An Analysis of Open Access LIS Journals in the Period 2003 to 2024: A Case Study of DOAJ

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Abstract

This study focuses on Library and Information Science (LIS) journals listed in the Directory of Open Access Journals (DOAJ) exploring their number, country-wise distribution, language use, licensing policies, peer-review types, article processing charges (APCs), and DOAJ Seal certifications. For this study, a quantitative method was adopted and systematically evaluated in Microsoft Excel. From DOAJ websites 198 journals with 61,630 articles (till 12.07.24) were analysed. The analysis disclosed that the United States is the top country in LIS journal publication, contributing approximately 16% of the total journals. English is the main language in 155 journals, with many journals existing in bilingual, trilingual, or multilingual. Licensing analysis showed that 91 journals utilized the CC BY license uniquely, with six journals adopting mixed licenses. 135 journals used double anonymous peer review. 88.89% of journals did not issue Article Processing Charges (APCs). Only 9.09% of the journals have been granted the DOAJ Seal. This study presented the important contributions and practices of LIS journals in helping open access and providing valuable identifications into their distribution, licensing, and peer review processes.

Keywords: Open Access publishing LIS trends, Licensing Diversity, APC-free journal, DOAJ Seal, Multilingual journals

Introduction:

Without any economic or technical barriers providing access to any electronic format of research outputs such as articles, theses and dissertations, conference papers, and datasets is commonly defined as open access (OA). This standard ensures that without any restriction anyone can access these e-resources freely and they can be read, downloaded, shared, or modified with different licensing issues. The Budapest Open Access Initiative (BOAI) was established in 2002, and it was the turning point of the OA movement. Several models of OA are present, such as gold OA, where articles are freely available on the publisher's website and frequently financed by Article Processing Charges (APCs). Green OA, where the authors self-archive their work in repositories, and hybrid OA, which means subscription journals offer an OA option for individual articles typically for a fee. OA journals are freely available online, anybody can access them without any restrictions. Open-access journals are crucial for higher education because they permit unlimited access to scholarly research which helps students and educators stay updated on the latest findings.

Directory of Open Access Journals (DOAJ):

The Directory of Open Access Journals (DOAJ) is an online database that lists high-quality, peer-reviewed open-access journals. Initially, it was established and maintained by Lund University, but the responsibility has transformed to Infrastructure Services for Open Access (IS4OA) since 2013. It started with 300 open-access journals in 2003. The DOAJ has since progressed into an independent database indexed by over 20571 peer-reviewed open-access journals in the disciplines of science, technology, medicine, arts, humanities, and social sciences. The mission of DOAJ is to "increase the visibility, accessibility, reputation,

usage, and impact of quality, peer-reviewed, open access scholarly research journals globally, regardless of discipline, geography or language." The significance of DOAJ for higher education is that it provides free access to high-quality peer-reviewed journals to students and faculty. The platform is a valuable resource for researchers looking for freely accessible academic content. This access to unrestricted scholarly materials enhances learning and research purposes reducing financial journal subscriptions.

Literature review:

Patil and Chandratre (2024) conducted a study on Architectural Journals from DOAJ and this study revealed that 10% of indexed journals were awarded the DOAJ seal. 334 architectural journals were contributed among 56 countries globally and Spain was the top contributor with 35 journals (10.47%). The majority of Journals 232 (69.46%) were double-blind peer-reviewed journals. Among these 68 journals originated from Asian Countries. The indexing distribution contains 64 journals in DOAJ, 53 in ROAD, 50 in FATCAT, 41 in CROSSREF and WIKIDATA, 40 in ZDB, 10 in THE KEEPERS and Sherpa Romeo, 8 in SUDOC, 7 in SCOPUS, 2 in MIRABEL and CAB ABSTRACTS, and 1 each in Global Health, Wikipedia EN, and PubMed in the category of Architectural Journals.

Madhavi (2023) focused on DOAJ-indexed journals in the discipline of Chemistry. According to this review, the findings indicated that the DOAJ had indexed 601 journals from Chemistry disciplines, the United Kingdom (UK) was the topmost country, English was the most preferable language, and 87.52 percent of the open-access journals in chemistry lacked the DOAJ seal, while only a limited number of journals are designated with this seal.

S et al. (2023) assessed a bibliometric investigation of DOAJ's Physical Education journals. This paper proved that the maximum number of journals issued in 2018 and 2020, were monolingual and in English. With 79.10% of journals in physical education and 57.27% of both print and online journals, Brazil was the most creative nation in terms of physical education journals.

