

# Bibliometric Study on LIS Journals Archived in DOAJ

**Santosh C. Hulagabali**

*Librarian, Nagindas Khandwala College, Malad (W), Mumbai-64*

*E-mail: santoshlib@yahoo.co.in*

**ABSTRACT:** *The article analyses the Library and Information Science (LIS) journals with the aid of bibliometric methods. The study covers year-wise, country-wise and language-wise distribution of LIS journals archived in Directory of Open Access Journals (DOAJ).*

**KEYWORDS:** *Bibliometrics, Open access journals, LIS Journals, DOAJ*

## 1. INTRODUCTION

In the information society, free flow of information is a fundamental principle for bridging the knowledge gaps between privileged and under-privileged communities. Open access (OA) to information and knowledge is an innovative mode of scholarly communication within the digital environment aimed at achievement of universal access to information and knowledge (Das, 2008, p.iv). Information resources are continuously becoming harder to acquire because of increasing subscription costs and shrinking budgets. Journal publisher's monopolistic policies make the scene bleaker for libraries and readers. The OA has brought in a welcome change and opened-up new avenues for scholarly publishing and access models (Pandian, 2008).

Bibliometrics is a type of research method being used in LIS. It is an emerging area of research in the LIS field. The quantitative analysis and statistics to describe patterns of publication within a given field of literature are utilized. Researchers use bibliometric methods of evaluation to determine the influence of a single author or to describe the relationship between two or more authors or works. Bibliometric studies can also be used to study the regional patterns of research, the extent of cooperation between research groups and national research profiles. The main derivatives of bibliometrics are: publication counts, citation counts, co-citation analysis, co-word analysis, scientific 'mapping' and citations in patents. The word 'bibliometric' has been derived from the Latin and Greek words 'biblio' and 'metrics' which refer to the application of mathematics to the study of bibliography (Thanuskodi, 2010, p.78).

Periodicals/journals are the primary source of information and an important media for communication. They play a major role for communicating the latest research findings and publishing the articles containing the current development in any field of knowledge (Thanuskodi, 2010, p.78). In this study, the online open access journals (archived in DOAJ) of LIS have been covered.

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## 2. ABOUT DOAJ

The aim of the DOAJ is to increase the visibility and ease of use of open access scientific and scholarly journals thereby promoting their increased usage and impact. The Directory aims to be comprehensive and cover all open access scientific and scholarly journals that use a quality control system to guarantee the content. The DOAJ (2010) defines open access journals as 'journals that use a funding model that does not charge readers or their institutions for access'. From the BOAI definition of 'open access', DOAJ takes the right of users to "read, download, copy, distribute, print, search, or link to the full-texts of these articles" as mandatory for a journal to be included in the directory.

The proliferation of freely accessible online journals, the development of subject specific pre-print and e-print archives and collections of learning objects provide a very valuable supplement of scientific knowledge to the existing types of published scientific information (books, journals, databases etc.). However, these valuable collections are difficult to overview and integrate in the library and information services provided by libraries for their user constituency (DOAJ, 2010).

## 3. FEATURES

- a) All scientific and scholarly subjects are covered.
- b) The types of the sources archived are scientific and scholarly periodicals that publish research or review papers in full-text. Academic, government, commercial, non-profit and private sources are all acceptable.
- c) The target group for included journals is primarily researchers.
- d) A substantive part of the journal consists of research papers. All content is available via *free user registration* online and access to the full-text data with *no embargo*.
- e) It allows any journal in any of the international languages and access to all content is freely available.
- f) For a journal to be included it should exercise quality control on submitted papers through an editor, editorial board and/or a peer-review system. This means the open access archive does not perform peer-review. It merely provides open access to its contents (Pandian, 2008).
- g) Metadata: Resources will be catalogued on journal title level. To make article level content searchable in the system, journal owners are encouraged to supply with article-metadata when a journal has been added into the directory (DOAJ, 2010).
- h) The article-level-metadata can be harvested using OAI protocol. The base URL is: <http://www.doaj.org/oai.article>.

## 4. OBJECTIVES OF THE STUDY

The objectives of the study are to:

- a) find out the share of LIS open access journals (as one of the growing disciplines) under Social Sciences (category) on DOAJ;
- b) trace the country-wise and language-wise distribution/scattering of LIS journals on DOAJ;
- c) understand the changing trends in scholarly publication in LIS and

d) to know the LIS literature flow in the form of open access journals archived in DOAJ.

