

# The Open Software Engineering Journal: “Bibliometrics Study”

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**Abstract:** *This paper examines the articles published in the open software engineering journal for authorship pattern, degree of collaboration and geographical distribution of papers. The studies carried out for this paper found that majority of papers are multi authored. The degree of collaboration is found to be 0.75. The geographical distribution reveals that the contribution by Finland and Canada is the highest in foreign.*

**Keyword:** Web of the Engineering, Degree of collaboration, Authorship pattern, Bibliometrics, open software engineering journal

## 1. Introduction

Bibliometrics is a relatively new subject or branch of information science. It is interdisciplinary research method which utilizes quantitative analysis and statistics to describe patterns of publication within a given field or body of literature. The basic units of Bibliometrics are all facets of written communications, such as, primary and secondary periodicals, articles and abstracts published in them, bibliographies of articles, books, monographs and other media of communication [Sengupta, 1985]. It has sound theoretical base with contribution from Pritchard, Lotkas, Gross, Bradford, Zipf, Garfield, Vickery and many others. The present study relates to Bibliometrics analysis of 16 articles published in open software engineering journal from 2007 to 2012. The data is analyzed to know the authorship pattern, degree of collaboration and Geographical distribution of papers.

## 2. Objectives of the Study

The objectives of the present study are to find the following:

1. Year-wise distribution of articles
2. Authorship Pattern
3. Degree of collaboration among the author
4. Geographical distribution
5. Country wise distribution of articles

## 3. Methodology

The present study is related to Bibliometric analysis of 16 articles published in open software engineering journal to evaluate the research publication of Developing Library Network (Delnet) New Delhi in the field of science and Technology. authorship pattern, The degrees of collaboration of authors, geographical distribution and country wise distribution of articles are examined to identify the pattern of research contribution in the field of

science and technology database on open software engineering journal and cover the period from 1999 to 2007, Further, the research has downloaded the paper and bibliographical data in the form of notepad files. Then the bibliographical details are converted to the form of MS – EXCEL format using the PHP (hypertext pre processor), Scripting language text extracting based a delimiters Programme. Finally, the unique data are rearranged in MS – EXCEL format to the data for analyzing the present study.

## 4. Scope and Coverage of the Study

The analysis of information use of the research publication of Developing Library Network (Delnet). New Delhi in the field of science and Technology The subject coverage on the open source software journals by them during the period from 2007-2012 were taken for the study

**Table 1:** Details about the open software engineering journal

Sl	Title	Publishers	Frequency	ISSN	Starting year
1	The Open Software Engineering Journal	Bentham Science Publishers,	Annual	1874-107X	2007

**Table 2:** Year-wise distribution of articles in the open software engineering journal

Sl	year	No. of articles	%
1	2007	1	6.25
2	2008	4	25.00
3	2009	5	31.25
4	2010	3	18.75
5	2011	1	6.25
6	2012	2	12.50
		16	100

Table 2 indicates the year-wise distribution of articles in the open software engineering journal. It is observed that the highest number of 5 (31.25%) articles have been appeared in the year 2009. Followed by 4 (25.00%) articles in the years 2008. The less Productive year is 2011(6.25 %).

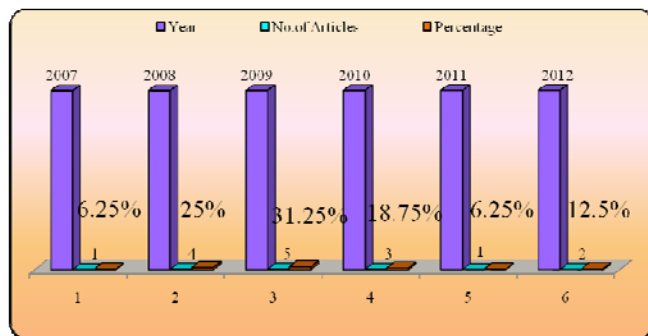


Figure 1: Year wise Distribution

Table 3: Authorship Pattern

Sl	Authorship	No. of papers	%
1	Single	4	25.00
2	Two	6	37.50
3	Three	4	25.00
4	Four	2	12.50
		16	100

The above table -3 showed that out of 16 articles contributed a single author has contributed 25.00% of the total articles. 37.50 % of the contributions were published two authors, 25.00% of the contributions were contributed by one author and three authors, 12.50 % of contributions were contributed by more than four author. A Significant note of the study is that the majority of articles are contributed by two authors.

