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“Journal of Library and Information Science: A Bibliometric Study from 2013-2020”

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ABSTRACT

PURPOSE: This study is a bibliometric analysis of the “Journal of Library and Information Science” published between 2013 to 2020. Total number of citations, year-wise distribution, authorship pattern, authors productivity, degree of collaboration of authors are examined.

DESIGN/ RESEARCH METHODOLOGY/ APPROACH: The data for the period of 2013 to 2020 was collected by downloading articles from the Journal of Library and Information Science website <http://jlisnet.com>. References were arranged in MS Excel worksheet for the study. In this study, Subramanyam’s formula was used for measuring degree of collaboration. Further, collaboration efforts are discussed and examined.

FINDINGS: 89 articles were published during the 8 years’ period and total 1865 number of citations were available in published articles. In most of the papers, joint authors contributed during the study period of this journal.

RESEARCH IMPLICATIONS: In bibliometric analysis the maximum the citation frequency of an article, the highest will be the value of the journal. The bibliometric analysis also helps to trace the time gap between the publication of an article and the appearance of its citations in other journals. According to findings and analysis of the present study following suggestions are made by the authors for future research,

1. Citation pattern of other journals and disciplines may be conducted
2. Informatic analysis, Webometric analysis, Scientometric analysis may be conducted
3. The Pattern of chronological authorship pattern could be explored

Keywords: - Bibliometrics, Bibliometric analysis, Citation analysis, Content analysis

INTRODUCTION

Citation analysis studies the patterns of citations in documents. This method includes the process of collecting, counting, analyzing and interpreting quotations provided in published literature. Authors present the bibliography as an authoritative data source. It is used as a tool to define the authenticity of a published article. Analysis of cited papers is a well-established component of data studies that is used to measure the influence of individual articles, authors, and so on. It is recognized in almost all studies and is a well-established component of data studies. For research papers, this is important.

The Journal of Library and Information Sciences is a global peer-reviewed international journal and published twice a year by the American Research Institute for policy development (June and December). Librarians, data analysts, professionals, executives, and teachers are among the journal's target audience. The aim of the journal is to publish research papers on current issues and developments in the field.

LITERATURE REVIEW

Bibliometric, scientometric, and webometric methodologies have been used to quantify the research production of authors, institutions, countries, and other entities throughout the previous few decades, and some of these studies are listed below:

