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A SCIENTOMETRIC PROFILE OF INTERNET USE IN LIBRARY AND INFORMATION SCIENCE ON DOAJ

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Abstract

Directory of Open Access Journals (DOAJ) is a service that provides access to quality controlled Open Access Journals. DOAJ is an online directory that indexes and provides access to quality open access, peer-reviewed journals. The aim of the Directory is to increase the visibility and ease of use of open access scientific and scholarly journals thereby promoting their increased usage and impact. The DOAJ which lists the open access scientific and scholarly journals in various subject disciplines was selected to analyze the open access availability of the Library and Information Science discipline. In the study it is found that 89 articles are published in the area of Internet Use in Library and Information science subject on DOAJ. The study focuses on various aspect of the journal such as document types, growth of papers (year wise), authorship pattern, institutions involved, citation analysis, most prolific authors of the journal, mean page length and number of references.

Keywords: Open access; DOAJ; Internet use; library and information science.

Introduction:

Scientometrics is a branch of the science 'Science of Science'. Haitun treats 'Scientometrics', as scientific disciplines, which performs reproducible measurements of scientific activity1. Now a day's scientometrics is one of the truly interdisciplinary research fields extended to almost all scientific fields. Scientometrics applications are used to measure scientific activities, mainly by producing statistics on scientific publications indexed in databases. Scientometrics is the branch of science that describes the output traits in terms of organizational research structure, resource inputs and outputs, develops benchmarks to evaluate the quality of information output. Scientometric studies characterize the disciplines using the growth pattern and other attributes. These applications are extremely valuable methods for evaluating research output, to know about the author productivity and citation analysis in science and technology. Scientometric tools can be used to measure and describe countries, universities, research institutes, journals, specific research topics and specific disciplines. This paper focuses on quantitative study of "*Directory of Open Access Journals*" by applying simple scientometric techniques (**Jayendra Kumar Singh,** *Research Journal of Library Sciences* Vol. 2**(1),** 7-12, February **(2014))**

Open Access:

The Directory of Open Access Journals is website that lists open access journals and is maintained by Infrastructure Services for Open Access.

Directory of Open Access Journal (DOAJ)

Directory of Open Access Journals (DOAJ) is a service that provides access to quality controlled Open Access Journals. Lars Bjornshauge was Director of Libraries at Lund University from 2001 to 2011 and founded the DOAJ in 2003. He became Managing Editor of DOAJ in January 2013. Directory of Open Access Journals is hosted, maintained and partly funded by Lund University Libraries Head Office, Sweden. The Directory aims to be comprehensive and cover all open access scientific and scholarly journals that use an appropriate quality control system, and it will not be limited to particular languages or subject areas. **(McCabe, Mark -2006).**

The DOAJ: A Directory of Open Access Journals is selected to analyze the structure and different contents, because this open access directory has grown in status and set its own standards in different professional journalism. It is an International directory completely dedicated to the field of various subjects. **(Ramesh Kuri, *Asian Journal of Multidisciplinary Studies*, Volume 2, Issue 5, May 2014)**

Literature Review:

Scientometric / Bibliometric / Citation studies have done earlier by different authors on the different individual journal publications and literature on specific subject areas. The following studies related to the objectives of this study have been reviewed.

Literature Review: The terms bibliometrics and scientomatrics used almost simultaneously introduced by Pritchard and by **Nalimov and Mulchenko in 1969**. Pritchard explained the term

Bibliometrics as "the application of mathematical and statistical methods to books and other media of communication"2. Nalimov and Mulchenko defined scientometrics as "the application of those quantitative methods which are dealing with the analysis of science viewed as an information process"3. A number of bibliometric and scientometric studies have been done during the last three decade to evaluate the research productivity of science discipline journals in terms of author productivity, growth of literatures, their publication output and in citations study. A scientometrics analysis of 103 articles published in "Directory of Open Access Journals (DOAJ)" during by the year 2009 to 2013. In his study he showed that highest numbers of papers were written by co-authors and contributions of paper in this journal from India is slightly more than from other foreign countries. 6

(**Jayendra Kumar Singh,** *Research Journal of Library Sciences* Vol. 2**(1),** 7-12, February **(2014)**)

Objective of the Study:

The main objective of the study is to present the growth of literature, and make quantitative and qualitative assessment of the research by analyzing the research outputs towards identifying the following facts:

1. To study the year-wise distribution of articles
2. To study the frequency of citations
2. To study the mail domain.
3. To identify the length of title and pages.
4. To find out organization wise distribution of publication.
5. To find out country-wise distribution of articles.
6. To find out the authorship and degree of collaboration pattern in the publication.

Methodology:

For this study data has collected from the open access directory (DOAJ) website named **www.doaj.org**. Each and every "Internet use in library and information science" of published on the DOAJ directory during 2009 to 2013 was examined. It was interesting to analyze the journals of such a leading Directory in the different fields so as to know the structure and contentment of DOAJ, language of publication, and year of journal addition during the study period. At the end data accessed has analyzed by helping of SPSS software and analyzed data has represented in the form of tables and graphs.