#### **4. NEED OF THE STUDY**

There have been incessant studies on the growing trends of open access journals/archives in the field of LIS. The trend has given new dimensions and understanding about open access journals (OAJs) in LIS and other fields. However, the present study aims to highlight aspects which are related to the source of publication and their language. It is evident to understand as which are the countries who are publishing LIS journals with open accessibility. Thus, to trace this trend, the popular open access database i.e. DOAJ is selected. The very study may further encourage the researchers to understand the country-wise and language-wise distribution of LIS OAJs on other platforms/databases.

#### **5. SCOPE AND LIMITATIONS**

The study has specifically concentrated on the LIS journals available on DOAJ. All LIS journals listed under Social Science stream have been undertaken for the study (time series data: 2003-2009). There are chances that some of the journals listed under LIS journals' category may belong to Computer Science, however interrelated to the LIS. The study does not explain the policy issues of DOAJ. It does not stress on the type of document viz. peer reviewed journal, magazine or newsletter. Moreover, the LIS journals listed on DOAJ may be available on other open access databases, but the study does not consider this fact.

In the present study, the phrases, 'open access journals' and 'DOAJ archive/database' have been used interchangeably as the terms open access and open archive have different meanings. However, the use of both the terms is apt as far as DOAJ is concerned. Keeping the objectives of the study and availability of time in mind the study has excluded the listing of ISSN numbers, web links to the particular title and keywords.

#### **6. METHODOLOGY**

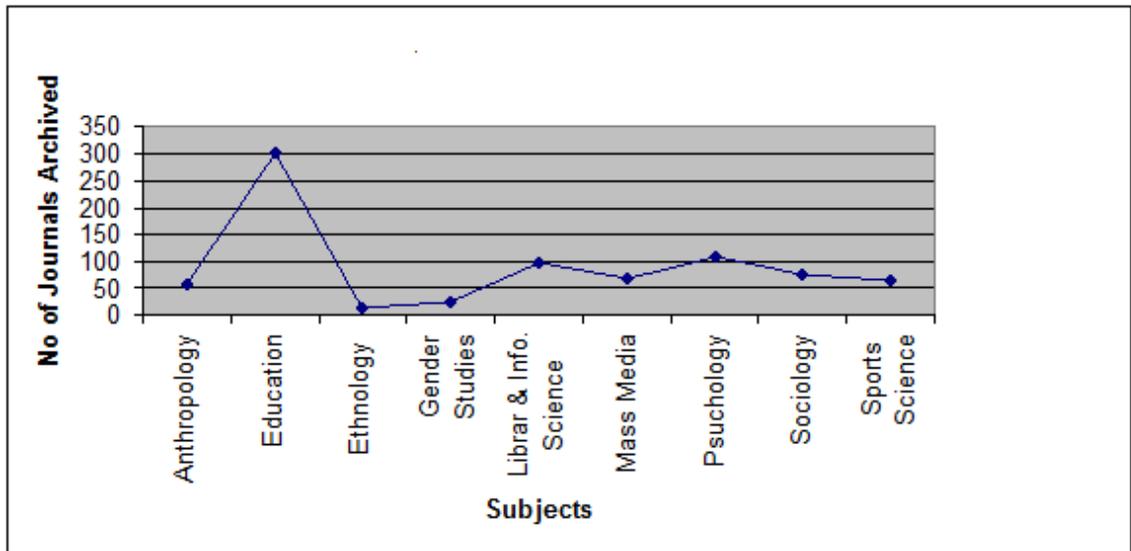
The study specifically selects LIS journals archived in DOAJ database. The selection of the sample, i.e. LIS journals, is purposive. All 97 LIS journals archived under Social Science stream were selected, retrieved and tabulated based on the metadata structure of the journals. Each parameter was filtered using MS-Excel and Endnote and then represented in the form of tables and charts with the analysis of the same. Moreover, the study also informally used the primary sources of information and some online databases like Open J-Gate, ERIC and RePEc to understand the general trends in open access databases.

#### **7. ANALYSIS AND INTERPRETATION OF DATA**

The study is based on the analysis of the collected data which has been represented in the tabular form for the easy understanding of the theme.

**7.1. Sub-disciplines under Social Science:** The share of LIS journals in DOAJ, under Social Science stream, stands third with 97 journals followed by Education (304 journals) and Psychology (106 journals). This is indeed remarkable quantity if compared to the other subjects.

