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**AUTHORSHIP PATTERN IN HISTORY
LITERATURE CITED IN DOCTORAL
DISSERTATIONS ACCEPTED BY
KURUKSHETRA UNIVERSITY AND PUNJAB
UNIVERSITY: AN ANALYSIS**

Authorship Pattern in History Literature Cited In Doctoral Dissertations Accepted By Kurukshetra University and Punjab University: An Analysis

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Abstract – Studies the authorship pattern and collaborative research in history, based on the data collected from doctoral dissertations accepted by Kurukshetra University and Punjab University from 1998-2007. The study revealed that the collaborative research is more favored than the solo research. The authorship collaboration is more in Journal articles than in books. The study concluded that authorship pattern, the degree of collaboration and the average number of authors were different in journals and in books.

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1. INTRODUCTION

Authorship trend and collaborative research are important facets of bibliometric studies. The authorship pattern, one of the prime aspects of citation analysis mainly deals with the kind of authors, nature and degree of collaboration among them and collaborative trend of authors. The characteristics of any subject literature include not only the basic publishing pattern but those of the authors themselves. Authors are important in a system which is concerned with the generation of information, its communication and consumption. Authors not only contribute to the production of new scientific knowledge, they also influence many other aspects related to and concerned with the information production, dissemination and use. Any kind of investigation aimed at studying the community of authors and their behavior is likely to yield such useful data as is helpful in improving the overall functioning of the information system.

Data on authorship is quantifiable and reliable and can be processed in several ways and made ready for analysis and interpretation as part of a serious research project. Two types of bibliometric studies relating to authors and their characteristics have been commonly reported in the literature.

2. AUTHORSHIP PATTERN

Studies of the first type are concerned with the investigation on co-authorship or collaborative trends of authors in specific subject areas. The organization of science has changed dramatically during the present century. As a result of which, unlike the scientists of the past, the present day scientists are no longer able to carry out their research in isolation. Today, almost all the scientists work to a lesser or

greater extent in collaboration with other scientists. The extent of collaboration in research depends on many factors such as the nature of research, the mode of financial support, use of large scale equipment's, interdisciplinary and heterogeneous nature of the subject, etc. It is often presumed that multiple authorship in a research paper is the direct consequence of collaborative research of the authors in a group or team. The first investigation by De Solla Price in this direction has pointed out that there has been an increasing trend of collaborative authorship. He has observed in the field of Chemistry that the number of single author articles is gradually decreasing whereas the proportion of multi-authored papers is going up steadily since the beginning of the twentieth century.

Many other investigations after De Solla Price have been carried out by different researchers in different branches of science in different countries at different time periods. It has been found from those studies that collaboration in research varies from one discipline to another and also in the same discipline it differs from time to time and from one country to another.

Very interesting predictions have been made by experts observing the then authorship trend. De Solla Price, by observing the growing trend towards team work in research and multi authorship, predicted that the single- author papers would be extinct by 1980.

Subramanyam and Joshi and Maheswarappa have written good review articles on the subject.

Multiple authorship has become correlative with collaboration and despite the problems of interpretation; collaboration in research can apparently be measured with the multiple authorship.

For the purpose of determining the extent of collaboration as indicated by the multiple authorship in a discipline, different measures such as Collaborative Index (CI), Degree of Collaboration (DC) and Collaborative Coefficient (CC) have been proposed in the literature.

Mean number of authors per paper is termed as Multiplicity Index by O'Connor, Collaborative Index by Lawani and Average Authorship per Paper (AAP) by Kalyane and Vidyasagar Rao. CI (AAP) can be expressed as $AAP = (\sum W_i P_i) / \sum P_i$ where,

W_i = Number of authors contributing to i^{th} category,

P_i = Number of papers in the i^{th} category, and

$i = 1, 2, 3, 4 \dots k$ authors.

The proportion of multiauthored papers to the total number of papers is called Degree of Collaboration (DC) by Subramanyam. Radhakrishnan and Kernizan have used the term Group Coefficient's (g) for the DC which can be expressed as:

$$DC = N_m / (N_m + N_s)$$

Where, DC = Degree of Collaboration in a discipline,

N_m = Number of multi authored research papers in a discipline published during a year,

N_s = Number of single-authored research papers in the discipline published during the same year.

It is a crude measure of multiple authorship indicating the proportion of single and multiple authors.

