

Trends in the Journal of Geography and Geology: a Five-Year Bibliometrics Analysis

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ABSTRACT: *This paper deals with the authorship pattern, author Officials, geographical distribution of papers, Subject Coverage of the articles and citation analysis of the articles published in Journal of Geography and Geology for. The studies found that majority of papers are multi- authored 3-5 range. Maximum articles have been published from Universities of Africa and Asia. Mostly the contribution size has been limited to 10 pages. The study shows that the Geography was the major subject contributors in this journal. The authorship collaboration of cited document is mostly single author. The age of the cited document mostly cover 2000 and the average citations per paper are 23.*

KEYWORD: *Bibliometrics Study, Citation Analysis, journal of Geography and Geology, Authorship*

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I. INTRODUCTION

Bibliometrics studies have been conducted on journals related mainly to scientific fields and are based principally on various metadata elements such as author, title, subject, citations and so on. This type of analysis provides useful indicators of trends, scientific productivity, emphasis of research in various fields, and researcher preferences for publication. Typically, bibliometrics consider organization, classification, and quantitative evaluation of publication patterns as well as provide an analysis of macro-communication (Thavamani, 2013). In another way the work is being taken to study of intellectual content or scholarly written documents of the primary sources that is the journal.

Bibliometrics

The term ‘Bibliometrics’ was first used by Alan Pritchard in 1969 to denote a new discipline where quantitative methods were employed to probe scientific communication process by measuring and analyzing various aspects of written documents. Bibliometrics is an emerging thrust area of research from different branches of human knowledge. Bibliometrics has become a standard tool of science policy and research management in the last decades. All significant compilations of science indicators heavily rely on publication and citation statistics and other, more sophisticated bibliometrics techniques. Bibliometrics is a quantitative evaluation of publication patterns of all macro and micro communication along with their authorship by mathematical and statistical calculation. (Sengupta, 1985). Bibliometrics can be applied to any subject area and to most of the problems that mainly concerned with written scholarly communication. It helps to monitor trend and patterns of literature published by research activity. This paper studies the bibliometrics analysis of the literature published in the Journal of Geography and Geology.

Journal of Geography and Geology

Journal of Geography and Geology (JGG) is an international, double binding peer reviewed, open access journal published quarterly by the Canadian centre of science and education in both print and online versions. The online version is free to access and downloadable. JGG publishes original research, applied and educational articles in all areas of Geography and Geology. Authors are encouraged to submit complete, unpublished original works that are not under review in any other journal. The scopes of the journal include the following fields: Physical Geography; Human Geography; spatial analysis, such as cartography, GIS, RS and GPS; Geophysics, Geochemistry, Mineralogy, petrology, volcanology, Sedimentology, Palaeontology, Hydrology, Glaciology, Tectonics, Geomorphology, Environmental Geology, Engineering Geology, Geological Hazards, atmospheric and marine science, planetary science. E-Version is a feature first offered in this journal. It allows PDF version of manuscripts that have been peer reviewed and accepted, to be hosted online prior to their inclusion in a final printed journal. Readers can freely access or cite the article. Their aim is to publish accepted manuscripts in e-versions first in two week’s time after the final draft completed. This journal has a policy of “Zero Tolerance on the Plagiarism”. They check the plagiarism issue through two methods- reviewer check and

plagiarism prevention tool (iThenticate.com). All submissions will be checked by iThenticate before being sent to reviewers.

II. LITERATURE REVIEW

This portion of the paper reviews previous research done on the various aspects of the concerned topics:

This paper performed a bibliometric analysis on rural geography studies based on the peer-reviewed articles concerning rural geography published in the SSCI-listed journals from 1990 to 2012. Our analysis examines publication patterns (document types and publishing languages, article outputs and their categories, major journals and their publication, most productive authors, geographic distribution and international collaboration) and demonstrates the evolution of intellectual development of rural geography by studying highly cited papers (Wang, 2014).

