



Research Paper

## Bibliometric Analysis of Annals of Library and Information Studies Journal (ALISJ) during 2015 -2021

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### Abstract

*Bibliometrics 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. This article brings the results of a bibliometric analysis of the journal entitled " Analysis of Annals of Library and Information Studies Journal (ALISJ)" for the period is d of 2015-2021. The result showed that a total of 212 articles were published during the study period from 2015 to 2021. Among 212 articles 99.89% of papers were published under the multi-authorship pattern. The degree of collaboration of the published articles is found to be 99.68%. Further, more than 16.50% of articles neared the domain of "Theoretical & General Aspects of LIS" Nearly 41.98% of papers were contributed by the university representative, the average length of a paper is 17.92%. All the bibliometric indicators study point toward the strengths and weaknesses of the journal which will be helpful for its further development.*

**Key word:** *Bibliometric, Authorship pattern, Degree of collaboration,*

*Received 10 July, 2022; Revised 23 July, 2022; Accepted 25 July, 2022 © The author(s) 2022.*

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### I. Introduction

The term "Bibliometric" was first coined by, Pritchard (1969) in preference to the existing terminology 'statistical bibliography'. The word 'bibliometric' has been derived from the Latin and Greek words 'Biblio' and 'metrics' respectively which refer to the application of mathematics to the study of bibliography. But its usage and practice started much before its origin in the second decade of this century. Sengupta, I N-1985 The term 'Bibliometrics' is just parallel to Ranganathan's 'Librametrics', FID's 'Informetrics', and to some other well-established sub-disciplines like 'Econometrics', 'Psychometrics', 'Sociometrics', 'Biometrics', 'Technometrics', 'Chemometrics', 'Cliometrics', where mathematical and statistical techniques have been systematically applied to study and solve problems in their respective fields. (Ratan G K-2012) Now-a- days the term 'Scientometrics' is used for the application of quantitative methods to the history of science and overlaps with bibliometrics to a considerable extent. Bibliometrics is a type of research method used in Library and information science and an emerging area of research in this field. (Ratan G K-2012)

### II. Review Of Literature

According to Ramesh Kuri and Tayappa Adin the present study is a Bibliometrics analysis of the journal titled International Journal of Information Dissemination and Technology for the period of 2011-2015. The result showed that there are 254 articles are published during in study period. Among 254 articles the study found that 93.69% of papers are multi-authored papers and Degree of Collaboration.

Mulla, K.R. & Dhanamjaya, M. (2000-2009) Bibliometrics analysis of 412 research articles appeared in the series journal of information management during the period of 2000 to 2009 this paper gave a review on authorship pattern degree of collaboration author productivity and further it revealed that out of total 686 contributors 360(52.48%) contributors contributed a jointly authored paper that amounts to 180 (43.69%) articles.

Neeraj Kumar Chaurasia and Shankar B. Chavan (2001 to 2010), the study describes the growth, contribution, and impact of research carried out by the faculty members and researchers of IIT Delhi. It also

attempts to analyze the growth and development of research activity of IIT Delhi as reflected in publications output covered by ISI Web of Science during the year 2001 to 2010.

Gurjeet Kaur Rattan and Kamini Gupta (2007-2011) The present study is a Bibliometric Analysis of the journal titled Malaysian Journal of Library and Information Science from 2007-2011. Covers mainly the number of articles, authorship pattern, the geographical distribution of the authors, the pattern of references, etc. The results show that out of 100 articles, single authors contributed 27 (27%) articles while the rest 73 (73%) articles are contributed by joint authors. It has been revealed that most of the contributors.

Malaysia. Kotti Thavamani (2007 to 2013) examines the authorship trends of contributions in the “Indian Journal of Forensic Medicine & Toxicology” during 2007 to 2013. A total of 456 contributions and 1425 authors were examined by year wise contributions, author productivity, year wise single and multi authored papers and Degree of Collaboration.

Ramesh Kuri, Maranna O and Tayappa Adin (2020) Business Review Journal (GBRJ)” for the period of 2011-2015. The result showed that a total of 319 articles were published during the study period from 2011 to 2015. Among 319 articles 95.19% of papers were published under the multi-authorship pattern. The degree of collaboration of the published articles is found to be 0.83%. The average author's productivity is 0.98%.

