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Scholarly Open Access Publishing: Growth of LIS Open Access Journals visible through Directory of Open Access Journals

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Abstract: Open access is an effective way for the dissemination of the scholarly publishing. Open access opens new vistas of access and dissemination of scholarly communication to wider readers. Library and Information Science field also witnessed the ever growing trends of open access and its growth in the form of Open Access Journals (OAJ), Open Access Repositories (OAR), Open Source Software (OSS), Open Educational Resources (OER) and MOOC's. The present study highlights the position of LIS open access journals indexed in DOAJ. Directory of Open Access Journals (DOAJ) is an indexing service indexes high quality peer-reviewed journal of Science & technology, Social Sciences and Humanities. About 119 LIS Journals are indexed in DOAJ in the month of September, 2017. These journals are analysed on the different parameters set as objectives.

Keywords: Open Access Journals (OAJ), Open Journal System (OJS), Peer Review, DOAJ Seal, Directory of Open Access Journals (DOAJ), Public Library of Science (PLOS) Creative Commons.

Introduction

Open access journals (OAJs) have an impact in all fields from science and technology to social sciences and humanities which is visible through their indexing in the major databases like Web of Science and SCOPUS. Moreover OAJs and have their own impact factor like their traditional counterparts. (Norris, Oppenheim and Rowland, 2008; Masrek and Yaakub, 2015) The researchers all over the globe show their interest towards the OA publishing. This results in the growth of OA journals and their higher research impact. (Te et. al, 2017)

Open access journals provide a big relief to libraries and better alternative which suffers from the ever increasing subscription cost of the journals. Open access provides alternative way of publishing through online mode. (Krisop and Chan, 2005) OA Journals and repositories are the two major modes for the dissemination of the open access scholarly content. OA journals represent the gold route (authors have to pay for publication of its research paper in a journal) while OA repositories represents the green route (self archiving of the own research in an institutional repositories) to achieve the open access mandate. (Harnad et.al, 2008)

Open access as described by Peter Suber (2012) "Open-access literature is digital, online, free of charge, and free of most copyright and licensing restrictions."

George Soros, Philanthropist founded the Open Society Institute, the foundation which works towards the open access to research literature. The concept visualized in the conference conducted by the Open Society Institute in December 1-2, 2001 in Budapest. The recommendations were published as a statement in February 2002, as Budapest Open Access Initiative which first defined "Open Access".

By ‘open access’ to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited. (Budapest, 2001 [Online]).

Another important event in the timeline of open access was added on April 11, 2003. A one day meeting on Open access publication was conducted at Howard Hughes Medical Institute in Chevy Chase, Maryland. The statement of principles was emerged from the meeting on open access publication. The document is divided into four sections: Working definition of Open Access Publication constitutes the first part, which is followed by reports of three working groups.

The definition of Open access Publication as per Bethesda Statement is the one which fulfils the two norms:

- (i) The author(s) and copyright holder(s) grant(s) to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship [<http://www.earlham.edu/%7Epeters/fos>], as well as the right to make small numbers of printed copies for their personal use.
- (ii) A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in a suitable standard electronic format is deposited immediately upon initial publication in at least one online repository that is supported by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, interoperability, and long-term archiving (for the biomedical sciences, PubMed Central is such a repository). (Bethesda Statement, 2003)

Another historic event added in the history of Open Access (OA) was Berlin Declaration to Knowledge on Open Access in Science and Technology in November, 2003. The Mission statement of Berlin Declaration asserted that

“Scholarly research results and cultural heritage shall be freely accessible and usable for scientists and the public. A fundamental premise of the declaration is that open access (OA) is a responsibility of research performing organisations and research funding organisations, and that the publication and dissemination of research results are integral parts of the research process.” (Berlin Declaration, 2003)

These three public statements on open access are collectively known as BBB statements of OA. There are many other initiatives in the development of open access, some of the noteworthy are discussed in timeline proposed by Peter Suber (2009): Creation of creative commons by Lawrence Lessig in (2002), BioMed Central (2003), PubMed Central (2000), PLoS (Public Library of Science) founded in 2000 by the initiatives of Harold Vamur, Patrick Brown and Michael Eisen. PLoS launched its first open access journals *PLoS Biology*

in 2003. (PLoS, 2018) Directory of Open Access Journals (DOAJ), Directory of Open Access Repositories (DOAR) launched in 2003.

