

Citation Analysis and Authorship Pattern of the UGC Care List of Group-I Journals of Library & Information Science From 2020 To 2024

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ABSTRACT

The citation analysis of journal articles, impact factors, Eigen factor score, SCImago journal rank, Cite Score, SNIP, h-index, g-index, and many other related indices are important tools in the selection of journals and articles for higher education and research purposes. This article aims to study the citation analysis and authorship collaborations of journals in the UGC CARE List Group I journals of Library and Information Science published from 2020 to 2023, covering up to 2024, by taking the citation data from the Google Scholar Index with the help of Harzing's Publish or Perish (POP). Harzing's Publish or Perish can be downloaded for free from the website. The software POP calculates the citation databases by restructuring and organizing them. Additionally, files can be imported or exported in Excel, CSV & several other formats. The International Journal of Information Retrieval Research, Journal of Indian Library Association, Knowledge Quest, Art Libraries Journal, and Library Herald are the five Group 1 UGC CARE List journals in Library and Information Science, selected based on receiving more than 100 citations. The journal International Journal of Information Retrieval Research receives a total of 416 citations, with an impact factor of 5.546 & 2.6 averages of 2.6 authors per article. The Journal of Indian Library Association has a total of 411 citations, the second-highest total count and the highest percentage; i.e., 68% of articles in this journal received citations among the other journals. 39.26 % & 38.48 % of articles had single and double-authorship patterns, respectively, which is almost the same when considering all the articles of the journals. The degree of authorship collaboration is 0.607.

Keywords: Citations, Citation Analysis, Impact Factor, Authorship Collaboration, Google Scholar, UGC Care List

INTRODUCTION

Citation analysis, impact factor, Eigen factor score, Scimago Journal Rank, Cite score, SNIP, h- index, g- index, and many other related indices measure the productivity of journals based on citations received by their total articles published within a given period. These quantitative metrics are used to assess the quality of books, journals, articles, and other resources within a specified time period, informing important decisions by higher education institutions and individual authors. Web of Science, JCR, Scopus, and Google Scholar are well-known sources of journal articles, with quantitative metrics that help select publications that value our research and education and inform decisions regarding tenure, promotions, and the status of research activity. "The WOS and SCOPUS databases are the two major sources of databases covering the bibliographic records since the publication year 1900. WOS has bibliographic databases of cited references for the source documents, totaling 49.8 million records up to 2011, including SCI E (68. 25%), SSCI (12. 53%), A & HCI (7. 16%), CPCI S (11. 17%), and CPCI SSH (0. 89%). On the other hand, 44. 7 million databases of SCOPUS are mostly compiled from the indexing and citation databases such as Elsevier, EMBASE, Science Direct, etc." (Jacso, Peter, 2011). WOS and Scopus are two well-known subject databases, but they have limited coverage in the humanities and social sciences compared to the scientific field. Google Scholar has an automated indexing system with broad coverage across languages, the humanities, and the social sciences, and it is freely available (Martin Martin, A. et al., 2019). Google Scholar Author Citation Tracker, launched in 2011, and Google Scholar Metrics are well-known Google Scholar services for calculating the h-index and related indices. The software Harzing Publish or Perish

with Google Scholar organizes the Google Scholar citation database to provide various bibliometric indicators for free. This article aims to show the journals' citation patterns by focusing on Library and Information Science journals published from 2020 to 2023 that received the highest citations within 2020-2024, and to present the recent state of the journals' productivity and authorship collaboration. This study considered five UGC CARE-listed Group 1 journals: International Journal of Information Retrieval Research, Journal of Indian Library Association, Knowledge Quest, Art Libraries Journal, and Library Herald. Harzing Publish or Perish is an important tool used to calculate journal metrics for this study.

Some important definitions and conceptual framework:

Journal Impact Factor and related indices:

The Journal Citation Report define Journal Impact Factor = The numbers of citations received by the items published in the previous two years, divided by the total number of citable items published in the journal in the previous two years.

Calculation of 2023 IF of a journal:

A = the number of citations received by the articles of the publication years 2021 and 2022 during 2023.

B = the total number of "citable items" published in 2021 and 2022.