Bibliometrics analysis—the quantitative analysis of publications—is particularly applicable to fields with large bodies of literature that are difficult to summarize by traditional review methods. The multidisciplinary nature of the published literature on climate engineering makes it an ideal candidate for Bibliometric analysis. Publications on climate engineering are found to be relatively recent (more than half of all articles during 1988–2011 were published since 2008) (Belter & Seidel, 2013)

These study evaluated earthquake research performance based on a bibliometrics analysis of 84,051 documents published in journals and other outlets contained in the Scientific Citation Index (SCI) and Social Science Citation Index (SSCI) bibliographic databases for the period of 1900–2010. (Liu, 2012).

Bibliometric analysis was applied in this work to evaluate global scientific production of geographic information system (GIS) papers from 1997 to 2006 in any journal of all the subject categories of the Science Citation Index compiled by Institute for Scientific Information (ISI), Philadelphia, USA. ‘GIS’ and ‘geographic information system’ (Tian, Wen, & Hong, 2008)

The aim of this article is to research the extent to which ‘international journals’ of human geography are really international. The analysis is based on the affiliation data (work centre) of the authors of articles and of members of editorial boards of a group of international journals; the results so obtained are related to the impact factors of these journals (Gutiérrez & López-Nieva, 2001)

All the above literature have conducted the Bibliometric study of micro subject of geography covering different scholarly literature but none above have studied any single journal bibliometrics study of some consecutive year.

Objectives

The study has been carried out to achieve the following objectives:

- 1) To find out the authorship pattern;
- 2) To ascertain the contributing authors officials
- 3) To determine the continent wise distributions of contributions in the journal.
- 4) To find out the year wise size of the contribution
- 5) To find out the statistics of distribution of contributions in various fields of Geography and Geology
- 6) To find out the document type and age of cited document.
- 7) To calculate the Citation count per article

Scope

I have taken the only 5 years within my study 2010 to 2014. Study covers the Article analysis including Author collaboration, Authorship Study, Subject analysis of the Article, Size of the contribution, geographical distribution etc.

Citation Analysis covers Authorship Study of the cited Document, Type of Cited Document, Age of the cited Document, Year Wise Citation Count.

III. METHODOLOGY

The data was collected from the website of the Journal of Geography and Geology (<http://www.ccsenet.org/journal/index.php/jgg>) covering the period from 2010 to 2014. Have been taken into consideration for this study. 2010 to 2011 it has published only once a year but 2012 onwards its frequency shifted to quarterly 4 issue per year. Total 206 articles have been analysed. The details regarding each published article such as title of the article, number of authors, their institutional affiliations and addresses, number of references with list, page number, Number of tables and figures etc. were recorded by the method of raw data collection and analyzed through the statistical mode of representation for making observations. In the case of subject analysis Classification Schedule DDC 23rd edition and content of the book and colon classification 7th editions were used.

IV. DATA ANALYSIS AND FINDINGS

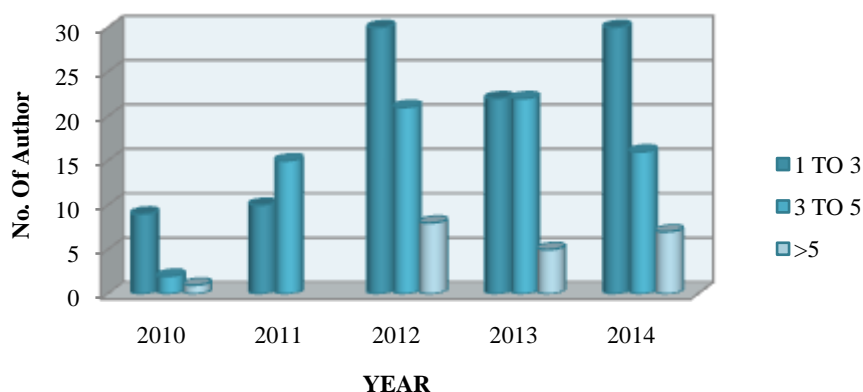
Bibliometrics study of the journal Geography and Geology have been analysing in two parts one is the Article analysis part and another is Citation Analysis part.