Analysis of Data:

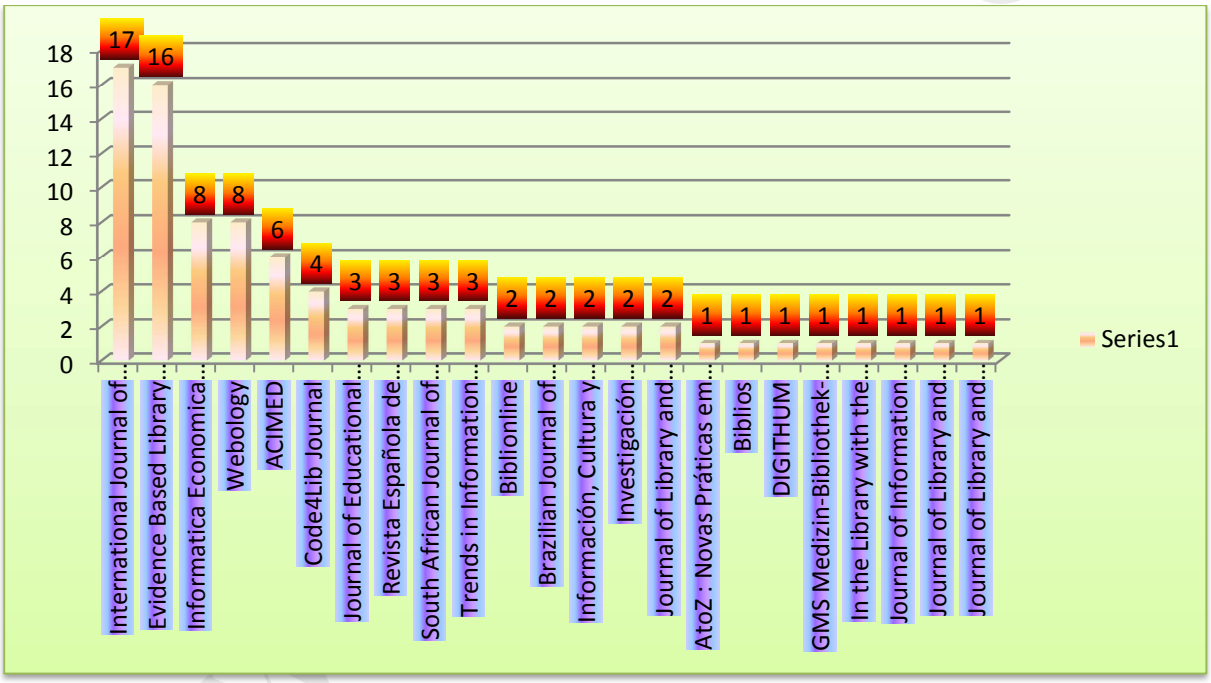
In views of the objectives of the present study, analysis of "Directory of Open Access Journals (DOAJ)" is presented further (Directory of Open Access Journals (DOAJ).

Table No. 1: Journal-wise Distribution of the journal

Sr. No.	Journal Name	Frequency	Percent
01	International Journal of Digital Library Services	17	19.1
02	Evidence Based Library and Information Practice	16	18.0
03	Informatica Economica Journal	8	9.0
04	Webology	8	9.0
05	ACIMED	6	6.7
06	Code4Lib Journal	4	4.5
07	Journal of Educational Media & Library Sciences	3	3.4
08	Revista Española de Documentación Científica	3	3.4
09	South African Journal of Libraries and Information Science	3	3.4
10	Trends in Information Management	3	3.4
11	Biblionline	2	2.2
12	Brazilian Journal of Information Science	2	2.2
13	Información, Cultura y Sociedad	2	2.2
14	Investigación Bibliotecológica	2	2.2
15	Journal of Library and Information Science Research	2	2.2
16	AtoZ : Novas Práticas em Informação e Conhecimento	1	
17	Biblios	1	1.1

18	DIGITHUM	1	1.1
19	GMS Medizin-Bibliothek-Information	1	1.1
20	In the Library with the Lead Pipe	1	1.1
21	Journal of Information Science Theory and Practice	1	1.1
22	Journal of Library and Information Science	1	1.1
23	Journal of Library and Information Studies	1	1.1
Total		89	**100**

Fig No. 1: Journal-wise Distribution of the journal

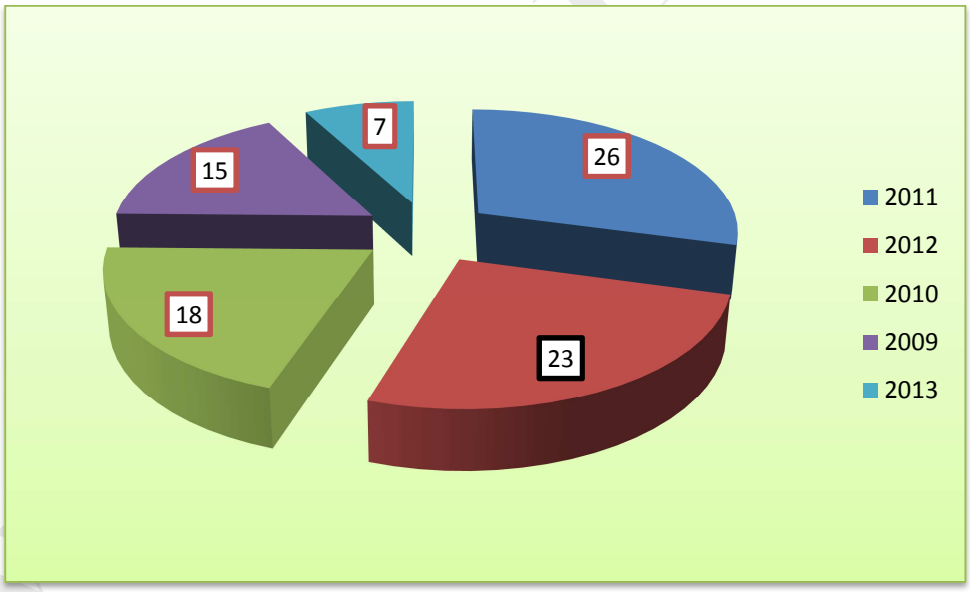


It can be observed from Table No.1, that during 2009-2013 a total of 89 Journal were published in the Journal "Directory of Open Access Journals" by researchers in various countries.

