



## Collection development in the digital library: A Scientometric study

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### Abstract

The study is based on the Scientometrics analysis of 176 research article published during the period of 2017-2021. This Study will review To find out the contribution type of author, To find out the contributions Keyword –wise, To find out the collaboration Country wise, To find out the contributions document type wise, To find out the contributions Language-wise, the findings must reveal various aspects of the characteristics and patterns of contributions of the study.

**Keywords:** Collection Development, digital library, digitization, university library

### Introduction

Scientometric is the science of measuring and analyzing science. In practice, Scientometric is often done using Bibliometrics that is measurement of (Scientific) Publications. In 1960, Vassal V. Nazimova had coined the term Scientometric. Modern Scientometric is primarily based on the work of Derek J. de Solla Price and Eugene Garfield. The latter founded the Institute of scientific Information (ISI), which carries out Scientometric analysis. Scientometric studies broadly constitute quantitative analyses of scientific literature to reveal the latest developments in various fields and the patterns of geographical distribution of science and scientific productivity of individual nation.

### Scientometric

Scientometrics is the field of study which concerns itself with measuring and analyzing scientific literature. Scientometrics is a sub-field of Bibliometrics. Major research issues include the measurement of the impact of research papers and academic journals, the understanding of scientific citations, and the use of such measurements in policy and management contexts. In practice there is a significant overlap between Scientometrics and other scientific fields such as information systems, information science, science of science policy, sociology of science, and met science. Critics have argued that over-reliance on Scientometrics has created a system of perverse incentives, producing a publish or perish environment that leads to low quality research (<https://en.wikipedia.org/wiki/Scientometrics>).

### Definition Analysis

#### Scientometric

According to bankapur, M.B. and Kumabar, (1993) “Scientometric is a more general that Bibliometrics. It is interesting to know, that both disciplines have a large overlap. It is surprised to learn certain comments stating that both disciplines have a large overlap. It is surprised to learn certain comments stating that Scientometric, using Bibliometrics techniques id a part of Bibliometrics”.

### Collection Development in the Digital Library

Library collection development is the process of systematically building the collection of a particular library to meet the information needs of the library users (a service population) in a timely and economical manner using information resources locally held as well as resources from other organizations <sup>[1]</sup>.

According to the International Federation of Library Associations and Institutions (IFLA), acquisition and collection development focuses on methodological and topical themes pertaining to acquisition of print and other analogue library materials (by purchase, exchange, gift, legal deposit), and the licensing and purchase of electronic information resources.<sup>[2]</sup> Collection development involves activities that need a librarian or information professional who is specialized in improving the library's collection. The process includes the selection of information materials that respond to the users or patrons need as well as de-selection of unwanted information materials, called *weeding*. It also involves the planning strategies for continuing acquisition, evaluation of new information materials and the existing collection in order to determine how well a particular library serves its users.

### Review Literature

Khaparde V S (2011) stated in study “Bibliometric Study of Electronic Journal of Academic and Special Librarianship.” that single author contributions have dominated the journal with 47.95% of contributions, and in geographical based distribution of articles India have occupied the top position with 28.41% publications.

Khaparde V S (2013) her paper conducted the Bibliometric Analysis of Research Publication of Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, from 1975 to 2012. 774 research publications were analyzed from 144 journals. The study examines year-wise distribution of papers, authorship pattern, journal in which author published

Fawaz Alhamdi and Khaparde V S (2015) <sup>[2]</sup> Analyzed Authorship pattern in cloud computing research in LISTA. They collect 108 articles during the year 2009 to 2013. In

this study the number of contributions found to be the highest is 24 in the year of 2012. The rate of growth of publication highly decreased from the rate of 0.693 in 2010 to 0.193 in 2013 whereas the corresponding the Doubling time for different years gradually increased from 1 in 2010 to 3.95 in 2013.

