University of Nebraska - Lincoln DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

December 2021

Research Trends in Annals of Library and Information Studies (ALIS): A Bibliometric Review from 2011-2021

Satyajit Nayak CSIR-Central Road Research Institute, New Delhi, satyajitnayak555@gmail.com

Piyush Kumar Hari Post Graduate, Department of Library and Information Science, Banaras Hindu University, Varanasi, haripiyush19@gmail.com

Neha Verma Central Library, Banaras Hindu University, Varanasi, 20nehaverma@gmail.com

Follow this and additional works at: https://digitalcommons.unl.edu/libphilprac

Part of the Library and Information Science Commons

Nayak, Satyajit; Hari, Piyush Kumar; and Verma, Neha, "Research Trends in Annals of Library and Information Studies (ALIS): A Bibliometric Review from 2011-2021" (2021). *Library Philosophy and Practice (e-journal)*. 6584.

https://digitalcommons.unl.edu/libphilprac/6584

Research Trends in Annals of Library and Information Studies (ALIS): A Bibliometric Review from 2011-2021

Satyajit Nayak

Technical Assistant, Knowledge Resource Centre, CSIR-Central Road Research Institute, New Delhi, E-mail:<u>satyajitnayak555@gmail.com</u>

Piyush Kumar Hari

Post Graduate, Department of Library and Information Science, Banaras Hindu University, Varanasi-221005, E-mail: <u>haripiyush19@gmail.com</u>

Neha Verma*

*Corresponding Author: Library Assistant, Central Library, Banaras Hindu University, Varanasi, 221005, E-mail: <u>20nehaverma@gmail.com</u>

ABSTRACT

The study uses various bibliometric techniques to examine papers published in the Annals of Library and Information Studies (ALIS) from 2011 to 2021. Scopus database was used to gather the necessary information. Furthermore, the research productivity was measured using various parameters such as year-by-year distribution of publications with citations, RCI, AGR, ACPP, CAI, Citation analysis, and author, institution, and country collaboration. The findings of the study, the number of articles published varies with time, with the highest number of articles published in 2014. Two authors published the most research papers (152), followed by single authors (108). B. K. Sen was the most prolific author, with 19 publications and 34 citations. India's Council of Scientific and Industrial Research contributed 30 papers, which were ranked first among the top ten most effective institutions. As per the distribution of output by country, India contributed the most, with 242 research papers, followed by Nigeria with 24 research papers.

Keywords: Bibliometrics; Scientometrics; Citation analysis; Relative citation impact (RCI); Co-citation analysis; ALIS; VOSviewer; Scopus Database

INTRODUCTION

Information on the current state and trends of research in their fields is beneficial to researchers' careers and academic publications (Lee et al., 2009). Academic publication trends have historically represented scholars' research interests, methodologies, and common knowledge (Lin et al., 2014). In academia, one of the vital activities for researchers is to publish (Lin et al., 2019). Dissemination and exploitation of conducted research at an

international level require publishing research results in well-respected journals (Cavas, 2015). Journals are an essential source of knowledge and are widely regarded as the principal medium for communicating research findings and new ideas in a discipline. Also act as an indicator of literature growth in any field of knowledge (Garg et al., 2020). Journals' significance in academic life extends much beyond providing a means of communication and permanent records (Singh et al., 2021). In the field of Library and Information Science (LIS), India publishes a large number of publications (periodicals). The Annals of Library and Information Studies (ALIS) is an interdisciplinary magazine published in India that covers all aspects of library and information science. The Annals of Library and Information Studies was chosen as the source journal for bibliometric studies spanning the years 2011 to 2021 in the current study. This study aims to perform a bibliographic analysis on the research productivity of Annals of Library and Information Studies.

The term "bibliometrics" comes from two Greek words: "biblio", which comes from the Greek word "biblion", which means "book", and "metrics", which comes from the Greek word "metrikos", which means "measuring". The term "bibliometrics" was coined by Alan Pritchard in 1969 (Patel et al., 2021a). Bibliometrics is the application of mathematics to the study of bibliography. Bibliometric methods are widely utilized in library and information science, as well as in other fields (Rawat et al., 2021). Bibliometric tools are used to determine how influential or impactful a particular research publication is on future research (Cooper, 2015).