Table No. 2: Year wise Distribution of the Article

Year	Frequency	Percent
2011	26	29.2
2012	23	25.8
2010	18	20.2
2009	15	16.9
2013	7	7.9
Total	**89**	**100.0**

Fig No. 2: Year wise Distribution of the Article

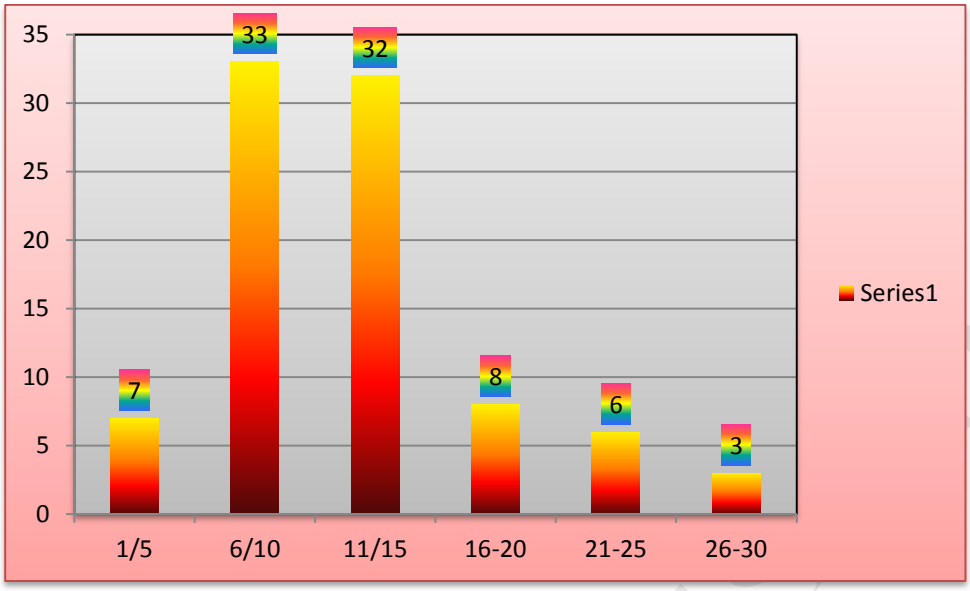


It can be observed from Table No 2. There were as many as total 89 articles caring out from 2009 to 2013. Table no.2 provides year wise distribution of the article to this field, the number of publications of each country and their share in percentages, in the year

2011many as highest 26 (29.2%) article published and in the year 2012 many as 23 (25.8%) article publishes. And in the year 2010 the totals of 18(20.2%) article were publishes. In 2009 the total of 15(16.9%) article were publishes. And 2013 is the lowest country total 7(7.9%) article were publishes. Therefore, the **(Hypotheses No.2)** is valid.

Table No. 3: Length of Title wise Distribution of the Article

Sr. No	Length of Title	Frequency	Percentage
01	1-5	7	7.9
02	6-10	33	37.1
03	11-15	32	36.0
04	16-20	8	9.0
05	21-25	6	6.7
06	26-30	3	3.4
Total		**89**	**100.0**