Article Analysis

Article analysis consist of the study of only the main article of the journal in different respect

No of Author	2010	2011	2012	2013	2014
1 to 3	9	10	30	22	30
3 to 5	2	15	21	22	16
>5	1		8	5	7

Figure 1: AUTHORSHIP STUDY

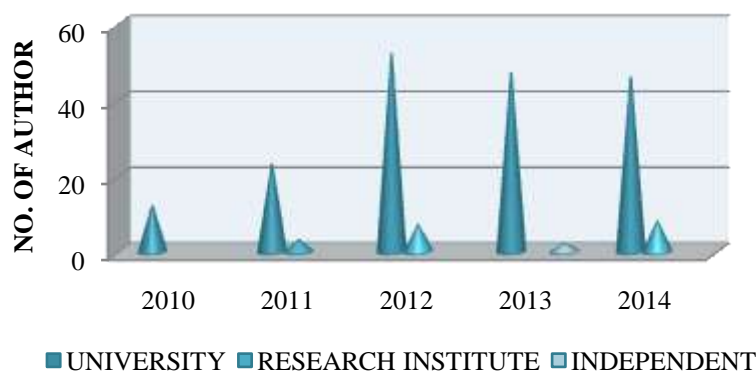


Authorship Study

From the above diagram the authorship study is clearly depicted. It is clear that in 2012 and 2014 1-3 Authors contribution is highest. On the other hand it is comparatively low in 2010-2011. Generally in previous times it is believed that collaboration work is not upto the mark and the authors don't want to share his or her work with the other. It is clearly projected from the above mentioned diagram.

Officials	2010	2011	2012	2013	2014
University	12	23	52	47	46
Research institute	-	3	7	-	8
Independent	-	-	-	2	-

FIG 2: AUTHORS OFFICIALS STUDY

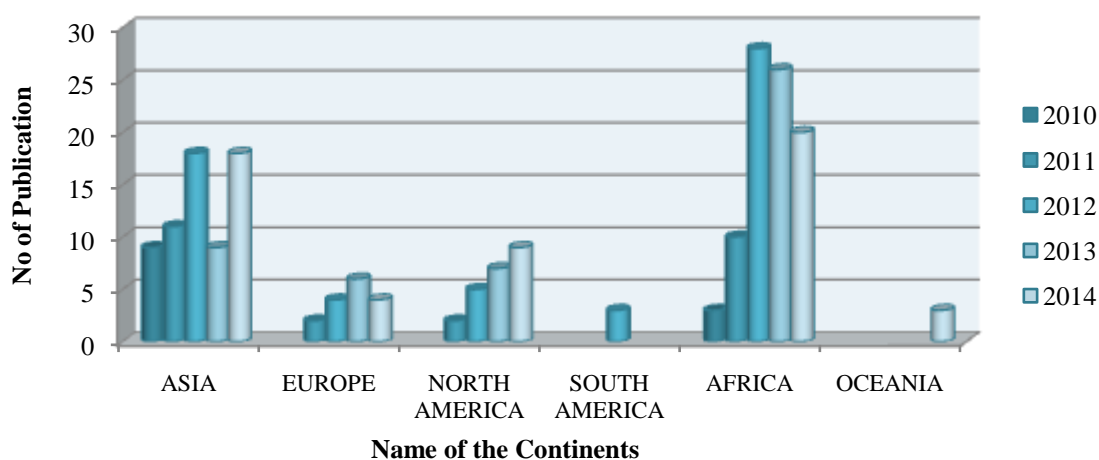


Authors Officials Study

The above diagram clearly display that the most of the author are belong to University irrespective of every year. But some of the authors belonging the research institute and two authors were writing their article independently. Basically in developing countries particularly in India maximum researcher are from University and some are from various researches Institute because here financial and academic issues played a great role for the above scenario.

