

SCIENTOMETRIC ANALYSIS COMPUTER MEDIATED ONLINE JOURNAL

Dr. Siddiqui Eraj Azeza * Kharat Pooja Prakash**

*** Librarian**

Dr. Rafiq Zakeria College
of Woman
Aurangabad, Maharashtra,
India

*** Research Scholar**

DLIS,
Dr. Babasaheb Ambedkar
Marathwada University,
Aurangabad, Maharashtra,
India

QR Code



Abstract: - *The present study attempts on the Scientometric analysis of Journal Computer Mediated Communication. It is based on the references appended to International Journal of “Computer Mediated Communication” during 2004-2008. The present study is based on 5 volumes, 20 issues of the Journal of computer Mediated Communication. It was found that journals citations are more in number than the other citations.*

Keywords: Scientometric, Computer Mediated Communication,
Authorship pattern

INTRODUCTION:-

Scientometrics is the science of measuring and analyzing science. In practice, scientometrics is often done using bibliometrics which is a measurement of the impact of (scientific) publications. Scientometrics is the study of measuring and analyzing science, technology and innovation. Major research issues include the measurement of impact, reference sets of articles to investigate the impact of journals and institutes, understanding of scientific citations,

mapping scientific fields and the production of indicators for use in policy and management contexts. In practice there is a significant overlap between scientometric and other scientific fields such as bibliometric, information systems, information science and science of science policy.

REVIEW OF LITERATURE:-

Jackson (1997) suggested that the methods of social network analysis could be applicable to understand the interplay between computer-mediated communication (CMC) processes. In particular, Jackson (1997) argued that hyperlink-based social network analysis could be a strong approach for studying the representation and interpretation of the Web's communication structure.

Khaparde V S (2011) she studied the pattern of information use by researcher in the field of library and information science. It is based on the references appended to International Journal of "Library Hi Tech" during 2005-2009. The present study is based on 3876 references appended to 247 articles contributed by the authors in Library Hi Tech. In Authorship pattern it was found that Solo Research is Predominant than Collaborative Research.

Khaparde and Pawar (2013) 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-authored articles are higher and predominant than single author.

FawazAlhamdi and Vaishali Khaparde (2015) 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.

Kumbar Prakash & Biradar Nirmala (2015) They studied various aspects of forensic sciences literature. The study explores and analyses the various bibliometric components of the research articles published on-line version of Web of Science in the field of forensic sciences during 2001-2015. Such as year wise distribution, geographical wise, organization wise, Language wise, form wise, etc. The highest number of articles was published in the year of 2015, while lowest numbers of research articles were reported in the year 2002.

Madhu Bala, Mahender Pratap Singh (2014) Analyzed 316 scholarly communications published in the Indian Journal of Biochemistry & Bio-Physics. The analysis cover mainly the number of articles, form of document cited, most cited Journals etc. Study reveals that single author contributed 18 (5.7%) while the rest of 162 (51.3%) articles were contributed by Multi authors. The contributions in this Journal from

India are slightly more than those from the other countries

SOURCE JOURNAL

Journal of Computer-Mediated Communication (JCMC) is a web-based, peer-reviewed scholarly journal. Its focus is social science research on communicating with computer-based media technologies. Within that general purview, the journal is broadly interdisciplinary, publishing work by scholars in communication, business, education, political science, sociology, psychology, media studies, information science, and other disciplines. Acceptable formats for submission include original research articles and meta-analyses of prior research.

JCMC is one of the oldest web-based Internet studies journals in existence, having been published quarterly continuously since June 1995. The journal was started by Margaret McLaughlin and Sheizaf Rafaeli in response to the growth of CMC scholarship in the early- to mid-1990s. The founding editors had the vision to make *JCMC* an open-access, online journal. This, combined with high quality standards, proved to be a recipe for success: today *JCMC* is widely read and cited by CMC scholars around the world. In 2004, *JCMC* became an official journal of the International Communication Association. (<https://academic.oup.com/jcmc/pages/About>)

OBJECTIVES OF THE STUDY

The main objectives of the present study are:

1. To examine the distribution of the contributions Volume wise.
2. To find out authorship pattern of contributions.
3. To find out authorship pattern of contributions Volume wise.
4. To find out Degree of collaboration year wise.
5. To find out the contribution Institution wise.
6. To find out the Geographical distribution of contributors of articles.
7. To find out the types of publication cited volume wise.
8. To find out the average citation per contribution in each volume.
9. To find out the average pages per volume & per contribution.

SCOPE & LIMITATON

The present study is based on 5 volumes, 20 issues of the Journal of computer Mediated Communication during 2004-2008. The present study is based on over all 12440 citations appended to 254 articles.

