

Research Contribution and Degree of Collaboration in Journal of Granthalaya Vigyan during 1994- 2023

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Abstract

This paper presents a research contribution of articles published in Volumes 25 (1994) to 54 (2023) of the Journal of “Granthalaya Vigyan”. This study analyses the year wise distribution, year wise references distribution, authorship pattern and distribution of research contributions. For the analysis of the study thirty volumes have been taken up. Two authored articles are found to the highest followed by single and three authored articles. The average degree of collaboration is **0.583**.

Key Words: Granthalaya Vigyan, bibliometric study, research contribution, authorship patterns, degree of collaboration.

1 Introduction

Very few Hindi Journals are published in Library and Information Science, among which “Granthalaya Vigyan” is a very important journal. This journal is being published by Professor Kaula Library and Information Science. Its founder editor is Prof. P.N. Kaula and the editor is Dr. S.P. Sood.

In this article, research contribution of the articles of “Granthalaya Vigyan” Journal has been done. Under bibliometric study, numerical and computational study of various aspects of any subject or literature is done. In bibliometric study, data is analysed through citation analysis. Citation analysis is considered an important technique for bibliometric study for any subject. In the present study, the details of publication of articles of Granthalaya Vigyan journal year wise, citation details year wise, types of cited documents, authorship effect in texts year wise, contribution of single author and multiple authors and the value of condition of collaborators have been shown with the help of mathematical statistical study.

2 Objectives of study

The main objective of this study is to present a research contribution of the articles published in the “Granthalaya Vigyan” journal. Under this-

- 1 To tell the number of articles and authors published in “Granthalaya Vigyan” journal up to 30 volumes.
- 2 To give citation details of published articles.
- 3 To find out the number of authors in published articles.

4 To find out the number of references cited in the articles of Granthalaya Vigyan journal.

5 To find out the status of the degree of collaboration.

6 To find out the types of documents cited in published articles is important.

3 Related literature review

Sinha and Nag (2023)¹ analysed the study for food systems and farming development to be sustainable, agricultural extension is essential. India has used a number of agricultural extension models during the last few decades. The scientific contribution of agricultural extension research during the past ten years (2011-2020) is highlighted in this paper. In order to find pertinent themes, patterns of collaboration, research topics, and significant journals for publication, bibliometric approaches were applied to the secondary data for the analysis of 145 articles. **Sahu and Yadav (2023)**² study examined the current study examines the output of agronomy research at Indira Gandhi Agricultural University in Raipur between 2001 and 2021. Krishikosh of the Indian Council of Agricultural Research provided the study with data on the topic of agronomy at Indira Gandhi Agricultural University in Raipur. The study has described crop distribution, authorship productivity, research productivity, etc. Between 2001 and 2021, a total of 54 research projects were finished in the field of agronomy, with 45 male and 9 female researchers participating **Singh and other (2022)**³ studied the bibliometric examination of research output from Indian management institutes is the focus of this paper. The Indian Institutes of Management (IIM) for the most recent ten years, from 2010 to 2019, are included in this document. Additionally, three highly esteemed, globally recognized business schools—MIT Sloan School of Management, Harvard Business School, and NUS Business School—are contrasted with the outcomes. According to the results, the older IIMs, such as Bangalore and Ahmedabad, rank highest in terms of citations and publication counts. **Joshi and Sahu. (2019)**⁴ revealed in their study the different facets of bibliometrics research are the main emphasis of this work. The quantitative study of literature is known as bibliometrics. By distributing the papers by year, the goal is to compare the contributions of the two publications. The distribution of authors, paper lengths, and subjects in the Annals of Library and Information Studies (ALIS) and PEARL between 2014 and 2016. 220 contributions from 12 volumes of the two publications are analysed in this study. Results show that PEARL published more articles than the Library and Information Studies Journal. The element that both journals have in common is joint authorship. The majority of the articles were published under the headings of electronic information resources and bibliometrics studies.

4 Area of study

In the present study, articles published in 30 volumes from 1994 to 2023 of the important Hindi Journal of Library and Information Science “Granthalaya Vigyan” from volume number 25 to 54 have been included. Information related to book reviews and information abstracts has not been included in it.

5 Methodology of study

This research article is based on research contribution. In this study, numerical or computational study of various aspects of any subject or literature of the world of knowledge is done. This is a new technique of library and information science and it serves as a guide for better management of information sources at national and international level. In this bibliometric study, the value of year wise details, types of cited documents, authorship effect and status of collaboration have been calculated through mathematical and statistical methods.

