

AUTHORSHIP PATTERN OF SADHANA –ACADEMY PROCEEDINGS IN ENGINEERING SCIENCES (E- JOURNAL)

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Abstract: *The study presents the trends in authorship patterns in Sadhana –Academy Proceedings In Engineering Sciences with a sample of 243 articles collected from website of res. Journal during 1978 to 1987. The average number of authors per article is 2.1. In the study the degree of collaboration (C) during the overall 10 years (1978-1987) is 2.6 but the year wise degree of collaboration is different, it may vary and sometimes less. In this study period, the multi-authorship articles are higher and predominant on single authorship. This study reveals that the researches sadhana are kept toward multi authored than solo research.*

Keywords: *Authorship Pattern, Degree of Collaboration, Collaborative Index,*

Introduction:

The word Sadhana come from Sanskrit which very familiar to Indian readers. Sadhana –Academy Proceedings In Engineering Sciences was started in the year 1978. Then it divided from being a part of the proceedings of the Indian academy of sciences – section c, and was renamed Sadhana in the year 1984. The frequency of journal was quarterly up to 1978-1992 then six issues per year in 1993-2015 & again the publication pattern of journal changes as a twelve issue per year in 2015-2019. The journal covers all branches of engineering science & technology. The main motive of the journal focuses on papers that are relevant to more than one professional group, either because the work is fundamental. Sadhana - academy proceedings in engineering sciences is now distributed in print outside, India ISSN no is 0256-2499 (Print) & online 0973-7677 (E-print) worldwide by Springer, collaboration with the Indian academy of sciences. This journal abstracted and indexed in academic search, CAS, CSA, Compendex, Google Scholar, INIS, Science Citation Index, and Scopus. This journal publishes special issue devoted to special area of engineering science.

2. Objective:

1. To Study year & volume wise distribution of the articles.
2. Year wise Authorship Pattern.
3. To study numeric authorship pattern by volume/ year.
4. To Find out Author Productivity.
5. To Study degree of Collaboration

3. Hypothesis:

Following hypothesis are drawn for the study.

1. In This Study no. of contribution is slightly decrease.
2. In this study multi author published more article than single author.

4. Methodology:

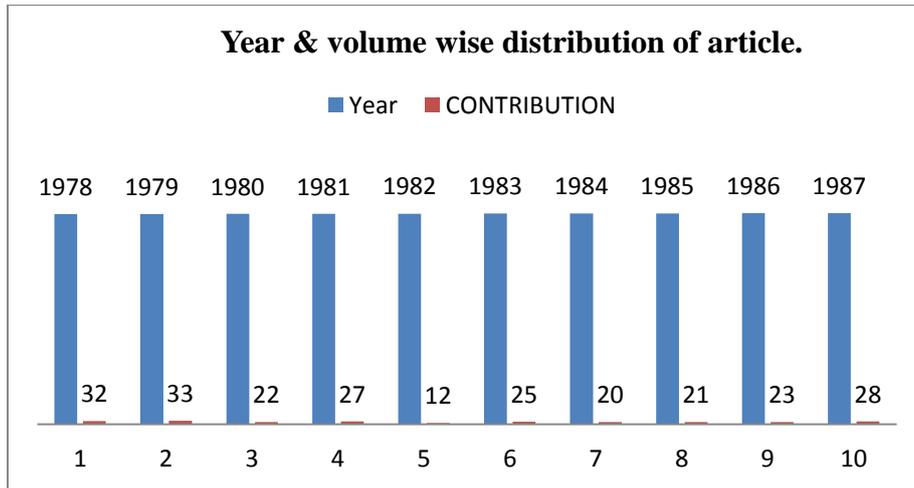
Data of journal is down load from respective site of journals from 1978 (vol.1) to 1987 (Vol.10).In this study descriptive as well as qualitative and quantitative method of research is used for drawn finding.