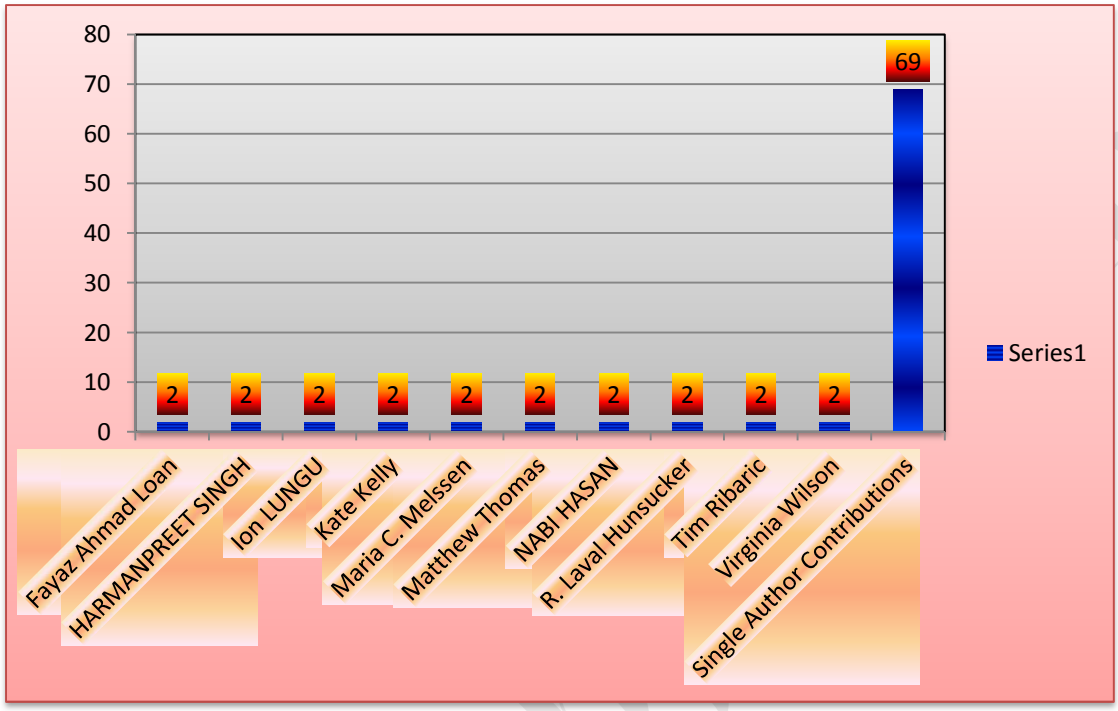


It can be observed from Table No 3. There were as many as total 89 Journals caring out from 2009 to 2013. The 33 article have a height length of the title from 6 to 10, and 32 articles have a length of the title from 11 to 15, the 8 articles have a length of the title from 16 to 20, the 7 articles have a length of the title from 1 to 5, the 6 articles have a length of the title from 21 to 25, and 3 articles have a length of the title from 26 to 30.

Table No. 4: Author wise Distribution of the Article

Author	Frequency	Percent	Rank
Fayaz Ahmad Loan	2	2.2	1
HARMANPREET SINGH	2	2.2	1
Ion LUNGU	2	2.2	1
Kate Kelly	2	2.2	1
Maria C. Melssen	2	2.2	1
Matthew Thomas	2	2.2	1
NABI HASAN	2	2.2	1
R. Laval Hunsucker	2	2.2	1
Tim Ribaric	2	2.2	1
Virginia Wilson	2	2.2	1
Single Author Contributions	**69**	/	2
Total	**89**	**100.0**	

Fig No. 3: Author wise Distribution of the Article

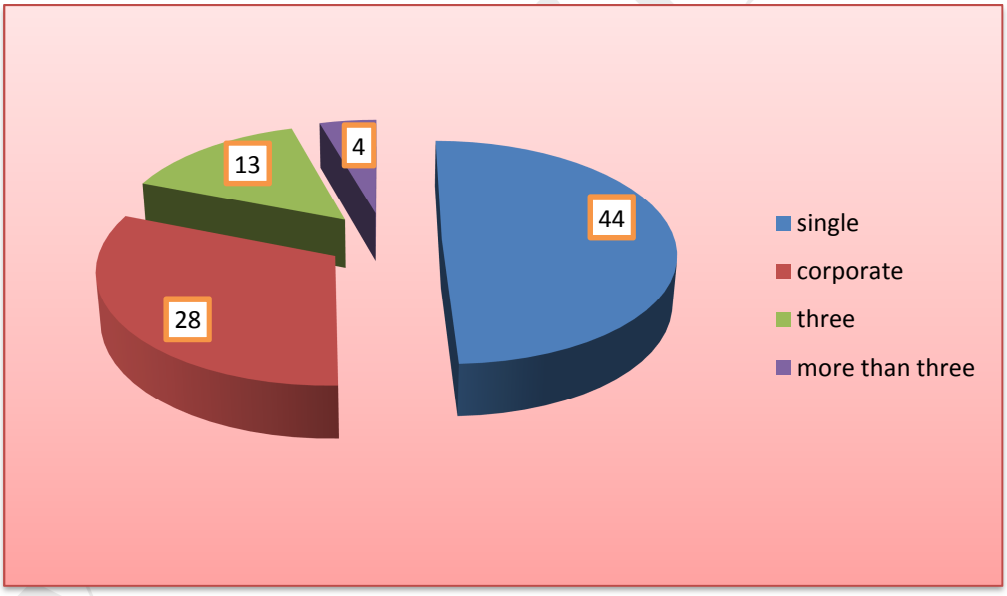


It can be observed from Table No. 4 that, the most productive authors are Fayaz Ahmad Loan who had the highest number 2 publications, as well as Harmanpreet Singh, Ion Lungu, Kate Kelly, Maria C. Melssen, Matthew Thomas, Nabi Hasan, R. Laval Hunsucker, Tim Ribaric, Virginia Wilson, with Two Publications, and 69 Authors with One Publications each.

Table No. 5: Authorship pattern

Number of Authors	Frequency	Percent
single	44	49.4
corporate	28	31.5
three	13	14.6
more than three	4	4.5
Total	**89**	**100.0**

Fig No. 4: Authorship pattern



It can be observed from Table No.5 that, year-wise authorship and collaboration trend is given in table 5. Authorship trend is towards multiple-authored papers. Single authored papers accounted for 44 (49.4%) corporate authored paper accounted for 28 (31.5%) Three authored paper accounted for 13 (14.6%) and more than three authored paper accounted for 4 (4.5%). Therefore, the hypothesis, "Authorship trend is towards multiple authored papers'' (Hypothesis No.1) is valid.