A/B = 2023 impact factor

JIF is an important measurement of the productivity of the journals that help in preparing journal ranking which not only help the research scholars for their study and research but also help librarian to take an important decision in purchasing and preparing budget.

Cite Score

Cite Score measures the numbers of citations in one year (2023) by the documents published in the journals in previous three years divided by the total numbers of documents published in 3 years.

A = Numbers of citations in one year (say, 2023) received by the documents published in the previous 3 years

B = All documents (all document types, same as A) published in 3 years.

A/B = Cite Score (2023)

Eigen Factor Score

This Eigen Factor Score is the measurement of importance of the publications published in the previous 5 years receiving citations in the current year of study showing the extent of importance of the journals in solving purposes for the scientific community. This metrics excludes the self –citations and it can be seen that the influence of highly cited journals is more effective than that of lesser cited journals.

Source-Normalized Impact per Paper (SNIP)

An indicator created by professor Henk Moed at CWTS (Centre for Science and Technology Studies), University of Leiden named Source -Normalized Impact per Paper (SNIP) which measures the numbers of citations in the current year by the publications in the past three years where the normalisation is done on the variations between the different scientific fields.

The JIF, Cite Score, Eigen Factor Score, and SNIP are different measures of journal productivity based on citations received by journals.

Authorship productivity, i.e., multi-authorship studies, indicates the extent of multiple authorship in a subject field of study and across different disciplines over time. The rise in multiple authorship across several disciplines measures collaboration within a discipline, which implies growing professionalism. Multiple authorship presents the growth of a subject and its interdisciplinary research with institutional collaboration.

Degree of Collaboration: The degree of collaboration is calculated on the basis of the Subramanyam formula $C = N_M / N_M + N_S$

Where, C= degree of collaboration; N_M =Number of multi authored papers

N_S = Number of single-authored papers

LITERATURE REVIEW

(Larivière & Sugimoto, 2019) in their article briefly review that the most frequently mentioned bibliometric indicator is the Journal Impact Factor (JIF). Since its launch more than 40 years ago, it has profoundly shaped the scientific ecosystem, changing the publishing sector, influencing recruitment procedures and resource distribution, and ultimately reorienting scholars' research endeavours and dissemination strategies. Because of the indicator's widespread use and significance, academics from all fields have extensively examined and discussed the JIF. This chapter briefly reviews the indicator's history and identifies its well-known drawbacks, including asymmetry between the numerator and denominator, variation across disciplines, an inadequate citation window, and skewness in the underlying citation distributions. It does so by drawing on both original research and the existing literature. It explores the negative impacts on individual actors and the research enterprise, along with the JIF's inflation and declining predictive power. The chapter ends with a call for responsible use and a note on future developments in journal indicators after describing alternative journal-based indicators. (Mech, Eugene....et al., 2020) In their articles, they attempt to evaluate the utility of JIF by gathering and contrasting its benefits and drawbacks; document the various applications of JIF in research settings; and compile and contrast workable alternatives to JIF by using databases from MEDLINE and Web of Science. The qualitative analysis included 84 studies for objective (1). The study found that JIF had more drawbacks than benefits (18 drawbacks compared to 9 benefits). A qualitative examination of 653 data points was conducted for objective (2).