Verma, Sinha & Shukla (2021)²⁴ did the scientometrics analysis of publishing trends in information and communication technology (ICT) reflected by scholarly publications index in the Scopus database during 1999-2018. In this period 18382 research papers were published. Highest 1622 (8.82%) research papers were published in 2017. In the subject of computer science, 7345 research articles were published and also looked at the year wise distribution of publications, AGR (Annual Growth Rate), CAGR (Compound Annual Growth Rate), RGR (Relative Growth Rate), AP (Authorship Patterns), C (Degree of Collaboration) and CI (collaborative index) etc. Vellaichamy & Jeyshankar (2020)²² investigated the Journal of Ornithology from 2000-2015. 1353 articles were published, with Germany producing 359(26.53%), USA 210 (15.52%), UK 148 (10.94%) and Spain 139 (10.27%) of the overall production. Authors also studied the RGR (Relative Growth Rate), AP (Authorship Patterns), document types, collaboration levels of authors, language-wise output, and geographical distribution of papers, as well as the most prolific authors and institutions. Vellaichamy & Esakkimuthu (2020)²¹ Between 2010 and 2019, a bibliometric analysis of the International Journal of Robotics Research was conducted. Total 983 articles were published, with the degree of collaboration ranging from 0.92 to 0.99, with 0.97 being the mean value. According to the findings, the most articles were published in 2019 and the most contributions were 16-20 pages long. Garg, Lamba & Singh (2020)⁵ studied the geographical distribution and growth pattern of the publications; recognized the prolific writers and institutions, as well as their output; and assessed the pattern of paper citations and found the most cited authors. According to the report, the most articles were published between 2012 to 2015, followed by 2016 to 2019. The biggest percentage of articles (86.1%) were written by Indian authors. Bapte, Vishal Dattatray's (2017)¹ have identified the bibliometric analysis of 4821 documents cited for the 295 articles published in the DESIDOC Journal of Library & Information Technology between 2011-2015, analysis was done based on different parameters such as authorship patterns, citation distribution, degree of collaboration of authors and prepared ranked list of core journals. The findings of the study showed 53.10% journal frequently cited as a source of information. Bharvey, Sharma & Shrivastava (2016)¹¹ study was based on the Journal of Vegetable Science for the period 2008-2012. The authors analyzed a total of 3883 citations recovered from 355 articles in 11 issues published in 2008-2012 for the purpose of studying the year wise distribution of articles; the study of frequently used keywords; the study of authorship patterns; the study of degree of collaboration; the search for authors rank lists; to study institution wise, area wise, year wise articles distribution; length of articles and study types of articles. The authors observed the highest number of publications in 2009. Sujatha & Padmini (2015)¹⁷ Journal of IEEE Transactions on Antennas and Propagation considered for the study. 82025 documents were used in the published 3442 articles between 2010-2014. Highest 789 articles published in 2014 and 688 average publications of each year. United States delivered the record 921 articles followed by China 572 articles, with India in 21st place with 52 articles. Thavamani, Kotti (2015)¹⁹ study provided a bibliometric survey on collaborative leadership during 2009-2014. The study examined 223 research contributions and 343 writers analyzed contribution development per year and writers' volume growth per year, job trends per year & volume, authorship efficiency, authorship development per year and volume, author productivity, patterns of authorship of global contributors, and degree of collaboration. The average degree of collaborative authoring shows clearly that it dominates single authored contributions. Vellaichamy & Jeyshankar (2015)²³ investigated 158 papers published between 2004-2013 in Journal of Webology. C (Degree of Collaboration) fluctuates between 0.182 and 0.693, with a mean value of 0.44. In the subject analysis, the top most articles were 24.68 % of web analysis and 15.82% of social media. In comparison to Iran, the United Kingdom, the United States, and

Australia, India has contributed the most articles. Chandra Arya (2012)² investigated the collective research trends and authorship pattern in the veterinary medicine subject. Based on facts from the Indian Journal of Veterinary Medicine, Multi-authored papers (95.55%) exceed single-authored publications, according to observations (4.45%). In the subject of veterinary medicine, the C (Degree of Collaboration) is 0.96. Per work, the average number of authors ranges from 2.92 to 4.08. Kumar & Moorthy (2011)⁹ conducted 10 years' bibliometric analysis. Total 271 papers were published with 3428 references, and examined the authorship pattern, study of total citations, year, institutions and length wise distribution, sources of references. mostly papers (37.6 %) were written by single author.

OBJECTIVES

Following aspects are designed for the study of the journal:

1. To find out the entire published article and citations of the said journal between 2013 to 2020;
2. To measure the year-wise published articles of the said journal between 2013 to 2020;
3. To find out authorship patterns during 2013-2020 in the said journal;
4. To study the authors productivity;
5. To study the type of documents cited by the authors for their research during 2013-2020;
6. To study the degree of collaboration of authors;
7. To make a rank list of the journal used by the authors;

METHODOLOGY AND SCOPE

The data required for the study is collected from the "Journal of Library and Information Sciences" website available at <http://jlisnet.com>⁸. Articles are downloaded and bibliographies are copied into Microsoft Excel worksheet which is ultimately used for examining the data from different viewpoints. The study focus on the bibliometric analysis of the Journal of Library and Information Sciences. Period of the study is restricted to 2013-2020.