**Need and scope** The present study tries to find out the literature growth, authorship and collaborative pattern, country wise contribution, Domain wise articles appeared, designation of contributors, institute Affiliated of an author, average number references per paper etc. (Shankar P 2016) Volume 01 to 07 of Analysis of Annals of Library and Information Studies Journal (ALISJ), published between 2015 and 2021 have been taken into consideration to the present study. A datasheet ALISJ 2011- 21, 4 issues of 7 volumes was prepared in MS-Excel to record the data and then the data was entered manually into it from the journal itself.

### Objective

- The objectives of the present study are:
- To study the year, volume wise distribution of articles.
- To study the Authorship pattern paper published during 2015-21.
- To study the Volume wise Degree of Collaborations.
- To study the Domain wise Distribution of Article.
- To trace the country-wise distribution of papers authorship patterns.
- To identify contributions by designation.
- To study the most productive institutions.
- To study the Length of the Articles.

### III. Methodology

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 a rate with which no Librarian or information worker equipped with traditional bibliometric skills and methods could keep abreast. (Chourasia Kamal-2008) Methodology applied in the present study is bibliometric analysis which is used to study in detail the bibliographic features of the articles published in Analysis of Annals of Library and Information Studies Journal (ALISJ) from 2015 to 2021.

### Analysis and distribution

**Table 1: Year, Volume & Issue-wise Contribution of Papers**

Year	Vol.	Issue-wise no of contributions				Total	Annual Average (AA) growth rate (%)
		1	2	3	4		
2015	62	6	6	9	17	38	<b>17.93</b>
2016	63	10	8	8	6	32	<b>15.09</b>
2017	64	9	6	7	7	29	<b>13.67</b>
2018	65	7	6	7	6	26	<b>12.26</b>
2019	66	5	4	5	5	19	<b>08.96</b>
2020	67	6	5	8	8	27	<b>12.37</b>
2021	68	7	12	12	10	41	<b>19.33</b>
<b>Total</b>		<b>50</b>	<b>47</b>	<b>56</b>	<b>59</b>	<b>212</b>	<b>100%</b>

**Table 1: Year /Volume-Wise Distribution**

Annual average growth rate = (Ending Value - Beginning Value) / Beginning Value

The above table table-1 shows the total number of papers published from 2015 to 2021 in ALISJ. On the whole, from five volumes and 22 issues of the journal understudy, the total number of papers published is 212. The distribution of papers by volume shows that the number of papers highest in 2021 with 41 (19.33%)

papers. The range of papers published per year during the period under study is between 59 and 100. Further, it shows a maximum of 98 (31.34%) papers published in the 3rd issues of the journal. The annual average growth rate of the paper published ranges from 24.14% to 0.26.

**Table 2: Authorship pattern Paper Published during 2015-21**

Year	Vol.	One	Two	Three	> four	Total	Percentage
2015	62	11	12	12	3	38	17.93%
2016	63	8	17	5	2	32	15.09%
2017	64	8	15	5	1	29	13.67%
2018	65	8	14	2	2	26	12.26%
2019	66	6	9	2	2	19	08.96%
2020	67	6	17	3	1	27	12.37%
2021	68	15	21	5	-	41	19.33%
<b>Total</b>		<b>62</b>	<b>105</b>	<b>34</b>	<b>11</b>	<b>212</b>	
<b>Percentage</b>		<b>29.25%</b>	<b>49.53%</b>	<b>16.04%</b>	<b>5.18%</b>		<b>100%</b>

The above table-2 gives a detailed overview of the authorship pattern of papers published from 2015(vol.01) to 2021(vol.7). It reveals that out of 212 contributions, a total of 105 (49.53%) contributions have been contributed by one authors, followed by 62 (29.53%) contributions by single-authored, 38(17.93%) contributions by three authors, and 34 (16.4%) contributions by four and more than four authors respectively. Also, a maximum of 22 numbers of papers containing two authors have been published in vol. 3, 4, 5, 6 & 7 (2015, 2016, 2017, 2018, 2019, 2020, & 2021 respectively).