The number of articles published in the Journal “Granthalaya Vigyan” has been calculated and it has been given through tables as follows-

Table 1: Year wise Distribution of Research Articles in Granthalaya Vigyan

S. No.	Year	Vol. and Issues	Articles	%
1	1994	25	11	2.18
2	1995&1996	26&27	11	2.18
3	1997&1998	28&29	10	1.98
4	1999&2000	30&31	17	3.37
5	2001	32	19	3.77
6	2002&2003	33&34	14	2.78
7	2004	35	12	2.38
8	2005	36	15	2.98
9	2006	37	17	3.37
10	2007	38	12	2.38
11	2008	39	16	3.18
12	2009	40	15	2.98
13	2010	41	18	3.57
14	2011	42	17	3.37
15	2012	43	17	3.37
16	2013	44	19	3.77
17	2014	45	19	3.77
18	2015	46	18	3.57
19	2016	47	21	4.17
20	2017	48	23	4.57
21	2018	49	23	4.57
22	2019	50	44	8.74
23	2020	51	30	5.96
24	2021	52	28	5.56
25	2022	53 (No 1 & 2)	15+14=29	5.76
26	2023	54 (No 1 & 2)	14+14=28	5.56
Total	30	30	503	100

From the analysis of table number 01, it is known that its four volumes have been published biennially. From 1994 to 2023, in a total period of 30 years, 30 volumes of this magazine have been published. In these 30 volumes, 503 articles have been published. From the analysis as per the articles, it is clear that the maximum number of 44 articles have been published in the 50th volume of 2019 and the least number of articles i.e. 10 articles have been published in the 28-29th volume in 1997-98.

Table 2: Distibution of Year wise references in Granthalaya Vigyan

Year	Vol. and Issues	References	%
1994	25	64	1.72
1995&96	26&27	46	1.23
1997&98	28&29	49	1.31
1999&2000	30&31	23	0.61
2001	32	111	2.98
2002&2003	33&34	92	2.47
2004	35	69	1.85
2005	36	92	2.47
2006	37	114	3.06
2007	38	88	2.36
2008	39	90	2.42
2009	40	94	2.53
2010	41	108	2.90
2011	42	94	2.53
2012	43	131	3.52
2013	44	164	4.41
2014	45	147	3.95
2015	46	194	5.22
2016	47	178	4.79
2017	48	211	5.68
2018	49	178	4.79
2019	50	419	11.28
2020	51	280	7.53
2021	52	222	5.97
2022	53 (No 1 & 2)	130+128=258	6.94