Geographical Contribution (by continent)	2010	2011	2012	2013	2014
Asia	9	11	18	9	18
Europe	-	2	4	6	4
North America	-	2	5	7	9
South America	-	-	3	-	-
Africa	3	10	28	26	20
Oceania	-	-	-	-	3

FIG 3:CONTINENT WISE DISTRIBUTION OF PUBLICATIONS

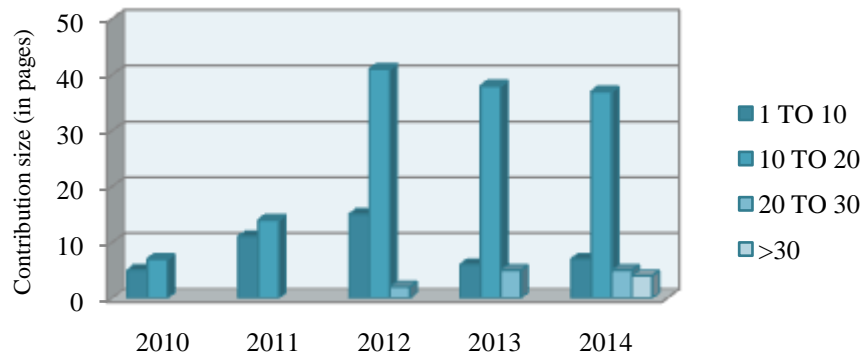


Geographical Distribution of Articles

Most of the contributions were coming from the African continent after that Asia, North American and then European continent. Very few contributions have been made from South America and Oceania. It is very unnatural to see the data that Africa is much more progressive than Asia and Europe in publication of paper. It may be for the thrust of African and Asian continent for developing their intellectual property and their strive towards development.

Contribution Size	2010	2011	2012	2013	2014
1 TO 10	5	11	15	6	7
10 TO 20	7	14	41	38	37
20 TO 30	-	-	2	5	5
>30	-	-	-	-	4

FIG 4: SIZE OF CONTRIBUTION (in Pages)



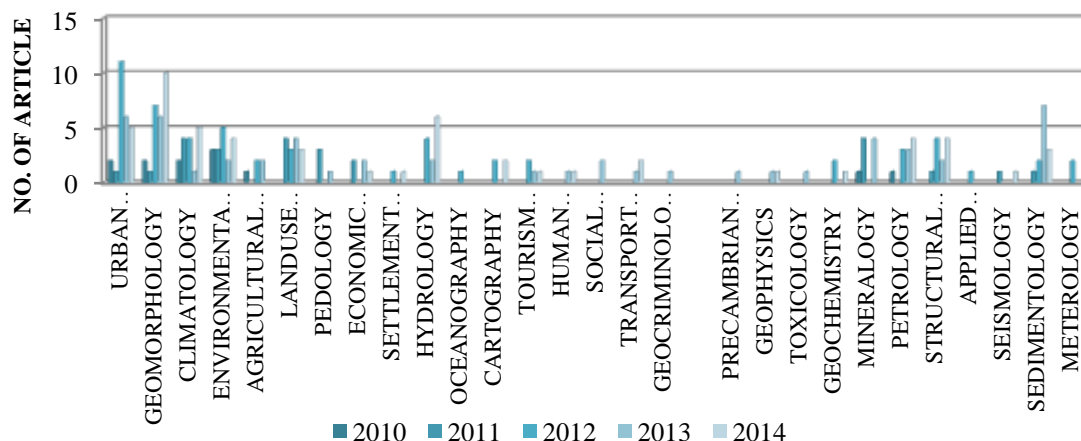
Size of Contribution

From the above diagram it is seen that the most contribution size were range between 10 to 20 pages consistently in 2012, 2013, and 2014. Before these years contribution size were mostly within 1 to 10 pages. And very little contribution size was exceeding more than 30 pages mainly in the year of 2014. The main reason behind these phenomena is now-a-days maximum journal publication authority need the compact concept which may ranges within 10 to 20 pages but not more than that. Basically all the publication tried to incorporate as much as possible article in their issue so a large volume of writing is not acceptable to them.