**Table3-Author Productivity**

Year	Vol.	Total papers	Total authors	AAPA	Productivity per author (PPA)
2015	01	38	40	1.05	0.95
2016	02	32	31	0.96	1.03
2017	03	29	30	1.03	0.96
2018	04	26	26	1	1.00
2019	05	19	21	1.10	0.90
2020	06	27	26	0.96	1.03
2021	07	41	40	0.97	1.02
<b>Total</b>		<b>212</b>	<b>214</b>	<b>1.00</b>	<b>0.99</b>

Table 3 depicts the data pertaining to author productivity and average author per paper. It is revealed from Table 3 that the overall average number of authors per article is 1.00 for 212 articles published between the periods of 2015 to 2021. It is also clear from above table that 1.10 is the highest average author per paper in 2019 followed by 2015, 2017 is recorded i.e., 1.05 and 1.03 respectively and least 1 is recorded in 2018. The overall average productivity per author for the periods of 2016 to 2020 is 0.96. and 2021 is recorded 0.97. Further above table reveals that in the year 2019 is highest productivity is 1.10.

**Table 4: Volume wise Degree of Collaboration**

Year	Vol.	Single Author Contributions	Multi Author contributions	Nm + Ns	Degree of collaboration (DC)
2015	01	11	27	38	17.94
2016	02	8	24	32	15.10
2017	03	8	21	29	13.68
2018	04	8	18	26	12.26
2019	05	6	13	19	08.96
2020	06	6	21	27	12.37
2021	07	15	26	41	19.33
<b>Total</b>		<b>62</b>	<b>150</b>	<b>212</b>	<b>100%</b>

**Table4: volume-wise Degree of Collaboration**

The extent of collaboration in research can be measured with the help of the formula given by Subramanyam.

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

$NM + NS$

$C = \frac{Nm}{Nm + Ns}$  Where,

$C$  = Degree of Collaboration

$Nm$  = Number of Multi Authored Contributions

$Ns$  = Number of Single Authored Contributions

In the present study the value of  $C62/150 = 0.4$ . An examination of the degree of collaboration, a prominent area of inquiry in bibliometric studies, indicates the trend in patterns of single and joint authorship in ALISJ during 2015-21, as shown in table 4. The degree of collaboration ranges from 8.96 to 15.09. The average degree of collaboration is 0.4 during the period under study.

### Domain wise Distribution of Article

We have identified twelve domains adopted in “Eprints for LIS”, to classify all the source items of ALISJ Journal.

A- Information Technology and Library Technology.

B- Information Use and Sociology of Information

C- Information Source Support Channels

D- Libraries as Physical Collection

E- Theoretical & General Aspects of LIS

F- Library Management

G- Users Literacy and Reading

H- Industry Profession & Education

I- Technical Service in Libraries, Archives, Museums

J- Information Treatment & Information Services

K- Publishing & Legal Issues

L- Miscellaneous

**Table 5: Domain wise Distribution of Article**

Domain	No. of Articles	Percentage	Cumulative Articles (CA)	Percentage
A	21	09.88	-	<b>9.88</b>
B	19	08.96	40	<b>18.86</b>
C	20	09.42	60	<b>28.30</b>
D	14	06.60	74	<b>34.90</b>
E	35	16.50	109	<b>51.41</b>
F	13	06.13	122	<b>57.54</b>
G	17	08.01	139	<b>65.56</b>
H	10	04.71	149	<b>70.02</b>
I	23	10.84	172	<b>81.13</b>
J	17	08.01	189	<b>89.15</b>
K	17	08.01	206	<b>97.16</b>
L	6	02.83	212	<b>100</b>
<b>Total</b>	<b>212</b>	<b>100</b>	<b>212</b>	<b>100%</b>

The above Table5- depicts the domain wise contribution of articles published in the ALISJ journal. during the period of study (2015-2021), the domain 21 (9.88%) of articles appeared in the domain (A) "Information Technology & Library Technology" followed (B) "Information Use and Sociology of Information" domain with 19 (08.96%) articles; The domain (C) "Information Source Support Channels" with 20 (09.42%) articles, (D) "Libraries as Physical Collection" with 14 (06.60%) articles, (E) Theoretical & General Aspects of LIS 35 (16.50%) articles, (F) Library Management 13(06.13%) articles, The domain (G) Users Literacy and Reading 17(08.15%) articles, The domain (H) Industry Profession & Education each 10(04.71%) articles, (I) Technical Service in Libraries, Archives, Museums 23(10.84%) articles, (J&K) Information Treatment & Information Services and Publishing & Legal Issues 17 (08.01%) articles and the domain (L) Miscellaneous each 6(02.83%) articles.

