



# ROLE OF DOAJ AND OTHER OPEN ACCESS IN LIBRARY SCIENCES

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## Abstract:

Information is crucial part of education, research, academics as well as every section of the society. Open Access is an ingenious method of scholarly communication in the digital era and aim to make information and knowledge accessible to everyone. The expansions of scholarly information in various resources, increase in cost at a rapid rate, made it arduous for libraries to access and continue it. The cost structures of the entire scholarly publishing enterprises can alleviate by Open Access. DOAJ and other Open Access publications, in short are described as digital information, provided free of charge and free of most copyright and licensing restrictions, easily available to common people and researchers, once it has been published. In contrast to conventional journals, DOAJ and Other Open Access journals do not charge subscription fees. The research sponsors, the authors, their institutions pay the fees to make it free to readers. Authors keep possession of the copyright for the article and most permission hurdles have been removed. Open access publishing uses different colour codes like Gold, Diamond, Green, Yellow, White, Black and Blue to assist the authors in choosing journals which have permissive self-archiving policies.

**Index Terms:** Open Access, DOAJ, Creative Commons, Publication

## Introduction:

Open access journals is a more recent style of scholarly publication where the journals are freely available, digital, online information that often carry less restrictive licensing barriers and copyright in comparison to conventional published works, for both the users and the authors. An open access journal focuses mostly on peer-reviewed literature and does not charge readers, so they must find other ways to pay for expenses by using financial models. In one of the models, journals make money by collecting publication fees from authors in exchange for making their work freely accessible at the time of publication. A portion of the cost may be waived by some publishers for authors from underdeveloped nations. <sup>(1)</sup> The title "open access publishing" refers to a comprehensive concept that captures how digital technology may affect scientific publishing in the future. <sup>(2)</sup> Choosing a journal for publishing involves taking into account a number of factors, including the suitability of the journal for the research, the status of the journal among peers, the possibility of getting accepted for the journal, the quality of the editing process, the speed of publication, and the openness of the journal. <sup>(3)</sup>

The Open Access Journals were established with the goal of creating a trustworthy platform and offering open access to scholarly literature for the quick dissemination of current advancements across scientific and technological areas. Readers get free access to the material and can take advantage of the opportunity to expand their knowledge of the relevant scientific subjects. The scientific community has been in need of a trustworthy source for knowledge, tools, and direction recently, and the publishing industry has met that need. A step closer to satisfying this need is the open access publication paradigm. <sup>(4)</sup>

The mission of Open Access Journals is to advance accurate, unbiased research data and information while preserving the highest level of transparency and adhering to the established worldwide publication standards. <sup>(4)</sup> Open Access to Information and Knowledge is an innovative method of scholarly communication in the digital world that aims to make information and knowledge accessible to everyone. Access to information is becoming more challenging as a result of rising costs and decreasing funding. The situation is made worse for readers and libraries by publisher policies. A beneficial change has been brought about by open access, which has also expanded the possibilities for scholarly publishing and access. <sup>(3)</sup> In several thousand open access journals there are nearly 2 million articles. <sup>(5)</sup> "Open Access" is of both types Gratis and Libre Open Access. <sup>(6)</sup> When the content is accessible without charge it is known as gratis open access journal. As the idea of open access gained popularity, it became necessary to be more explicit about what users were permitted to do with the content. This means that the re-use rights of the users should be mentioned. This type of Open Access eliminates at least part of the permission barriers and has no price restrictions. It is known as Libre Open Access. <sup>(7)</sup>

In recent years, "Open Access" publications have become an even more important consideration. However, in general, readership and quality of the journals are the two most significant variables that influence the submission decision. Readership refers to getting the

work in front of peers in the same field so that it can be recognised and ideally cited, whereas quality refers to peer-review and the journal's impact factor. <sup>(3)</sup>

An increasing number of academic publishers have made open access their only business strategy through processing costs, which must be paid by researchers in order to use open access. Many institutions offer funds to support their researchers. <sup>(5)</sup> Furthermore, a growing number of conventional, large publishers are releasing journals with complete open access. Some of the examples of open access journals are: DOAJ, Springer, Elsevier, Wiley, Taylor & Francis group, Nature Publishing, SAGE, and the Oxford University Press. A long tradition is yet to be established by the majority of publishers, including Copernicus, PLoS, Biomed, Frontiers, MDPI, and PeerJ etc. <sup>(8)</sup>