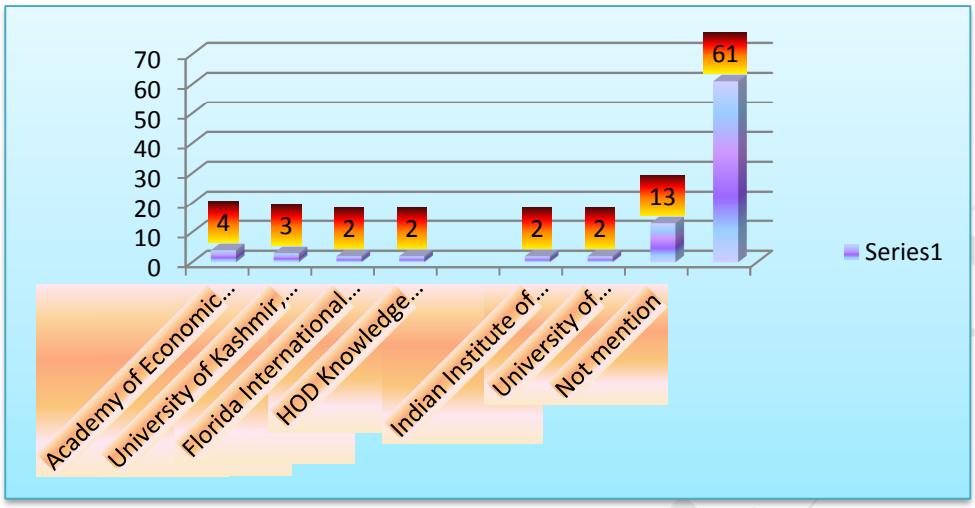
Institution-wise:

Institution is a society or organization for the promotion of science, education etc. An institute is a permanent organizational body created for a certain purpose. Often it is a research organization (research institution) created to do research on specific topics. An institute can also be a professional body. In some countries institutes can be part of a university or other institution of higher education, either as a group of departments or an autonomous educational institution without a classic full university status such as a University Institute.

Table No. 6: Institution- -wise distribution of Article

Institution	Frequency	Rank
Academy of Economic Studies, Bucharest, Romania	4	1
University of Kashmir, Srinagar	3	2
Florida International University Miami	2	3
HOD Knowledge Centre, DAV Institute of Engineering & Technology, Jalandhar	2	3
Indian Institute of Technology Delhi	2	3
University of Saskatchewan Saskatoon	2	3
Not mention	13	4
Institution mentioned once	**61**	5
Total	**89**	**100.0**

Fig No. 5: Institution- -wise distribution of Article

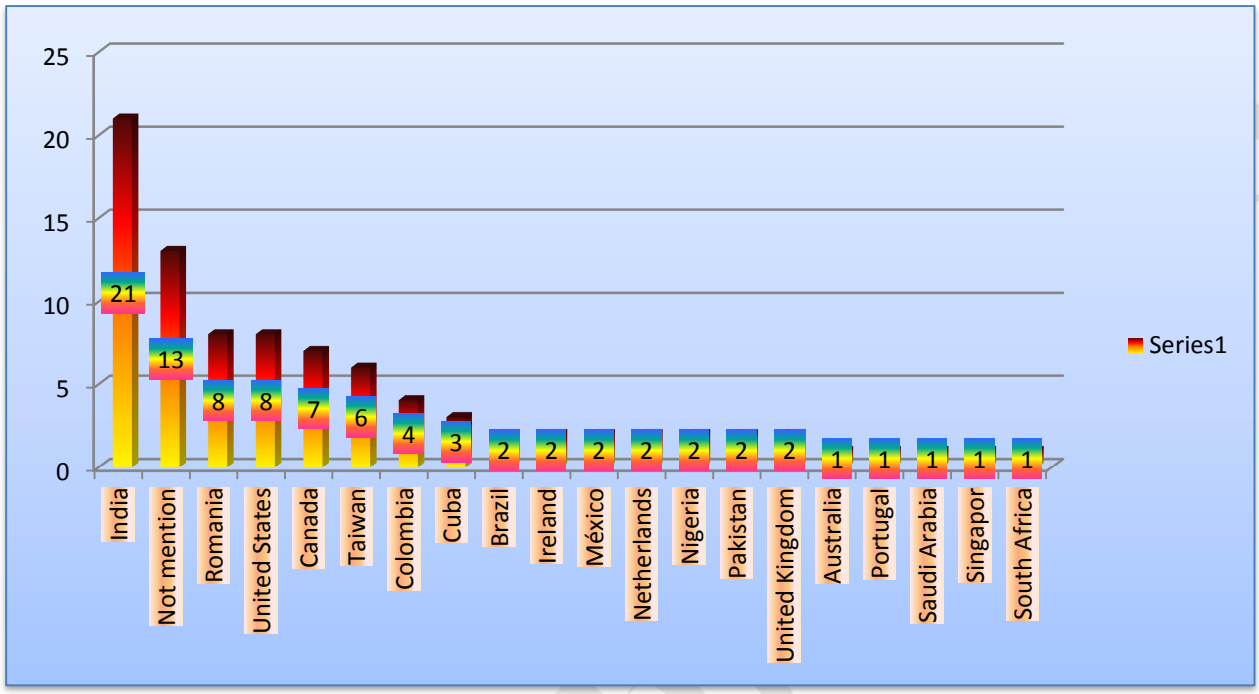


It can be observed from Table No. 6 that, there were 89 organizations involved in research activity. The organizations that have contributed in the publication during 2009-2013. Institution is a society or organization for the promotion of science, education etc. An institute is a permanent organizational body created for a certain purpose. Often it is a research organization (research institution) created to do research on specific topics. An institute can also be a professional body. In some countries institutes can be part of a university or other institution of higher education, either as a group of departments or an autonomous educational institution without a classic full university status such as a University Institute. Highest 4 frequency of the 1 institutions, 3 frequency of the 1 institution, 2 frequency of the 4 institution,13 institution has not mention their institutions, and 61 has one institution.