2023	54 (No 1 & 2)	99+99=198	5.33
30	30	3714	100

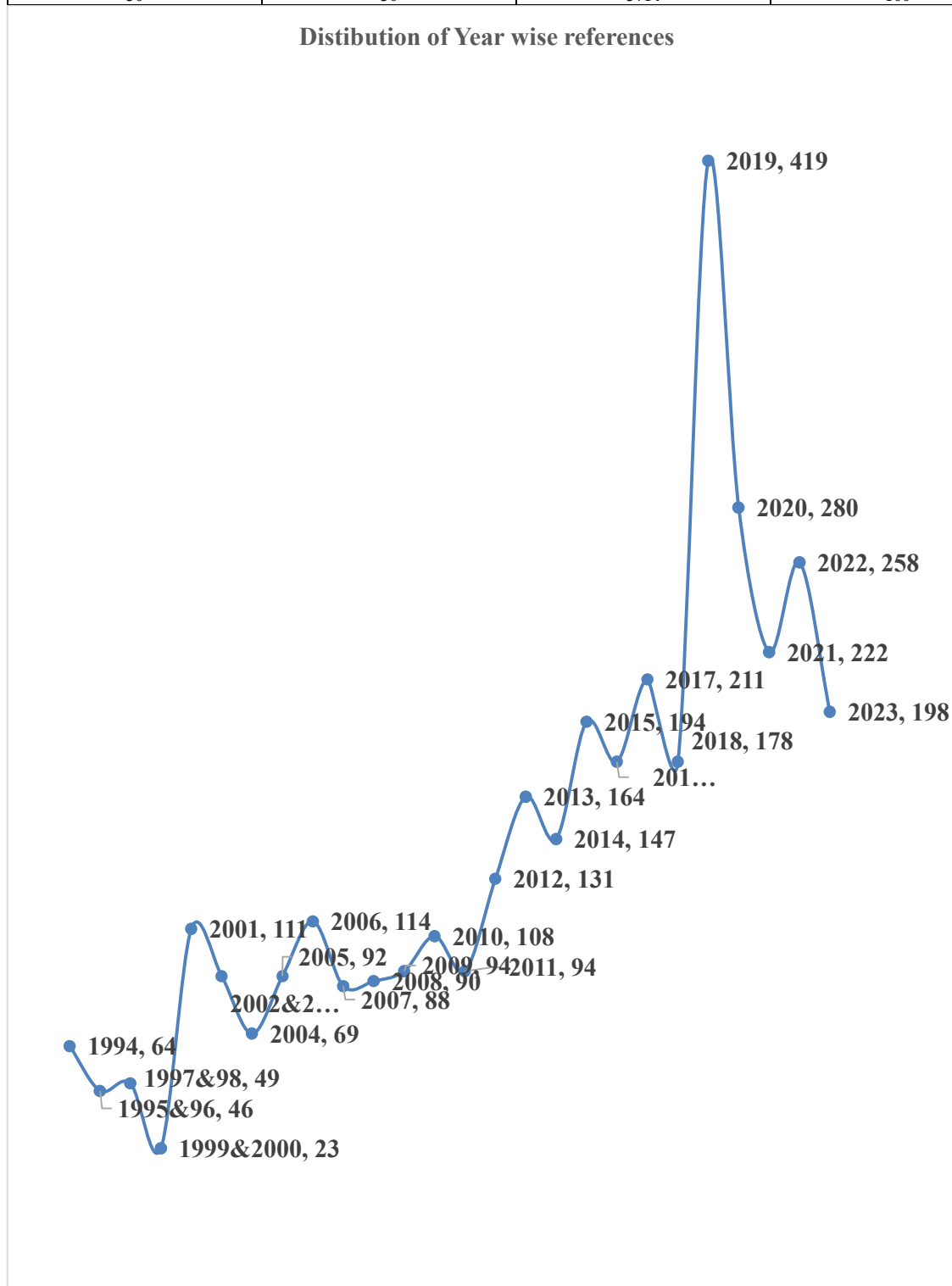


Table number 02 gives the details of the citations presented in the articles published in the Journal “Granthalaya Vigyan”. From 1994 to 2023, in a total period of 30 years, 3714 citations have been given in 503 articles. The highest number of cited articles is in the 50th volume of the year 2019 with 419 citations and the least number of cited articles is in the 30 and 31st volume of the year 1999-2000 with 23 citations.

Table 3: Forms of Cited Documents in Granthalaya Vigyan

Year/Total Documents	Books	Journals	Conference/Seminar proceedings	WWW	Theses/ Dissertations	Miscellanies	Total
1994	42	22	-	-	-	-	64
1995&96	39	07	-	-	-	-	46
1997&98	38	09	02	-	-	-	49
1999&2000	15	08	-	-	-	-	23
2001	54	44	10	02	01	-	111
2002&2003	42	43	04	01	02	-	92
2004	35	16	07	11	-	-	69
2005	47	21	04	20	-	-	92
2006	83	21	05	05	-	-	114
2007	41	28	05	14	-	-	88
2008	39	31	06	14	-	-	90
2009	55	14	19	06	-	-	94
2010	39	37	26	06	-	-	108
2011	34	22	01	35	02	-	94
2012	45	46	10	28	02	-	131
2013	56	51	05	51	01	-	164
2014	37	41	12	57	-	-	147
2015	52	39	06	97	-	-	194
2016	49	42	04	82	01	-	178
2017	50	43	08	107	01	02	211
2018	26	53	01	94	-	04	178
2019	66	116	13	210	02	12	419
2020	25	53	19	173	03	07	280
2021	13	37	04	155	-	13	222
2022	19	49	02	179	-	09	258
2023	14	30	03	148	-	03	198
Total	1055	923	176	1495	15	50	3714
%	28.40	24.85	4.73	40.25	0.40	1.34	100