**Table6: Country-Wise Distribution of Contribution**

Rank	Country	Total	Percentage
1	India	132	<b>62.26</b>
2	Iran	17	<b>8.1</b>
3	Srilanka	15	<b>7.7</b>
4	Nigeria	16	<b>7.54</b>
5	Dhaka	4	<b>1.88</b>
6	Indonesia	4	<b>1.88</b>
7	Span	3	<b>1.41</b>
8	South Africa	3	<b>1.41</b>
9	Portugal	3	<b>1.41</b>
10	USA	2	<b>0.94</b>
11	Tanzania	2	<b>0.94</b>
12	Canada	2	<b>0.94</b>
13	Japan	2	<b>0.94</b>

14	Turkey	2	<b>0.94</b>
15	Bhutan	1	<b>0.47</b>
16	Brazil	1	<b>0.47</b>
17	Sudan	1	<b>0.47</b>
18	China	1	<b>0.47</b>
19	Poland	1	<b>0.47</b>
	<b>Total</b>	<b>212</b>	<b>100%</b>

An attempt has been made to study the country-wise distribution of contributors; the table 6 reveals that out of the total 212 contributors, majority (62.26%) of articles have been published by Indian contributors. 17(8.01%) contributors have been contributed from Iran which stands second among the contributors. Similarly 16(7.54%) contributors have been published from Nigeria, and 15(7.7%) contributors have been published from Srilanka. Like 4(1.88%) contributors have been published from Dhaka, and 3(1.41%) contributors have been published from Span, 2(0.94%) contributors have been published from USA, and the remaining 1 (0.47%) contributors have been contributed from 5 countries.

**Table 7: Designation Wise Contributions**

Designation of the contributors	No. of Contributions	Rank	Percentage
Professor	188	1	<b>47.83</b>
Librarian	108	2	<b>27.48</b>
research Scholars	35	3	<b>8.90</b>
Scientist	31	4	<b>7.88</b>
Senior Technical Officer	19	5	<b>4.83</b>
Students	6	6	<b>1.52</b>
Resources officer	3	7	<b>0.76</b>
Manager	2	8	<b>0.50</b>
Resource Manager	1	9	<b>0.25</b>
<b>Total</b>	<b>393</b>		<b>100%</b>

**Designation Wise Contributions**

The table 6 shows the number of contributors 188(47.83%) are from Professor. The second highest contributions are from Librarian 108(27.48%). The Third highest contributions are from research Scholars 35(8.90%). The fourth highest contributions are from Scientist 31(7.88%). The fifth highest contributions are from Senior Technical Officer 19(4.83%). The sixth highest contributions are from students 6(1.52%). The is followed by Resources officer 3 (0.76%) contributions and Manager 2(0.50%).The lowest number of contributions from the category of Resource Manager. 1(0.25%).

**Table 8: Institution-wise Distribution of Contributors**

Institutions	Total	Percentage	Rank
Universities	165	<b>41.98</b>	<b>1</b>
Institutes	71	<b>18.06</b>	<b>2</b>
Research centre	43	<b>10.94</b>	<b>3</b>
College	18	<b>4.58</b>	<b>4</b>
University Iran	17	<b>4.32</b>	<b>5</b>
University , Negeria	16	<b>4.07</b>	<b>6</b>
University , Srilanka	15	<b>3.81</b>	<b>7</b>
IGNOU	9	<b>2.29</b>	<b>8</b>
University, Dhaka	4	<b>1.01</b>	<b>9</b>
University Of Malang Indonesia	4	<b>1.01</b>	<b>9</b>
School	4	<b>1.01</b>	<b>9</b>
University of Gdansk ,Poland	3	<b>0.76</b>	<b>10</b>
University of Technology South Africa	3	<b>0.76</b>	<b>10</b>
Universitaria deL isboa Portugal	3	<b>0.76</b>	<b>10</b>
Universities Canada	2	<b>0.50</b>	<b>11</b>
University ,USA	2	<b>0.50</b>	<b>11</b>
University Tanzania	2	<b>0.50</b>	<b>11</b>
High Court of Delhi	2	<b>0.50</b>	<b>11</b>
Japan	2	<b>0.50</b>	<b>11</b>
Maramara University, Turkey	2	<b>0.50</b>	<b>11</b>
Bank of India Mumbai	1	<b>0.25</b>	<b>12</b>
University Sudan	1	<b>0.25</b>	<b>12</b>
Bhutan	1	<b>0.25</b>	<b>12</b>
Federal University of Minas Brazil	1	<b>0.25</b>	<b>12</b>
Agricultute University China	1	<b>0.25</b>	<b>12</b>
University of Gdansk ,Poland	1	<b>0.25</b>	<b>12</b>