(Kharparde & Pawar) studied the authorship pattern and author's collaborative research in Information Technology with a sample of 17917 articles collect from LISA during 2000- 2009. The average number of authors per article is 1.80. In the study the degree of collaboration (C) during the overall 10 years (2000-2009) is 0.71 but the year wise degree of collaboration is almost same in all the years of mean value 0.49. According to 10 years of period, the multi-authorship articles are higher and predominant on single authorship. The study found that the researches in Information Technology are keep toward team research or group research rather than solo research.

**Objective of the Study**

The following objectives have been formulated for the present study.

- To find out the contribution type of author
- To find out the contributions Keyword -wise.
- To find out the collaboration Country wise.
- To find out the contributions document type wise.
- To find out the contributions Language-wise.

**Scope and Limitation of the study**

The present study keywords analysis on Collection Development in the Digital Library from 2017-2021. The present study is based on over all 176 articles in the database of Web of Science during 2017-2021.

**Data Collection**

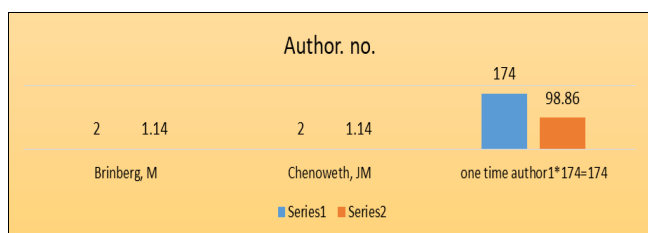
Data can be numerically expressed that is quantified or objective the data was collected from in database of Web of Science with the help of excel sheet.

**Data Analysis and Interpretation**

Scientometric analysis is a branch of Bibliometrics. It is an important research tools for understanding of the subject it aims at measuring the utility of documents and relationship between documents and fields.

**Table 1**

Sr. No.	Author. no.	Frequency	Percentage
1	Brinberg, M	2	1.14
2	Chenoweth, JM	2	1.14
3	one time author1*174=174	174	98.86
	Total	176	100



**Fig 1:** Author wise distribution of Article.

The distribution of Authorship pattern is given in the Table No.1. The table shows the multi authorship is predominant then single authors. Table No. 1 &Figure no. 1 indicates the

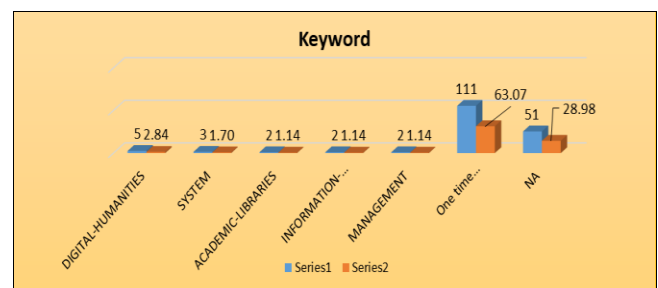
majority of the contributions are contributed by Single author.

**1. Keyword Wise Distribution.**

The Key word Wise Distribution of contributions is shown in Table No.2

**Table 2**

Sr. No	Keyword	Frequency	Percentage
1	Digital-humanities	5	2.84
2	System	3	1.70
3	Academic-libraries	2	1.14
4	Information-seeking behavior	2	1.14
5	Management	2	1.14
6	One time keyword1*111=111	111	63.07
7	NA	51	28.98
	Total	176	100



**Fig 2:** Key word wise distribution of Article.

The distribution of published papers by keyword wise the table 02 reveals that, out of 176 contributors, the highest number 111(63.07%) has not mention their second place with 51(28.98%) contributors of NA. The 5(2.84%) contributors the third place.

**3. Country wise distribution of the article**

**Table 3:** Country wise distribution of the article

Sr. No	Country	Frequency	Percentage
1	USA	61	34.66
2	China	15	8.52
3	Austria	9	5.11
4	Netherlands	7	3.98
5	Canada	6	3.41
6	England	6	3.41
7	Germany	6	3.41
8	Spain	6	3.41
9	Brazil	5	2.84
10	Canada	4	2.27
11	Scotland	4	2.27
12	Taiwan	4	2.27
13	Belgium	3	1.70
14	Malaysia	3	1.70
15	England	2	1.14
16	Greece	2	1.14
17	Iraq	2	1.14
18	Nigeria	2	1.14
19	Pakistan	2	1.14
20	Slovenia	2	1.14
21	South Africa	2	1.14
22	one time contry1*23=23	23	13.07
	Total	176	100

