Scientific Mapping of Global Research Trends on Jain **Philosophy: A Bibliometric Analysis**

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ABSTRACT

This paper presents a bibliometric analysis of research work done in the global academic world concerning Jain philosophy and its knowledge system. In this study, a total of 3346 publications related to Jain philosophy freely available on 'Lens Database published from the year 1961 to 2024 (16/09/2024, 4:00 PM) have been analyzed with the help of VOSViewer Software (1.6.20 edition), which is freely available. The study results show that the highest numbers of publications related to Jain philosophy (867) were published during 2021-2025. Jeffrey D. Long (307 publications) and Pankaj Jain (305 publications) are ranked first and second among the most productive authors related to Jain philosophy. In contrast, Timothy R. Oton (4428 citations) and Christopher W. Moore (1731 citations) are ranked first and second respectively among the top Cited authors. The most trending keywords in Jain philosophy-related studies are India, Philosophy, Jainism, Ethics, and Religion. The most Cited source is 'The International Journal of Advanced Manufacturing Technology' and the most productive source is 'The Indian Journal of Philosophy'.

Keywords: Jain Philosophy, VOSViewer, Lens Database, Bibliometric Analysis and Scientific Visualization.

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Received: 30-11-2024; **Revised:** 14-01-2025: Accepted: 02-04-2025.

INTRODUCTION

The National Education Policy 2020 is committed to making the rich and eternal knowledge history of India useful at the global level in a new form. Indian knowledge, science, and philosophy of life have been included as its guiding principles. It is recommended to integrate the Indian knowledge system scientifically into a framework that includes tribal knowledge and indigenous and traditional methods of learning. It covers the Indian approach and methods of subjects like mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, etc. Other major areas under the major focus of the Indian knowledge system include tribal ethno-medical practices, forest management, natural farming, etc. The Indian knowledge system is an Indian way, which is sustainable and strives for the welfare of all. If we want to become 'Vishwaguru' in this century, we must regain the comprehensive knowledge of our heritage and demonstrate the 'Indian way' of working to the whole world. Therefore, there is a need to rejuvenate and mainstream Indian knowledge systems for the contemporary world. For this, it

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is necessary to make the whole world aware of the important contribution of the Indian knowledge system. Indian knowledge systems are very ancient but overshadowed by Western ways of thinking. Therefore, there is a need to change the current mind-set towards the Indian knowledge system and create awareness about it at the global level. So that the whole world can realize that without understanding the global concerns of the Indian knowledge system for the establishment of global peace and harmony, it is not possible to get rid of international problems like terrorism, unrest, and border disputes. There are various schools of thought on the Indian knowledge system. One of them is Jain philosophy. Jain philosophy is famous as a unique knowledge system under the Indian knowledge system. The Sanskrit word 'Jain' is used as a self-designation (rather than as a doctrine designation), based on the vernacular precursor 'Jain', which became prevalent from the early modern period (Flugel, 2005). Jainism, apart from being an important philosophical framework in the context of Indian philosophy, constitutes an exemplary religion, possibly the oldest yet practiced today. Like Jain philosophy, Jain philosophy also does not accept the authority of the Vedas (Das, 2015). It has made major contributions to the development of Indian culture and spirituality as well as constructive, progressive, and peaceful resolution of human suffering and distress.

Jainism adopts a holistic view of existence. It expresses universal values as helpful in achieving the paramount purpose of life in



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'Samanasuttam'. Acharya Umasvati in his Tattvartha-Sutras (8/9) clarifies that 'Nirvana or salvation can be attained through a combination of right faith, right knowledge, and right conduct'. Gandhi loved the basic tenets of Jainism and lived for them. His English writings are deeply influenced by the life of Shrimad Raichand (a Jain philosopher. Gandhi's views on education are entirely governed by the doctrine of Jainism (Jain, 2019). Unlike Western philosophical traditions, Jainism claims that belief, knowledge or conduct cannot independently lead to the path to liberation. It requires the integration of all the three elements mentioned above. Lord Mahavira clarifies, "Through knowledge, one understands the essence of substances; through faith, one believes in them; through conduct, one eliminates the influx of deeds, and through austerity, attains purity. The reflections of Jain thinkers about the concept of knowledge are historically significant and hold great significance in the field of 'epistemology'.