Kaltenbrunner et al. (2022) studied a overview of present innovations of Peer review and their potential effect on scholarly communications. This paper revealed that some efforts focus on making peer review more efficient and cost-effective, while others prioritize enhancing its rigor, which may drive up costs.

Panda (2021) studied access to Indian Publications from DOAJ. This paper unveiled that only 2% of the total coverage in Indian Publications, 79% of journals from medical science, and 73% of journals are print and electronic format with PDF being the most general type. It is disclosed that 76% of journals undergo double-blind peer review, and 75% of OA publications came under CC-BY-NC-SA.

Rathinasabapathy and Veeranjaneyulu (2022) quantitatively investigated DOAJ-listed journals in Agricultural and allied sciences. Agriculture and Allied Science published 458 journals (2.65%) out of 17282 open-access journals, Brazil and Indonesia are the top countries for article publication in this subject. The majority of journals 39.08% were English, 62.28% were monolingual, paid APC, and followed CC-BY licensing.

Pradhan et al. (2021) presented Social Science journals indexed by DOAJ and this paper reported that a total of 955 social science journals were selected from DOAJ, Indonesia was the top country for publishing social science journals, 2012-16 being the most productive, and the majority of journals published CC-BY.

Dhule (2021) examined Open-access journals in the field of Law from DOAJ. The author determined that Brazil has the highest contribution to Law Journals. In 2017, the maximum number of Journals were Double-blind peer Reviews published in the English Language under CC-BY licensing.

Chakravarty and Diksha (2020) analysed LIS Journals from DOAJ. This result revealed that LIS journals are accessible in 43 countries all over the world. The U.S. had most OA LIS journals whereas India had contributed only one. The majority of journals did not mention their plagiarism policy, although they did

favor the English language and PDF format. The majority of journals did not pay for APCs and DOAJ seals.

Selvam and Amudha (2020) conducted an analysis of LIS journals from DOAJ. As stated in this publication, out of 15,633 journals, 176 were indexed as Library and Information Science (LIS) journals, and out of 5,474,195 articles, 53,959 articles were published in the Library and Information Science discipline. Also unveiled that maximum of the journals do not process APC, published in the English Language, and only 8.5% of journals honoured the DOAJ seal. Maximum LIS journals published in the United States use a CC-BY license, and 52.58% of journals were Double Blind Peer Review Journals.

Hugar (2019) quantitatively analyzed Open-access journals presented in the DOAJ database. This paper confirmed that DOAJ was a very potential open-access portal for medicine. Most journals did not require authors to pay an Article Processing Charge (APC). Only 11% of journals received the DOAJ special seal, while the majority of journals were published English language, and 15.68% were published by Elsevier publishers. The United Kingdom had the largest contribution to the DOAJ portal.

Mehraj et al. (2019) analyzed computer science journals in the DOAJ and this paper revealed 168 journals across different types of publishers. OA journals in computer science Springer publisher was the largest category i.e. 6.55%, maximum no of journals i.e. 52.98% used CC-BY authorizing, 51.19% journals were blind-Peer-Review. A total of 168 journals from 51 countries were registered in the DOAJ in the field of Computer Science. Among the 168 journals, 29 journals 17.26% from Indonesia, 114 i.e. 67.86% journals have no APC & 34 i.e. 20.24% journals are marked with a DOAJ Seal. English was the most favored language over other languages.

Statement of the Problem:

Being a Directory of Open Access Journals and articles DOAJ provides a high-quality peer-reviewed journal. Presently DOAJ provides 198 Library and Information Science (LIS) journals with 61,630 articles till 12th July 2024. Despite the increasing availability of OA journals, there is a noticeable deficiency in a comprehensive analysis of the features and trends of LIS journals listed in DOAJ. This study aims to fill this gap by providing a detailed analysis of LIS journals indexed by DOAJ focusing on characteristics such as year-wise development, geographical distribution, language diversity, licensing policies, peer-review processes, and the presence of the DOAJ Seal.

Objectives:

1. To evaluate the development of Open access LIS journals in the Parameter of year-wise growth, geographical distribution
2. To analyse the characteristics of DOAJ indexed LIS journals in Language diversity
3. To analyse the policies and practices LIS journals, focusing on licensing, peer-review types, article processing charges (APCs), and their alignment with the DOAJ Seal standards

Scope and Limitation of this study:

From the objectives, we clearly defined this study as limited to Open-Access journals in the field of Library and Information Science indexed on the DOAJ website(www.doaj.org) until 12.07.24.