5. Analysis of Data:

5.1 Year & Volume wise distribution of the articles

Sr. no	Year	No. of issue	No. of contribution in this year	%
1	1978	4	32	13.16
2	1979	4	33	13.58
3	1980	4	22	9.05
4	1981	4	27	11.11
5	1982	4	12	4.93
6	1983	4	25	10.28
7	1984	4	20	8.23
8.	1985	4	21	8.6
9.	1986	4	23	9.46
10.	1987	4	28	11.52
Total		40	243	100

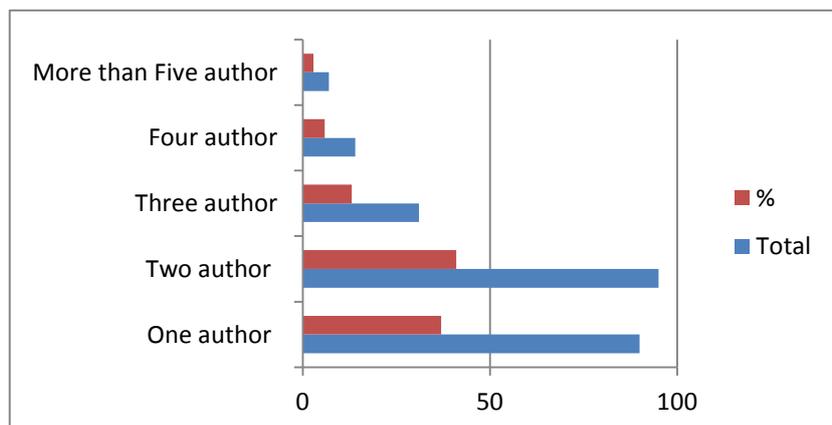
from table 5.1 & graph, it is observed that year & volume wise distribution of the articles show slightly decrease from year 1980 to 1986 .highest no. of contribution in 1979 i.e.33(13.58%) and lowest no. of contribution in 1982 i.e.12(4.93%).This indicate that no. of contribution is slightly decrease (**Hypothesis No.1**)



Graph 1.

5.2 Authorship Pattern

Sr. No	Author	Total	%
1.	One author	90	37
2.	Two author	95	41
3.	Three author	31	13.08
4.	Four author	14	5.90
5.	More than Five author	07	2.9
		237	100



Graph 2. Authorship Pattern

Data collected from respective site is analyzed according to study the authorship pattern. From the above table it is observed two author contributed highest publication i.e. 95(41%) followed by single author contribution 90 (37 %).Lowest contribution of publication is more than five authors 07(2.9%).This indicate that In this study multi author published more article than single author.(**Hypothesis No.2**)

5.3 Year wise Authorship Pattern.

Sr. No	Year	Vo 1	Author per article					No. of author	%
			1	2	3	4	More than 5		
1.	1978	1	12	4	2	2	1(6)*,3(7)*,1(8)*, 1(9)*	26	10.97
2.	1979	2	14	11	4	4	0	33	13.92
3.	1980	3	11	09	02	0	0	22	9.28
4.	1981	4	16	09	01	1	0	27	11.39
5.	1982	5	05	04	01	01	1(30)*	12	5.06
6.	1983	6	07	12	05	0	0	24	10.12
7.	1984	7	05	15	1	0	0	21	8.86
8.	1985	8	09	08	04	0	0	21	8.86
9.	1986	9	04	11	04	04	0	23	9.70
10.	1987	10	07	12	07	02	0	28	11.81
Total			90 (37.97)	95 (40)	31 (13)	14 (5.9)	07(2.95)	237	100