Literature Review

Number of articles examined the state of open access initiatives in different ways till date. Krisop and Chan (2005) described in their paper the economic development of the country depends upon the knowledge and research base of the country. From this perspective, the developing nations are the most affected. As researcher in these countries find it difficult to access the information which is locked by price. But many open access initiatives give respite to information seekers of developing nations. Open Access Archives, Open Journal Initiatives, Open Access Publishing and Consortial licensing approaches are the best utilised by the research community of the developing nations. Bjork (2011) studied the 24 open access journals which are selected in non random manner. These journals are studied for peer-reviewing process, adoption of new innovative features, formats of journals and articles, media formats and new revenue models. Kuballa (2017) identified journals in the subject category of “Medical Informatics” from Web of Science database. These OA journals are studied for article processing charges as a criteria followed by them. Yuan and Hua (2011) studied the scholarly impact of LIS open access journals mainly Journal of the Medical Library Association, D-Lib Magazine, Information Research, Ariadne, Cybermetrics and First Monday through their coverage in WoS, LISA, Web links analysis, WIF’s and Page Rank. Yang and Yanning (2009) studied the citation impact of four OA LIS Journals namely Chinese Librarianship: an International Electronic Journal, D-Lib Magazine, The Electronic Journal of Academic and Special Librarianship and Ariadne through Google Scholar. Rodriguez (2014) studied the faculty attitude towards the open access publishing. Bjork (2017) discussed about the journal portals which facilitates the publication of journals usually published by Scholarly societies and Universities. These portals are analysed further to find out their country of origin, percentage of journals, licensing model, subject area and type of publisher etc. Majority of Social Sciences and Humanities subjects are represented by these portals. SciELO, Journals On-Line, Bioline International, Open Library of Humanities, DoiSerbia, J-Stage, Scientific Journals Online etc are discussed in the article. Laakso and Bjork (2012) identified the longitudinal development of OA journals indexed in DOAJ from the year 2000 to 2011. There is growth in articles and Journals from 2000-2011 which are Online-only OA Journals with APC. Databases like Scopus, Web of Knowledge also confirms increase in the proportion of gold OA journals. Geographically; Latin America, North America, Asia and Europe have tremendous growth output towards OA. Commercial publishers share in OA increased from 13,400 articles in 2005 to 119,9000 in 2011. In subjects, Biomedicine occupies the first position with 35.5% of the total OA article published in the year 2011, while social sciences and Humanities are at the second position. In Indian Context, Pujar (2014) conducted a study to find out the LIS journals indexed in DOAJ in the year 2014. Husain and Nazim (2013) studied the open access journals indexed in DOAJ in the field of Media and Communication.

Objective of the study: The main objectives behind this study are as follows:

- To find out the country wise contribution of LIS OAJs indexed in DOAJ;
- To find out the year wise growth of LIS OAJs indexed in DOAJ;

- To find out language wise distribution of LIS OAJs indexed in DOAJ;
- To find out the license adoption by the LIS OAJs indexed in DOAJ;
- To find out LIS OAJs production and hosting platform;
- To find out the DOAJ Seal status of LIS OAJs indexed in DOAJ;
- To find out the reviewing system adopted by the LIS OAJs indexed in DOAJ;
- To find out the article processing charges system followed by LIS OAJs indexed in DOAJ;
- To find out the productivity of publishers represented in LIS OAJs indexed in DOAJ.

Methodology

Open access has emerged as a new medium of scholarly communication. The present study triggers the Indian Scholars to work and achieve the objectives of open access and shun the apprehensions associated with it. The data for the study was collected from DOAJ (Directory of Open Access Journals), an indexing service which indexes the high quality peer- reviewed open access journals of all subject areas. DOAJ indexes about 10,979 journals having 2,854,350 research articles of 123 countries till date. All journals fall under the category of Library and Information Science was analysed and their bibliographic information was collected from DOAJ in the month of September, 2017. In some cases, individual journal website is also search to collect the relevant information according to set parameter.