Table No.1 Distribution of Contribution's (Volume- Wise)				
Year	Volume no.	No. of Issue	No. of contribution	Percentage
2004	9,10	4	31	12.20
2005	10,11	4	62	24.41

2006	11,12	4	51	20.08
2007	12,13	4	73	28.74
2008	13,14	4	37	14.57
	TOTAL	20	254	100

Distribution of contributions (Volume- wise) is shown in Table No. 1 & Figure no. 1 out of the total 254 contributions majority of the contributions i.e.73 contributions were contributed in 2007 were as minimum contributions i.e. 31 contributions were contributed in 2004.

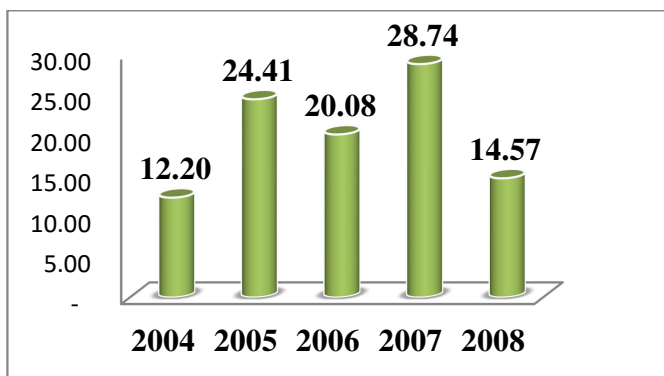


Figure No. 1 Distribution of contributions (Volume-wise)

More than three authors	35	164	30.42
TOTAL	254	539	100

The distribution of Authorship pattern is given in the Table No.2. The table shows the single authorship is predominant then multi authors. Table No. 2 & Figure no. 2 indicatives the majority of the contributions are contributed by twoauthor.

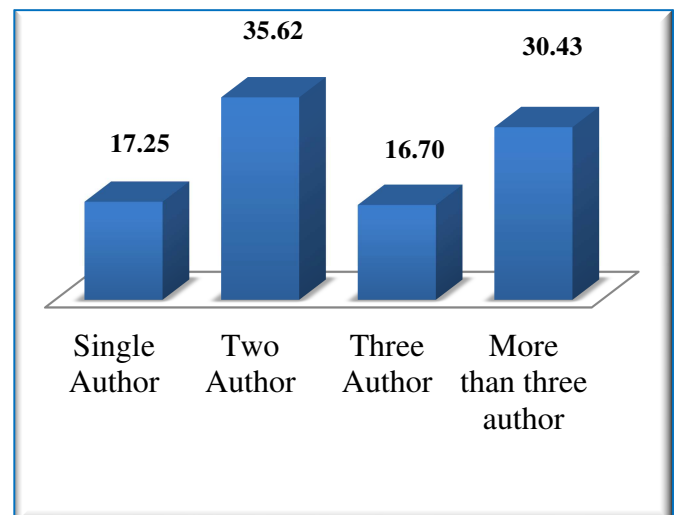


Figure No. 2 Authorship pattern of contributions

Table No.2 Authorship Pattern of Contribution's			
No. of Author	No. of Contribution	No. of Authorship	Percentage
Single authors	39	93	17.75
Two authors	96	192	35.62
Three authors	30	90	16.70

Table No.3 Authorship Pattern of Contribution's (Volume- Wise)					
Volume no.	Single author	Two author	Three author	More than three author	Total article
9,10	12	13	3	3	31
10,11	22	24	6	10	62
11,12	17	19	8	7	51
12,13	32	26	7	8	73

13,14	10	14	6	7	37
Total	93	96	30	35	254
Percentage	36.6	37.8	11.8	13.8	100

Table No. 3 shows the authorship pattern of contributions (Volume- wise). Distributions of contributions majority of highest by a Two authors in 96 with (37.8%). indicate that the lowest percentage were Three authors in 30 with (11.8%). Table No. 3 & figure no. 3 indicates the majority of the contributions are contributed by two author.

Degree of collaboration in the international journal of “Computer mediated communication” the formula given by k. Subramanyam is useful for determining the 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 authored papers

NS= Number of single authored papers

In the present study

NM= 35

NS=93

$$= \frac{35}{35 + 93} = \frac{35}{128} = 0.2734$$

Those, C= 0.2734

Thus the degree of collaboration if the journal of “Computer mediated communication” is 0.2734 which clearly indicates its dominance upon individual contribution.