Table 5: Subject Wise Number of Contribution

Basic Subject	Sub Division of basic subject	2010	2011	2012	2013	2014
GEOGRAPHY	URBAN GEOGRAPHY	2	1	11	6	5
	GEMORPHOLOGY	2	1	7	6	10
	CLIMATOLOGY	2	4	4	1	5
	ENVIRONMENTAL GEOGRAPHY	3	3	5	2	4
	AGRICULTURAL GEOGRAPHY	1	-	2	2	-
	LANDUSE GEOGRAPHY	-	4	3	4	3
	PEDOLOGY	-	3	-	1	-
	ECONOMIC GEOGRAPHY	-	2	-	2	1
	SETTLEMENT GEOGRAPHY	-	-	1	-	1
	HYDROLOGY	-	-	4	2	6
	OCEANOGRAPHY	-	-	1	-	-
	CARTOGRAPHY	-	-	2	-	2
	TOURISM GEOGRAPHY	-	-	2	1	1
	HUMAN GEOGRAPHY	-	-	-	1	1
	SOCIAL GEOGRAPHY	-	-	-	2	-
	TRANSPORT GEOGRAPHY	-	-	-	1	2
GEOCRIMINOLOGY	-	-	-	1	-	
GEOLOGY	PRECAMBRIAN GEOLOGY	-	-	-	1	-
	GEOPHYSICS	-	-	-	1	1
	TOXICOLOGY	-	-	-	1	-
	GEOCHEMISTRY	-	-	2	-	1
	MINERALOGY	1	4	-	4	-
	PETROLOGY	1	-	3	3	4
	STRUCTURAL GEOLOGY	-	1	4	2	4
	APPLIED GEOLOGY	-	-	1	-	-
	SEISMOLOGY	-	1	-	-	1
	SEDIMENTOLOGY	-	1	2	7	3
	METEROLOGY	-	-	2	-	-

FIG 5: SUBJECT OF THE ARTICLE



Subject of the article

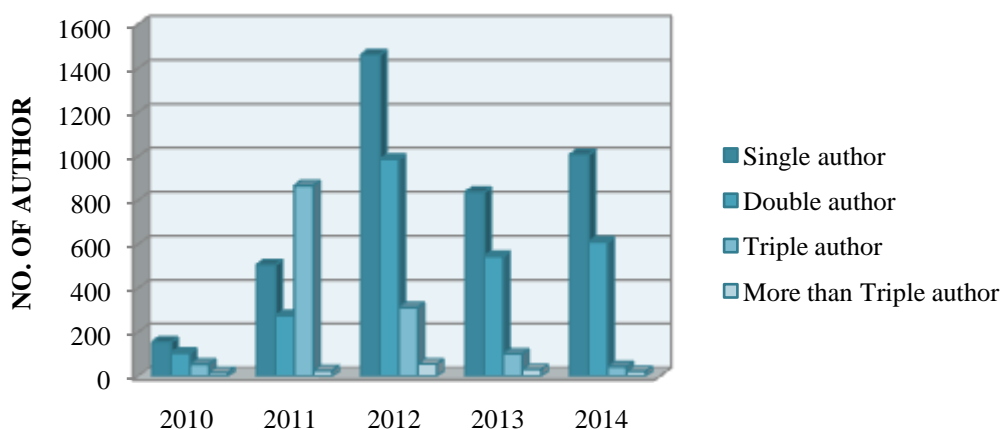
2010 cover mainly geography and few of the contribution on geology. 2011 cover Urban Geography, Climatology, Agricultural Geo, Mineralogy, Seismology, and Structural Geology. 2012 to 2014 Most of the Micro thoughts have been covered in both Geography and Geology. In recent times the paradigm was totally shifted from macro to micro aspects and now all the subjects of humanities and science concerns chiefly on human centred activities.