Analysis

Country Wise Contribution of LIS OA Journals in DOAJ

Country	Number of Journals	Percentage
USA	29	24.37
Brazil	15	12.61
Spain	08	6.73
Poland	07	5.89
Indonesia	06	5.04
United Kingdom	06	5.04
Germany	04	3.36
Taiwan, Province of China	03	2.52
Switzerland	03	2.52
Netherlands	02	1.68
Colombia	02	1.68
Canada	02	1.68
India	02	1.68
France	02	1.68
Italy	02	1.68
Cuba	02	1.68
Romania	02	1.68
Korea, Republic of	02	1.68
Iran, Islamic Republic of	02	1.68
Turkey	02	1.68
Argentina	02	1.68
Chile	01	0.84

South Africa	01	0.84
Croatia	01	0.84
Costa Rica	01	0.84
Portugal	01	0.84
Australia	01	0.84
China	01	0.84
Ukraine	01	0.84
Uruguay	01	0.84
Egypt	01	0.84
Slovenia	01	0.84
Singapore	01	0.84
Singapore	01	0.84
Lithuania	01	0.84
Pakistan	01	0.84

Table 1: Country Wise growth of LIS OAJs indexed in DOAJ

Table 1, shows that USA is at the top with (24.37%) contribution in LIS OAJs. Brazil has (12.61%) LIS journals indexed in DOAJ just half of USA. It shows that USA is leading in LIS journals contribution in DOAJ. Spain has (6.73%) followed by Poland (5.89%) LIS journals indexed in DOAJ. Indonesia and United Kingdom both have (5.04%), Germany (3.36%), Taiwan, Province of China and Switzerland (2.52%) contribution of LIS OAJs in DOAJ. Countries like Netherlands, Colombia, Canada, India, France, Italy, Cuba, Romania, Korea, Republic of, Iran, Islamic Republic of, Turkey and Argentina have (1.68%) contribution while Chile, South Africa, Croatia, Portugal, Australia, China, Ukraine, Uruguay, Egypt, Slovenia, Singapore, Lithuania and Pakistan have (0.84%) contribution of LIS journals indexed in DOAJ.

Growth of LIS Journals in DOAJ over the Years

From the fig1, it is clear that the year 2017 has maximum addition of open access journals in DOAJ in the field of LIS. The year 2003 witnessed the growth with 6 journals which slowly