With the term 'Jain education', Mays (2021) refers to the religious and intellectual teachings given by some members of the Jain community to other members of the Jain community, including monks, nuns, laymen, and laywomen. Jain education is transformative because it informs the way one sees, relates to, and acts in the world. According to Jain tradition, 'the purer the soul becomes, the greater its capacity for knowledge'. The obstacles that prevent the soul from knowing are karma. Complete elimination of karmic obstructions facilitates the attainment of 'Anant Jnana' (Infinite Knowledge. Knowledge plays an important role in the conception of the soul and its liberation. According to Jain epistemology, the soul has consciousness and the ability to understand as its most prominent inherent characteristics. As conscious entities, souls engage in experience in three different modalities. Some people only experience the consequences of karma; others engage in their own actions; and yet others experience wisdom. It is thus clear that Jain philosophy as its philosophical tradition and religious way of life has established itself very strongly at the global level. But is Jain philosophy trending with the same speed and expansion in the global academic world, what is the status of research research in the field of Jain philosophy, how and how strong is the link of Jain philosophy with other knowledge disciplines at the global level, which is the world's most productive researcher and most published journal in the field of Jainism studies. Keeping the above questions in mind, the published research work related to Jain philosophy has been exported by the researcher from the lens database (https://www.lens.org/) to a CSV file and presented the bibliometric analysis of the most productive researcher and source; Trending keywords, and citation and density visualization by VOSViewer Software (1.6.20 version).

Bibliometric analysis is an emerging research area. Their development and mutual relationships are presented effectively by quantitative analysis with the help of available texts (Wang et al., 2021). It is a great way to analyse the productivity and global links of a topic or magazine by analysing relevant available literature. Bibliometric analysis is one of the mature and effective statistical methods based on quantitative analysis, which offers authors great ability to reveal a comprehensive overview from a global perspective (Jia *et al.*, 2024). Bibliometric research has developed over many years and has also achieved many great scientific achievements (Lew *et al.*, 2023).

Contribution of this Research

The most important contribution of this research study is that this study has done a bibliometric analysis of the bibliography of 'Jain philosophy', known as one of the most important and distinct parts of the Indian knowledge tradition available on the lens database. Bibliometrics is the cross-disciplinary science of quantitative analysis of all available texts by mathematical and statistical methods (Merigo et al., 2013). This bibliometric study has been completed with the help of VOSViewer software, using various options for network and densification visualization. The study used criteria such as 'Top Productive Researcher, Source, and Country'. Also, the most popular and top global trending keywords have been analyzed along with their total link strength.

Novelty and Originality of Research

The novelty of this research paper lies in the fact that it helps in understanding the evolution of global studies related to Jain philosophy. In this, studies related to Jain philosophy have been visualized by studying bibliometrically. Bibliometric analysis and scientific visualization represent the originality of this research to understand how different dimensions of Jain philosophy are connected in different perspectives of global knowledge disciplines and how important and strong its linkage is. This study will motivate the authors doing bibliometric analysis and visualization of various other dimensions of Indian knowledge tradition to do new research.

Research Objectives

The most important objective of this research study was to present the academic development and keyword research trend of Jain philosophy-related studies by quantitative analysis and visualization of the studies conducted in the context of various dimensions of Jain philosophy. The specific objective of this research study was also to find out the top-producing authors and sources and knowledge disciplines in the field of Jain studies.