Citation Analysis Citation analysis is the analysis of the citation or reference of the journal article in different respect.

Table 6: Authorship Collaboration of Cited document (year wise)

No of Author	2010	2011	2012	2013	2014
Single author	155	507	1462	837	1008
Double author	106	276	987	545	611
Triple author	55	867	313	102	43
More than Triple author	17	25	56	31	22

FIG 6: AUTHORSHIP STUDY OF CITED DOCUMENT

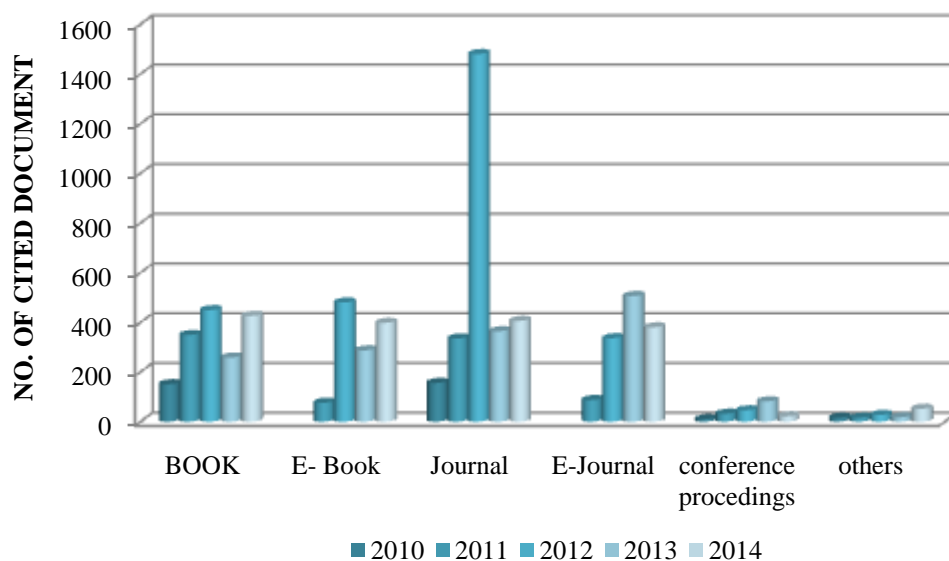


Authorship Study of cited documents

Most of the cited article is single author or double author. Very few of them has triple or more than triple author in each year. The number of single author cited document is highest in 2012, the situation reversed in 2010. But the trend was slightly unpredictable when it is seen that the number of triple author is maximum in the year 2011. Except the 2011 triple and more than triple author is almost absent in all the years.

	2010	2011	2012	2013	2014
BOOK	151	349	449	258	426
E- Book		76	480	287	398
Journal	156	335	1480	364	406
E-Journal		87	336	506	380
conference proceedings	10	32	46	82	22
others	16	16	27	18	52

FIG 7: TYPE OF CITED DOCUMENT

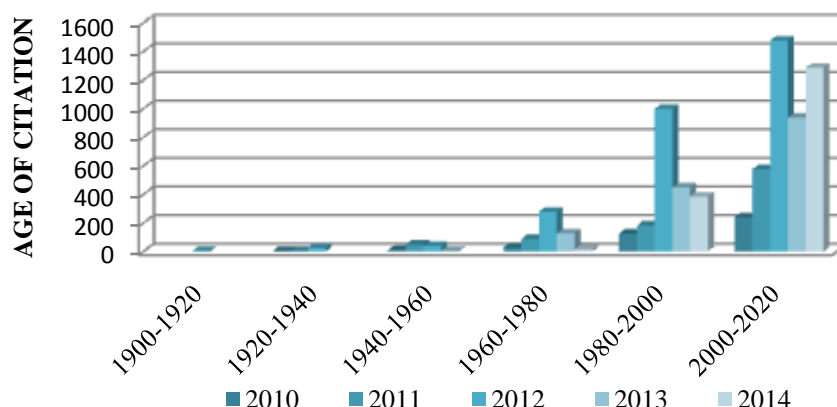


Type of Cited Documents

From the above diagram it would clearly seen that gradually the usage of book shifted to eBook journal shifted to e- journal in the cited document type and very few conference proceedings or other document were cited. The number of citation is negligible in conference proceedings and others relevant document over the years.