Brief History of ALIS

The Annals of Library and Information Studies is a leading quarterly journal in the subject of library and information studies, publishing original papers, survey reports, reviews, short communications, and letters on library and information science, as well as computer applications in these fields. Dr. S R Ranganathan was the inaugural Editor of the old INSDOC's first journal, Annals of Library Science, which was launched in 1954. In 1964, the title of the journal was changed to Annals of Library Science and Documentation, and in 2001, it was renamed Annals of Library and Information Studies. ALIS, which is now in its 59th volume, is the oldest LIS journal in India (ALIS, n.d.).

RELATED WORKS

A wide range of bibliometric research studies were conducted by many authors, both individually and collaboratively, to explore the contributions of journals over time.

Singh, Varma, and Singh (2021) examined the JOI's research output from 2007 to 2019. The Journal of Informetrics (JOI) has a mediocre performance due to annual publishing growth. Multi-author articles were also prominent. United States contributed 12.40% out of 58 countries.

Patel et al. (2021a) analyzed the Webology Journal's publication trends during 2006 to 2020. This study generated the most articles (92) and citations (273). A. Noruzi was a prolific and cited author with 24 articles and 68 citations in Webology. The findings show that Webology is a high-quality publication and a leader in online technology.

Nath and Jana (2020) analyzed the Journal Annals of Library and Information Studies (ALIS) from 2008 to 2018. The study's findings showed that the authors from India published a maximum number of articles (62.86%), followed by Nigeria (15.65%). The most productive author was B. K. Sen, who published 26 articles. The institution was CSIR-NISTADS which published 52 articles (22.51%) in this study period.

Garg et al. (2020) reviewed the DESIDOC Journal of Library and Information Technology (DJLIT) papers published between 1992 and 2019 (28 years) and their Google Scholar citations through March 20, 2020. The survey found that the most publications were published in 2012-2015. 39 countries produced 1,698 articles, according to the output distribution. The majority of articles (86.1%) were authored by Indians. B.M. Gupta (CSIR-NISTADS) contributed the most.

Maity and Sahu (2019) reported the Journal of documentation's bibliometric profile during 2005-2015. Between 2005 and 2015, 489 research papers were published, according to the study. The majority of articles were about information seeking behaviour. The study also found author productivity using Lotka's Law of Productivity.

Prieto-Gutierrez and Segado-Boj (2019) analysed bibliometric data from 2011 to 2017 in Annals of Library and Information Studies. The study found authorship patterns such as country of residency, co-authorship trends, and collaborative networks. Keyword analysis was utilised to identify research topics, and performance was measured by citations.

Nayak (2018) studied the 362 articles published in the DESIDOC journal of library and information technology (2012-2016). The study finding revealed that B. M. Gupta had risen to the top of the list of most productive authors with 165 (45.58 %) papers.

On the other hand, the similar studies were conducted by various authors Singh (2017); Varma and Singh (2017); Verma and Singh (2017a); Singh, Nayak, and Varma (2017); Singh, Varma, and Pradhan (2017); Verma and Singh (2017b).

OBJECTIVES OF THE STUDY

The study's primary objectives are: to identify the year-by-year distribution of publications and citations using relative citation impact (RCI) and average citation per publication (ACPP); to review the authorship pattern and co-authorship index (CAI); to analyse the citation of documents; to find out the occurrence of keywords; and to analyse the co-citation of cited authors and cited sources.

METHODS USED

Data Source

The bibliometric technique is principally used in this research to analyse ALIS publications from 2011 to 2021. Scopus is one of the most comprehensive databases of bibliographic data and citations from a variety of sources, offering a comprehensive picture of a paper's impact. The researchers used the Scopus database (http://www.scopus.com/) to retrieve the information because Scopus began indexing ALIS publications in 2011.

Search strategies

To trace out all the publication output of ALIS throughout the chosen period, researchers have searched the name of the Journal within the keywords search choice given in the search interface of the Scopus database. The search string used for retrieving the details is "SRCTITLE (annals AND of AND library AND information AND studies)AND (LIMIT-TO (PUBYEAR, 2011) OR LIMIT-TO (PUBYEAR, 2021))". As a result, as of June 27, 2021, the researchers have retrieved the needed bibliographic data. During the chosen period, a total of 319 publications were collected.