Open access journals and articles are available in 80 languages, in 130 countries and 12,722 journals without APCs. <sup>(9)</sup> Open access is significant for a variety of target audiences, including academics, lecturers, students, administrators, and publishers. <sup>(8)</sup>

Most of the journals are blind and double blind peer-reviewed category. As a result, it became a source of fresh information for scholars that is more trustworthy and accurate. Additionally, the length of the peer-reviewing process delays publishing. It was the publishers' responsibility to handle it. The journals increased visibility, which tends to raise the impact factor of literature, is closely related to its indexing in databases. Journals in the LIS field that included on DOAJ are indexed locally, regionally, nationally and internationally in various databases. As a result, each successful journal could be indexed across numerous platforms. <sup>(3)</sup>

**History of open access Journals:** More than 20 years ago, when the term "Open Access" was first used, the content was accessible without charge (Gratis). Open access has become a global movement as a means of addressing issues linked to the serial crisis, which resulted in the cancellation or decrease of subscriptions to many pricey journals due to financial constraints. This spiralling effect was caused by the continual rise in the cost of many scientific journals' subscriptions and the exponential rise of online access to e-journals starting in 1990. Initially, OA organisations attempted to offer Free OA and Libre OA to scientific literature. The arXiv.org website, which assisted researchers in self-archiving of their electronic preprints of scientific articles in various fields, was the first official OA repository ever launched. <sup>(10)</sup>

DOAJ was launched in 2003 with 300 open access journals. It explains that open access journals are scientific and scholarly journals making all their material available for free, without delay or user-registration requirement, and meeting high quality standards, particularly by exercising peer review or editorial quality control. Infrastructure Services for Open Access (IS4OA) C.I.C was founded in 2012 in U.K as a community interest company by open access advocates Caroline Sutton and Alma Swan. IS4OA runs DOAJ. <sup>(11)</sup> The idea for DOAJ came out of discussion at first Nordic Conference on Scholarly communication in 2002. Open access was defined by the Budapest Open Access Initiative, earlier the same year. The interpretation was that if a service focusing on true open access journals could be developed, it would be beneficial for the entire global research and scholarly education community. The responsibility of constructing this service was given to the Head Office, of Lund University Libraries. Academic Resources Coalition, The Open Society Institute and Scholarly Publishing financially supported initial project work.

The technical infrastructure was set up in May 2003, and the service has been started with more than 300 listed titles. Since the beginning, there have been much advancement to this service and new functions have been suggested. At an average collection rate of 900 titles per year, it has become one of the largest and most well-reputed services within OA journal publishing. <sup>(7)</sup>

1 The DOAJ is a global organisation, and its holding company, IS4OA C.I.C., cannot be bought, acquired, or transferred. DOAJ is funded either by donations from its sponsors and funders. This set up DOAJ to provide all of its services free of charge. This includes it being a free service to those publishers that want to be indexed in DOAJ. 12 DOAJ was started with the mission of increase visibility, accessibility, reputation, usage and impact of quality, peer-reviewed, open access scholarly research journals globally, regardless of discipline, geography or language. <sup>(11)</sup>

#### Types of open access journals:

- Open access publishing use different colour codes:
- Green Open access publishing refers to archiving one's own previously published or unpublished work for unrestricted public use in a disciplinary or institutional archive like arXiv.org, authors grant access to preprints or postprints with publisher approval.
- Blue open access: after a research journal paper has undergone peer review, the authors have the option to archive the post print. (For example, the publisher's version or the final draft after the refereeing)
- Yellow open access: Authors have the option to preserve preprints, or versions of their work that were published before they were made generally available.
- White open access means that neither preprints nor post prints of the authors work may be archived.
- Black open access: Black open access means, publications that have been illegally leaked and made freely accessible after eluding paywalls. One prominent example is a SciHub repository that has been utilised as a repository for research papers that have been copied and published open access (OA) without the author's consent. Under any circumstances black OA is not a desired option. <sup>(13)</sup>
- Gold open access signifies that the final version of the paper is publicly accessible from the journal website once it has been published. Examples of Gold Open Access are PLOS (Public Library of Science) and BioMed Central. Hybrid journals still function primarily as paid publications with an open access option for some articles. Despite the fact that publishers refer to these journals as "gold open access," they are not truly open access publications.
- Diamond Open access journals offer scholarly publishing without any costs or access fees. They receive direct or indirect financial support from organisations like universities, research centres, government agencies, etc. One such organisation is Discrete Analysis, an online peer-reviewed journal where articles link to arXiv. <sup>(1)</sup>