DATA INTERPRETATIONS

The study is based on the 89 papers and 1865 references used by the authors in the Journal of Library and Information Sciences throughout the study period 2013-2020. The average quotes per article are 20.96, these quotes created the foundation for the study's evaluation and interpretation. The information was evaluated in the headings below:

Table 1: Average of citations per articles

Total references	1865
Total articles	89
Average of citations per article	20.96

YEAR-WISE DISTRIBUTION

The maximum number of citations 380 (20.38%) are originating in 2019 and the minimum number of citations 60 (3.22%) are in the year 2013, it is represented in the Table 2 and Figure 1.

Table 2: Year-wise distribution

S. No.	Year	Vol. No.	Number of citing papers	Number of cited items	% of Cited items
1	2013	1	3	60	3.22

2	2014	2	14	260	13.94
3	2015	3	10	349	18.71
4	2016	4	12	203	10.88
5	2017	5	4	72	3.86
6	2018	6	12	268	14.37
7	2019	7	18	380	20.38
8	2020	8	16	273	14.64
Total		8	89	1865	100.00%

Figure 1



VOLUME WISE CONTRIBUTIONS

Table 3 represents the volume and issue details of published articles in the journal. Volume number 7 shows the maximum 18 articles published in volume 7 (2019) followed by 16 articles in volume 8 (2020), volume 2 (14) and volume 4 and 6 (12) both are same and volume 3(10). The minimum 3 articles published in volume 1(2013).

Table 3: Volume wise contributions

S. No.	Year	Vol. No.	Issue No.		Total
			1	2	
1	2013	1	0	3	3
2	2014	2	10	4	14
3	2015	3	2	8	10
4	2016	4	7	5	12
5	2017	5	0	4	4
6	2018	6	6	6	12
7	2019	7	11	7	18
8	2020	8	12	4	16
Total			48	41	89

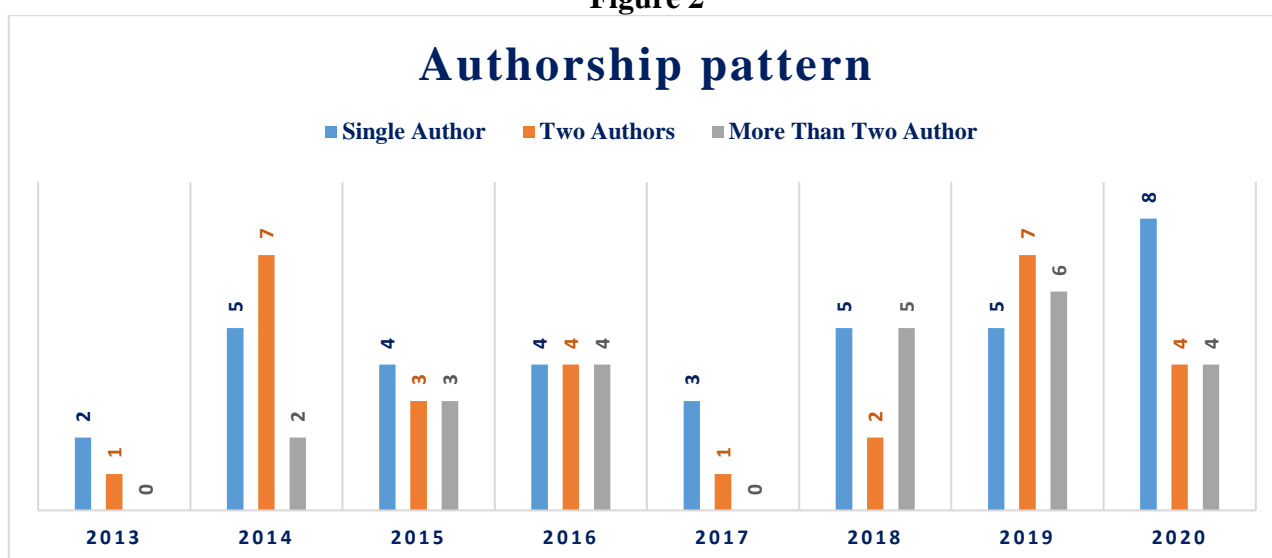
AUTHORSHIP PATTERN OF CONTRIBUTION

The authorship pattern of 89 articles published in 8 volumes of the journal is shown in Table 4 and Figure 2. The maximum articles are by single author 36 (40.45%), followed by two authors 29 (32.58%) articles and more than two authors are with 24 (26.97%) articles. 59.55% are through collaboration by joints authors which shows that collaborative research is a common phenomenon the present scenario.