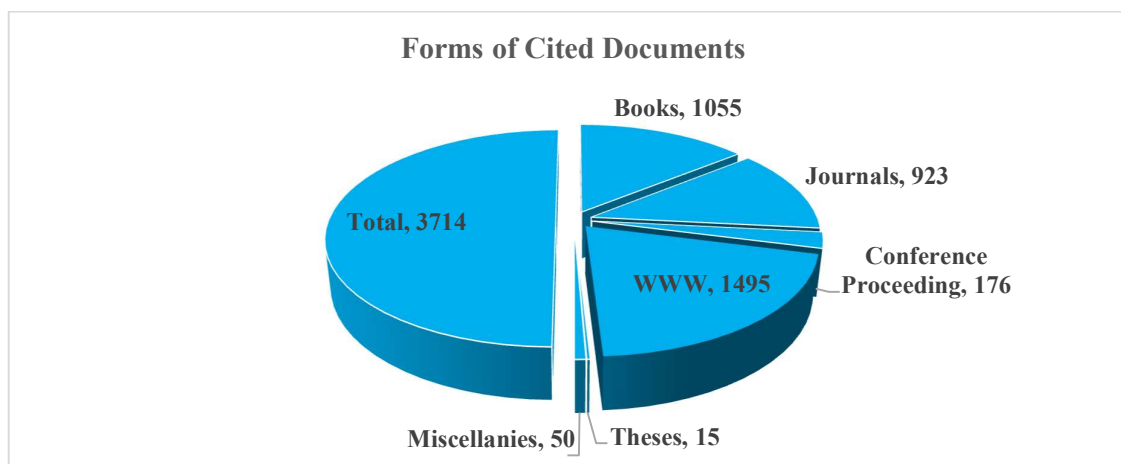


Table No. 03 describes the various formats of documents cited in the articles published in the Journal, in which the total number of cited articles in the period of 30 years from 1994 to 2023 is 3714.

The total number of cited books taken from 1994-2023 is 1055 which is 28.40% of the citations, in which the maximum number of 83 texts were cited in the year 2006 and the minimum number of 13 books were cited in 2021.

The total number of Journals/periodicals is 923 which is 24.85% of the total citations. In which the maximum number of 116 periodicals were cited in the year 2019 and the minimum number of 07 periodicals were cited in the year 1995-96.

The total number of conference/seminar proceedings is 176 which is 4.73% of the total citations. In which the maximum number of 26 conference proceedings were cited in the year 2010 and the least number of 01 conference proceedings were cited in the year 2011.

The total number of World Wide Web is 1495 which is 40.25% of the total citations. In which the maximum number of 210 World Wide Web were cited in the year 2019 and the least number of 01 World Wide Web were cited in the year 2002-03.

Similarly, the total number of theses/dissertations is 15 which is 0.40% and miscellanies is 50 which is 1.34% of the total citations.

Table 4: Authorship Patterns of Contributions in Granthalaya Vigyan

Year/No. of Author	Single	Two	Three	Total
1994	09	02	-	11
1995&96	03	07	01	11
1997&98	06	04	-	10
1999&2000	13	04	-	17
2001	09	10	-	19
2002&2003	08	03	03	14
2004	07	05	-	12
2005	08	05	02	15
2006	05	11	01	17
2007	03	06	03	12
2008	06	07	03	16
2009	06	05	04	15
2010	06	10	02	18
2011	03	10	04	17
2012	04	09	04	17
2013	08	08	03	19
2014	06	11	02	19
2015	07	11	-	18
2016	07	14	-	21
2017	10	13	-	23
2018	08	15	-	23
2019	16	26	02	44
2020	12	16	2	30
2021	11	16	01	28
2022	11	17	01	29
2023	13	15	-	28
Total	205	260	38	503
%	40.75	51.68	7.55	100

From the analysis of table number 04, it is known that in the period of 30 years from 1994 to 2023, the trend of two authors is the highest at 260 (51.68%) and the trend of three authors is the lowest at 38 (7.55%). Thus, it can be said that joint authorship is the highest in the Journal “Granthalaya Vigyan”.

Table 5: Single and Multi-Author of Contributions in Granthalaya Vigyan

S. No.	Year	Single Author		Multi Author		Total
		No. of Articles	%	No. of Articles	%	
1	1994	09	4.39	02	0.67	11
2	1995&96	03	1.46	08	2.68	11
3	1997&98	06	2.92	04	1.34	10
4	1999&2000	13	6.34	04	1.34	17
5	2001	09	4.39	10	3.35	19
6	2002&2003	08	3.90	06	2.01	14
7	2004	07	3.41	05	1.67	12
8	2005	08	3.90	07	2.34	15
9	2006	05	2.43	12	4.02	17
10	2007	03	1.46	09	3.02	12
11	2008	06	2.92	10	3.35	16
12	2009	06	2.92	09	3.02	15
13	2010	06	2.92	12	4.02	18
14	2011	03	1.46	14	4.69	17
15	2012	04	1.95	13	4.36	17
16	2013	08	3.90	11	3.69	19
17	2014	06	2.92	13	4.36	19
18	2015	07	3.41	11	3.69	18
19	2016	07	3.41	14	4.69	21
20	2017	10	4.87	13	4.36	23
21	2018	08	3.90	15	5.03	23
22	2019	16	7.80	28	9.39	44
23	2020	12	5.85	18	6.04	30
24	2021	11	5.36	17	5.70	28
25	2022	11	5.36	18	6.04	29
26	2023	13	6.34	15	5.03	28
Total		205	100	298	100	503

In table number 05, the contributions of single author and multiple authors in the Journal “Granthalaya Vigyan” have been shown. From the analysis, it is known that in the period of 30 years from 1994 to 2023, the number of single authors in the total 503 articles is 205 i.e. 40.75%, whereas the number of multiple authors is the highest at 298 i.e. 59.24%.