**Directory of Open Access Journals (DOAJ)** is a website run by Infrastructure Services for Open Access (IS4OA) that features a community-curated directory of open access journals.<sup>(11)</sup> The Directory of Open Access Journals (DOAJ), which has open access journals covering all fields of science, technology, medicine, social sciences, and humanities, is hosted and maintained by Lund University in Sweden. DOAJ is for librarians, publishers, researchers, students, journal owners, and everyone else<sup>(3)</sup>. DOAJ indexes and promotes the importance of high-quality, open access journals. The DOAJ established the global standard for open access by evaluating journals in accordance with a set of criteria and assisting journals to satisfy those standards. The information DOAJ gather is used by discovery systems all throughout the world. The constant expansion of DOAJ is a reflection of the expansion of open access on a global scale, where open access is now the standard, long-term approach for scholarly publishing.<sup>(3)</sup>

It includes 300 subject categories and 15,000 open access journals from 133 countries and in 77 languages. To make sure they adhere to a set of quality standards, the DOAJ team of staff and volunteer editors evaluates each journal submission. A journal's audience may benefit from DOAJ indexing. The journal's information must be accessible promptly and simply for authors and librarians helping researchers. The basic criteria is to facilitate the transparent and clear display of specific information on your website through a network of volunteers and ambassadors, DOAJ works to provide support in local language wherever possible. Additionally, it means that as a company, they have a better understanding of how scholarly publishing functions in your area. This enables them to be aware of the difficulties and possibilities presented by the global production of scholarly knowledge.<sup>(14)</sup>

As long as the articles are released under an open licence, DOAJ recommends that writers retain ownership of their published works. However, it also accepts journals when authors transfer all or part of their rights to the publisher. The majority of open access publishing is carried out using free and open-source software, i.e. System for Open Journals (OJS).<sup>(3)</sup> Although DOAJ had the biggest number of open access journals listed when compared to MEDLINE, PubMed Central, EMBASE, and SCOPUS in 2015, but less than half of them have actively published articles on DOAJ.<sup>(15)</sup>

For academics and their institutions, DOAJ indexing has long been a sign of journal quality, and it is now steadily turning into a fundamental requirement of open access publishing. A lot of OA publishing associations, such as the Open Access Scholarly Publishers Association (OASPA), now demand that all publisher members with journals have at least one title indexed in the DOAJ as part of their admissions criteria. Journals can increase their audience and demonstrate publication quality by being indexed in the DOAJ. The DOAJ is a strong platform for journal awareness with 15,000+ journal members, over 1.2 million monthly visitors, and a stream of journal metadata that is continuously updated and ingested by major discovery services. The DOAJ strives to be the go-to place for scholars to search for quality, peer-reviewed OA content and, as such, it has some pretty specific inclusion criteria.<sup>(16)</sup> According to the Library of Congress Classification (LCC) system, all journals in DOAJ are classified; this is done by the editorial team as a journal is accepted for indexing in the database. A journal's articles inherit the same classification system as has been adopted by DOAJ, If a publisher chooses to upload article metadata to DOAJ. The classification system appears in the 'Subject' facet of search.<sup>(17)</sup>