Data Analysis

Various bibliometric measures, such as year-by-year distribution of publications with citations, relative citation impact (RCI), authorship pattern, co-author index (CAI), annual growth rate (AGR), citation analysis, most prolific authors, most collaborative institutes, and top funding agencies, have been used in this study. All of the retrieved data was afterwards

evaluated and collated in order to formulate the analysis' findings. The network visualisation of the investigated results was done with the VOSviewer software version 1.6.16. In addition, the following formula was employed in this research:

Relative Citation Impact

Relative citation impact (*RCI*) =
$$\frac{\% \ of \ TC}{\% \ of \ TP}$$

Where,

TC= Total Citations during a yearTP= Total Publications during the same yearFor example, Relative citation impact of the year 2011

RCI2011 =22.64/11.29=2.00

Co-Authorship Index

The co-authorship index is calculated according to the formula proposed by (Garg & Padhi, 2001). Thus, the co-authorship index (CAI) can be stated mathematically as:

CAI=
$$\left\{ \frac{\binom{Nij}{Nio}}{\binom{Noj}{Noo}} \right\} \times 100$$

Where,

Nij = The number of publications having j authors in block i

Nio = Total output of block i

Noj = The number of publications having j authors for all blocks

Noo= Total number of publications for all authors and all blocks

j = 1, 2, 3...

For example, Co-authorship index of the year 2011

 $CAI_{2011} = (14/108)/(36/319) \times 100$

 $CAI_{2011 \, = \, 114.866255}$

RESULTS AND DISCUSSIONS

Chronological distribution of publication and citation with ACPP & RCI

The chronological distribution of papers published in ALIS, with 319 articles published between 2011-2021, is shown in Table 1. A maximum of 45 articles (14.11%) were published in 2014, with a minimum of 8 contributions (2.51%) in 2021. The year-by-year distribution

of publications has shifted, with decreasing and growing patterns. The year 2011 had the most citations with 250, followed by 2014 with 227, and 2021 with zero. It changes throughout time as well. The average number of citations per publication (ACPP) is 3.46, with 6.94 (2011) being the highest and 0. being the lowest (2021). The year 2011 has the highest relative citation impact (RCI) (2.00), followed by 2015 (1.45), and 2021(0).

Year	TP	AGR	%TP	TC	%TC	RCI	ACPP
2011	36	-	11.29	250	22.64	2.00	6.94
2012	29	-19.44	9.09	144	13.04	1.43	4.96
2013	27	-6.89	8.46	128	11.59	1.36	4.74
2014	45	66.66	14.11	227	20.56	1.45	5.04
2015	38	-15.55	11.91	89	8.06	0.67	2.34
2016	32	-15.78	10.03	90	8.15	0.81	2.81
2017	32	0	10.03	84	7.61	0.75	2.62
2018	28	-12.50	8.78	51	4.62	0.52	1.82
2019	17	-39.28	5.33	22	1.99	0.37	1.29
2020	27	58.82	8.46	19	1.72	0.20	0.70
2021	8	-70.37	2.51	0	0.00	0	0
Total	319	_	100	1104	100	1	3.46

Table 1: Chronological distribution of publications and citations with ACPP & RC

*Note: TP= Total Publications, TC= Total Citations

Authorship pattern

The researchers wanted to see if there were any patterns in the authorship of articles published throughout the study period. Table 2 shows the year-by-year contributions of the single and collaborative authors over the course of the study. According to the results, the most significant research articles by two authors were 152, followed by 108 by single authors. Five or more authors published the required number of contributions with five publications. Furthermore, the researchers revealed that during the study period, the majority of articles in the ALIS were co-authored by multiple authors. The majority of the contributions (66.14 %) were authored by two or more people, while 108 (33.86 %) were written by a single person.

Year	Author					
	One	Two	Three	Four	Five &+	
2011	14	14	7	0	1	36
2012	13	10	6	0	0	29
2013	10	12	3	0	2	27
2014	14	23	6	2	0	45

Table 2: Authorship pattern

2015	18	14	4	1	1	38
2016	8	18	3	2	1	32
2017	9	17	6	0	0	32
2018	8	16	2	2	0	28
2019	6	7	4	0	0	17
2020	6	18	3	0	0	27
2021	2	3	3	0	0	8
Total	108	152	47	7	5	319

^{*}Note: TP= Total Publication

Co-Authorship Index

The proportional output of one, two, three, and four authored papers published in the Journal was used to calculate the co-authorship index. The co-authorship index (CAI) of articles in ALIS throughout the study period is shown in Table 3. The highest co-authorship index was discovered among single authorships in 2015, with a value of 139.9. Similarly, the year 2020 had seen the highest co-authorship index with a score of 139.9 in two authorships. In three authorships in 2019, the highest co-authorship index was found to be 159.6. With a value of 325.5, 2018 was selected as the highest co-authorship index in four authorships. In 2013, the greatest co-authorship index of 472.5 was discovered with five or more publications. In 2012, 2014, 2017, 2018, 2019, 2020, and 2021, the lowest co-authorship index in five or more articles was zero.