Figure 1: DOAJ Subject-wise distribution of journals in social science



**7.2. Year-wise Growth of LIS Journals:** The year-wise growth of LIS journals in DOAJ started in the year 2003 with 21 journals. Now in its seventh year of addition of LIS journals, i.e. 2009, DOAJ has archived 97 LIS journals. The year 2003 has seen maximum number of journals (21) and 2009 minimum journals (6) archived.

Table 1: Year-wise growth of LIS journals

Year	No. of LIS Journals
2003	21
2004	11
2005	19
2006	18
2007	10
2008	12
2009	6
<i>7 years</i>	<i>97 LIS Journals</i>

### 7.3. Country wise-Distribution of LIS Journals on DOAJ:

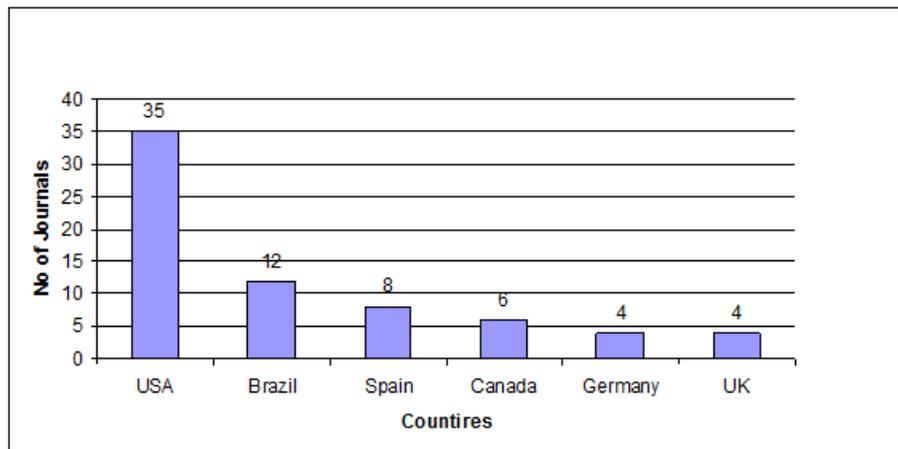
a) If analyzed the *distribution* of LIS journals under *developing and developed countries' categories* (Secure4, 2010), it is found that the participation in the Open Access Initiative, indirectly, by the developed countries is higher (77) than that of their counterparts (20).

Table 2: Country-wise Distribution of LIS Journals on DOAJ

Developed Countries	No. of Journals	Developing Counties	No of Journals
Australia	1	Argentina	1
Canada	6	Brazil	12
Croatia	2	Bulgaria	1
France	2	Cuba	1
Germany	4	Egypt	1
Italy	2	Iran	1
New Zealand	1	Peru	1
Lithuania	1	Romania	1
Netherlands	2	Venezuela	1
Poland	1		
Puerto Rico	1		
South Africa	1		
Spain	8		
Sweden	2		
Switzerland	2		
Taiwan	1		
Turkey	1		
UK	4		
USA	35		
<i>19 Countries</i>	<i>77</i>	<i>9 Countries</i>	<i>20</i>

b) *Top six contributing countries:* Twenty eight countries contribute 97 journals to DOAJ's database, among twenty countries, the USA, Brazil and Spain stand first, second and third with 23, 11 and 9 journals respectively. Interestingly, Canada and the UK's share is 7 journals and stands in fourth position. Germany holds 4 journals and Italy, Australia, France and Croatia share 2 journals each. The developing country like Brazil is on second position where as there is a thick-margin-difference between developed countries viz. Canada, Australia, Spain and UK.

Figure 2: Top six LIS journals' contributing countries



#### 7.4. Language-wise Distribution of LIS Journals:

- a) The *most preferred languages* of LIS journals are English, Spanish, French and Portuguese. Australia, UK, USA and Iran are the countries which publish LIS journals only in English accounting a major share in the language-wise distribution LIS journals.