Methodology:

The main intention of this study is to categorize LIS journals indexed from DOAJ up to 12.07.24. To analyze the objectives of the present study, a quantitative technique is applied to reveal findings. The Data were collected from the DOAJ website in specific library science disciplines and then evaluated in an MS Excel sheet in a structured format. The data were represented in tabular and chart formats for clear interpretation.

Data Analysis and Interpretation:

Table 1: Yearly Progress of LIS Journals from DOAJ

Indexed Per Year	Yearly progress
2003	4
2004	1
2005	3
2006	5
2007	6
2008	3
2009	3
2010	4
2011	3
2012	7
2013	13
2014	1
2015	9
2016	11
2017	28
2018	13
2019	16
2020	17
2021	12
2022	14
2023	19
Jun-24	6
Total	198

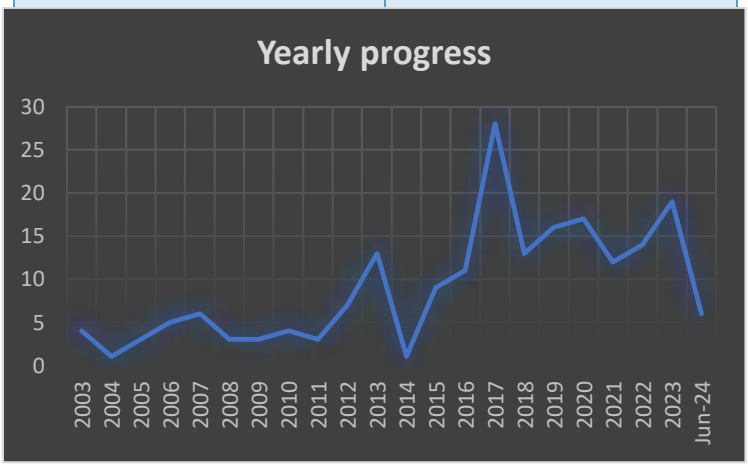

Figure:1 Line-Chart of Yearly progress of LIS journals

Table 1 shows that a total of 198 LIS journals are present up to June 2024 from the development year of DOAJ. From Figure 1 There has been steady progress over the years with some variations but an upward trend in recent years. From 2003-2011 there was medium growth but over the years from 2012-2023, there was positive growth with some fluctuations. If I calculated the average growth of LIS from the starting time (it was rejected in Jun 2024 due to an incomplete year) then the average yearly growth that 9.6 entries per year.

Table 2: Indexed LIS journals and articles from DOAJ

Publications	Numbers
Journals	198
Articles	61630

Table 2 shows that 198 LIS journals and 61630 articles were indexed from DOAJ in around 134 countries until 12.07.24. This is also shown in Figure 1.

Figure 2: Indexed LIS Journals and Articles

Table 3: Country-wise Distribution of LIS journals in DOAJ:

Country	No. of Journals
United States	31
Brazil	23
Indonesia	14
Iran, Islamic Republic of	13
Spain	12
Poland	11
United Kingdom	8
Ukraine	7
Canada	6
Germany, Italy	5
Egypt, Twain, Province of China	4
Mexico, Romania, Russian Federation	3
Argentina, China, Costa Rica, Korea, Republic of, Lithuania, Nigeria, Norway, Sweden	2
Australia, Bosnia and Herzegovina, Bulgaria, Colombia, Croatia, Cuba, Cote d'Ivoire, Denmark, Finland, France, India, Japan, Kenia, Malaysia, Morocco, Pakistan, Portugal, Qatar, Serbia, Singapore, Slovenia, South Africa, Uruguay	1
Total	198

Table 3 shows that the highest number is around 31 LIS journals published in the United States, followed by 23 LIS journals published in Brazil. India is the World's third-largest country in terms of higher education, but India's involvement in the publishing of LIS journals is only one.

Table 4: Individual Language Diversity:

Language	No. of Journals
English	155
Spanish	39
Portuguese	34
French	13
Indonesian	12
German	11
Polish	10
Italian	9
Persian	9
Russian	8
Ukrainian	8
Arabic	6
Chinese	5
Catalan	4
Croatian	3
Serbian	3
Lithuanian	3
Swedish	2
Bosnian	2
Danish	2
Norwegian	2
Belarusian, Czech, Finnish, Galician, Norwegian Bokmal, Romanian, Slovak, Slovenian, Urdu	1*10=10
Total	350

Table 4.1: Language Comparison

Mixed Language	No. of Journals
English, Spanish, Portuguese	14
English, Indonesian	7
English, Polish	6
French, English	6
English, Spanish	5
Arabic, English	4
Portuguese, Spanish	4
English, Italian	4
English, Ukrainian, Russian	4
English, German	4
English, Chinese	4