Table 4: Authorship pattern of contribution

S. No.	Year	Vol. No.	Single author	Two authors	More than two authors	Total authors
1	2013	1	2	1	0	3
2	2014	2	5	7	2	14
3	2015	3	4	3	3	10
4	2016	4	4	4	4	12
5	2017	5	3	1	0	4
6	2018	6	5	2	5	12
7	2019	7	5	7	6	18
8	2020	8	8	4	4	16
Total		8	36	29	24	89
%			40.45	32.58	26.97	100

Figure 2



DEGREE OF COLLABORATION (K. SUBRAMANYAM'S FORMULA)

K. Subramanyam (1983)¹⁶ formula has been used to find out the degree of collaboration for this study:

$$C = Nm / Nm + Ns$$

Here,

“Degree of collaboration” is denoted by “C”

“Number of multiple authors” is denoted by “Nm”

“Number of single authors” is denoted by “Ns”

Result of The Degree of collaboration (C) of the study is 0.60 (53 / 89 = 0.60)

Degree of collaboration between the authors and their publications is shown in Table 5 and Figure 3. Single authors published 36 publications throughout the 8-year period, whereas joint or multiple authors published 53 articles during the same time period, as shown in the table and figure. Year and volume wise degree of collaboration of the journal falls in the range of (0.25) to (0.72). even though there are fluctuations in degree of collaboration and highest is 0.72 in the year 2019. The average degree of collaboration (C) throughout the period (2013-2020) is 0.60, indicating that collaborative research among authors is prevalent in the publication.

Table 5: Degree of collaboration (Subramanyam's formula)

S. No.	Year	Vol. No.	Multi authord papers (Nm)	Single authord papers (Ns)	Nm+N _s	Degree of collaboration (C)
1	2013	1	1	2	3	0.33
2	2014	2	9	5	14	0.64
3	2015	3	6	4	10	0.60
4	2016	4	8	4	12	0.67
5	2017	5	1	3	4	0.25
6	2018	6	7	5	12	0.58
7	2019	7	13	5	18	0.72
8	2020	8	8	8	16	0.50
	Total		53	36	89	0.60