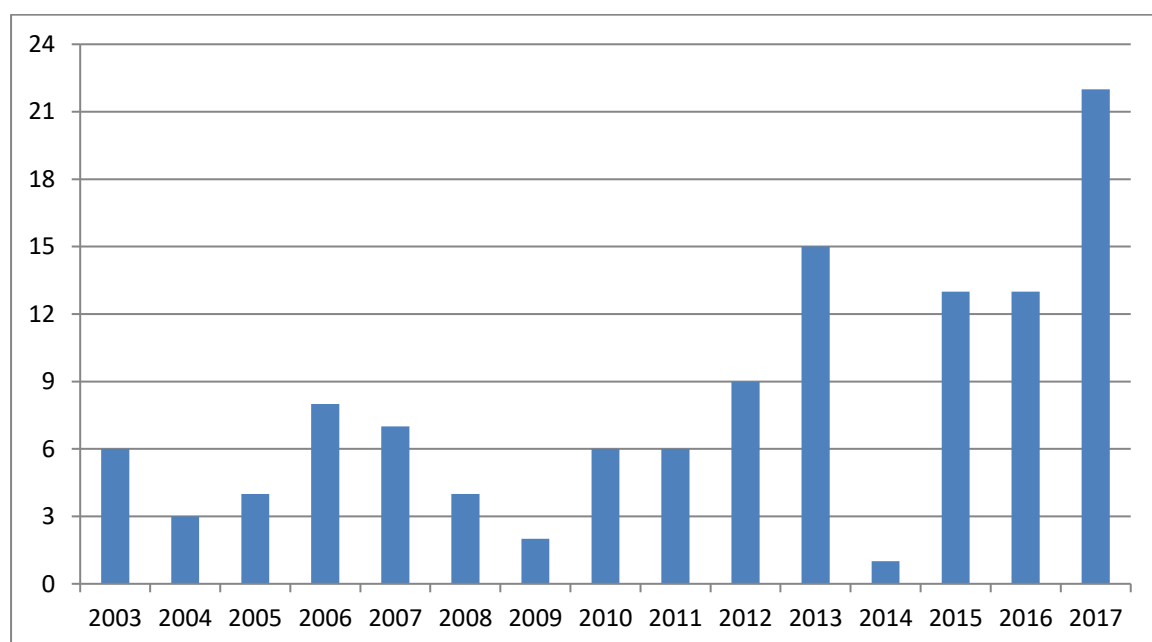


Fig1: Year Wise growth of LIS Journals

increased to 22 journals in 2017. The year 2009 has minimum addition of 2 journals followed by 2014 which has only 1 journal. The year 2013 has maximum addition of 15 journals while the year 2015 and 2016 has constant addition of 13 journals each.

Language Wise distribution of LIS Open Access Journals

It is indicated from fig2 that English language is at the peak of the graph. About 47 journals (39.5%) are published in English. Portuguese, Spanish, Castilian, English language and Spanish, Castilian followed by 9 Journals (7.57%) each. Journals published in Portuguese language constitutes about (5.88%) while journals in Indonesian, Polish and Portuguese, Spanish, Castilian, language constitute about (4.2%). LIS Journals published in German, English language comprises about (2.52%).