JIF was most frequently used to compute scientific research productivity ($n = 367$, 56.2%) and journal ranking ($n = 653$, 100%). The qualitative analysis included 65 pieces for objective (3). These publications identified 45 alternatives, 18 of which address the well-publicized drawbacks of JIF. (Sen., B.K., 2014) depicts the top seven Indian LIS journals based on citations, impact factor, etc., for the year 2013. According to him, a total of 130 journals in the field of Library and Information Science have been published in India, amongst which Granthalaya Sarvaswamu, published since 1915, was the oldest. (Sen., B.K., 2014) also prepared a ranked list of journals such as Annals of Library and Information Studies, Collnet Journal of Scientometrics and Information Management, DESIDOC Journal of Library and Information Technology, IASLIC Bulletin, Information Studies, Library Herald, and SRELS Journal of Information Management for the year 2013, taking into account. (Patra, Swapan Kumar, 2014) discusses the historical trend of Library and Information Science journals, noting that nearly 100 journals are currently published in English and regional languages, among which IASLIC Bulletin, Library Herald, and Annals of Library and Information Studies have been publishing for over 50 years. (Dutta, B., and Sinha, P.K., 2017) In their articles, they present a bibliometric study of authorship collaboration and research trends, showing the distribution of research work by researcher, country, and organization. This study, based on the databases of Google Scholar, Scopus, and the ScitePress digital library on the Ontology Construction process of AOCP and SOCP, found that 89.42% of total publications are in a multiple-authorship pattern (i.e., two or more authors), and 9.58% are single-authorship. A total of 154 publications (62.09%) are from the Computer Science background and related other subject fields of study, such as Library and Information Science, Engineering and Allied fields, Management & Auxiliary subjects, Medicine and Health, Chemical Engineering, Economics, Language, Agriculture, etc., in this collaborative network of study. A citation analysis and authorship collaboration study was conducted using volumes of the journal Journal of Documentation, covering the period 2005 to 2013 (Roy, S.B., and Basak, Moutusi, 2013). The analysis reveals that the average

citation per paper is 43, and that multi-authored papers are the majority, with an authorship collaboration of 0.51. (Bapte, V.D., Gedam, J.S., & Bejalwar, S., 2024) in their study based on 2216 documents published in Library and Information Science between 1989 and 2023, the study examines authorship productivity and patterns. The data was obtained from the online of Science and examined using Microsoft Excel and the biblioshiny online application. The total research output averaged 12.49 citations. Although it varied during the course of the study, the greatest AGR (74.29) was noted in 1992. The remaining authorship pattern was dominated by single authorship. While CC and MCC were determined to be 0.68 and 0.27, respectively, DC is reported as 0.50.

(Mondal & Jana, 2018) In their study, they measured authorship patterns and collaboration trends in India's LIS sector, mapped using articles published in top Indian LIS journals between 2012 and 2017. The study evaluated collaborative authorship trends using a variety of metrics, including the amount of collaboration, journal-wise patterns, year-wise collaboration, the co-authorship index, and a ranked list of the most prolific writers. (Singh & Singh, 2025) In their study, they use bibliometrics data from Scopus to analyze the research output of Indian writers in the field of "Arts" from 2015 to 2024. It examines publication patterns, citation impact, prolific writers, institutional contributions, and international partnerships. The paper's findings show that research production in this area has been steadily rising, with a sizable percentage of articles appearing in high-impact journals. The study highlights the significance of cross-border research relationships by finding that international collaborations produce the highest citation impact. The study also highlights interdisciplinary trends, including the incorporation of new technology in arts studies. Despite these advancements, Indian scholars still face issues, such as limited representation in international rankings. Future studies should concentrate on the influence of the digital revolution in arts scholarship and discipline-specific citation trends. Institutional funding and the growth of their collaborative networks can enhance the global exposure and influence of Indian arts research.

Objectives of the study

- i) To quantify and analyze the total citation and citation pattern of the articles published in UGC care-listed journals of Library and Information Science in Google Scholar Index during the publication years 2020-2023 in 2024.
- ii) To measure and compare the productivity of the journals in terms of their impact factor (3 years) and average number of authors per article published from 2020 to 2023.
- iii) To measure the multiple authorship and the degree of authorship collaboration during the same period of time.

METHODOLOGY

UGC-CARE lists academic journals in India that are important sources for databases prepared and maintained by UGC, with assistance from reputed institutions across the country, and that promote academic integrity and research across all disciplines of Arts, Humanities, Social Sciences, Science, and Technology. This study uses journals in Library & Information Science from the UGC CARE List; Group 1. The citation study was prepared by selecting journals with the highest citations in the Google Scholar index from 2020 to 2023, using the software Harzing Publish or Perish, and calculated as of 2024, exceeding 100 citations. The five journals with the highest citations are considered among the 20 journals in Library and Information Science. The five journals under study are International Journal of Information Retrieval Research, Journal of Indian Library Association, Knowledge Quest, Art Libraries Journal, and Library Herald, with a total of 147, 175, 207, 80 & 175 articles, respectively. This software retrieves citations for articles and several metrics by providing the journal title and publication year, and defines several ideas of citation studies in the following ways;

Cites/year: Average number of citations per year (i.e., $Citations / Citation\ years$)

Cites/paper: The sum of the citation counts across all articles, divided by the total number of articles.