Research Planning and Methodology

A quantitative research approach was used to complete this research study keeping in mind its quantitative nature. In this, the method of bibliometric analysis has been used. A total of 3405 publications were exported as CSV files by searching 'Jain Darshan' on the lens database (https://www.lens.org/) for the compilation provided. After data cleaning, 59 publications

regarding which sufficient information was not available were removed. Thus, a total of 3346 publications were analyzed with the help of VOSViewer (version 1.6.20) software. The VOSviewer software is freely available (https://www.vosviewer.com/). The author follows the PRISMA (Page *et al.*, 2021) Guidelines for data extraction. The PRISMA flowchart is presented in Figure 1A below:

RESULTS AND DISCUSSION

Global Research Publications on Jain Philosophy

Jain philosophy has made its presence felt as a powerful signature as an important part of the Indian knowledge tradition at the global level. A total of 3346 publications related to various dimensions of Jain philosophy were analyzed quantitatively to carry out bibliometric analysis. Figure 1 presents the total publications from the year 1961 to 2024 (16/09/2024) at a class interval of 5 years. It is clear from the observation of Figure 1 that the least number of publications (only 14) were published from 1961-1965. The highest publication was done between the years 2020-25. Similarly, the number of publications in other periods can be seen in following Figure 1B.

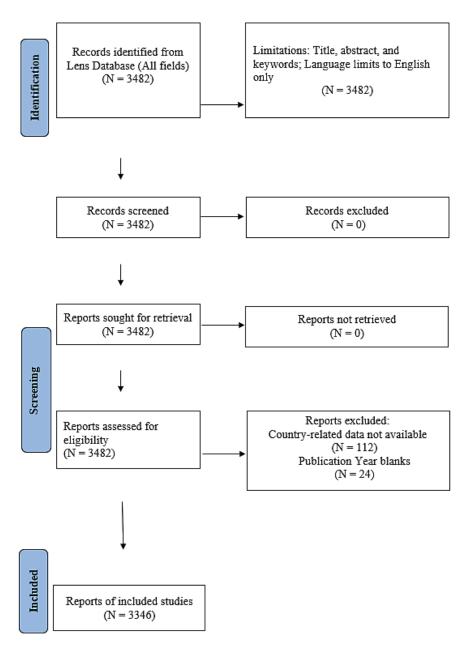


Figure 1A: Identification of studies on Jain Philosophy from lens database. Source: Page *et al.*, 2021; Edited by Author.

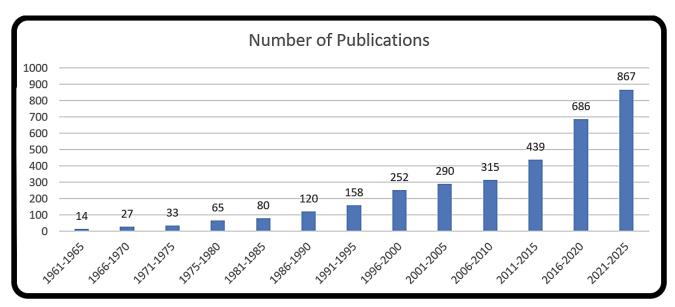


Figure 1B: Details of total publications. Source: Created by the authors.

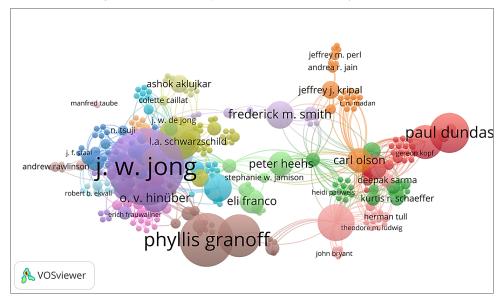


Figure 2: Network visualization map of total authors. Source: Network visualization map of all authors created by VOSViewer Software.

Table 1: Details of Top 10 Productive Authors.