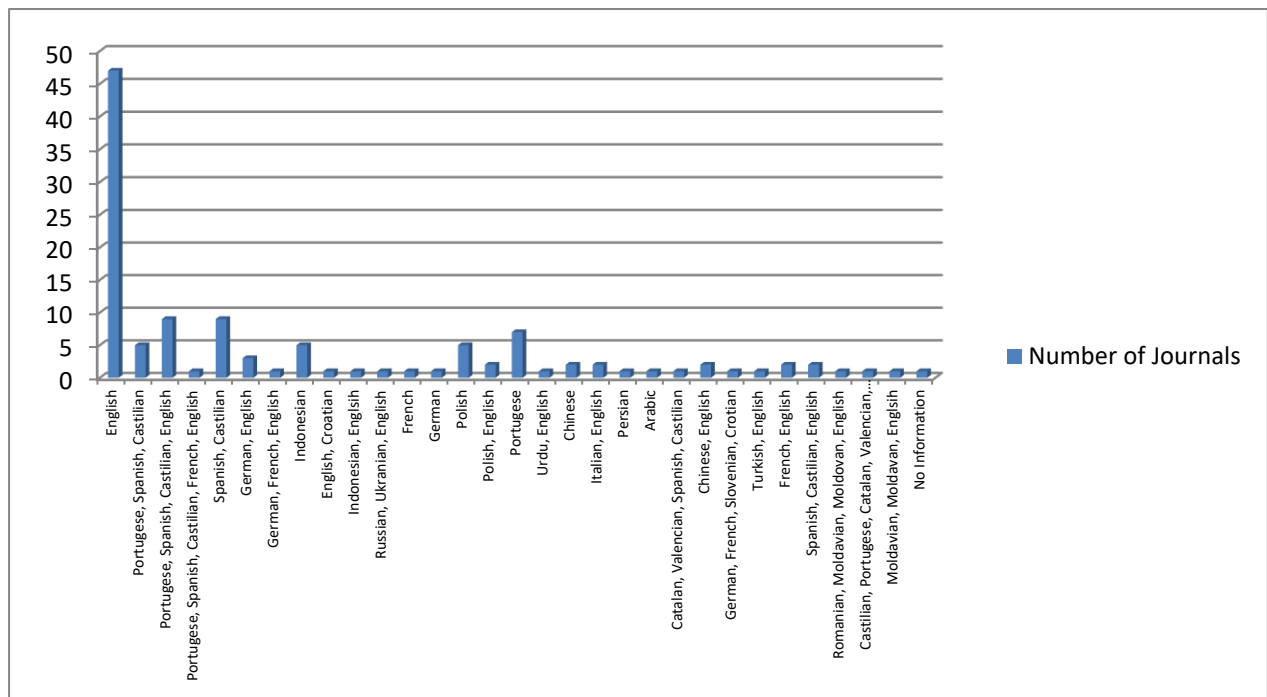


Fig2: Language Wise Distribution of LIS Journals

LIS Journals published in language Polish, English; Chinese; Italian, English; Chinese, English; French, English and Spanish, Castilian, English comprises about (1.68%) each. Portuguese, Spanish, Castilian, French, English; German, French, English; English, Croatian; Indonesian, English; Russian, Ukrainian, English; French; German; Urdu, English; Persian; Arabic; Catalan, Valencian, Spanish, Castilian; German, French, Slovenian, Croatian; Turkish, English; Romanian, Moldavian, Moldovan, English; Castilian, Portuguese, Catalan, Valencian, Italian, English and Moldavian, Moldovan, English language have (0.84%) each contribution in the publishing language in LIS journals. Only one Journal (0.84%) has no information about the publishing language.

License Information

From the analysis it is found that CC_BY license (39.49%) is the most widely followed license by the LIS journals.

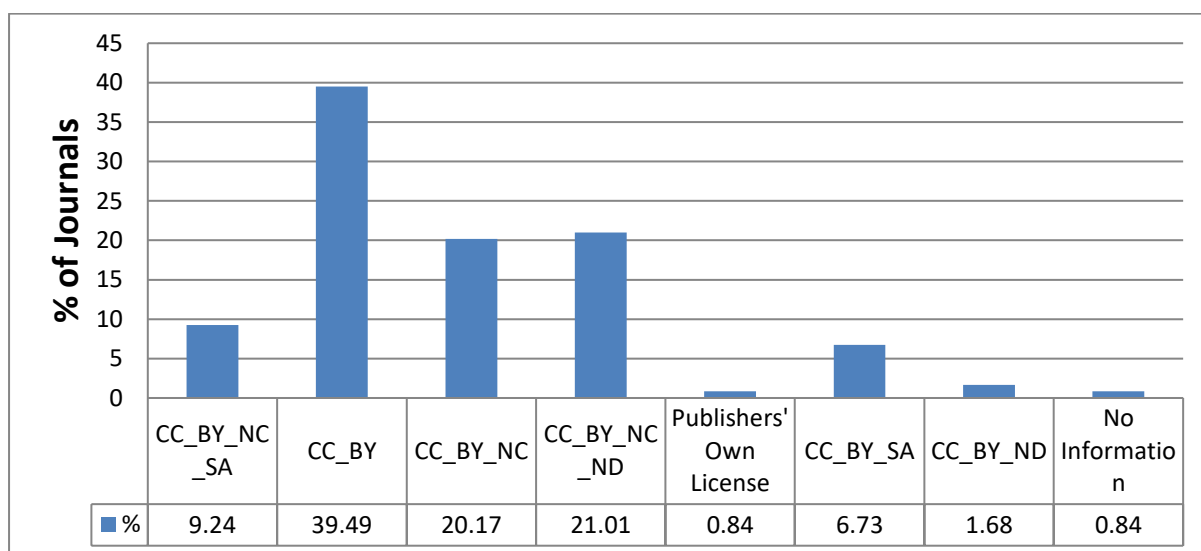


Fig3: License options followed by LIS Journals

CC_BY_NC_ND (21.01%) and CC_BY_NC (20.17%) come at second and third position in their adoption by the LIS journals. CC_BY_NC_SA has (9.24%) and CC_BY_SA (6.73%) share in their taking up by the LIS journals. CC_BY_ND is the least followed license type. North Carolina Libraries (0.84%) has publishers' own license and Knygotyra journal has no information about the license type followed by it.

