

# International Journal of Qualitative Methods (2002-2011): A Bibliometric Study

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**Abstract** – The bibliometric study analysis the journal titled “International Journal of Qualitative Methods” for the period between 2002 to 2011. The paper covers the number of articles, authorship pattern, average number of references per articles, year-wise distribution of cited journals etc. It is found that the joint authors have contributed highest number of articles.

**Keywords:** Bibliometric Study, Qualitative Methods, Authorship Pattern, Citation Analysis

## I. INTRODUCTION

The bibliometric study aims to improve the bibliographical control because bibliometric analysis helps to know the character of literature in different fields. The volume and growth of primary literature has a direct effect on structure of secondary literature. Therefore, the computed growth rates and direction of change may be of services in determining their future approach and coverage. A major area of bibliometric study is to determine statistics of literature relating to the country of origin, subject, and form and language distribution of documents as well as their incidence of translation. The data will provide useful information determining the scope of work, and can suggest weakness in the coverage or areas of possible improvement of secondary services.

Bibliometrics study reveals the organization of technological sectors from the stand point of the information sources. It measures the scientific growth by applying statistical methods to the production of scientists. In this way, it establishes the degree of development of the different disciplines. Bibliometrics is the ensemble

of methodological knowledge that will serve the application of quantitative techniques in order to evaluate the processes of production, communication and use of scientific information.

## II. REVIEW OF LITERATURE

The bibliometric study conducted by Biswas, Roy, and Sen (2007) on Economic Botany from 1994-2003 and reveals that among the citations, books accounted for 59%, and articles 41% and e-citations were quite negligible. Rama Krishnan and Ramesh Babu (2007) carried out a bibliometric analysis of literature output in the field of Hepatitis covered in three bibliographic databases namely MEDLINE, CINAHL and IPA for a period 1984-2003. The study states out that there were 82617 records in Hepatitis for which that collaboration in authorship pattern is prevalent, which is account to be averaging 0.85. Thansukodi (2010) discussed the research output performance of social scientists on social science subjects. The analysis covers the number of articles, authorship pattern, subject-wise distribution of articles, average number of references per articles, forms of documents cited, year-wise distribution of cited journals etc.

This study conducted by Thansukodi (2012) on Bibliometric Analysis of DESIDOC Journal of Library & Information Technology 2002-2010 reveals that out of 199 articles, 116 (58.29%) articles were contributed by joint authors while the rest 83 (41.71%) articles were contributed by single author. Suchetan Kumar, Charu Tiwari and Mahija Deepu studied on A Bibliometric Analysis of 139

contribution in Indian Sociology, during 2000- 2009. The study reveals the distribution of contributions, authorship pattern, citation analysis, geographical distribution of contributions, number of pages used in each volume and gender distribution. The study indicates that the most of the contributions are single authors and male authors have a slight edge over female contributors.

### III. OBJECTIVES

The objectives framed by the researcher for the purpose of the present research are

1. To find out volume-wise distribution & average number of contributions per volume;
2. To find out the authorship pattern;
3. To calculate the volume-wise degree of collaboration;

4. To Study the length of article;
5. To Study the degree of collaboration;
6. To Study the Distribution of citation.

### IV. METHODOLOGY

For the present study, the International Journal of Qualitative Methods has been selected as the source journal.

A Total of 40 issues of the International Journal of Qualitative Methods (2002-2011) have been taken for the study. The details regarding the published article such as title of the article, number of authors, number of reference with list, page number, number of tables and figures etc., were recorded and analyzed for making observations. Tables are filled by tally mark system counting one by one reference and other data. The data has been calculated and represented in tables. The study does not take consideration how far a certain piece of information is useful or a particular citation relevant to the central theme of the citing documents. The citations were counted by the type of document and volume wise.