When a journal is approved for DOAJ indexing, details about it and any article abstracts that are submitted there are included in discovery services all around the world. As a result, more people visit the website, increasing both its prominence and its published content's visibility. After being added to the DOAJ index, a journal's website typically experiences a threefold increase in traffic. Because DOAJ metadata can be used and reused by anybody, it is indexed by search engines and discovery services. Many academic libraries and research institutes use this metadata, including Web of Science, Scopus, Primo, Summon, EBSCO, Google, Google Scholar, OCLC, WorldCat, Dimensions, and many more.<sup>(18)</sup> If you publish in open access journals, the Directory of Open Access Journals (DOAJ) ought to be in your indexing list at the top. For academics and their institutions, DOAJ indexing has long been a sign of journal quality, and it is now steadily turning into a fundamental requirement for open access publishing. At the highest level, journals must be fully-OA publications in order to be accepted into the DOAJ. The DOAJ defines fully-OA journals as those that publish content under a Creative Commons or comparable open copyright licence that permits anyone to "read, download, copy, distribute, print, search, or link to the full texts of articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose" and make it instantly and freely available online (without an embargo period). Journals might not ask readers to sign up in order to access their content. Journals must first certify that they comply with the DOAJ's definition of OA as the first stage in the application procedure for the DOAJ. All journals must give the DOAJ with a URL to a page on their website that displays an OA statement. This is typically contained on the journal's author information page or a page describing its policies.<sup>(16)</sup>

**Publication platform:** Without the right platform, open access publications are not possible. The best and most appropriate host for the situation should be capable of managing and publishing scholarly communication. It must be capable of eliminating traditional procedures and lowering publishing costs. Editors and users should get along with one other for an effective publication host. The most popular option for publishing open access journals globally is the Open Journal System (OJS), open source software. The research journal of a country reflects its development and abundance in knowledge. The research and development activities of a nation directly affect its progress. USA is ranked first with 24 journals, accounting for 18.18% of all open access publications in the LIS area in DOAJ, followed by Brazil in second place with 16 journals (12.12%) and Indonesia in third place with 11 journals (8.33%). With Poland in fifth place on the ranking list, Spain moves up to the spot. With just one journal registered in DOAJ, India is listed ninth, considerably behind many other tiny nations. Therefore, a nation like India must consider and take the necessary steps to promote LIS R&D efforts.

Electronic journals can often be found in four different formats. HTML, ASCII, PDF, and E-Text. Publishers typically favour these formats because they are more convenient. The PDF format is on the top, followed by the PDF/HTML and PDF/HTML/XML formats, which are second and third, respectively. For open access publications, there is no other full-text option available. For their open access publications, the majority of publishers opt for the PDF, HTML, or XML format. It is quite evident that every journal listed in the DOAJ belongs to the highly reviewing category. It implies that all journals are valuable places for a scholar's paper to be published.

For scholarly communities, though English is the most common language in the field of Library and Information Science, for the betterment of local language scholars weak in the English, there is still a possibility to communicate in the local language.

A multilingual system called Open Journal System (OJS) enables journals to publish in a number of different languages. This is quite beneficial for nations like India where a lot of literature and academic knowledge are produced in different languages. This encourages non-English speaking Indians to computers and the internet. Such peoples would benefit the rest of the world by sharing their scholarly insights and creative concepts. With the exception of Annals of Library and Information Studies, there is several open access LIS journals published in India that do not meet the DOAJ standard. A higher level needs to be met by the Indian publisher. Furthermore, to enable worldwide access, standard journals should be made open access.<sup>(3)</sup>

### Charges for Publication:

Article processing fees (APFs) appear to be a challenge for a lone researcher without institutional assistance. In publishing their priceless contribution to the world, he might suffer. 130 open access journals listed in DOAJ, charge no publication or processing fees for article publication. Another important feature is that many journals don't charge for publication, which demonstrates their reliability as journals.<sup>(3)</sup>

The ethics of open access journals and their manuscript processing fees are being discussed more and more. One topic of debate is "double tipping," which involves charging both authors and subscribers.