Cites/author [PoP6]: Average number of citations per author, calculated as follows: For each paper, its citation count is divided by the number of authors for that paper to give the normalised per-author citation count for the

paper. The normalised citation counts are then summed across all articles to give the number of citations per author over the result set.

Articles/author [PoP6]: Average number of articles per author, calculated as follows: For each paper, $1/\text{author count}$ is calculated to give the normalised author count for the paper. The normalised author counts are then summed across all articles to give the number of articles per author.

Authors/paper: The average number of authors per paper, calculated as the sum of the author counts across all articles, divided by the total number of articles.

The other indices such as cites/ year, cites/ author, articles/author are all the average count of the productivity of the journals measuring the ratio considering per article and summing across all the articles of the journal within the period

The result can be exported in Excel and CSV formats. Articles with no citations are omitted, and data analysis is performed in the Excel file.

The citation analysis and the authorship study of the UGC CARE-listed journals of Library and Information Science during the period 2020-2024

The citation study of the journal articles

The journal International Journal of Information Retrieval Research received a total of 416 citations, the highest among journals, based on citations to articles during 2020-2024. Journal of the Indian Library Association has a total of 411 citations. Knowledge Quest, Art Libraries Journal & Library Herald received 283, 131, and 121 citations, respectively, during this period.

Table 1: The UGC Care Listed Group I journals during the publication years 2020-2023 in 2024

Title of the journal	Frequency	Volumes	Total articles	Access
International Journal of Information Retrieval Research	Quarterly	10 to 13	147	Hybrid open access model up to 2022 As of 1st Jan 2022, the journal is gold open access.
Journal of Indian Library Association	Quarterly	56 to 59	175	A membership login is required to get the digital access, but some articles are openly available.
Knowledge Quest	5 issues per year	58 to 61	207	Open access; the volumes from 2023-24 are available through membership login.
Art Libraries Journal	Quarterly	45 to 48	80	Institutional access or membership login is required to get access. There is open access of articles also.
Library Herald	Quarterly	58 to 61	175	Institutional access or membership access is required to get access. There is open access of articles also.

The journals are quarterly, except Knowledge Quest, which publishes 5 issues per year. All the journals publish original research papers, review articles, book reviews, obituaries, news articles, etc. The journal Knowledge Quest includes several columns, including presidential columns, editorial columns, and others by AASL. The journal Library Herald also includes research reports & reviews of important Indian and foreign publications, as well as publications of original peer-reviewed research papers. The journals also have special issues of publication from time to time. International Journal of Information Retrieval Research (IJIRR) publishes original, innovative, and creative research on information retrieval that supports the interdisciplinary and

multidisciplinary application of data, text & document retrieval. In contrast, the Journal Knowledge Quest publishes articles on special themes and topics related to information literacy and the school library. A special issue on “cataloguing ethics” has also been published by the journal Art Libraries in its April 2023 issue.

Table 2: Total numbers & percentage of journal articles with citations during the publication years 2020-2023 in 2024.

Title of the journal	Total No of articles	Number of articles with citations	Percentage of articles with citations
International Journal of Information Retrieval Research	147	75	51.02
Journal of Indian Library Association	175	120	68.57
Knowledge Quest	207	97	46.85
Art Libraries Journal	80	37	46.25
Library Herald	175	54	30.85

The Journal of Indian Library Association has the highest number of total citable articles; 68.57% of its articles received citations from 2020 to 2024. The article “Web-based and smart mobile app for data collection: Kobo Toolbox/Kobo collect” by MC Lakshminarasimhappa, published in 2022, received the highest citation count of 64 amongst the other articles. The article “Breast cancer histopathological image classification using stochastic dilated residual ghost model” by R Kashyap of the journal International Journal of Information Retrieval Research, also published in 2022, received 45 citations within that period.

Table 3: Impact factor (3-year) and average authors per article during the publication years 2020-2023 in 2024.