Table 3: Language-wise distribution of LIS Journals

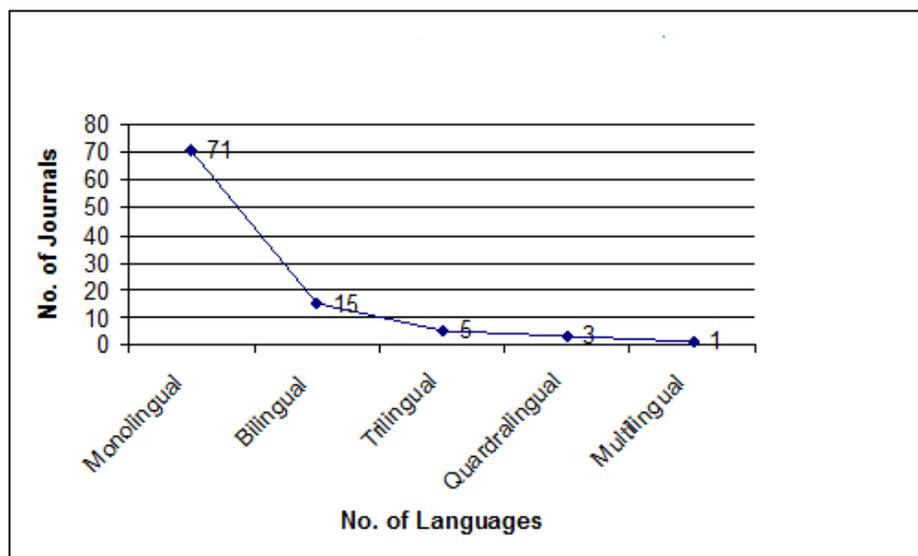
<i>Languages</i>	<i>No. of Journals</i>
Arabic	1
Bulgarian	1
Catalan	2
Croatian	1
Danish	1
English	75
French	13
German	5
Italian	3
Norwegian	1
Polish	1
Portuguese	13
Spanish	19
Swedish	2
<i>Total 14</i>	<i>138</i>
<i>Languages</i>	

- b) There are total 71 monolingual, 15 bi-lingual, 5 tri-lingual journals and also in few in multi-languages.

Table 4: Number of Languages preferred by LIS journals

<i>Country</i>	<i>Monolingual Journals</i>	<i>Bi-lingual Journals</i>	<i>Tri-lingual Journals</i>	<i>Quadrilingual Journals</i>	<i>Multiple journals</i>
Argentina	-	1	-	-	-
Australia	2	-	-	-	-
Brazil	4	4	3	-	-
Bulgaria	1	-	-	-	-
Canada	4	3	-	-	-
Croatia	2	-	-	-	-
Cuba	1	-	-	-	-
Egypt	1	-	-	-	-
France	1	-	-	-	-
Germany	2	1	-	-	1
Iran	1	-	-	-	-
Italy	1	-	-	1	-
Lithuania	-	1	-	-	-
Netherlands	2	-	-	-	-
Newzeland	1	-	-	-	-
Peru	1	-	-	-	-
Poland	1	-	-	-	-
Puerto Rico					
Romania	-	1	-	-	-
South Africa	1	-	-	-	-
Spain	4	1	2	1	-
Sweden	-	1	-	1	-
Switzerland	1				
Taiwan	-	1	-	-	-
Turkey	-	1	-	-	-
UK	4	-	-	-	-
USA	35	-	-	-	-
Venezuela	1	-	-	-	-
Total	71	15	5	3	1

Figure 3: Number of Languages preferred by LIS journals



## 8. FINDINGS AND CONCLUSIONS

Open access has three pillars: open access publishing, open access archiving and open access support/advocacy. These three pillars are integral in creating sustainable open access to scholarly communication (Pandian, 2008).

The findings of the study are listed below.

- a) The archival of LIS journals, in the DOAJ database, comprises of 97 journals, the LIS domain stands third position under the social science stream, out of 960 journals listed under 10 major disciplines.
- b) The study found that open access movement is gaining momentum in developed countries which already have necessary information infrastructure. Hence, in a country-wise distribution of LIS journals, developed countries top the share. However, the developing country, Brazil stands second with 12 journals, USA (35), UK (4), Canada (6) and Spain (8). It indicates that the developing countries are participating in the open access movement with significant number of journals. However, this fact has relevance to only one developing country i.e. Brazil.
- c) Language-wise distribution of the journals has marked an interesting trend. There are 71 journals which are monolingual being published in major foreign languages. Only 15 journals are bilingual. This shows the importance for monolingual is given utmost priority. There are only three developed nations which publish journals only in English accounting 40 journals out of 97 journals. Other journals are being published in other foreign languages. However, English and Spanish languages share a vital part.

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