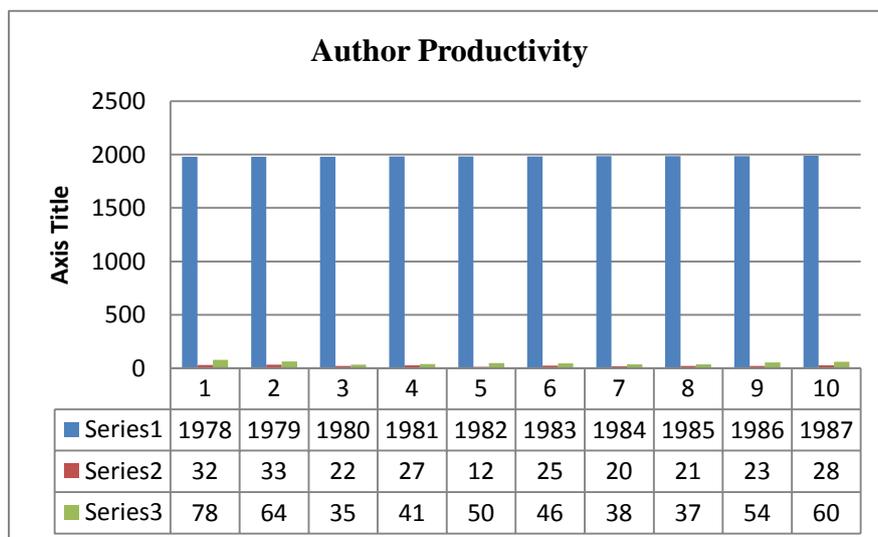
Six (6)*,Seven (7)*,Eight(8)*,Nine (1)*Authors

Table 5.3 show that year wise authorship pattern in Sadhana academy proceedings in engineering sciences (e- journal)from 1979-1987 .this table show that article in 1979 no. of authors is increased 33(13.92) followed by 1987 (28, 11.81%). In this study double author more i.e. 95(37.97%), followed by single author 90(37.97%). In year 1982 show 30 author contribute a single paper as well as in 1978, only year that Six to Nine author contribute a single paper. Over all this table show that multi author contribution is more than others.

5.4 To find out author productivity.

Year	No. of article	No. of author	AAPP	Productivity /Author
1978	32	78	2.4	0.41
1979	33	64	1.9	0.5
1980	22	35	1.5	0.6
1981	27	41	1.5	0.65
1982	12	50	4.1	0.2
1983	25	46	1.8	0.54
1984	20	38	1.9	0.52
1985	21	37	1.7	0.56
1986	23	54	2.3	0.42
1987	28	60	2.14	0.46
Total	237	503	2.1	0.4

AAPP=no. of author / no. of paper ,PPA= no.of papers/ no.of authors



According to table 5.4 & graph the value of average number of authors per papers is 2.1 and the average productivity per author’s res.is 0.4. The highest value of AAPP in year 1978 res.78 (2.4%) & lowest value was 35 (1.5%) in1980.

5.3 To Study degree of Collaboration

Year	Vol.no	No. of single author(Ns)	No. of multiple author(Nm)	Total (Ns+Nm)	Degree of collaboration of author
1978	1	12	14	26	0.5
1979	2	14	19	33	0.5
1980	3	11	11	22	0.5
1981	4	16	11	27	0.4
1982	5	05	07	12	0.58
1983	6	07	17	24	0.7
1984	7	05	16	21	0.7
1985	8	09	12	21	0.5
1986	9	04	19	23	0.8
1987	10	07	21	28	0.7
Total		90	147	237	0.6

Formula to calculate, This formula given by K.Subramanya (1983)

$$DC = \frac{Nm}{Ns + Nm}$$

$$DC = \frac{147}{90 + 147}, DC = \frac{147}{237}$$

The Value Of DC=0.6

The degree of collaboration is defined as the ratio multi authored papers published during a year & total no. of papers published during that year. .Table no.5.5 show the degree of collaboration in journal is 0.6 .which clearly show that its dominance over single authored contribution. in this study degree of collaboration by author over a period of 10 year & detailed show in the above table. in this work the value of C is in between 2.1(1978) to 4(1987) during this study period.

6. Finding & Conclusion:

The authors studied year-wise growth Sadhana –Academy Proceedings In Engineering Sciences their authorship trend and the degree of collaboration. A gradual growth of journal output in Sadhana –Academy Proceedings In Engineering Sciences is

observed. The average number of authors per article is 2.1. The mean value of year-wise degree of collaboration for 10 years is 0.6. The year-wise degree of collaboration for 10 years is almost as same as the mean value 0.6. The single author publication of articles is very less with 90 (3.03%) articles. The authorship pattern reveals a remarkable difference between the number of single author and multiple authors. The study concludes that multiple-authorship research is predominant as compare to single authored contribution.

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