<b>Total</b>	<b>393</b>	<b>100</b>	
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The distribution of published papers by institution-wise the table 8 reveals that, out of 393 contributors, the highest number 165(41.98%) of contributors are contributed from the Universities. The institutes stand the second place with 71(18.06%) contributors. The Research centre stand the third place with 43(10.98%) contributors. The various types of colleges stand in fourth place with 18(4.58%) contributors. The University of Iran stand in fifth place with 16(4.32%) contributors. The University Nigeria stands in fifth place with 16(4.07%) contributors. The University of Srilanka stands the place with 15(3.81%) contributors. Other Universities have contributed University Dhaka with 1.01%, the University of Gdansk, Poland with 0.76%, the Universities Canada with 0.50%, and the University Sudan with 0.25 % contributions respectively.

**Table 9: Length of the Articles**

Year	Vol.*	1- 50	50-100	100-150	150-200	200-250	250-300	≥300	Total
2015	62	6	5	5	5	8	9	0	<b>38</b>
2016	63	4	7	9	4	5	5	1	<b>35</b>
2017	64	5	4	6	4	5	5	0	<b>29</b>
2018	65	2	5	1	11	4	4	0	<b>27</b>
2019	66	5	6	4	4	0	0	0	<b>19</b>
2020	67	3	4	7	5	6	2	0	<b>27</b>
2021	68	3	5	5	5	3	6	10	<b>37</b>
		<b>28</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>31</b>	<b>31</b>	<b>11</b>	<b>212</b>
		<b>13.21</b>	<b>16.99</b>	<b>17.45</b>	<b>17.92</b>	<b>14.63</b>	<b>14.62</b>	<b>5.18</b>	<b>100%</b>

\*Each volume consists of 4 issues (7x4= 28 issues)

Table 9 presents the length of articles published in Analysis of Annals of Library and Information Studies Journal. A major portion of articles i.e., 38 (17.92%) are between 150 and 200 pages, followed by 100 to 150 pages in 37 (17.45%) articles and 36 (16.99%) articles are from 50 to 100 pages. Whereas 31(14.62%) articles are from 200 to 250 and 250 to 300 pages and 28 are from 1 to 50 pages, only 11(5.18%) articles are more than 300 pages respectively.

#### IV. Finding and conclusion

1. The range of papers published per volume during the period under study is 38(17.93%) 41 with an average of (19.33%) citations per paper.
2. The number of Two-authored papers is quite higher at 105(49.53%), followed by single-authored papers 29.25%, three authored 16.04%, and more than four authored 5.18% respectively.
3. Researchers measured the distribution of degree of collaboration over the years from 2015 to 2021 as a result the degree of collaboration in Analysis of Annals of Library and Information Studies Journal (ALISJ) is 99.61
4. The highest distributions have been contributed by professors and the least number of contributions were by librarians and research scholars and scientists respectively.
5. The domain-wise contribution of articles published in the ALISJ journal. During the period of study (2015-2021), the highest number of 35 (16.50%) articles appeared in the domain of Theoretical & General Aspects of LIS, and the lowest number of Miscellaneous 6(02.83%) articles.
6. The maximum number of articles contributed by authors from India was 62.26 % got first place followed by Iran 8.1 % second rank respectively, the Srilanka is the Third rank 7.7%; Nigeria is the Fourth rank 7.54% and Dhaka is the fifth rank with 1.88%.

The Bibliometric pattern of the Annals of Library and Information Studies Journal (ALISJ) is analyzed. The popularity of the use of bibliometric techniques in various disciplines stimulated the stupendous growth of literature on bibliometrics and its related areas. The above study has elucidated the variety of bibliometric measures which can be useful for understanding various aspects. The aim of this study was to measure and track the changes in research scenarios in recent times in India so that all are informed and research facilities can be enhanced.

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