### V. ANALYSIS OF THE STUDY

TABLE I VOLUMEWISE DISTRIBUTION

| Year                   | Vol.No. | No.of Issues | No. of Contributions | %    |
|------------------------|---------|--------------|----------------------|------|
| 2002                   | 1       | 4            | 26                   | 11   |
| 2003                   | 2       | 4            | 17                   | 17.2 |
| 2004                   | 3       | 4            | 15                   | 06.4 |
| 2005                   | 4       | 4            | 22                   | 09.4 |
| 2006                   | 5       | 4            | 31                   | 13.2 |
| 2007                   | 6       | 4            | 28                   | 11.9 |
| 2008                   | 7       | 4            | 23                   | 09.8 |
| 2009                   | 8       | 4            | 22                   | 09.4 |
| 2010                   | 9       | 4            | 21                   | 08.9 |
| 2011                   | 10      | 4            | 30                   | 12.8 |
| 10 years               | volumes | 40 issues    | 235 articles         | 100  |
| Average : articles     |         |              | Total: 235 articles  |      |
| Highest % 13.2 (2006 ) |         |              | Lowest % 06.4 (2004) |      |

Table I indicates that the volume-wise output. It is clear from the above table that Vol. No. 5 has shown a predominant contribution (13.2%) whereas Vol. No. 3 has

shown less contribution (15%). The contribution during the study period was 235 publications.

TABLE II SHOWING YEAR-WISE DISTRIBUTION OF OUTPUT

| Volume | Year | No.of Output | Cum. No. of Output | W <sub>1</sub> | W <sub>2</sub> | R(a) | Mean R.(a) 1 – 2 | Doubling Time DT.(A) | M Dt(a) 1 – 2 |
|--------|------|--------------|--------------------|----------------|----------------|------|------------------|----------------------|---------------|
| 1      | 2002 | 26           | 26                 |                | 3.26           |      |                  |                      |               |
| 2      | 2003 | 17           | 43                 | 2.83           | 3.76           | 0.93 |                  | 0.75                 |               |
| 3      | 2004 | 15           | 58                 | 2.7            | 4.1            | 1.4  |                  | 0.49                 |               |
| 4      | 2005 | 22           | 80                 | 3.09           | 4.38           | 1.29 |                  | 0.54                 |               |
| 5      | 2006 | 31           | 111                | 3.43           | 4.71           | 1.28 |                  | 0.54                 |               |
| 6      | 2007 | 28           | 139                | 3.33           | 4.93           | 1.6  |                  | 0.43                 |               |
| 7      | 2008 | 23           | 162                | 3.13           | 5.08           | 1.95 |                  | 0.35                 |               |
| 8      | 2009 | 22           | 184                | 3.09           | 5.21           | 2.12 |                  | 0.33                 |               |
| 9      | 2010 | 21           | 205                | 3 .04          | 5.32           | 2.28 |                  | 0.3                  |               |
| 10     | 2011 | 30           | 235                | 3.4            | 5.45           | 2.05 |                  | 0.34                 |               |
|        |      |              |                    |                |                |      | 1.65             |                      | 0.45          |

Table II indicates the relative growth rates of articles output and also the doubling time for publication. It includes all sources of publication. It could be observed that the relative growth rates of all sources of research output have decreased from 0.93 in 2003 to 2.05 in 2011. The mean relative growth rates for the periods 2002-2011. The overall

study period has witnessed a mean relative growth rate of 1.65.

Contrastingly the doubling time for publication of all sources of article output increased from 0.75 in 2003 to 0.34 in 2011. The mean doubling time for publications for the periods of 2002-2011 was 0.45.

TABLE III AUTHORSHIP PATTERN OF CONTRIBUTION

| No. of Authors | No. of Contribution | %      |
|----------------|---------------------|--------|
| One            | 111                 | 47.23  |
| Two            | 63                  | 26.81  |
| Three          | 36                  | 15.32  |
| >three         | 25                  | 10.64  |
| Total          | 235                 | 100.00 |

It is evident from the Table III that the contributions of single authors are more than those of double, triple or more than triple authors. The multiple authorship patterns from two authors, three authors and more than three authors has the most productive publications i.e., 124 (52.77%) papers while the single authorship pattern has 111 (47.23%) papers.