Year	One Author	Two	Three	Four	Five &
		Authors	Authors	Authors	Above
2011	27 (114.8)	14 (81.6)	7 (131.9)	0 (0)	1 (177.2)
2012	13 (132.4)	10 (72.3)	6 (140.4)	0 (0)	0 (0)
2013	10 (109.3)	12 (93.2)	3 (75.4)	0 (0)	2 (472.5)
2014	14 (91.8)	23 (107.2)	6 (90.4)	2 (202.5)	0 (0)
2015	18 (139.9)	14 (77.3)	4 (71.4)	1 (119.9)	1 (167.8)
2016	8 (73.8)	18 (118.0)	3 (63.6)	2 (284.8)	1 (199.3)
2017	9 (83.0)	17 (111.4)	6 (127.2)	0 (0)	0 (0)
2018	8 (84.3)	16 (119.9)	2 (48.4)	2 (325.5)	0 (0)
2019	6 (104.2)	7 (86.4)	4 (159.6)	0 (0)	0 (0)
2020	6 (65.6)	18 (139.9)	3 (75.4)	0 (0)	0 (0)
2021	2 (73.8)	3 (78.7)	3 (254.5)	0 (0)	0 (0)

Table 3 Co-Authorship Index (CAI)

Citation analysis of documents

The researchers use the VOSviewer visualization software to look at the citations of publications throughout the investigation. A minimum of 5 citations for a single document

has been imposed for the analysis. Out of a total of 319 papers, only 88 fit the criteria. Seena, S. T. (2014) "A study of ICT skills among library professionals in the Kerala University Library System" and Kumar, N. (2011) "Comparative analysis of scientific output of BRIC countries" have the most citations (21), followed by Nwagwu, W.E. (2011) "Women's health information needs and information sources: A study of a rural oil palm business community in South-eastern Nigeria" and Jeyshankar, R. (2011) "Research output of CSIR-Central Electro Chemical Research Institute (CECRI): A study" were top cited publications. Table 4 shows the top ten referenced ALIS journal articles during the study period. The scaled distribution of document citations is depicted in Figure 1. The more significant number of citations in the density map is shown by the significantly yellowish colour and font size.

S.No.	First Author	Year	Title	Citations
1	Seena, S.T.	2014	A study of ICT skills among library	21
			professionals in the Kerala University	
			Library System	
2	Kumar, N.	2011	Comparative analysis of scientific output	21
			of BRIC countries	
3	Nwagwu, W.E.	2011	Women's health information needs and	19
			information sources: A study of a rural	
			oil palm business community in South-	
			eastern Nigeria	
4	Jeyshankar, R.	2011	Research output of CSIR-Central Electro	17
			Chemical Research Institute (CECRI):A	
			study	
5	Aswathy, S.	2013	Productivity pattern of universities in	16
			Kerala: a scientometric analysis	
6	Alison, K.A.	2012	Factors affecting utilisation of electronic	16
			health information resources in	
			universities in Uganda	
7	Pal, J.K.	2011	Usefulness and applications of data	16
			mining in extracting information from	
			different perspectives	
8	Pujar, S.M.	2015	Internet of Things and libraries	15
9	Pujar, S.M.	2014	MOOCs and LIS education: A massive	15
			opportunity or challenge	
10	Vimal Kumar,	2012	Adoption and user perceptions of Koha	15
	V.		library management system in India	

Table 4: Top cited publications



Figure 1: Citation analysis of documents

Most prolific Authors

Table 5 shows the top 5 most prolific vs. most cited authors, as well as the number of publications and citations they published in ALIS over the research period (Patel et al., 2021b). With 19 publications and 34 citations, the most productive author, B. K. Sen, published their research output in ALIS. S. M. Pujar is the most cited author, with 64 citations and seven papers. The top five authors in both metrics were B. K. Sen, K. C. Garg, B. M. Gupta, and S. M. Pujar, showing that more productive authors were highlighted.