Table 6: Degree of Collaboration in Granthalaya Vigyan

S. No.	Year	Vol. and Issues	Articles	Multi Author	Degree of Collaboration
1	1994	25	11	02	0.18
2	1995&96	26&27	11	08	0.72
3	1997&98	28&29	10	04	0.4
4	1999&2000	30&31	17	04	0.23
5	2001	32	19	10	0.52
6	2002&2003	33&34	14	06	0.42
7	2004	35	12	05	0.41
8	2005	36	15	07	0.46
9	2006	37	17	12	0.70
10	2007	38	12	09	0.75
11	2008	39	16	10	0.62

12	2009	40	15	09	0.6
13	2010	41	18	12	0.66
14	2011	42	17	14	0.82
15	2012	43	17	13	0.76
16	2013	44	19	11	0.57
17	2014	45	19	13	0.68
18	2015	46	18	11	0.61
19	2016	47	21	14	0.66
20	2017	48	23	13	0.56
21	2018	49	23	15	0.65
22	2019	50	44	28	0.63
23	2020	51	30	18	0.6
24	2021	52	28	17	0.60
25	2022	53	29	18	0.62
26	2023	54	28	15	0.53
Total	30	30	503	298 (0.592%)	

In table number 06, the status of the degree of collaboration in the Journal “Granthalaya Vigyan” has been told. For the position of cofactors, the formulas given by K. Subrahmanyam (1983) have been used.

Formula- $DC = Nm / (Nm + Ns)$

Here-

DC = Degree of collaboration

Nm = Number of multi-authored Contributions

Ns = Number of single authored Contributions

In the table, the number of single authors is 205 and the number of multiple authors is 298. On adding these two, the total cited authorship is 503. Now, on finding the value of position of collaboration -

$$DC = 298 / (298 + 205) = 503$$

$$298 / 503 = 0.583$$

Thus, it can be said that on the basis of the number of single authors and co-authors, the value of position of degree of collaboration in cited authorship in “Granthalaya Vigyan” Journal is 0.583%, which is the highest.

6 Conclusion

The main conclusions of the present article are as follows:

- 1 The frequency of this magazine is annual but its four volumes are published bi-annually.
- 2 From 1994 to 2023, 30 volumes of this Journal have been published in a total period of 30 years, in which 503 articles have been published in these 30 volumes.
- 3 The total number of cited books taken from 1994-2023 is 1055 which is 28.40% of the citations, in which the maximum number of 83 texts have been cited in the year 2006 and the least number of 13 books have been cited in the year 2021.

4 The total number of Journals/periodicals is 923 which is 24.85% of the total citations. In which the maximum number of 116 periodicals were cited in the year 2019 and the least number of 07 periodicals were cited in the year 1995-96.

5 Total number of conference/seminar proceedings is 176 which is 4.73% of the total citations. In which the maximum number of 26 conference proceedings were cited in the year 2010 and the least number of 01 conference proceedings were cited in the year 2011.

6 Total number of World Wide Web is 1495 which is 40.25% of the total citations. In which the maximum number of 210 World Wide Web were cited in the year 2019 and the least number of 01 World Wide Web were cited in the year 2002-03.

7 Total number of theses/dissertations is 15 which is 0.40% and miscellanies is 50 which is 1.34% of the total citations.

8 In the 30-year period from 1994 to 2023, the trend of two authors is the highest at 260 (51.68%) and the trend of three authors is the lowest at 38 (7.55%) i.e. the trend of joint authorship is the highest in Granthalaya Vigyan Journal.

9 The contributions of single authors and multiple authors have been shown in Granthalaya Vigyan Journal. In a total of 503 articles in a period of 30 years, the number of single authors is 205 i.e. 40.75% whereas the number of multiple authors is the highest at 298 i.e. 59.24%.

10 The value of the status of collaborators in the authorship quoted in Granthalaya Vigyan Journal is 0.592%, which is the highest.

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