutions	92	26.74
Govt. Departments	11	3.2
Socities	6	1.74
TOTAL	344	100

The table 6.6 shows the institution wise contributors. The highest contributions were from universities with 195 (56.69%). This is followed by research institutions with 92 (26.74%), colleges 40 (11.63%) , Government department 11 (3.2%) and 6 articles (1.74%) were contributed by Societies.

Table 6.7: Geographical distribution of articles

GEOGRAPHICAL DISTRIBUTION	NO.OF ARTICLES	PERCENTAGE (%)
National	274	79.65
International	70	20.35
TOTAL	344	100

Table 6.7 displays geographical distribution of articles in the Journal. The articles have been divided in to two categories: National and International. It has been found that 274 (79.65%) articles were belong to National contribution and 70 (20.35%) articles were contributed by International authors. National contribution is more than international contribution to the journal. On the analysis, it has been found that since the journal is of Indian origin, highest number of articles submitted and published by India in the journal. International contribution of articles to the journal is less than national because of geographic distance as well as less popularity of the journal due to recent in existence.

Citation analysis

Citation analysis is used to study the citation links between scientific papers, technical notes and reviews; for example it may be used by the periodicals librarian for study of the structure of literature and to identify core journals. Citation analysis provides relevant measures of utility and relationships of journals where primary function is to communicate research results. It helps in identification of the key documents and the creation of core lists of journals.

Table 6.8: Year wise distribution of citations

YEAR	NO.OF CITATIONS	PERCENTAGE (%)
2009	674	8.18
2010	1039	12.62
2011	819	9.94
2012	465	5.64
2013	836	10.15

2014	801	9.73
2015	652	7.92
2016	572	6.95
2017	616	7.48
2018	1762	21.39
TOTAL	8236	100

The table 6.8 showed that maximum number of citations 1762 (21.39%) produced in 2018 followed by 1039 (12.62%) citations in 2010, 836 (10.15%)citations in 2013, 819 (9.94%) citations in 2011, 801 (9.73%) citations in 2014, 674 (8.18%) citations in 2009, 652 (7.92%) citations in 2015, 616 (7.48%) citations in 2017, 572 (6.95%) citations in 2016, and 465 (5.64%) citations in 2012.

Research findings and conclusion

The analysis of the data collected through survey and observation have revealed a number of findings which are as follows:

The journal has published 344 articles in 40 issues of 10 volumes from the year 2009-2018. There was almost equal distribution of articles found in every volume. Volume 57 and Volume 61 have published major percentage of research papers to the journal i.e. 12.5% and 11.04% respectively. As per issue wise publications of articles in five volumes, it has been found that December issue (27.03%) of the journal has the highest number of published articles followed by September issue (25.87%). In the study of authorship pattern for the journal, it has been found that multi authorship pattern (65.70%) is most prevalent in the journal followed by single authorship (34.30%). The present study reveals that majority of the contributions are under research oriented subject 63 (18.31%) followed by 45 (13.08%). In the analysis based on country wise distribution of authors,most of the contributors are from India with 274 (79.65%), The journal has 70 (20.35%) contributors from foreign countries. In the analysis based on institution wise distribution of authors, it has been observed that the highest contribution were from the universities with 195 (56.69%). The study revealed that the maximum number of citations accounted in the 2018 with 1762 (21.39%) followed by 1039 (12.62%) citations in 2010.

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