All donations to DOAJ are made freely, and all services offered by DOAJ, including the review of journals, are free. These contributions allow DOAJ to provide on-going services and enhancements to these services for everyone.<sup>(12)</sup>

### Misconceptions about open access:

- The author, shall relinquish copyright
- Without peer review, the article will be published;
- Publication won't be included in scholarly databases' indexes.
- The impact factor for your publication won't exist.<sup>(8)</sup>

### Advantages:

- In comparison to non-open access publications, OA publishing offers more visibility and accessibility as well as quicker publication periods.
- There are no financial or copyright restrictions, thus the readership keeps growing, boosting one's work's visibility and effect.
- OA publications are much more likely to make use of creative common licences and provide a number of other advantages, such as providing free, simple access to scientific knowledge, information, and data that strengthen the basis for both research and education.
- Modern research can keep doctors informed and help them provide better patient care.
- Free access to information on the most recent advancements in diagnostics and treatments benefits both patients and the general public.
- In general, when knowledge and ideas are freely available, they enhance study, education, public enrichment, and economic growth.
- Authors who are young, in experienced, lack administrative support, or otherwise encounter obstacles in their efforts to start sharing their ideas will gain from the increased number of sites they can publish as well as from the increased competition between journals.

### Disadvantages

- Some people may be driven by the chance to earn by taking advantage of unskilled authors. Authors have raised their voices in protest, arguing in favour of conventional journals.
- Some of these journals provide evidence that claims of false peer review and careless editing.
- For people who have climbed the corporate ladder in the conventional manner, for those "paying to publish" is equivalent to cheating. After all, weak authors with huge cash resources have always been able to find publishers willing to print their publications. A few open-access journals are not very good. It's possible that some people will print anything for the decent money and label it peer reviewed.
- Professional perceptions of quality: One of the main drawbacks of an online format is the persistent unwillingness of some departments to give electronic publications equal weight as print media, since they believe that electronic publications are less thorough than print media.
- Authors are reluctant to submit to or consider OA journals because they doubt the quality of the published work, and OA journals suffer disadvantage from mistaken impressions of high-quality researcher.
- A journal's reputation in research and medicine is determined by its impact factor ranking. As a result, the reputation and worth of individual papers are frequently assessed using the journal's impact factor. Academic promotion and tenure are correlated with the impact factor and prestige of the top-tier journal in their field, making it challenging to persuade professors to submit their important works to a venue without an established impact factor. The majority of open access journals undergo peer review with the same or greater criteria than conventional scholarly publications, which is significant. A new OA journal takes time to develop a high impact factor.
- Inclusion of a journal in a significant citation database is regarded as a sign of a journal's quality. The procedure for obtaining OA journal indexing is comparable to that for submitting manuscripts and meeting applicable standards for peer review.

- Indexing newly formed OA journals in major citation databases is complicated and time-consuming, adding to existing misconceptions of quality.
- The pay-to-publish model of OA publishing has given rise to predatory publishers that pose a serious danger to the OA mission as well as the credibility of science. In these circumstances, authors may be charged exorbitant open access fees in exchange for no or subpar peer reviews and editorial services. Immediate warning signs of these practises include spam emails with overly informal tones asking readers to submit papers or join editorial boards, claims of suspiciously expedited peer review, a lack of pricing transparency, and masked editorial board members. Therefore, one has to be cautious when selecting OA journal, should send his/her work to open access publications that are published by reputable and well-known companies and check the websites of journals to see if they are clear about the editor, the editorial board members, and the fees for open access that must be paid if an article is accepted. Another technique to assess the calibre of OA publications is to verify if they are included in the Directory of Open Access Journals (DOAJ).<sup>(1)</sup>

### Summary:

Research and scholarly communication are becoming more accessible and transparent to a wider research community thanks to open access publication. Scholarly communications will only affect the world when shared with the rest of the scientific community by publishing in peer-reviewed journals. When selecting a journal to publish your work, keep in mind that you have invested time and effort into doing your research and writing your papers. With pride, publish your work after carefully examining the OA journal's quality standards.<sup>(2)</sup>

Information is a vital component of academia, research, education, and every other sphere of society. It became challenging for libraries to access and maintain scholarly content due to its rapid price increase and proliferation across a variety of sources. But Open Access Journals can reduce the overall scholarly publishing industry's cost structures. The brighter side is that, many new researchers and authors can work over their writing and publishing skills with the help of Open access journals. Electronic publications, on the other hand, guarantee rapid information dissemination and do away with the cost barrier that has been a new requirement. Electronic publication is not just the future but also the present; while subscription-based journals will continue to exist, many, if not most, journals will switch to open access due to the model's complete separation from paper.<sup>(1)</sup>

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