Table Na. 4 Degree of collaboration (Year-Wise)							
Year	Total no. of article	Total no. of author	No. of single authored articles	% of article	No. Of multi authored articles	% of articles	Degree of collaboration
2004	31	31	12	12.90	3	8.57	0.2
2005	62	62	22	23.66	10	28.57	0.3
2006	51	51	17	18.28	7	20.00	0.2
2007	73	73	32	34.41	8	22.86	0.2
2008	37	37	10	10.75	7	20.00	0.4
Tot al	254	254	93	100.0	35	100.0	0.2
	4	4		0		0	7

Table No. 4 shows that in the 5 years period, the single authorship articles are higher and predominant than multi author. The multi authored articles are which are highest in the year 2008 & 2010. It is the seen that the single authorship trend in increasing.

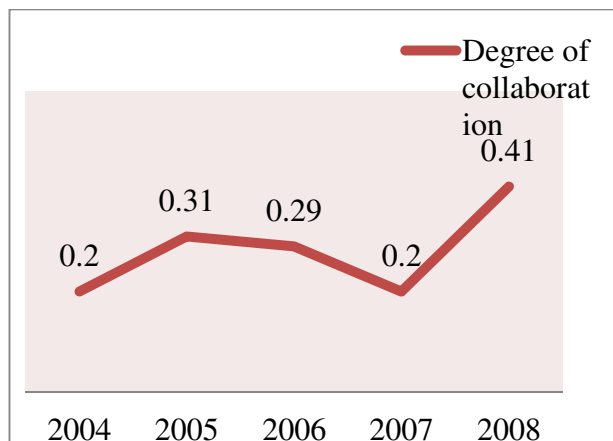


Figure No. 3 Degree of collaboration(Year- Wise)

Year	University	Institution	College	Not Mention	Total
2004	32	2	1	26	61
2005	51	8	1	65	35
2006	51	3	1	55	10
2007	58	3	2	76	49
2008	35	2	0	47	34
Total	47	18	5	269	39

Table No. 5 shows distribution of institutions volume wise contributions. University wise at the national level followed by colleges. It was seen that university wise contribution in maximum (247) than institution wise (18) and (5) contributions were contributed by the colleges. Table No. 5 shows that the highest number of contributions were university level.

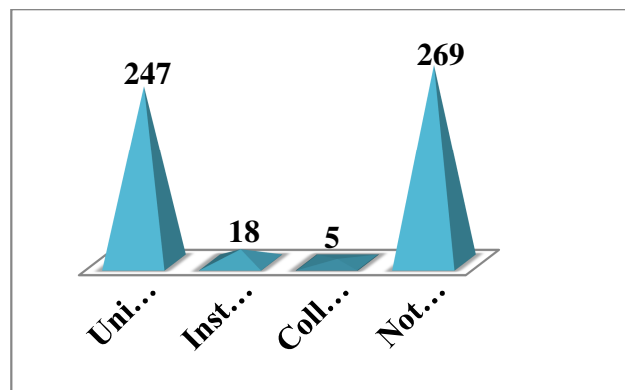


Figure no. 4 Contributors (Institution wise)

Sr. No.	Name of country	No. of Contribution	Percentage
1	USA	322	59.74
2	UK	34	6.31
3	Australia	19	3.53
4	Canada	19	3.53
5	Germany	19	3.53
6	Japan	15	2.78
7	Israel	14	2.60
8	SouthKorea	14	2.60
9	Spain	9	1.67
10	Singapore	8	1.48
11	Netherlands	7	1.30
12	SouthAfrica	7	1.30
13	Italy	5	0.93
14	NotMention	5	0.93
15	Philippines	5	0.93
16	Berkeley	4	0.74
17	France	4	0.74
18	Switzerland	4	0.74

19	Tunisia	4	0.74
20	Belgium	2	0.37
21	China	2	0.37
22	England	2	0.37
23	Greece	2	0.37
24	IRAN	2	0.37
25	NewZealand	2	0.37
26	Norway	2	0.37
27	Oklahoma	2	0.37
28	Portugal	2	0.37
29	Egypt	1	0.19
30	India	1	0.19
31	Thailand	1	0.19
	Total	539	100

Table No.6 shows the Geographical distribution of contributions at international level. Table No.6 indicates that the majority of the contributions were contributed by USA (59.74) were as the minimum contributions were contributed by (0.19) respectively.

Volume No.	Year	Books	Journals	Others	Total
9,10	2004	285	890	236	1411
10,11	2005	593	1437	908	2938
11,12	2006	510	1399	688	2597
12,13	2007	654	1455	1121	3230
13,14	2008	385	1322	557	2264
Total		2427	6503	3510	12440
Percentage		19.51	52.27	28.22	100

Table No. 7 shows the types of publication cited volume wise. Of the total 254 contributions

majority (6503) of the citations are the Journal citations and minimum (2427) are book citations.