Table No. 7: Country wise Distribution of the Article

Country	Frequency	Percent
India	21	23.6
Not mention	13	14.6
Romania	8	9.0
United States	8	9.0
Canada	7	7.9
Taiwan	6	6.7
Colombia	4	4.5
Cuba	3	3.4
Brazil	2	2.2
Ireland	2	2.2
México	2	2.2
Netherlands	2	2.2
Nigeria	2	2.2
Pakistan	2	2.2
United Kingdom	2	2.2
Australia	1	1.1
Portugal	1	1.1
Saudi Arabia	1	1.1
Singapore	1	1.1
South Africa	1	1.1
Total	**89**	**100.0**

Fig No. 6: Country wise Distribution of the Article

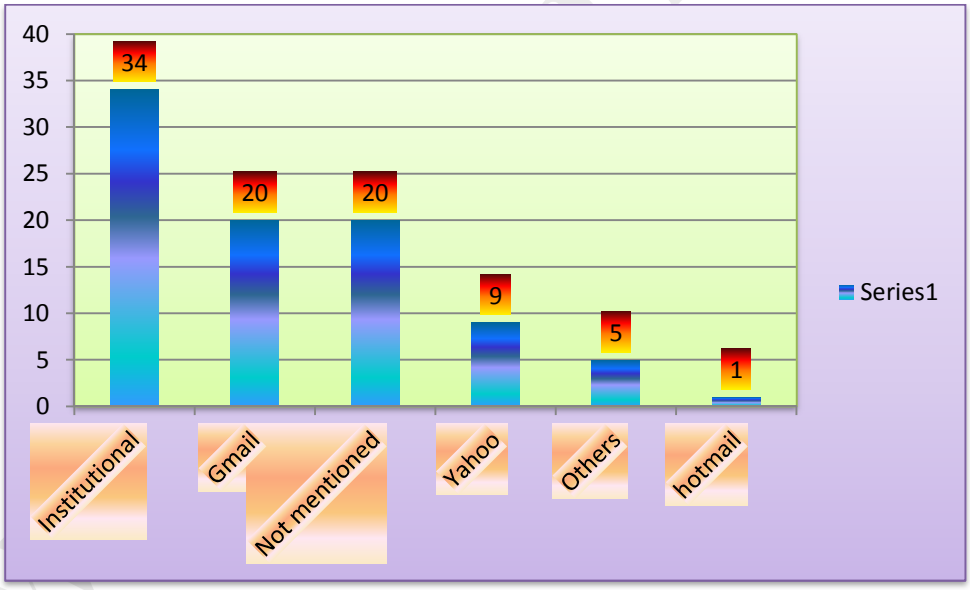


It can be observed from Table No 7 that, there were as many as 35 countries carrying out research and produced 89 articles. Table no.2 provides ranked List of countries contributing to this field, the number of publications of each country and their share in percentages, India is the top producing country with 21(23.6%) publications of the total output. Therefore, the hypothesis, "India is the high productive country". It can be stated that India being the publishing country the output is more than other country.

Table No. 8: Mail Domain wise Distribution of the Article

Mail Domain	Frequency	Percent
Institutional	34	38.2
Gmail	20	22.5
Not mentioned	20	22.5
Yahoo	9	10.1
Others	5	5.6
Hotmail	1	1.1
Total	**89**	**100.0**

Fig No. 7: Mail Domain wise Distribution of the Article

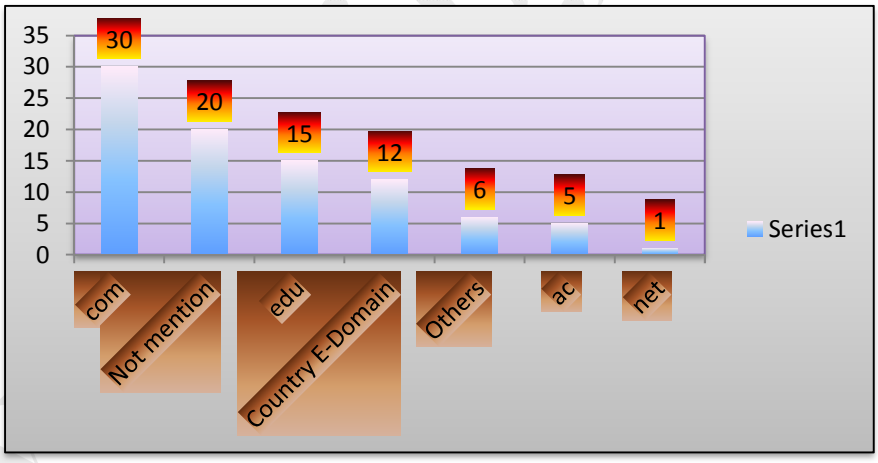


It can be observe from table No. 8 , there were as many as 34 authors used the Institutional Mail Domain, and 20 authors used the Gmail mail Domain, and 20 has not mention their mail domain, and 9 authors use the yahoo mail domain, and 1 authors use the Hotmail mail domains.