Figure 3



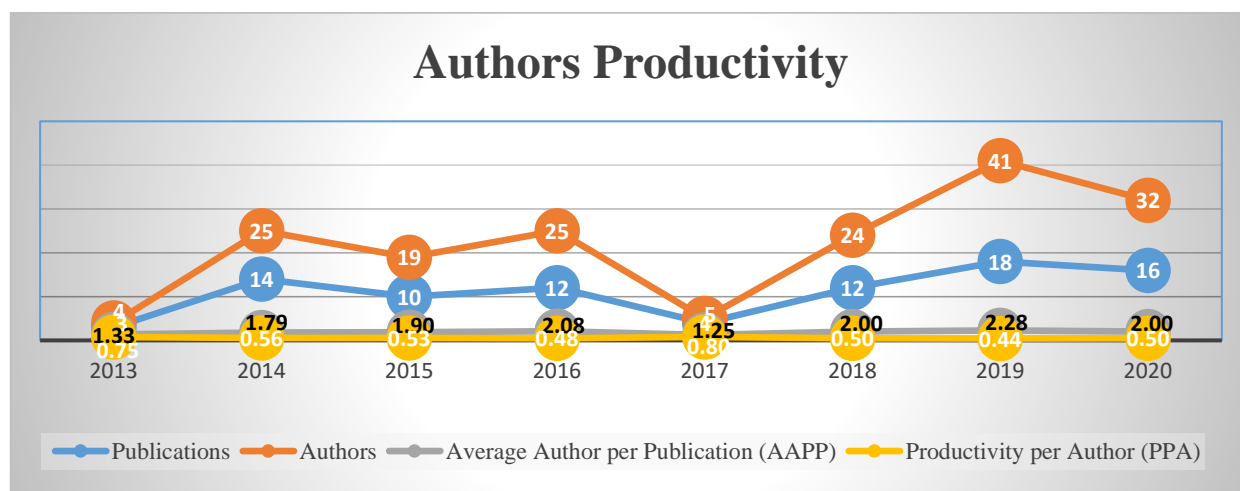
AUTHOR PRODUCTIVITY

The analysis of the journal's author productivity from 2013 to 2020 indicated that 175 authors produced 89 articles, with an average author per publication (AAPP) of 1.97 and a productivity per author (PPA) of 0.51. The year with the highest productivity per author 18 (0.44) was 2019. The complete distribution of this pattern is depicted in Table 6 and Figure 4.

Table 6: Authors' productivity

S. No.	Year	Publications	Authors	Average Author per Publication (AAPP)	Productivity per Author (PPA)
1	2013	3	4	1.33	0.75
2	2014	14	25	1.79	0.56
3	2015	10	19	1.9	0.53
4	2016	12	25	2.08	0.48
5	2017	4	5	1.25	0.8
6	2018	12	24	2	0.5
7	2019	18	41	2.28	0.44
8	2020	16	32	2	0.5
	Total	89	175	1.97	0.51

Figure 4



LENGTH OF ARTICLES WISE CONTRIBUTIONS

Table 7 reveals the length of papers published during the period 2013-2020. A range of pages comprising 10 mean difference between each class have been formulated to measure the length and the pages of the articles published. Article range between 1-10 pages long have the top position with 53 (59.55%) followed by 28 (31.46 %) articles that are 11-20 pages long, 5 (5.62 %) articles that are 21-30 pages long, and 3 (3.37 %) articles that are 31 and above pages long.

Table 7: Length of articles wise contributions

S. No.	No. of pages	2013	2014	2015	2016	2017	2018	2019	2020	Total	%
1	01 - 10	3	7	3	6	3	9	11	11	53	59.55
2	11 - 20	0	6	3	5	1	2	6	5	28	31.46
3	21 - 30	0	1	2	1	0	1	0	0	5	5.62
4	31 and above	0	0	2	0	0	0	1	0	3	3.37
	Total	3	14	10	12	4	12	18	16	89	100

SOURCE OF DOCUMENTS DISTRIBUTIONS

The data in Table 8 shows the distribution of researchers' output according to type of cited documents, articles 53.14%, books 17.96%, web resources 14.80%, conference papers 8.10%, reports & newsletters 3.49%, thesis and dissertation 1.39%, directory, dictionary and encyclopedias 0.70%. The most cited documents are journal articles, books, internet, conference papers, newsletters and reports, thesis and dissertations etc.

Table 8: Source of documents distributions

S. No.	Sources of document cited	No. of documents	%
1	Journals articles	991	53.14
2	Books	335	17.96
3	Web based sources	276	14.80
4	Conference proceedings	151	8.10
5	Reports/ Newsletters	65	3.49
6	Thesis/ Dissertation	26	1.39
7	Dictionary/ Encyclopedias/ Directory	13	0.70
8	Newspapers	8	0.43
	Total	1865	100

JOURNALS RANK LIST

Table 9 reflects that “Library Philosophy and Practice (e-journal)” published from USA got the 1st positions with the maximum citations 72, journal “The Electronic Library” got the 2nd position with 16 citations and “International Journal of Humanities and Social Sciences” got the 3rd position with 14 citations. Below is the rank list of the top 10 cited journals.