Ajiferuke and others are of the opinion that the DC does not differentiate the levels of multiple authorship. They have suggested an alternative measure, Collaborative Coefficient (CC) which incorporates some of the merits of both CI and DC. It indicates the weighted proportion of single and multiple authors; thus, it is a weighted measure of multiple authorship. Compared to DC, CC is a better measure as it gives due weight age to the number of authors. When CC is 0, it indicates that the total citations are single-authored. If a paper has a single author, the author receives one credit, if two authors, each receive $1/2$ credits, when n authors, each receive $1/n$ credit. Hence, the average credit awarded to each author of a random paper is $E(1/n)$ and $CC = 1 - E(1/n)$. Its sample estimate is:

$$1 - (f_1 + \frac{1}{2} f_2 + \dots + \frac{1}{k} f_k) / N$$

$$= 1 - [\sum (1/j) f_j] / N \text{ where,}$$

$$j=1$$

f_j = Number of j -authored research paper published in a discipline during a certain period of time.

N = Total number of research papers published in a discipline during a certain period of time, and

K = Greatest number of authors per paper.

This type of investigation determines the trend of research in a particular discipline to bring out whether the solo or team research is prevalent in the fields under study. In the present study, DC and CC values are calculated to confirm the trend.

3. OBJECTIVES

The purpose of the present study is to determine the collaborative research trends in history literature cited by the research scholars of Kurukshetra University and Panjab University in their doctoral theses. The objectives of present are to find out the trend of research collaboration in the field of history.

1. To examine the nature of authorship pattern in history journals and books.
2. To study the single vs multi authored papers and average number of authors.
3. To determine the degree of collaboration of history literature.

4. METHODOLOGY

The study has been carried out by collecting 534 journal citations and 3980 book citations from 30 theses in history awarded from Kurukshetra University during 1998-2007 and 473 journal citations and 2900 book citations from 19 theses in history awarded from Panjab University during 1998-2007. With a view to identify the extent of research conducted by individuals in collaboration with each other, the number of authors mentioned in the journals and books were recorded, analysed and tabulated for making observations.

5. ANALYSIS

5.1 Authorship Pattern in Journal Citations – Kurukshetra University

Sr. No.	Rank No.	Authorship Pattern	No. of Citations	Percentage of Citations	Cumulative Citations	Percentage of Cumulative Citations
1	1	Single	376	70.41	376	70.41
2	2	Joint	79	14.79	455	85.21
3	3	Three	55	10.30	510	95.51
4	4	Multiple*	24	4.49	534	100.00
		Total	534	100.00		

DC = 0.124 CC = 0.074

Table 5.1 and deal with the authorship pattern of cited journals at Kurukshetra University. Out of the total 6506 citations, the journals account for 534, forming

8.21 per cent of the total citations. Table 5.1 shows that out of 534 journal citations, 376 citations are from single authors, accounting for 70.41 per cent of the total citations, joint-author citations are 79 forming 14.79 per cent; three-authors are 55 (10.30%) citations; and multi-authors with only 24 (4.49%) citations. Value of DC and CC measures, being nearer to 0, indicates preference to single authorship. It is evident that single-author citations occupy the first position. This proves that the solo research is preferred in the field History at Kurukshetra University.

5.2 Authorship Pattern in Book Citations - Kurukshetra University

Sr. No.	Rank No.	Authorship Pattern	No. of Citations	Percentage of Citations	Cumulative Citations	Percentage of Cumulative Citations
1	1	Single	3485	87.56	3485	87.56
2	2	Joint	243	6.11	3728	93.67
3	3	Three	183	4.60	3911	98.27
4	4	Multiple*	69	1.73	3980	100.00
		Total	3980	100.00		

DC = 0.296 CC = 0.176

Table 5.2 depicts the authorship pattern of book citations by the research scholars of Kurukshetra University. At Kurukshetra University, the total number of book citations is 3980. Out of these, single-author citations account for 3485 (87.56%); joint-author citations are 243 (6.11%); three-author citations are 183 (4.60%) and multi-author citations are 69 (1.73%). DC and CC values also indicate preference to single authorship.

* On the basis of the following assumptions, CC is calculated in this study.

1. As in the multi authored group, majority of papers tend to be four authors, this group can be taken as four-author group.

2. As the proportion of multi-author group is very small compared to other categories. Its impact in the calculation of CC is negligible.