English, Ukrainian	3
Danish, English, Norwegian, Swedish	2
Spanish, English, French, Portuguese	2
French, Spanish, German, Italian, English	2
English, Lithuanian	2
English, Persian	1
Polish, French, English, German	1
German, Italian, Polish, French, English	1
Indonesian, Arabic, English	1
English, Portuguese	1
English, Croatian, Serbian, Slovenian, Bosnian	1
English, Russian	1
Catalan, Spanish, Galician, Italian, Portuguese	1
English, Serbian	1
English, Finnish, Swedish	1
Czech, English, Slovak, Ukrainian, Polish, Russian, Belarusian, Lithuanian, German	1
English, Urdu	1
English, Spanish, Catalan	1
Croatian, English	1
French, German, English	1
Spanish, Catalan	1
English, Romanian	1
English, Portuguese	1
Catalan, Portuguese, Spanish, English, Italian	1
English, Croatian, Serbian, Bosnian	1
Norwegian Bokmål, English	1
Total	94

Table 4.2: Subdivision of Language Distribution

No. of Language	NO. of Journals	Percentage
Monolingual (Single Language)	104	52.53
Bilingual	59	29.8
Trilingual	22	11.11
Quad lingual	6	3.03
Penta lingual	6	3.03
Multilingual	1	0.5
Total	198	100

A total of 350 language instances are represented across 198 journals, indicating that some journals adopt multiple languages. Table 4 shows the individual language diversity of LIS Journals indexed by DOAJ. There is an inequality of journals across different languages. According to Table 4, there are no. of journals in 350; but, Table 4.1 indicates some of these journals adopt mixed languages. Out of 198 LIS journals, 94 journals implement mixed language while the rest are available in a single language. Table 4 reveals a strong preference for the English language among LIS journals. 155 journals published in English, followed by Spanish, with 39 journals. Table 4.1 further subdivides the language distribution, showing that not all LIS journals are published in a single language. Of the 94 mixed-language journals, the largest group (14 journals) is published in English, Spanish, and Portuguese, with various other language combinations appearing in smaller groups. Table 4.2 provides additional perceptions of language distribution. It shows that 104 journals (52.53%) are monolingual, 59 journals (29.8%) are bilingual, 22 journals (11.11%) are trilingual, and 3.03% of the journals are either quad-lingual or penta-lingual. Only 0.5% of the journals are multilingual.

Table 5: License Diversity of LIS Journal in Open DOAJ:

Types of Licenses	No. of Journals
CC BY	91
CC BY-NC	42
CC BY-NC-ND	35
CC BY-NC-SA	20
CC BY-SA	16
CC BY-ND	4
CC0	2
Publisher's license	2
Total no. of Journals	212

Table 5.1 Subdivision of License Category

Mixed Licence	No. of Journals
CC BY, CC BY-NC	1
CC BY, CC BY-NC-ND	1
CC BY, CC0	1
CC BY, CC BY-SA, CC BY-NC, CC BY-NC-SA	1
CC BY, CC BY-SA, CC BY-ND, CC BY-NC, CC BY-NC-SA, CC BY-NC-ND, CC0	1
CC BY, CC BY-NC-SA	1
Total	6

Table 5 shows the License-wise categorization of LIS journals. Table 5 shows that the total no of journals is 212 but table 5.1 clearly states that some journals adopted two or more than two licensing policies. Table 4 revealed that out of 198 journals, the most common license is CC BY (Creative Commons Attribution) with 91 LIS journals using it, 42 journals, 35 journals using CC BY-NC (Attribution-Non-commercial) and CC BY-NC-ND (Attribution-Non-commercial-NoDerivatives) respectively license that restricts the work for non-commercial use only, 20 journals followed CC BY-NC-SA (Attribution-Non-commercial-Share Alike) and 16 journals have CC BY-SA (Attribution-Share Alike) that are allowed to share in similar licensing condition. 4 journals come under CC BY-ND (Attribution-NoDerivatives) and 2 journals follow CC0 ((Public Domain Dedication) and Publisher's license respectively. Table 5.1 shows the subdivision of the Licence category. Table 5.1 shows that all the LIS journals do not come under only one Licensing type. Out of 198 journals, 6 journals have mixed licenses.