Table No. 9: Domain Name wise Distribution of the Article

Domain Name	Frequency	Percent
Com	30	33.7
Not mention	20	22.5
edu.	15	16.9
Country E-Domain	12	13.5
Others	6	6.7
Ac	5	5.6
Net	1	1.1
Total	**89**	**100.0**

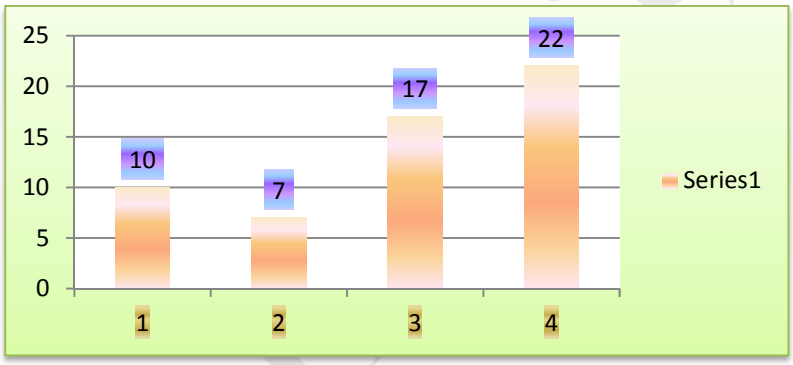
Fig No. 8: Domain Name wise Distribution of the Article



It can be observed from table No. 8, there were as many as 30 authors used the com. Domain name, and 20 authors has not mention their domain name, and 15 authors use the educational domain name, and 12 authors use the Country E-Domain 6 authors use the others domains name,5 authors used the ac. Domain name, and one author use the net. Domain name.

Table No. 10: Number of Pages wise Distribution of the Article

Sr. No	Number of Pages	Frequency	Percentage
01	1-3	10	11.2
02	4-6	7	7.9
03	7-9	17	19.1
04	10-12	22	24.7
Total		**89**	**100.0**

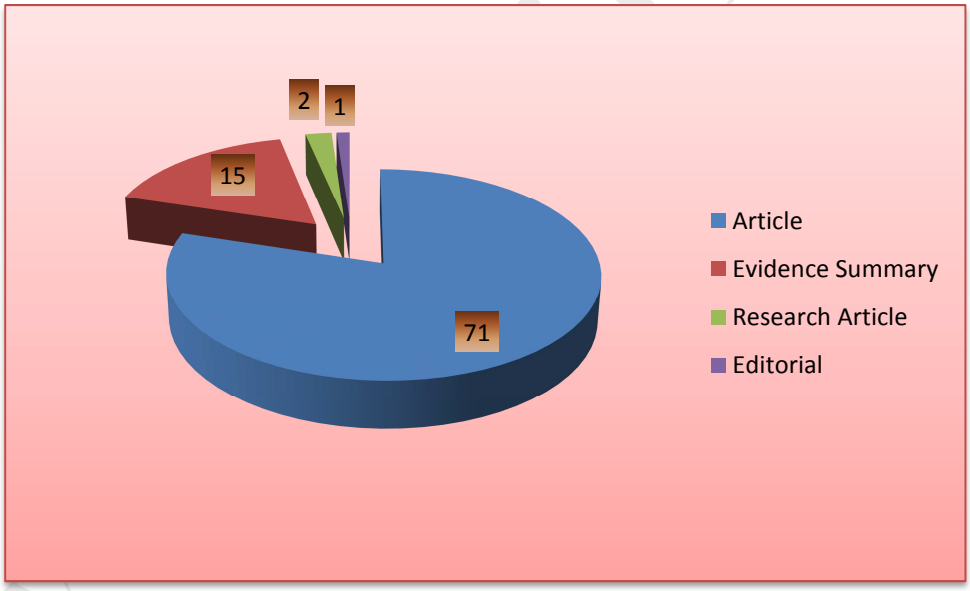


It can be observed from Table no.10 that, the highest number of pages frequency is 22(24.7 %), from the 10 to 12 number of pages in the articles, and the number of pages frequency is 17 (18.1%) from the 7 to 9 number of pages has taken in the article etc..

Table No. 11: Document Type wise Distribution of the Article

Document Type	Frequency	Percent
Article	71	79.8
Evidence Summary	15	16.9
Research Article	2	2.2
Editorial	1	1.1
Total	**89**	**100.0**