5.3 Authorship Pattern in Journal Citations- Punjab University

Sr. No.	Rank No.	Authorship Pattern	No. of Citations	Percentage of Citations	Cumulative Citations	Percentage of Cumulative Citations
1	1	Single	342	72.30	342	72.3
2	2	Joint	47	9.94	389	82.24
3	3	Three	50	10.57	439	92.81
4	4	Multiple*	34	7.19	473	100
		Total	473	100.00		

DC 0.277 CC = 0.174

Table 5.3 show the authorship pattern of journal citations in History at Panjab University. Table 5.3 show that out of 473 journal citations, 342 citations are from single authors, accounting for 72.30%; followed by joint-author citations 47 (9.94%), three-author citations 50 (10.57%) and multi-author 34 (7.19%). Single authorship also dominates here. This is also confirmed form DC and CC values.

5.4 Authorship Pattern in Book Citations - Panjab University

Sr. No.	Rank No.	Authorship Pattern	No. of Citations	Percentage of Citations	Cumulative Citations	Percentage of Cumulative Citations
1	1	Single	2421	83.48	2421	83.48
2	2	Joint	213	7.34	2634	90.83
3	3	Three	180	6.21	2814	97.03
4	4	Multiple*	86	2.97	2900	100.00
		Total	2900	100.00		

DC = 0.165 CC = 0.100

Table 5.4gives the authorship pattern of book citations in History at Panjab University. The total number of book citations is 2900 at Panjab University. Out of these, single-author citations are 2421 accounting for 83.48% of the total citations followed by joint-author citations 213 (7.34%); three-author citations 180 (6.21%) and multi-author citations 86 (2.97%) only. Like the earlier findings, the trend is again towards single authorship. DC and CC value also confirmed the trend.

5.5 Comparative Study of Authorship Pattern – Journals

Sr. No.	Authorship Pattern	No. of Citations		Percentage of Citations	
		KU	PU	KU	PU
1	Single	376	342	70.41	72.30
2	Joint	79	47	14.79	9.94
3	Three	55	50	10.30	10.57
4	Multiple*	24	34	4.49	7.19
	Total	534	473	100.00	100.00

Single-authored articles dominate in both the analyses comprising 70.41% and 72.30% of the total at Kurukshetra and Panjab Universities respectively. However, the percentage of the single-authored articles is more at Panjab University than it is at Kurukshetra University. The Joint-author, three-author and multi-author articles hold the second, third and fourth ranks respectively in both the cases, and their respective percentages slightly vary with each other in both the analyses as indicated in Table 5.5 and Fig. 5.1. From the data and its analysis as given above, it can thus be concluded that solo-research is the trend in the field of History. Only about 10 to 15 per cent of the articles are found to have joint-authorship, proving thereby that the collaboration goes up to two-author level at the maximum. Three-author and multi-author collaboration is noticed up to a maximum of 5 per cent of the total research.

5.5 Comparative Study of Authorship Pattern – Books

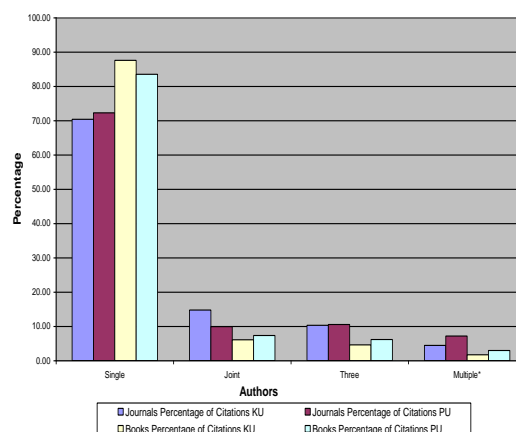
Sr. No.	Authorship Pattern	No. of Citations		Percentage of Citations	
		KU	PU	KU	PU
1	Single	376	342	70.41	72.30
2	Joint	79	47	14.79	9.94
3	Three	55	50	10.30	10.57
4	Multiple*	24	34	4.49	7.19
	Total	534	473	100.00	100.00

Table 5.6 and Fig. 5.1 give the comparative picture of the authorship pattern. It is revealed from the book

citations that the trend again goes in favour of solo research in the field of History.

Figure 5.1 : Authorship pattern of cited documents – comparative study –

Kurukshetra University and Panjab University



6. CONCLUSION

The authorship pattern, preference to the single authorship is noticed in case of Journal articles and also in the book writings at both the universities. In History, the respective percentage for the single authorship for Journals articles is 70.41 and 72.30 where it is 87.56 and 83.58 for book writings at Kurukshetra University and Panjab University. The percentage of Joint authorship is 14.79 (History-Journal articles – Kurukshetra University). The degree of collaboration among authors is found to be more in case at Journal –articles as compared to books at both the universities. Further studies are required to establish inter-disciplinary and inter-institutional collaboration of historians. Studies can also be done in the area of co-authorship and bibliographic coupling of history literature in the national and international level.

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