Table 6: Peer Review Types of LIS Journals in DOAJ

Peer Review Types	No. of Journals
Double anonymous peer review	135
Anonymous peer review	32
Peer review	24
Editorial review	7
Open peer review	6
Committee review	1
Total	205

Table 6.1: Joint Peer Review Types of LIS Journals

Joint Peer Review Types	No. of Journals
Open peer review, Double anonymous peer review	3
Editorial review, Double anonymous peer review	2
Peer review, Double anonymous peer review	1
Anonymous peer review, Double anonymous peer review	1
Total	7

In academic publishing, peer review is a process used to assess a paper or research proposal's quality, validity, and applicability before publication or funding. Peers, who are specialists in the same subject, evaluate the work critically during this process to make sure it satisfies the required consistency and quality requirements. Table 6 shows the Peer Review Types of LIS journals. Based on Table 6 revealed that 135 journals use Double anonymous peer review, 32 journals use Anonymous peer review, and so on. Table 6.1 shows that 3 journals followed Open peer review and Double anonymous peer review, 2 journals used Editorial review and Double anonymous peer review, and Peer review also Double anonymous peer review followed one journal respectively.

Table 7: Article Processing Charge-wise Distribution of LIS Journals

Article Processing Charge (APC)	No. of Journals	Percentage
Without Fees	176	88.89
With APC	22	11.11
Total	198	100

Some open-access journal publishers used to collect "Article Processing Charges" (APC) from authors to cover their publishing costs. However, a large number of open-access journal publishers do not collect APC from authors. The current analysis found that 176 journals (88.89%) do not collect APC from authors, and 22 journals (11.11%) collect APC from authors in the field of LIS journals specified in Table 7.

Table 8: DOAJ Seal

DOAJ Seal	No. of Journals	Percentage
Without DOAJ Seal	180	90.91
Present	18	9.09
Total	198	100

The DOAJ Seal is a mark of certification for open-access journals awarded by the Directory of Open Access Journals (DOAJ). It directs that the journal follows the best practices in long-term preservation, use of persistent identifiers, discoverability, reuse policies, and authors' rights. To be awarded the DOAJ Seal, a journal must meet the 7 criteria:1. Digital preservation (Archiving policy) 2. Self-archiving (Repository policy) 3. Persistent article identifiers (Unique identifiers) 4. Metadata supply to DOAJ 5. CC License 6. License information is in Article 7. Copyright and publishing rights. (https://doaj.org/apply/seal/). So, the DOAJ seal awarded those journals to best practices and high standards in open-access publishing. Table 7 specifies that around 9.09% of LIS journals have been awarded DOAJ Seal and 90.91% of the journals published without DOAJ Seal.

Results and Findings:

To achieve the above objectives, the data collection and data analysis is a quantitative analysis. The results are summarized as follows:

1. Table 1 demonstrates that the total number of LIS journals is 198. The highest growth of LIS Journals was 28 journals in 2017, but in 2004 and 2014, there was very low activity, i.e., only one journal was published.
2. The Directory of Open Access Journals has indexed 198 journals with 61630 articles in Library and Information Science from Table 2 until July 12, 2024.
3. From Table 3 Out of 198 LIS journals max.31 journals i.e. approx. 16% of journals published in the United States.
4. From Table 4 English is the dominant language, with 155 journals published in English and other significant languages like 39 journals in Spanish, 34 journals in Portuguese, and so on. From Table 4.1 out of 198 journals, 94 journals used mixed languages while the rest are monolingual and the most common language combination is English, Spanish, and Portuguese with 14 journals. From Table 4.2, 52.53% of journals are monolingual, 29.8% of journals are bilingual and others are trilingual (11.11%), quadrilingual (3.03%), Penta lingual (3.03%), and more than five languages 0.5%
5. Out of 198 journals 91 journals use CC By license from Table 5 and some journals i.e. 6 journals followed mixed license from Table 5.1
6. From Table 6 Maximum135 LIS journals follow the Double Anonymous Peer Review policy and so on and among them, 7 journals adopt a joint peer review policy from Table6.1
7. Most Journals 88.89% of journals do not collect APC from authors from Table 7.
8. Table 8 indicates that 9.09% of journals have received the DOAJ Seal.

Conclusion:

An online directory DOAJ provides access to peer-reviewed, high-quality open-access journals. This study especially emphasizes the field of LIS journals in DOAJ. It aims to provide a comprehensive understanding. Peer review, a process in which experts in the same field assess a work to ensure it meets standards of quality, originality, and accuracy, plays a critical role in validating and enhancing research credibility. 198 LIS journals indexed from DOAJ. India is the third largest country w.r.t higher education but India's contribution of only one. Furthermore, there is a noticeable lack of LIS Journals in Bengali and Hindi Language. The findings of this study are expected to be extremely beneficial for researchers, educators, students, and scientists in LIS and related disciplines.

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