Authors	Number of Publications	Total Citations	Total Link Strength
Jeffrey D. Long	307	36	290
Pankaj Jain	305	9	290
Phyllis Granoff	16	47	1
Piotr Balcerowicz	15	60	0
Keith E. Yandel	13	85	0
Ramakrishna Bhattacharya	13	127	0
Johannes Bronkhorst	12	42	2
Paul Dundas	11	11	0
Purushottam Bilimoria	11	60	0
Christopher Chapel	10	20	1

Source: created by the authors.

Table 2: Description of Top 15 Keywords.

SI. No.	Keywords	Occurrences	Total Link Strength
1	India	7	15
2	Ethics	5	1
3	Religion	4	8
4	Animal Welfare	3	1
5	Asia	3	14
6	Bioethics and Professional Ethics	3	3
7	COVID-19	3	1
8	Depression	3	0
9	Developing Countries	3	14
10	Education	3	6
11	Health	3	12
12	Jainism	3	3
13	Public Health	3	6
14	Religious Approach	3	4
15	Southern Asia	3	14

Source: Created by the authors.



Figure 3: Density visualization map of total authors. Source: Density visualization map of all authors created by VOSViewer Software.

Jain Philosophy-Related Publications and Co-authorship Analysis

The VOSViewer software produces a network visualization map and a density visualization map of authors publishing related to co-authorship options. The size of the sphere in the network visualization map represents the number of publications of the respective author. That is, the larger the sphere, the more publications that writer has. This makes it easy to understand the details including the authors' links and total link strength. Similarly, the brighter the color of the author in the dense visualization map, the more publications that the author will have than other authors. A CSV file of a total of 3346 publications related to Jain philosophy gets details of a total of 5295 authors by running the co-authorship option with the help of VOSViewer

software. A total of 5295 authors can be seen in the Network Visualization Map in Figure 2 and the Density Visualization Map of Authors in Figure 3 respectively.

Top 10 Productive Authors

A total of 13 top Authors were found on setting at least 10 publications and at least 5 citation criteria in the co-authorship option to analyze the top-productive Authors. The details of the top 10 out of 5295 Authors are presented in Table 1.

From the perusal of Table 1 above, it is clear that the most productive writer is Jeffrey D. Long. Jeffrey has made a total of 307 publications, of which he has received a total of 36 citations. Jeffrey's total link strength is 290. Similarly, Pankaj Jain is in second position among the most productive authors. The total

Table 3: Details of Top 10 Cited Authors.

Sl. No.	Author	Publications	Citations	Total Link Strength
1	Timothy R. Auton	1	4428	0
2	Christopher W. Moore	2	1731	0
3	Jörg Sander	1	1606	0
4	Roger, P. M.	1	1606	0
5	Matthew D. Aldridge	1	1312	0
6	Mustafa Kemal Kuleki	1	1312	0
7	Robert B. Woodruff	1	1312	0
8	Paolini, G. V.	1	1245	0
9	Hans-Peter Kriegel	1	1245	0
10	Michael Woolcock	1	1245	0

Source: Created by the authors.

Table 4: Top 10 Cited Sources.

SI. No.	Source	Publications	Citations
1	The International Journal of Advanced Manufacturing Technology	39	5261
2	International Journal of Computer Vision	15	3576
3	Journal of Computer-Aided Molecular Design	5	2979
4	Journal of High Energy Physics	63	2426
5	Journal of Business Ethics	23	2099
6	Data Mining and Knowledge Discovery	6	1545
7	Journal of Indian Philosophy	253	1496
8	Journal of Intelligent Information Systems	4	1402
9	Journal of the Academy of Marketing Science	12	894
10	Theory & Society	3	883

Source: Created by the authors.

number of Pankaj's publications is 305, of which he has received 9 citations. Pankaj's total link strength is 290. This shows that Jeffrey and Pankaj rank first and second among the top-productive authors globally. Similarly, the details of the top 10 productive authors can be seen in Table 1.