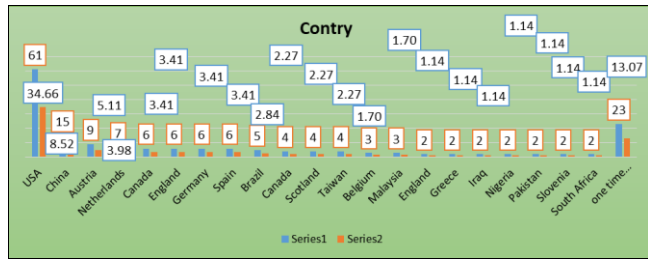


Fig 3: Country wise distribution of Article.

It can be observed from Table No. 03 the country wise distribution of contributors, the table 3 reveals that out of the total 176 contributors has contributed during 2017-2021, majority of article 141(80.11%) has not mention their country in the paper. 61(34.66%) contributors have been contributed form USA.15(8.52%) contributors have been

Contributed from China. And lowest contributed article of country Nigeria, Iraq, Pakistan, Slovenia, South Africa and Greece 2(1.14).

4. Type of document wise distribution of the article

Table 4: Type of document wise distribution of article

Sr. No	Document type	Frequency	Percentage
1	Article	141	80.11
2	Review	28	15.91
3	Article; Early Access	2	1.14
4	Article; Proceedings Paper	2	1.14
5	Article; Data Paper	1	0.57
6	Editorial Material	1	0.57
7	Reprint	1	0.57
	Total	176	100

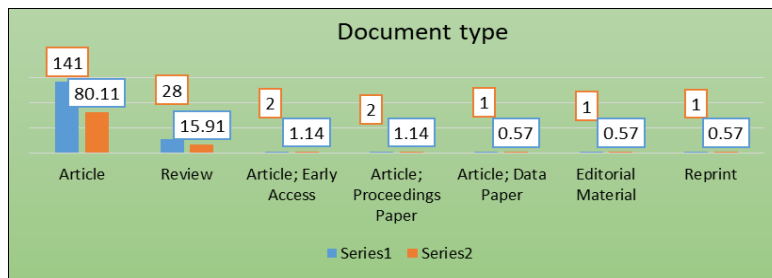


Fig 4: Type of document wise distribution of article

It can be observed from Table no.4 the highest 141(80.11%) number of publication has been published in research article in these study, and the second numbers of Review 28 (15.91%) published in research article, and the Article; Data Paper, Editorial Material 1(0.57%) publication has review document type.

We concluded that the present study is based on Saffron studies during the period of last Ten years on the journal of Web of Science Database. It is good and informative for the researcher.

Sr. No	Language	Frequency	Percentage
1	English	170	96.59
2	Portuguese	3	1.70
3	Spanish	2	1.14
4	Dutch	1	0.57
	Total	176	100

Reference

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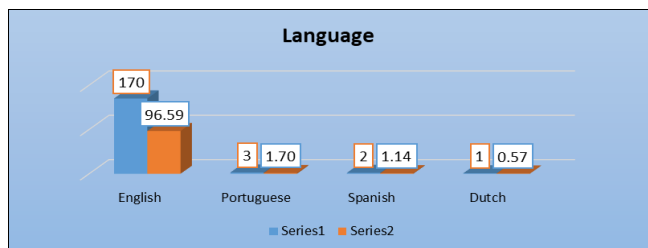


Fig 5: Type of Language distribution of Article.

The distribution of Language is given in the Table No.5 the table shows the highest language use 170(96.59) is English and loyest language use 1(0.57) is Dutch.

Conclusion

Scientometric relatively new subject of information. It helps to evaluate information & to handle the information in libraries and information centers by the quantitative analyzed information. It deals with the mathematical and statistical analysis. This is an umbrella term used for many studies where quantitative method or techniques are used to investigate various aspect of written document.