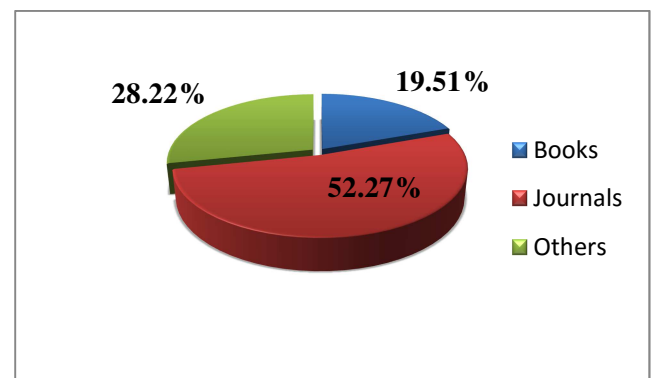


Figure no. 5 Types of publication cited (Volume wise)

Volume No.	No. Of Contribution	No. Of Citation	Percent age
9,10	31	1411	11.34
10,11	62	2938	23.62
11,12	51	2597	20.88
12,13	73	3230	25.96
13,14	37	2264	18.20
Total	254	12440	100

Table No. 8 shows the average citation per contribution in each volume, total 254 contributions were contributed. Maximum numbers of citations were contributed by volume no.12,13(25%96) and the minimum (11%34) contributions were contributed by volume no.9,10.

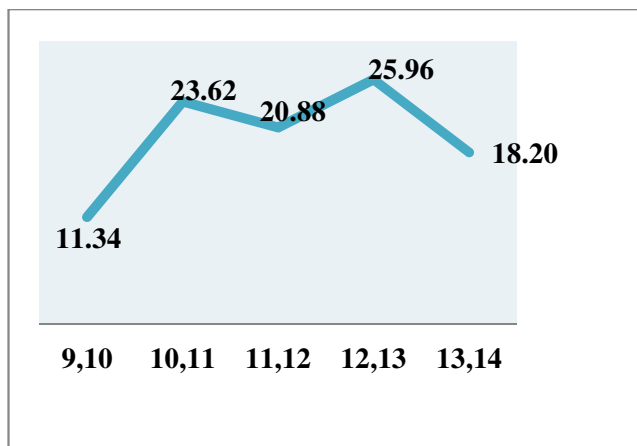


Figure No. 6 Average citation per contribution in each volume

Average Pages (Per Volume & Per Contribution)			
Volume No.	Total Pages	No. Of Article	Percentage
9,10	NA	31	0.00
10,11	NA	62	0.00
11,12	1149	51	31.39
12,13	1492	73	40.77
13,14	1019	37	27.84
Total	3660	254	100.00

The Table No. 9 shows the average pages (per volume & per contributions). The maximum pages were covered in volume no.12,13 (40.77) & minimum pages were covered in volume no.13,14

CONCLUSION

Scientometrics analysis is the major techniques of Bibliometrics which is used in the further study. Considering published literature present study has used quantitative method. Scientometric is

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.

REFERENCES

1. Khaparde V. S.(2011) Pattern of information use by researchers in library and Information Science.
2. Kumbhar Prakash & Biradar Nirmala (2015) Research trend in forensic science: A Study of Scientometric Analysis. *International Journal of Research in Library Science.1* (2) July- December 2015
3. Jackson, M. H. (1997). Assessing the structure of communication on the World Wide Web. *Journal of Computer-Mediated Communication, 3* (1). Retrieved September 19, 2000. From <http://www.ascusc.org/jcmc/vol3/issue1/jackson.html>
4. Wikipedia. (2010). Scientometrics. Retrieved July 30, 2010 from <http://en.wikipedia.org/wiki/Scientometrics>.
5. <https://academic.oup.com/jcmc/pages/About>
6. [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1083-6101/issues](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1083-6101/issues)
7. https://en.wikipedia.org/wiki/Journal_of_Computer-Mediated_Communication

8. Khaparde, V.S. and Pawar .S. (2013). Authorship Pattern and Degree of Collaboration in Information Technology. Journal of Computer Science & Information Technology, 1(1), 46-54.

9. Alhamdi, Fawaz. & Khaparde, V S.(2015). Authorship pattern in cloud computing research in Library and information science & technology abstracts LISTA. E-Library science research Journal, 3(3).

11. Bala, Madhu.& Singh, MahenderPratap.(2014). A scientometric study of the Indian Journal of Biochemistry & BioPhysics. Library Philosophy and Practice (e-journal), <http://digitalcommons.unl.edu/libphilprac/> 1168