Journal hosting platform

From the data in fig4, it is confirmed that Open Journal System is much followed by LIS OA journals. About 56% of LIS OA Journals are adopting Open Journal System Software for hosting their journal content. This means the OA Journals in LIS understands the importance of open access software and follow the trend. 3% journals hosted their content on Bepress

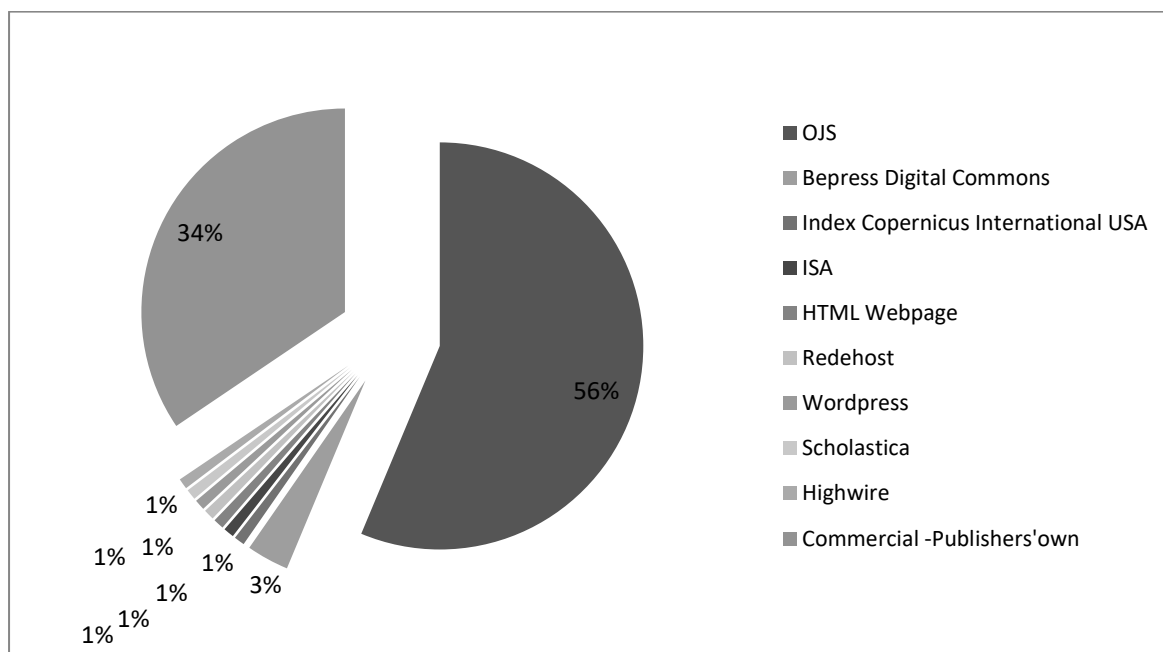


Fig4: Journal Hosting Platform

Digital Commons, while 34% journals are hosted their content on commercial platforms provided by the publishers. 1% of journals adopted the journal hosting platform of Index Copernicus International USA, ISA, HTML webpage, Redehost, Wordpress, Scholastica and Highwire each.

DOAJ Seal

From the fig5, it is found that only 7% journals have DOAJ seal. The journals having DOAJ seal are Insights: The UKSG Journal, Pennsylvania Libraries: Research & Practice, Biblios, JLIS.it, GMS-Medizin-Bibliothek-Information, Evidence Based Library and Information Practice, Liber Quarterly: The Journal of European Research and Libraries and Journal of Medical Library Association. Rest 93% of Journals does not have DOAJ seal.