Table 9: Top 10 journals rank list

S. No.	Journals	No. of citations	Rank
1	Library Philosophy and Practice (e-journal)	72	1 st
2	The Electronic Library	16	2 nd
3	International Journal of Humanities and Social Sciences	14	3 rd
4	Journal of Business Ethics	12	4 th
5	Libri	12	5 th
6	Turk Kütüphanecilerderneğibülteni	9	6 th
7	Journal of Information Science	9	7 th
8	Journal of Documentation	9	8 th
9	Scientometrics	9	9 th
10	Journal of Librarianship and Information Science	8	10 th

CONCLUSION AND SUGGESTIONS FOR FUTURE STUDY

This research study shows that most contributors come from Nigeria. 89 articles published in the studied period 2013-2020 with 1865 citations. Average citations per article is 20.96%. Year wise contribution of number of papers was the highest i.e. 18 out of 89 publications in the year 2019, with 380 (20.38 percent) references. Highest 991 journals are cited during the study period. Joint authors published 53 articles out of 89 articles with 59.55 % (1121 citations). Library Philosophy and Practice (e-journal) is top in ranking list. According to findings and analysis of the present study following suggestions are made by the authors for future research, Citation pattern of other journals and disciplines, informatic analysis, webometric analysis, scientometric analysis and chronological authorship pattern may be conducted.

REFERENCES

1. Bapte, V. (2017). DESIDOC Journal of Library and Information Technology (DJLIT): A Bibliometric Analysis of Cited References. *DESIDOC Journal of Library & Information Technology*, 37(4), 264-269.
Available at: <https://doi.org/10.14429/djlit.37.4.10712>
2. Chandra, A. (2012). Authorship Trends and Collaborative Research in the Field of Veterinary Medicine: 1999-2007. *International Journal of Information Dissemination and Technology*, 2(1), 50-53.
Available at: <file:///G:/Article%20for%20pub/out.pdf>
3. Deshmukh, P. (2011). Citations in Annals of Library & Information Studies during 1997-2010: A Study. *Annals of Library & Information Studies*, 58(4), 355-361.
Available at: <http://nopr.niscair.res.in/handle/123456789/13485>
4. Garg, K. & Bebi (2014). A Citation Study of Annals of Library and Information Studies (ALIS) and DESIDOC Journal of Library and Information Technology (DJLIT). *Annals of Library & Information Studies*, 61(3), 212-216.
Available at: <http://nopr.niscair.res.in/handle/123456789/29481>