The Table IV shows the trends in authorship pattern, as multi authored papers are leading in frequency of occurrence in the International Journal of Qualitative

Methods throughout the study and more interestingly this growth is continuous which significantly indicates about the future pattern in authorship. The difference in frequency can be analysed easily by plotting a graph based on above data.

During 2002-2011, the single authors contributed highest number ie. 16 and 16 in the years 2002 and 2006 respectively. The highest number of published by the multiple authors in the year 2011 (16.1%).

TABLE IV AUTHORSHIP PATTERN OF CONTRIBUTIONS (VOLUME-WISE)

| Year | Vol.No. | 1 Author | %     | 2 Author | %    | 3 Author | %    | >3 | %   | Total | %    |
|------|---------|----------|-------|----------|------|----------|------|----|-----|-------|------|
| 2002 | 1       | 16       | 14.5  | 4        | 6.3  | 1        | 2.8  | 5  | 20  | 26    | 11.1 |
| 2003 | 2       | 8        | 7.2   | 4        | 6.3  | 4        | 11.1 | 1  | 4   | 17    | 7.2  |
| 2004 | 3       | 10       | 9     | 3        | 4.8  | 1        | 2.8  | 1  | 4   | 15    | 6.4  |
| 2005 | 4       | 7        | 6.3   | 10       | 15.9 | 4        | 11.1 | 1  | 4   | 22    | 9.4  |
| 2006 | 5       | 16       | 14.45 | 8        | 12.7 | 5        | 13.9 | 2  | 8   | 31    | 13.2 |
| 2007 | 6       | 10       | 9     | 9        | 14.3 | 4        | 11.1 | 5  | 20  | 28    | 11.9 |
| 2008 | 7       | 12       | 10.8  | 8        | 12.7 | 3        | 8.3  | 0  | 0   | 23    | 9.8  |
| 2009 | 8       | 10       | 9     | 8        | 12.7 | 1        | 2.8  | 3  | 12  | 22    | 9.4  |
| 2010 | 9       | 12       | 10.8  | 0        | 0    | 6        | 16.7 | 3  | 12  | 21    | 8.9  |
| 2011 | 10      | 10       | 9     | 9        | 14.3 | 7        | 19.4 | 4  | 16  | 30    | 12.7 |
|      | total   | 111      | 100   | 63       | 100  | 36       | 100  | 25 | 100 | 235   | 100  |

TABLE V SINGLE AUTHORED V/S MULTIPLE AUTHOR PAPERS

| Year     | Single Author | %     | Multiple Author | %    | Total No. of Contribution |
|----------|---------------|-------|-----------------|------|---------------------------|
| 2002     | 16            | 14.45 | 10              | 8.1  | 26                        |
| 2003     | 8             | 7.2   | 9               | 7.3  | 17                        |
| 2004     | 10            | 9     | 5               | 4    | 15                        |
| 2005     | 7             | 6.3   | 15              | 12.1 | 22                        |
| 2006     | 16            | 14.45 | 15              | 12.1 | 31                        |
| 2007     | 10            | 9     | 18              | 14.5 | 28                        |
| 2008     | 12            | 10.8  | 11              | 8.9  | 23                        |
| 2009     | 10            | 9     | 12              | 9.7  | 22                        |
| 2010     | 12            | 10.8  | 9               | 7.2  | 21                        |
| 2011     | 10            | 9     | 20              | 16.1 | 30                        |
| 10 YEARS | 111           |       | 124             |      | 235                       |

TABLE VI DEGREE OF COLLABORATION

| Year | Single Author | Multi Author | Degree of Collaboration<br>$C = \frac{Nm}{Nm + Ns}$ |
|------|---------------|--------------|---|
| 2002 | 16            | 10           | 0.38  |
| 2003 | 8             | 9            | 0.53  |
| 2004 | 10            | 5            | 0.33  |
| 2005 | 7             | 15           | 0.68  |
| 2006 | 16            | 15           | 0.48  |
| 2007 | 10            | 18           | 0.64  |
| 2008 | 12            | 11           | 0.48  |
| 2009 | 10            | 12           | 0.54  |
| 2010 | 12            | 9            | 0.43  |
| 2011 | 10            | 20           | 0.67  |

**Degree of Collaboration**

It is clear from the above analysis that the percentage of multi-authored papers is more than that of single authored papers. To determine the extent of collaboration in quantitative terms, the formula given by K. Subramanyam is used.