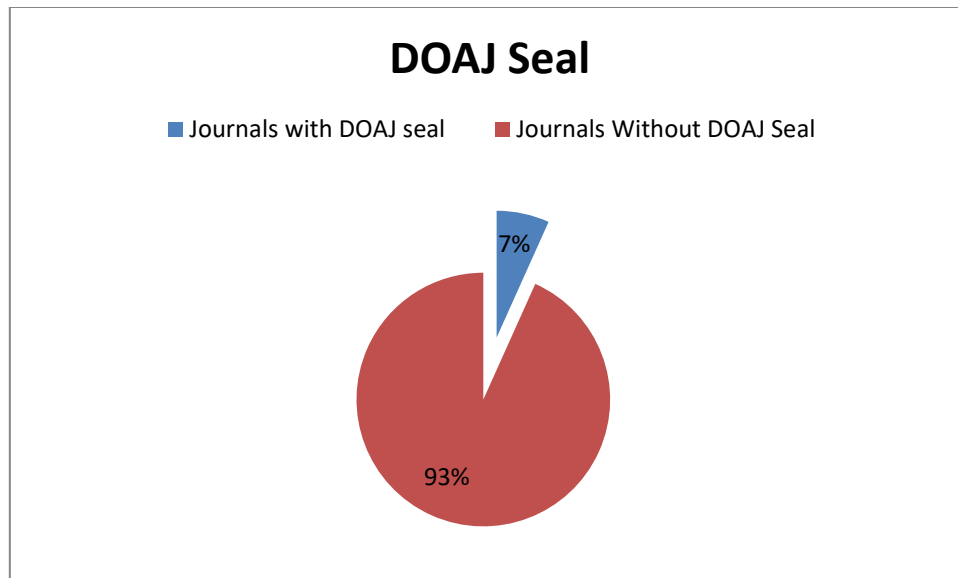


Fig5: DOAJ Seal

Peer Review

From the fig6, it is visible that Double blind Peer Review (53%) process of reviewing the research papers is the most followed up peer review process. However (21%) journals simply followed the peer review process. About (17%) journals followed Bind Peer Review.

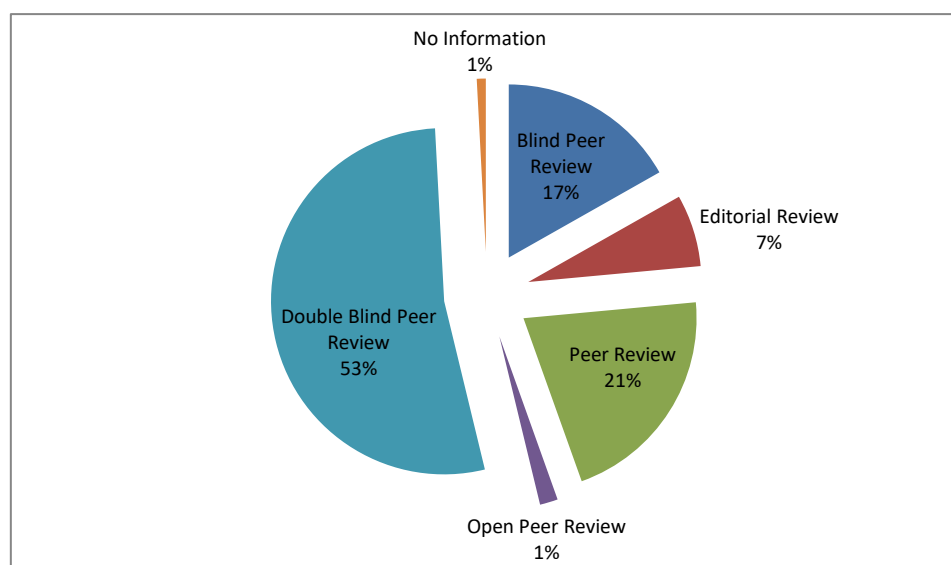


Fig6: Peer Review process adopted by LIS Journals

Information praxis (1%) published from Germany and In the Library with the Lead Pipe (1%) published from USA journal followed the open peer review process. Knygotyra journal (1%) published from Lithuania has no information about the peer reviewing process.

Article Processing Charges

From the fig7, it is found that maximum of journals in library and Information Science has no article processing charges. This group constitutes about 94% of the total. Only 04 journals are having article processing charges. These are Frontiers in Research Metrics (Switzerland), Pakistan Journal of Information Management (Pakistan), Electronic Journal of Knowledge Management (United Kingdom), South African Journal of Libraries and Information Science (South Africa).