Fig No. 9: Document Type wise Distribution of the Article

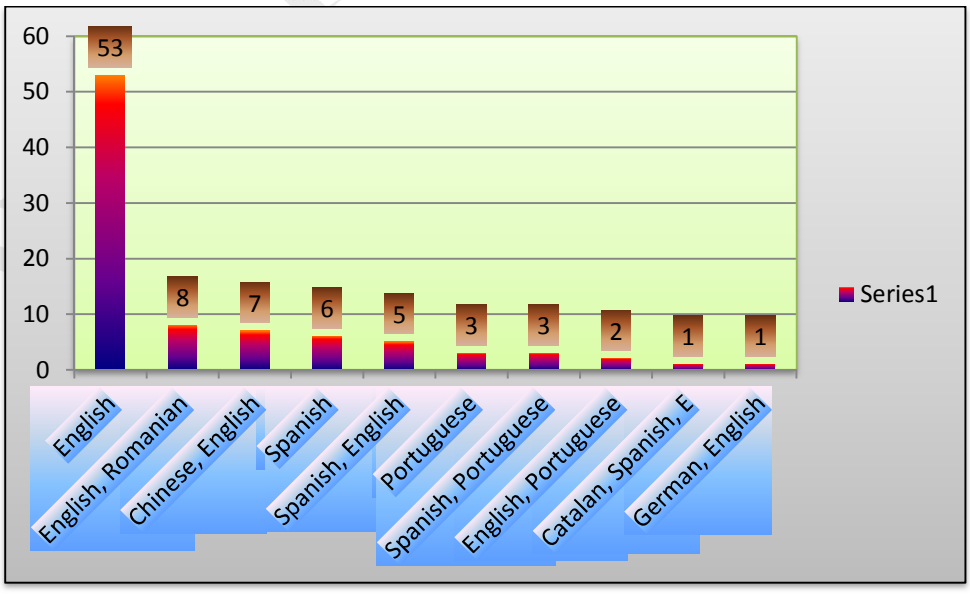


It can be observed from Table no.11 that, 71 (79.8%) of the Literature was published in Article, 15 (16.9%) of the literature was published in Evidence summary, 2 (2.2%) of the literature was published in Research Article, and 1 (1.1%) literature was published in Editorial. The total content of "Internet use in library and information science on DOAJ" that is Article, Evidence Summary, Research Article, Editorial, etc. is analyzed.

Table No. 12: Language wise Distribution of the Article

Language	Frequency	Percent
English	53	59.6
English, Romanian	8	9.0
Chinese, English	7	7.9
Spanish	6	6.7
Spanish, English	5	5.6
Portuguese	3	3.4
Spanish, Portuguese	3	3.4
English, Portuguese	2	2.2
Catalan, Spanish, E	1	1.1
German, English	1	1.1
Total	**89**	**100.0**

Fig No. 10: Language wise Distribution of the Article

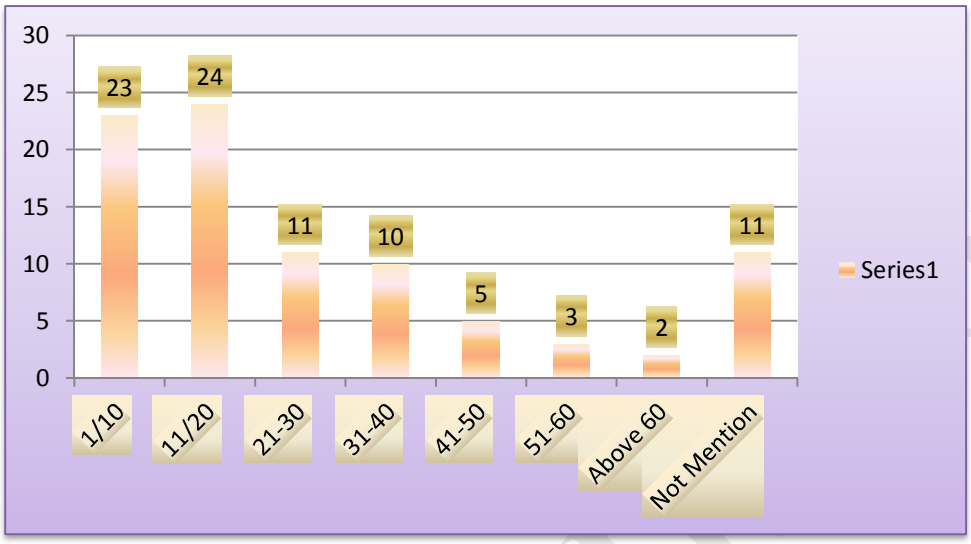


From table no. 12 Show that, the language wise distribution of Article on DOAJ. Total 89 Article were published in "Internet use in library and information science on DOAJ" from 2009 to 2013. Total 10 Languages are published the document in Internet use in library and information science from 2009 to 2013. The highest literatures were published in English language 53 (59.6%).

Table No. 13: Number of References wise Distribution of the Article

Sr. No	Number of References	Frequency	Percentage
01	1-10	23	25.8
02	11-20	24	27.0
03	21-30	11	12.4
04	31-40	10	11.2
05	41-50	5	5.6
06	51-60	3	3.4
07	Above 60	2	2.2
08	Not Mention	11	12.4
Total		**89**	**100.0**

Fig No. 11: Number of References wise Distribution of the Article



From table no. 13 Show that, the Number of References wise distribution of Article on DOAJ. Total 89 Article were published in "Internet use in library and information science on DOAJ" from 2009 to 2013. Total 89 Number of References are published the document in Internet use in library and information science from 2009 to 2013. The highest reference 24(27.0%) are from 11 to 20 number of references, and in 11 articles has not mention references.

Findings and Conclusion:

From the study it is found that most of the open access e-journals country wise distribution of "Internet use in library and information science on DOAJ". Total 103 journals were identified from 35 countries on DOAJ. First Ranking of 28 journals has contributed

from the India Country. 13 Articles contributed of Not mention. The Directory of Open Access Journals is a significant resource. DOAJ has developed a well-deserved reputation for quality, and is the world most authoritative list of fully Open Access. Enumerate the Internet use in library and information science on DOAJ.

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