Title of the journal	Number of articles with citations	No Authors of	Total Citation	Impact factor (3 years)	Authors/ Articles
International Journal of Information Retrieval Research	75	195	416	5.546	2.6
Journal of Indian Library Association	120	236	411	3.453	1.98
Knowledge Quest	97	140	283	2.917	1.443
Art Libraries Journal	37	57	131	3.54	1.54
Library Herald	54	104	121	2.24	1.925

The impact factor of a journal is the ratio of the total number of citations received by the items published during the given period of time divided by the total number of citable items within that period. The impact factor is the ratio of the total number of citations received by the articles of the journals published between 2020 and 2023 to the total number of citable articles. The International Journal of Information Retrieval Research has the highest impact factor of 5.546. The Art Libraries Journal has the lowest number of citable items, but its impact factor of 3.54 is larger than those of the two journals, Knowledge Quest & Library Herald. The average number of authors per article is calculated by summing the total number of authors across all articles & divided the total summation by the total number of articles. The International Journal of Information Retrieval Research has an average of

2.6 authors per article, the highest among all journals. The average number of authors per article is ≈ 2 for the journals Journal of Indian Library Association and Library Herald.

The multiple authorship counts and the study of authorship collaboration

Table 4: Number of authors in total and percentage terms

Title of the journal	No of Articles	Single author	2 author	3 author	4 author	5 author
International Journal of Information Retrieval Research	75	7 (9.33)	33 (44)	19(25.33)	15 (20)	1 (1.33)
Journal of Indian Library Association	119	30 (25.21)	65 (54.62)	20(16.80)	4 (3.36)	0(0.00)
Knowledge Quest	97	70 (72.16)	18(18.55)	4(4.12)	3(3.09)	2 (2.06)
Art Libraries Journal	37	23 (62.16)	9(24.32)	4(10.81)	1(2.70)	0 (0.00)
Library Herald	54	20(37.03)	22(40.74)	9(16.66)	2(3.70)	1 (1.85)
Total	382	150 (39.26)	147 (38.48)	56(14.65)	25 (6.54)	4(1.047)

72.16 % of articles are single-author articles for the journal “Knowledge Quest”. Single-authorship articles account for only 9.33% of the journal International Journal of Information Retrieval Research, but the journal has 44% of articles with 2 authors, 25.33% with 3 authors, and 20% with 4 authors, the highest percentage among the other journals. The Journal of Indian Library Association has 54.62% of its articles with double authorship.

Table 5: Authorship pattern & authorship collaboration

No of Total Cited Articles	Singled Author	Multiple Authors	Degree of Authorship Collaboration
	150 (39.267)	232(60.732)	0.607

The table shows that 39.267 per cent of articles have single authorship and 60.732 per cent have multiple authorship (two or more authors), based on the total coverage of cited articles in Library & Information Science during 2020-2024.

The degree of authorship collaboration is calculated as $C = N_M / N_M + N_S$ (Roy, S.B., and B. M., 2013).

The degree of authorship collaboration is 0.607, indicating that 38.48 per cent of articles have double authorship, which is almost equal to the percentage of single-authored articles (39.26 per cent) in the total count. The 3-author & 4-author articles account for 14.65% & 6.54% of the total, respectively.

Some Important Findings:

1. The number of articles that received citations among the total published articles is 68.57 for the journal Journal of Indian Library Association, which is higher than the other journals, and it is lowest, i.e., 30.85% for the journal Library Herald.
2. The International Journal of Information Retrieval Research has the highest impact factor & an average author per article i.e. 5.546 & 2.6 respectively amongst the five other journals within the period 2020-2024.
3. The number of single-authored articles is 39.26%, and a double-authored article is 38.48%, which

remains almost the same for the articles within this period, taking all the journals into account.

4. Knowledge Quest having 72.16 % of articles with single authorship count and the journal Journal of Indian Library Association have 54.62 % of articles with double authorship count with highest percentage terms.