Keyword analysis used in Jain philosophy-related publications

The 'co-occurrences with All keywords' option was run with the help of VOSViewer software to analyze the keywords included in publications made in the context of various dimensions of Jain philosophy globally. A total of 536 keywords were used in 3346 studies. These 536 keywords are linked together to form a total of 64 clusters and 2566 links. The total link strength of the above 536 keywords is 2660. This clearly shows how important and useful Jain philosophy as a unique part of Indian knowledge wealth is for diverse disciplines and dimensions of knowledge at the global level. VOSViewer software's Density, Network Visualization Map, and Overlay Visualization Map features have been used to visualize the keyword analysis. The network, density, and overlay

visualization map of the entire keywords are presented in Figures 4-6 respectively. A network visualization map of keywords used in Jain Darshan publications in Figure 4, a density visualization map of all keywords used in Jain Darshan publications in Figure 5, and an overlay visualization map in Figure 6 can be seen. The network visualization map shows the connections among objects based on similarities. The Density visualization map shows the density of their occurrences. Similarly, the overlay visualization map shows how many publications are done over time.

The most popular and trending keywords

From observing the keyword density in Figure 5 above, it is clear that Jain philosophy is closely related to various disciplines of knowledge at the global level. A total of 536 keywords have been used in a total of 3346 publications. Important keywords trending globally were checked with the help of VOSViewer software in increasing order of their occurrences. 536 keywords with at least 1 occurrence, 42 with at least 2 occurrences, and 15 with at least 3 occurrences. Out of 15 keywords with at least 3 occurrences, 9 keywords linked together and created 3 clusters. The related

links of these 3 clusters can be seen with the help of Figure 7. The first cluster is shown in red, the second cluster in green, and the third cluster in blue colours. The first cluster has 4 keywords, the second cluster has 3 keywords and the third cluster has 2 keywords. The total occurrences of these 15 keywords is 52, total links 32 and total link strength is 102. These keywords are the most famous and trending top 15 keywords in Jain philosophy-related publications. The top 15 keywords with their occurrences, total link strength, and respective clusters are presented in Table 2.

Jain Philosophy Publications and Citation Analysis

On analyzing the citations received by Jain philosophy-related publications, it was found that out of a total of 5295 authors, 3732 authors have at least one publication and have received at least one citation. The number of authors with at least 5 publications and at least 5 citations is 37. Similarly, 1123 sources were received

as a total source, which has received a total of 1601279 citations. The details of the most cited authors and sources are presented in Tables 3 and 4 respectively. The details of the most cited authors are presented in Table 3.

From the perusal of Table 3, it is clear that the top 10 authors who have received at least 1245 citations are there. The author with the most citations is Timothy R. Auton, who received a total of 4428 citations. Similarly, with the 1731 citation, Christopher W. Moore is second on the list of most cited authors. The other 10 top-cited authors can be seen in Table 3. In this way the top 10 cited sources are presented in Table 4.

It is clear from the observation of Table 4 above that the top 10 cited sources globally are The International Journal of Advanced Manufacturing Technology (5261 Citations), International Journal of Computer Vision (3576 Citations), Journal of Computer

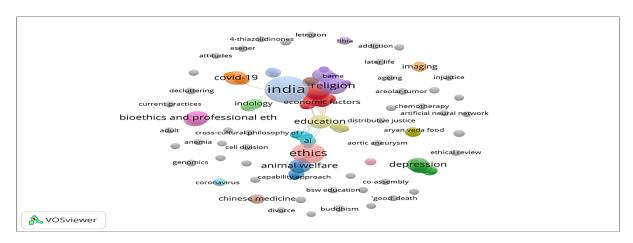


Figure 4: Network visualization map of all keywords used in Jain philosophy's publications. Source: Network Visualization Map of all keywords by VOSViewer Software.