Most Productive Vs. Most Cited Author							
Author	Documents	Citations	Vs	Author	Citations	Documents	
Sen, B.K.	19	34		Pujar, S.M.	64	7	
Garg, K.C.	11	59		Garg, K.C.	59	11	
Dutta, B.	8	11		Gupta, B.M.	49	8	
Gupta, B.M.	8	49		Sen, B.K.	34	19	
Pujar, S.M.	7	64		Pillai Sudhier,K.G.	33	2	

Table 5: Most prolific Authors

Contributions of Institutes/Organisations

Table 6 highlights the contributions of the top 10 most prolific institutions to ALIS through research articles published during the study period. The most productive institute was the Council of Scientific and Industrial Research India, which had 30 research publications, followed by the National Institute of Science, Technology and Development Studies India,

which had 24 research publications. The Indian National Science Academy finished in third with 18 publications, followed by the University of Delhi with 12 publications. Ten research articles were contributed by each University of Mysore, Vidyasagar University, Jawaharlal Nehru University, and the University of Colombo. At the same period, the Indira Gandhi National Open University and the University of Calcutta each contributed nine publications.

Institution	Publications
Council of Scientific and Industrial Research India	30
National Institute of Science Technology and Development Studies India	24
Indian National Science Academy	18
University of Delhi	12
University of Mysore	10
Vidyasagar University	10
Jawaharlal Nehru University	10
University of Colombo	10
University of Calcutta	9
Indira Gandhi National Open University	9

Table 6: Most Productive Institutions/Organisations

Highly productive Countries

Figure 2 illustrates the top ten most productive countries' contributions to ALIS and their research publications over the study period. India was found to be the most productive country, with 242 publications out of 319 total publications, followed by Nigeria with 24 research papers. Sri Lanka had the most publications with 14, followed by Bangladesh, Iran, South Africa, and the United States, 9, 6, 4, and 3 publications. Brazil, Canada, and China each contributed two research papers.



Figure 2: Highly productive countries

Top funding Agencies

The top research funding agencies/institutions are ranked in Figure 3. The Indian Council of Scientific and Industrial Research and the Indian Council of Medical Research are the top funding agencies, financing three publications. By sponsoring two articles, the Bangladesh Council of Scientific and Industrial Research, Department of Biotechnology, Ministry of Science and Technology, India, and Department of Science and Technology, Ministry of Science and Technology, India took second place in the top funding agencies. As shown in Figure 3, the remaining funding agencies help authors/researchers publish their findings in the Annals of Library and Information Studies (ALIS).



Figure 3: Top funding agencies

Network visualization of co-occurrence of keywords

Keyword co-occurrence can effectively reflect research hotspots across fields, providing additional support for scientific study (Liao et al., 2018). Keyword analysis can help you figure out the main research paths and trends (Hong et al., 2019). The researchers looked at keyword co-occurrence using VOSviewer. According to the VOSviewer handbook, "each link has strength, expressed as a positive numerical value." This value rises in proportion to the strength of the link. The number of publications in which two keywords appear together is known as "total link strength" (Patel et al., 2021c). During the study period, 921 keywords appeared in the entire spectrum of articles, according to the statistics. The keyword co-occurrence threshold was set to 2, which resulted in 157 keywords, as shown in Figure 4. It discovered that 'scientometrics' had 26 occurrences, 'bibliometrics' had 24 occurrences, 'India'

had 24 occurrences, 'Nigeria' had 11 occurrences, 'information literacy' had 10 occurrences, and 'citation analysis' had 10 occurrences.



Figure 4: Network visualization of co-occurrence of keywords

Co-citation analysis of cited authors and cited sources

Co-citation analysis, which is conducted for cited references, cited sources, and cited authors, is another important measure of visualization (Singh et al., 2021). With the help of VOSviewer visualization software and the strategic criteria of three minimum numbers of citations for a source, 84 out of 1109 total sources fulfil the criterion for co-citation analysis. The minimum link strength for visualization is 15. Applying the strategic parameter of three minimal number of author citations to the total number of authors, 45 authors out of 1604 meet the requirement. The minimum link strength for visualization studies, Journal of documentation, the electronic library, Journal of the American Society for information science, Expert system with the application are the most co-cited sources. B.M. Gupta, S. Kumar, Y. S. Ho, E. Garfield are the most co-cited authors, as shown in figure 5b. The different colors represent the various clusters of similar groups of cited sources and cited authors.