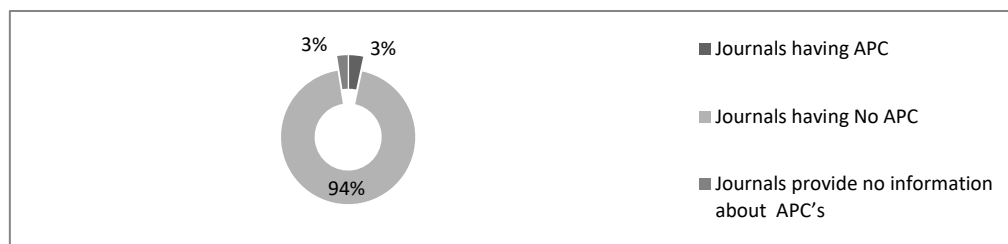


Fig7: Article Processing Charges

Three Journals have no information about the APC's. These are Knygotyra (Lithuania), International Journal of Doctoral Studies (USA) and International Journal of Digital Library Services (India). It is inferred that in library and information science journals the trend of no article processing charges prevails. This trend motivates the authors for submission in these journals.

Productivity of Publisher

The data from fig8, reflects that University as publisher has maximum share in research production in the form of journal. University as publisher constitutes (39%), while

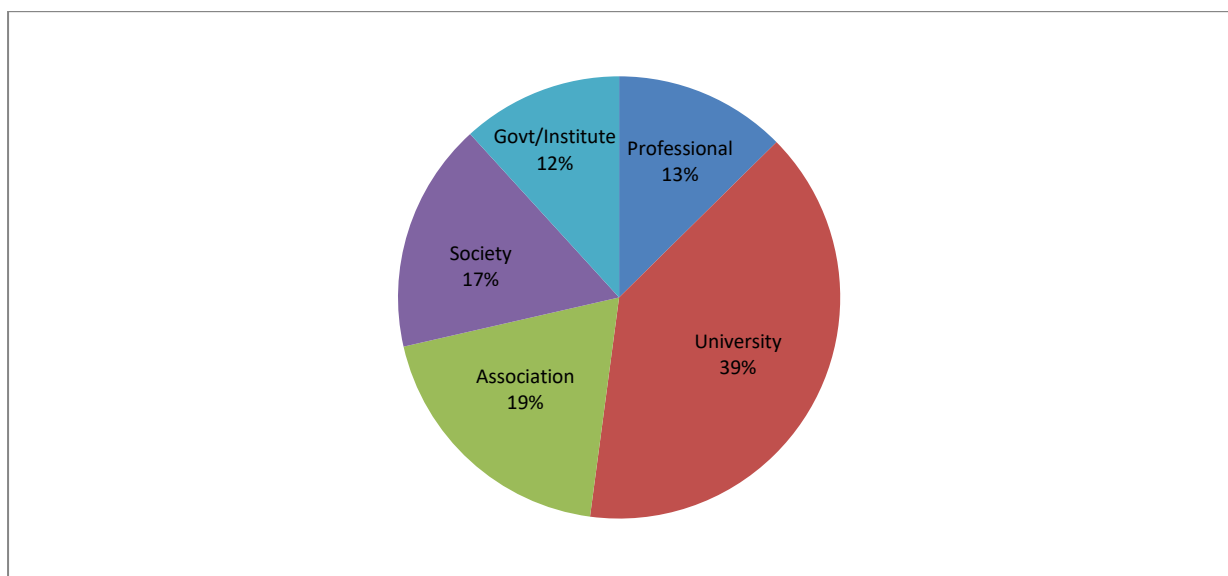


Fig8: Productivity of Publisher in LIS open access journals publishing

Association (19%), Society (17%), Professional (13%) and Government/Institution (12%) contribution in the production of LIS journals.

Conclusion

Open access journals in Library and Information Science have research impact similar to their traditional print counterpart. Since 2003 there is increase in their number in DOAJ. LIS OA journals are adopting the new developments like Open Journal System (OJS) software, creative common licenses etc. OA journals in LIS provide up-to-date information to readers and scholars without any geographic and economic barrier. The free flow of information helps in building the knowledge base DOAJ works perfectly in this regard.

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