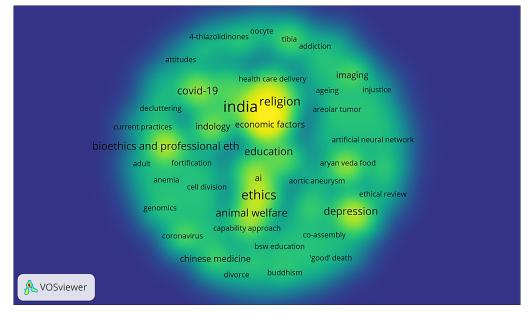


Figure 5: Density visualization map of all keywords used in Jain Philosophy's publications. Source: Density Visualization Map of all keywords by VOSViewer Software.

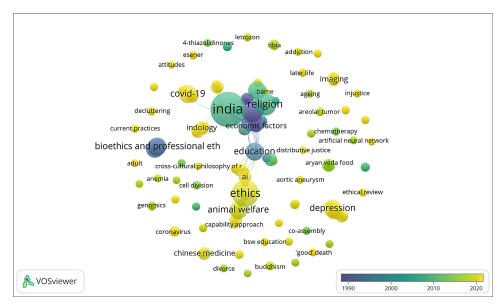


Figure 6: Overlay visualization map of all keywords used in Jain philosophy's publications. Source: Overlay Visualization Map of all keywords by VOSViewer Software.

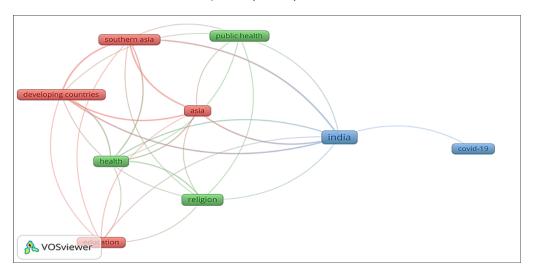


Figure 7: Network visualization map of top keywords. Source: Network Visualization Map of top keywords by VOSViewer Software.

Aided Molecular Design (2979 Citations), Journal of High Energy Physics (2426 Citations), Journal of Business Ethics respectively (2099 citations), Data Mining and Knowledge Discovery (1545 citations), Journal of Indian Philosophy (1496 citations), Journal of Intelligent Information Systems (1402 citations), Journal of the Academy of Marketing Science (894) and Theory and Society (883 citations).

CONCLUSION

In this research paper, studies conducted in the field of Jain philosophy at the global level have been analyzed bibliometrically with the help of VOSViewer software. Bibliometric analysis helps to find the structure and evolution in the respective subject area. A total of 3346 Jain philosophy-related publications obtained from the lens database till the year 1961-2024 (16/09/2024) were

used for bibliographic analysis. A total of 14 (lowest) publications were made during 1961-1965 and the highest number of 867 publications were made during 2021-2025 (till 16/09/2024. Jeffrey D. Long is the most productive author with 307 publications out of a total of 5295 authors, with a total of 36 citations and a total link strength of 290. With 305 publications, 9 citations, and 290 link strengths, Pankaj Jain is the second most productive author. The most famous and trending keywords are 'India', 'ethics', 'religion', 'Jainism' etc. The author who received the most citations on studies related to Jain philosophy is Timothy R. Auton, who received a total of 4428 citations. Similarly with 1731 citations Christopher W. Moore is second on the list of most visited authors. The most visited source in terms of Jain philosophy-related publications is 'The International Journal of Advanced Manufacturing Technology' with a total of 5261

citations. The International Journal of Computer Vision is in second place with a total of 3576 sites. One of the most important limitations of this study is that it has only quantitatively analyzed publications available on the 'lens database'.

CONFLICT OF INTEREST

The authors declare that there is no conflict of Interest.

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Cite this article: Pal S, Kumar V, Kumar V. Scientific Mapping of Global Research Trends on Jain Philosophy: A Bibliometric Analysis. Journal of Data Science, Informetrics, and Citation Studies. 2025;4(1):78-86.