Figure 5(a): co-cited sources & 5(b): co-cited authors.

FINDINGS OF THE STUDY

The primary goal of this study was to look into ALIS's research productivity from 2011 to 20 21, based on published literature indexed in the Scopus database. The following are some of the study's key findings:

- As per the research, 321 papers were published between 2011 to 2021, which is the study period.
- The maximum number of publications, 14.11%, were published in 2012, while the lowest number, 2.51%, were published in 2021.
- Joint writers contributed the most (66.14 %), while single authors contributed the rest (33.86%).
- In 2013, the greatest co-authorship index pattern was observed with five or more publications at a rate of 472.5.
- In 2011, the highest number of citations was 250, while in 2021, there were no citations.
- India has the most contributions, with 242, making it the most productive country.
- B. K. Sen was the most prolific author, with 19 publications and 34 citations.
- The Council of Scientific and Industrial Research India contributed the most, with 30 research papers, followed by the National Institute of Science, Technology and Devel opment Studies India, which supplied 24 research articles.

- The Council of Scientific and Industrial Research in India was the top funding agency for ALIS publications during the study period.
- The most cited sources were 'Scientometrics' and 'ALIS', whereas the authors cited were B.M. Gupta and S. Kumar, according to co-citation analyses.

CONCLUSION

The Annals of Library and Information Studies (ALIS) is an open-access, peer-reviewed journal dedicated to library and information science (LIS). ALIS has a strong reputation among LIS professionals in India and around the world. According to the research, 2011 was the year with the most publications. Joint writers provided the most contributions, while single authors produced the fewest. The Journal should make an effort to solicit manuscripts from authors based in other countries. It has the potential to help the Journal's reputation grow even further. The current study is meant to be of great interest to librarians in India and around the world.

REFERENCES

- Annals of Library and Information Studies (ALIS). (n.d). *ALIS-HOME*. Retrieved August, 02, 2021, from http://op.niscair.res.in/index.php/ALIS/index
- Cavas, B. (2015). Research Trends in Science Education International: A Content Analysis for the Last Five Years (2011-2015). *Science Education International*, 26(4), 573-588.
- Cooper, I. D. (2015). Bibliometrics basics. *Journal of the Medical Library Association: JMLA, 103*(4), 217. DOI: 10.3163/1536-5050.103.4.013
- Garg, K. C., Lamba, M., & Singh, R. K. (2020). Bibliometric Analysis of Papers Published During 1992-2019 in DESIDOC Journal of Library and Information Technology. *DESIDOC Journal of Library & Information Technology*, 40(6). DOI: 10.14429/djlit.40.6.15741
- Garg, K. C., & Padhi, P. (2001). A study of collaboration in laser science and technology. *Scientometrics*, 51, 415-427. https://doi.org/10.1080/00987913.2017.1300045
- Hong, R., Liu, H., Xiang, C., Song, Y. & Lv, C. (2019). Visualization and analysis of mapping knowledge domain of oxidation studies of sulfide ores. *Environmental Science and Pollution Research*, 27, 5809-5824.