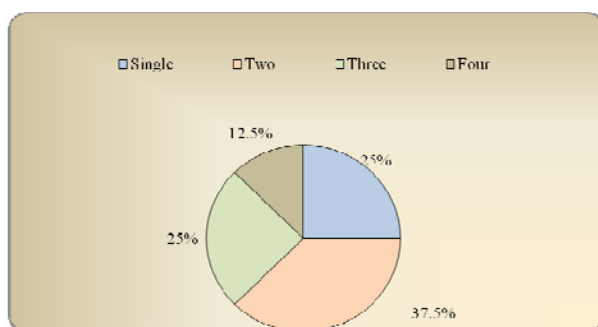


Figure 2: Authorship Pattern

### Degree of Collaboration in the Open Software Engineering Journal

The formula given by K.Subramanyam is useful for determining the degree of collaboration in quantitative terms. The study followed the same formula which is mathematically put as:

$$C = \frac{NM}{NM + NS}$$

Where,

C= Degree of collaboration

NM = Number of Multi-Author papers

NS = Number of Single Author Paper.

In the Present Study NM = 12, NS = 4

$$C = \frac{12}{12+4} = \frac{12}{16}$$

$$C = 0.75$$

Thus the degree of collaboration in Indian Journal of Nutrition and Dietetics is 0.95 which clearly indicates its dominance upon individual contribution

Table 4: Geographical distribution of Papers

Sl	Categories	Articles	%
1	Foreign countries	24	100

The geographical distribution is indicated by two sub categories ie Indian and Foreign countries (Table 4). In total 1 Foreign countries have contributed 2(0.65%) articles and Indian has contributed 305(99.35%).

Table 5: Country-Wise Distribution of Published Article

Sl	State	Articles	%	Cumulative
1	Finland	3	12.5	12.50
2	Canada	3	12.5	25.00
3	Germany	3	12.5	37.50
4	Mexico	3	12.5	50.00
5	New Zealand	3	12.5	62.50
6	Rock hill	1	4.17	66.67
7	Jordan	1	4.17	70.84
8	Lebanon	1	4.17	75.01
9	Thailand	1	4.17	79.18
10	Argentina	1	4.17	83.35
11	Spain	1	4.17	87.52
12	United kingdom	1	4.17	91.69
13	Sweden	1	4.17	95.86
14	Nicosia	1	4.17	100
	Total	24	100	

Form the analysis it has been observed that the highest numbers of contributors are from 3 articles and the percentage 12.50% and it is followed by Finland, Canada, Germany, and Mexico.

## 5. Conclusion

The present study is related to Bibliometrics analysis of articles published in open software engineering journal from 2007-2012. The study has analyses various aspects such as authorship Pattern, degree of collaboration among the authors and geographical distribution of papers. The year-wise distribution of articles in open software engineering journal shows that the highest number 5 (31.25%) total output 26 have appeared in the year 2007 & 2012. Maximum number of articles is 6 (37.50%) have been contributed by Two authors. This shows that single author research work were low among the contribution made to the open software engineering journal. This has been further testified with the degree of collaboration. The degree of collaboration in open software engineering journal is 0.75 which clearly contribution.

The Geographical distribution of papers highlights that the journal is dominated by the host country (ie foreign) as most of the articles are contributed by the professionals from foreign. The result further reveal that the contribution by Finland, Canada, and Germany in the highest one in foreign.

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## Author Biography



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