CONCLUSIONS

Subscribing to journals in academic institutions, universities, and colleges is an important and valuable task for librarians. This study reveals that the journal International Journal of Information Retrieval Research has the highest impact factor and publishes articles on special topics or subject fields. International Journal of Information Retrieval Research covers information, data, and text document retrieval, while the journal Knowledge Quest publishes articles on school libraries. The Library Herald and Art Library Journals also publish articles in specialized subject fields, but their hybrid access model may lead to a lower percentage of citations for the articles under study. The open-access and multidisciplinary nature of the journals are two important factors in increasing citations. The degree of authorship collaboration is 0.607, with most collaborations being 2-author. A higher degree of authorship collaboration in multi-author works (3 or more authors) is also a determining factor in collaborative subject fields and in increasing citation counts.

REFERENCES

1. Das, A. K., Das, G., and Dutta, B (2021). A selective review of bibliometric studies on Indian physics and astronomy. *Annals of Library and Information Studies*, 68, 152-169.
2. Dutta, B., and Sinha, P.K. (2018). A bibliometric analysis of the automatic and semi-automatic ontology construction process. *Annals of Library & Information Studies*, 65, 112-121.
3. Jacso, P (2011). The h-index, h-core citation rate, and the bibliometric profile of the Web of Science database in three configurations. *Online Information Review*, 35(5), 821-833. DOI 10.1108/14684521111176525.
4. Martin Martin, A. ...et al. (2019). Google Scholar, Web of Science, and Journal of Informetrics, 12(4), 1160-1177. Doi :<https://doi.org/10.1016/J.JOI.2018.09.002>
5. Patra, S. K. (2014). Google Scholar-based citation analysis of Indian library and information science journals. *Annals of Library and Information Studies*, 61, 227-234
6. Roy, S. B. (2013). JOURNAL OF DOCUMENTATION: A BIBLIOMETRIC STUDY. *Library Philosophy and Practice (e-journal)*, 11. Retrieved from <https://digitalcommons.unl.edu/libphilprac/945>
7. Sen, B .K. (2014). Top 7 Indian LIS Journals, *Annals of Library and Information Studies*, 61, 253-256
8. Mech, E., Ahmed, M. M., Tamale, E., Holek, M., Li, G., & Thabane, L. (2020). Evaluating Journal Impact Factor: A systematic survey of the pros and cons, and overview of alternative measures. *Journal of Venomous Animals and Toxins Including Tropical Diseases*, 26, e20190082. <https://doi.org/10.1590/1678-9199-jvatitd-2019-0082>
9. Harande, Y. I. (2001). Author Productivity and Collaboration: An Investigation of the Relationship Using the Literature of Technology. *Libri*, 51(2). <https://doi.org/10.1515/LIBR.2001.124>
10. Mondal, D., & Jana, S. (2018). Collaborative Authorship Trend in Leading Indian LIS Journals. *DESIDOC Journal of Library & Information Technology*, 38(5), 320. <https://doi.org/10.14429/djlit.38.5.12917>
11. Khan, B., Mondal, H., & Khan, A. (2025). Global Perspectives on Author Productivity in Library and Information Science Literature: A Bibliometric Study. 40(1).
12. Singh, B., & Singh, R. (2025). Research productivity and impact of Indian authors in arts: A bibliometric perspective. *Journal of Management Research and Analysis*, 12(2), 77–84. <https://doi.org/10.18231/j.jmra.2025.014>
13. Larivière, V., & Sugimoto, C. R. (2019). The Journal Impact Factor: A Brief History, Critique, and Discussion of Adverse Effects. In W. Glänzel, H. F. Moed, U. Schmoch, & M. Thelwall (Eds.), *Springer Handbook of Science and Technology Indicators* (pp. 3–24). Springer International Publishing. https://doi.org/10.1007/978-3-030-02511-3_1



14. Pathak, V. K., & M., M. K. (2019). Understanding the metrics used to assess the quality of journals. International Journal Of Community Medicine And Public Health, 6(12), 5368. <https://doi.org/10.18203/2394-6040.ijcmph20195501>
15. Bapte, V.D., Gedam, J.S., & Bejalwar, S. (2024). Authorship Pattern and Authorship Productivity in Library and Information Science Literature. Annals of Library and Information Studies, 71(02). <https://doi.org/10.56042/alis.v71i2.7129>