Year	2010	2011	2012	2013	2014
1900-1920	-	-	4	-	-
1920-1940	2	3	24	-	-
1940-1960	10	48	39	3	-
1960-1980	28	87	278	128	14
1980-2000	125	182	998	448	384
2000-2020	240	575	1475	936	1286

FIG 8: AGE OF CITED DOCUMENT



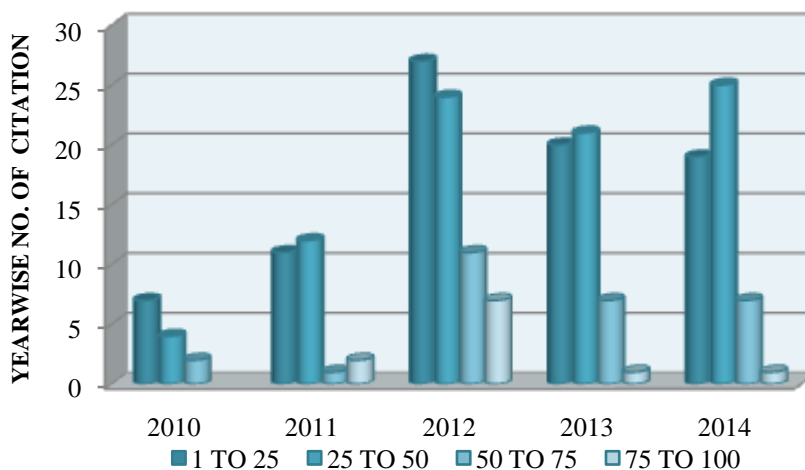
Age of Cited documents

Age of the cited document mainly at the age of 2000 to 2010 not more than and but few of 1960 to 1980s article were cited by the author which is negligible portion. After the TRIPS document the relevancy of citation is increasing and its importance is increasing. Now the world can't think of any article without citation.

Table 9: No of Citation Count (year wise)

No of Citation	2010	2011	2012	2013	2014
1 TO 25	7	11	27	20	19
25 TO 50	4	12	24	21	25
50 TO 75	2	1	11	7	7
75 TO 100		2	7	1	1

FIG 9: YEARWISE NO. OF CITATION COUNT



Year wise no. of citation count

The diagram showing the year wise citation or reference count, no of citation is much greater in 2012 to 2014, where it is lesser in the previous year. In 2012 1-25 citation count is highest and 25-50 citation is next to it, the phenomena is reversed in 2014. In 2013 1-25 and 25-50 citation count is almost equal. Except 2012 75-100 citation count is literally negligible.

V. CONCLUSION

The followings are some interesting facts found out from the analysis of the journal 'Journal of Geography and Geology (2010-2014)' such as-

- I. This study shows a trend of growth in collaboration mostly single or more than one author and few have more than 5 author in 2014

- II. Most of the author are mainly belonging to University, very few number of author belong to Research institute.
- III. The contributions are on Geology and Geography eventually for the year of 2010 to 2014
- IV. Most of the contributions in this journal are from African country like Nigeria, Congo, after that 2nd highest contributor for these journal is Asia in these china, Indonesia, Malaysia, India etc after that North America was the following .
- V. All the contributions are with a good number of citations. Year wise
- VI. Most of the cited document are e-book or e-journal in the recent years like 2013 and 2014 ant it trend to be increase with increasing year as public or authors are Significantly depend on the digital document ,these is the common phenomena for science. Yet this is not true for the humanity perspective.

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