The formula is

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

$$C = \frac{124}{124 + 111} = 0.53$$

Thus the degree of collaboration of the International Journal of Qualitative Methods is 0.53. The distribution of degree of collaboration over the years from 2002 to 2011 is presented in table VI.

TABLE VII PAGE NUMBER-WISE ARTICLE

| Year | 1-10 | %    | 11-15 | %    | 16-20 | %    | >20 | %     |
|------|------|------|-------|------|-------|------|-----|-------|
| 2002 | 12   | 32.5 | 7     | 6.4  | 3     | 5.1  | 4   | 13.8  |
| 2003 | 7    | 18.9 | 7     | 6.4  | 2     | 3.4  | 1   | 3.45  |
| 2004 | 4    | 10.8 | 7     | 6.4  | 3     | 5.1  | 1   | 3.45  |
| 2005 | 3    | 8.1  | 8     | 7.2  | 8     | 13.5 | 3   | 10.34 |
| 2006 | 3    | 8.1  | 19    | 17.2 | 6     | 10.2 | 3   | 10.34 |
| 2007 | 2    | 5.4  | 10    | 9.1  | 10    | 16.9 | 6   | 20.7  |
| 2008 | 3    | 8.1  | 11    | 10   | 6     | 10.2 | 3   | 10.34 |
| 2009 | 2    | 5.4  | 11    | 10   | 6     | 10.2 | 3   | 10.34 |
| 2010 | 1    | 2.7  | 11    | 10   | 6     | 10.2 | 3   | 10.34 |
| 2011 | 0    | 0    | 19    | 17.3 | 9     | 15.2 | 2   | 6.9   |
|      | 37   |      | 110   |      | 59    |      | 29  |       |

TABLE VIII PAGE NUMBER-WISE PATTERN OF ONTRIBUTION

| Pages | No. of Contribution | %     |
|-------|---------------------|-------|
| 1-10  | 37                  | 15.75 |
| 11-15 | 110                 | 46.8  |
| 16-20 | 59                  | 25.11 |
| >20   | 29                  | 12.34 |
| Total | 235                 | 100   |

TABLE IX DISTRIBUTION OF CITATIONS (VOLUME WISE)

| Vol. No. | No. of Article | No. of Citation | %     |
|----------|----------------|-----------------|-------|
| 1        | 26             | 671             | 7.79  |
| 2        | 17             | 631             | 7.33  |
| 3        | 15             | 518             | 6     |
| 4        | 22             | 791             | 9.2   |
| 5        | 31             | 1149            | 13.34 |
| 6        | 28             | 1138            | 13.21 |
| 7        | 23             | 874             | 10.14 |
| 8        | 22             | 927             | 10.76 |
| 9        | 21             | 766             | 8.89  |
| 10       | 30             | 1149            | 13.34 |
|          | 235            | 8614            | 100   |

The Table VIII indicates that out of 235 contribution, the highest number, i.e.110 (46.8%) publications have 11-15 pages and 37 (15.75%) articles have 1-10 pages. 59 articles with 16-20 pages 29 (12.34%) article have >20 pages.

The Table IX shows that the Volume 5 & 10 has highest number of share (13.34%) in the total citation i.e 8614 received during the study, while least citations has been recorded in Volume 2 with (7.33%) 631citation and a total of 8614 citations have been recorded in 235 articles.

## VII. CONCLUSION

Due to changes in organization of social science, almost every researchers of today in contrast to the researchers of past belongs to an institution and works to a lesser or greater degree in collaboration or close contract with other researchers. This paper has analysed publications in, and citations to, the first ten volumes of the International Journal of Qualitative Methods. The analysis shows that there have been statistically significant changes in the types of article, in the numbers of references per article and in the lengths of the articles.

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