5. Garg, K., Lamba, M., & Singh, R. (2020). Bibliometric Analysis of Papers Published during 1992 to 2019 in DESIDOC Journal of Library and Information Technology. *DESIDOC Journal of Library & Information Technology*, 40(6), 396-402.
Available at: <https://doi.org/10.14429/djlit.40.06.15741>
6. Gupta, R., Kumbar, B., & Tiwari, R. (2014). Ranking of Indian Universities in Social Sciences using Bibliometric Indicators during 2008-12. *DESIDOC Journal of Library & Information Technology*, 34(3), 197-205.
Available at: <https://doi.org/10.14429/djlit.34.3.7340>
7. Gupta, J., & Khare, V. P. (2013). Citation Analysis of Ph.D Theses of LIS in Dr. Harisingh Gour University, Sagar. *International Journal of Information Dissemination and Technology*, 3(2), 118-124.
8. <http://nopr.niscair.res.in/handle/123456789/66> (assessed February 24, 2021).
9. Kumar, M., & Moorthy, A. (2011). Bibliometric Analysis of DESIDOC Journal of Library and Information Technology from 2001-2010. *DESIDOC Journal of Library & Information Technology*, 31(3), 203-208.
Available at: <https://doi.org/10.14429/djlit.31.3.989>
10. Kumara, S., & Kumar, S. (2008). Citation Analysis of Journal of Oilseeds Research 1993-2004. *Annals of Library and Information Studies*, 55(1), 35-44.
Available at: <http://nopr.niscair.res.in/handle/123456789/827>
11. Lallaisangzualli & Sanjees (Eds.) *Library Management in 21st century: issues and challenges*. Ess Ess Publications.
12. Maharana, R. K. & Das, A. K. (2014). Growth and Development of LIS Research in India during 1999-2013: A Bibliometric Analysis. *Chinese Librarianship: An International Electronic Journal*, 2014(37), 35-46.
Available at: <http://www.iclc.us/cliej/cl37MD.Pdf>
13. Patra, S. (2014). Google Scholar-Based Citation Analysis of Indian Library and Information Science Journals. *Annals of Library & Information Studies*, 61(3), 227-234.
Available at: <http://nopr.niscair.res.in/handle/123456789/29483>
14. Sarin, S., Haon, C. & Belkhouja, M. (2017) A Bibliometric Analysis of the Knowledge Exchange Patterns between Major Technology and Innovation Management Journals (1999–2013). *The Journal of Product Innovation Management*, 35(1), 2-8.
Available at: <https://doi.org/10.1111/jpim.12431>
15. Siciliano, M. (2017). A Citation Analysis of Business Librarianship: Examining the Journal of Business and Finance Librarianship from 1990–2014, *The Journal of Business & Finance Librarianship*, 22(2), 81-96.
Available at: <https://doi.org/10.1080/08963568.2017.1285747>
16. Subramayan, K. (1983). Bibliometric Studies of Research Collaboration: A Review. *Journal of Information Science*, 6(1), 33-38.
Available at: <https://doi.org/10.1177/016555158300600105>
17. Sujatha, D., & Padmini, K. (2015). IEEE Transactions on Antennas and Propagation: A Bibliometric Study. *DESIDOC Journal of Library & Information Technology*, 35(6), 443-449.
Available at: <https://doi.org/10.14429/djlit.35.6.8433>
18. Thanuskodi, S. (2010). Bibliometric Analysis of the Journal Library Philosophy and Practice from 2005-2009. *Library Philosophy and Practice (e-journal)*, 437, 1-6.
Available at: <https://digitalcommons.unl.edu/libphilprac/437>
19. Thavamani, K. (2015). A Study of Authorship Patterns and Collaborative Research in Collaborative Librarianship, 2009-2014. *Collaborative Librarianship*, 7(2), 84-95.
Available at: <https://digitalcommons.du.edu/collaborativelibrarianship/vol7/iss2/6>
20. Tyagi, S., & Kumar, K. (2019). Citation Analysis of Doctoral Theses in Political Science Submitted to Chaudhary Charan Singh University. *Journal of Indian Library Association*, 53(1), 5-13.
Available at: <https://www.ilaindia.net/jila/index.php/jila/article/view/30>

21. Vellaichamy, A., & Esakkimuthu, C. (2020). Research Publications to International Journal of Robotics Research: A Bibliometric Analysis. *Journal of Advances in Library and Information Science*, 9(4), 137-142.
Available at: <http://jalis.in/pdf/9-4/Vellaisamy.pdf>
22. Vellaichamy, A., & Jeyshankar, R. (2020). Bibliometric Analysis of Contributions to Journal of Ornithology. *Library Philosophy and Practice (e-journal)*, 3846, 1-13.
Available at: <https://digitalcommons.unl.edu/libphilprac/3846>
23. Vellaichamy, A. & Jeyshankar, R. (2015). Bibliometric Analysis of the Journal of Webology from 2004-2013. *Journal of Advances in Library and Information Science*, 4(1), 7-13.
Available at: <http://jalis.in/pdf/4-1/Vellaichamy.pdf>
24. Verma, M., Sinha, M. & Shukla, R. (2021). Analysing Publishing Trends in Information and Communication Technology Literature Output using Scopus Database: A Scientometrics Analysis. *World Digital Libraries: An International Journal*, 14(1), 1-21.
Available at: <https://doi.org/10.18329/09757597/2021/14104>