- Lee, M. H., Wu, Y. T., & Tsai, C. C. (2009). Research trends in science education from 2003 to 2007: A content analysis of publications in selected journals. *International Journal of Science Education*, 31(15), 1999-2020. DOI: 10.1080/09500690802314876
- Liao, H., Tang, M., Luo, L., Li, C., Chiclana, F. & Zeng, Xiao-Jun. (2018), A Bibliometric Analysis and Visualization of Medical Big Data Research. *Sustainability*, 10(1), 166.
- Lin, T. C., Lin, T. J., & Tsai, C. C. (2014). Research trends in science education from 2008 to 2012: A systematic content analysis of publications in selected journals. *International Journal of Science Education*, 36(8), 1346-1372. DOI: 10.1080/09500693.2013.864428
- Lin, T. J., Lin, T. C., Potvin, P., & Tsai, C. C. (2019). Research trends in science education from 2013 to 2017: A systematic content analysis of publications in selected journals. *International Journal of Science Education*, 41(3), 367-387
- Maity, A., & Sahu, N. B. (2019). A comparative study of Journal of Documentation and Journal of Knowledge Management during the period 2005-2015. *Library Philosophy* and *Practice* (*e-Journal*), 2491. https://digitalcommons.unl.edu/libphilprac/2491
- Nath, A., & Jana, S. (2020). Bibliometric Analysis of Annals of Library and Information Studies (ALIS). *Library Philosophy and Practice (e-journal)*, 3685. https://digitalcommons.unl.edu/libphilprac/3685
- Nayak, S. (2018). Research Output of Desidoc Journal of Library and Information Technology: A Scientometric Analysis. *International Journal of Library and Information Studies*, 8(1), 174-180.
- Patel, A. K., Singh, K., Singh, M., & Patel, A. K. (2021b). Publication trends in Financial Inclusion: A Scientometric Assessment and Visualization. *Library Philosophy* and *Practice* (*e-journal*), 5115. https://digitalcommons.unl.edu/libphilprac/5115
- Patel, A. K., Singh, M., Patel, A. K., & Singh, K. (2021c). Mapping of Global Research Trends in Financial Literacy: A Scientometric Approach. *Library Philosophy* and *Practice* (*e-journal*), 5141. https://digitalcommons.unl.edu/libphilprac/5141
- Patel, A. K., Singh, M., Singh, K., Patel, A. K., Varma, A. K., & Kuri, R. (2021a).
 Visualizing Publication Trends in Webology Journal: A Bibliometric Review based

on the Scopus Database (2006-2020). *Library Philosophy and Practice (e-journal)*, 5995, 1-24. https://digitalcommons.unl.edu/libphilprac/5995

- Prieto-Gutierrez, J. J., & Segado-Boj, F. (2019). Annals of Library and Information Studies: A bibliometric analysis of the Journal and a comparison with the top library and information studies journals in Asia and worldwide (2011–2017). *The Serials Librarian*, 77(1-2), 38-48. https://doi.org/10.1080/0361526X.2019.1637387
- Rawat, D. S., Singh, K., Singh, M., Patel, A. K., & Patel, A. K. (2021). Research Productivity of Wadia Institute of Himalayan Geology. *Library Philosophy and Practice (e-journal)*, 5804, 1-22. https://digitalcommons.unl.edu/libphilprac/5804
- Scopus. (n.d.). *Scopus Preview*. Retrieved June 27, 2021, from https://www.scopus.com/
- Singh, I., Singh, P., Rawat, P., Patel, A. K., Singh, M., Singh, K., & Patel, A. K. (2021). Research Productivity of Forest Research Institute, Dehradun During 1990-2019: A Scientometric Approach. *Indian Forester*, 147(8), 767-777. DOI: 10.36808/if/2021/v147i8/164678
- Singh, K. (2017). Scholarly Communication in Evidence Based Library and InformationPractice from 2011-2015: A Bibliometric study. *International Journal of Next Generation Library and Technologies*, 3(4), 1-14.
- Singh, K., Nayak, S., & Varma, A. K. (2017). A scientometric analysis of Partnership: The Canadian Journal of Library and Information Practice and Research (2010-2016). *International Journal of Library and Information Studies*, 7(3), 81-88.
- Singh, K., Varma, A. K., & Pradhan, A. (2017). Scientometric Analysis of International Journal of Library and Information Studies (IJLIS). *Knowledge Librarian: An International Peer Reviewed Bilingual E-Journal of Library and Information Science*, 4(6), 63-72.
- Singh, K., Varma. A. K., & Singh, M., (2021). Research Productivity and Performance of Journals of Informetrics. *Library Philosophy and Practice (ejournal)*, 5026, 1-15. https://digitalcommons.unl.edu/libphilprac/5026
- Varma, A. K., & Singh, K. (2017). Bibliometric analysis of Partnership: the Canadian Journal of Library and Information Practice and Research from 2006 to 2016. *International Journal of Library and Information Management*, 2(8), 10-18.
- Verma, N., & Singh, K. (2017a). Authors productivity and degree of collaboration in Journal of librarianship and information science (JOLIS) 2010-2016. *International Journal of Library and Information Studies*, 7(4), 1-6.

 Verma, N., & Singh, K. (2017b). Research publication to international Journal of digital library services: A scientometric analysis. *Knowledge Librarian: An International Peer Reviewed Bilingual E-Journal of Library and Information Science*, 4(6), 108-114.