



ADVISOR REVIEWS—STANDARD REVIEW

Directory of Open Access Journals (DOAJ)

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Composite Score: ★★★★★ 1/2

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Abstract

DOAJ is a unique search service for fully Open Access (OA) (no embargo) peer-reviewed scholarly journals, featuring options to include article or journal level metadata in other library search services. DOAJ's over 9,000 journals represents about 27% of the world's scholarly peer-reviewed journals, up from 10% in 2007, and the article-level search encompasses about 10% of global scholarly journal article production. All academic disciplines are represented; some (notably medicine), more so than others. With 128 countries and many languages represented, DOAJ is diverse and inclusive. DOAJ has a well-designed, clean, attractive, easy-to-use search interface. Suggestions for improvement include more reader-friendly organisation, and results-level metadata export for journals and articles. ADA compliance checking is currently in progress. DOAJ's application form is long and complex and could benefit from streamlining. DOAJ is the premium venue for authors seeking quality Open Access journals to publish in. Its value for finding academic material is strong and growing. It is also a must-have for libraries. DOAJ membership for libraries, while optional, is of value to libraries for local OA promotion as well as promotion of the library through DOAJ's popular website.

Pricing Options

DOAJ is OA, supported by its communities—individuals, libraries, consortia, aggregators and service providers. Membership rates for 2016/2017 from the DOAJ membership website <<https://doaj.org/membership>> are as follows:

- Individuals—£200 (€250/\$275) per year
- Academic Libraries, Universities, Research Centers—£450 (€540/\$600) per year
- Library Consortia, Library Associations, up to 40 members—£4,500 (€5,400/\$6,000)
- Library Consortia, Library Associations, up to 80 members—£9,000 (€10,800/\$12,000)
- Library Consortia, Library Associations, 80+ members—Request a quote <<https://doaj.org/contact>>
- Aggregators and other Service Providers—£6000 (€7,000/\$8,000)

As of Nov. 3, 2016 DOAJ members include 171 libraries, library associations, consortia, universities, and research centers from 29 countries. The consortial discount is substantial for large consortia. The membership cost for a consortia of 40 members on a per-library basis is 10% of the cost of individual library membership. However the benefits are less for smaller consortia, with no consortial benefit at all for consortia with 10 or fewer members.

Product Overview/Description

DOAJ is a continuously updated, vetted list of fully OA (no embargo or delay), peer-reviewed journals, encompassing all scholarly disci-

plines. As of November 2016, DOAJ includes 9,201 journals from 128 countries, more than three times as many journals as were included in the 2007 DOAJ review. There is also an article-level search service for over 6,000 DOAJ journals encompassing over 2.3 million articles. Of these, 256,600 articles are identified as published in 2015, the latest full year as of the time of writing.

What percentage of the world's total journal and article production is reflected in DOAJ today? As of late 2014, there were a total of 34,550 active scholarly peer-reviewed journals in the world (28,100 English language + 6,450 non-English language) collectively publishing around 2.5 million articles per year (Ware and Mabe 2015, 6). Twenty-seven percent of the world's peer-reviewed scholarly journals are now listed in DOAJ. Approximately 10% of the world's peer-reviewed scholarly articles can now be found through DOAJ's article-level search.

DOAJ has grown significantly since the 2007 review (Morrison, 2008) in both absolute and relative numbers, from 2,800 titles to 9,201 titles and from 10% of the world's scholarly peer-reviewed journals to 27%. In 2007, DOAJ listed more active, peer-reviewed scholarly journals than the world's largest subscription databases, such as EBSCO's Academic Search Complete. As of November 2016, the EBSCO website for Academic Search Complete indicates coverage of nearly 5,890 active peer-reviewed full-text journals, of which more than 3,720 are non-embargoed. DOAJ now includes more than two and a half times as many non-embargoed, peer-reviewed scholarly journals as Academic Search Complete. DOAJ is currently growing at an average rate of 1.5 titles per day (Morrison, 2016).

DOAJ can be searched or browsed online, or the metadata can be downloaded for inclusion in library search services such as e-journal lists. The metadata file includes 31 columns of information including subjects, key words, DOAJ start date, article processing charge (APC), URL, and other information. DOAJ includes all scholarly disciplines. A screen scrape of results when expanding the Subjects tab for the over 2.3 million articles available through DOAJ returns 506 subjects. Medicine clearly dominates; 728,007 or 31% of the 31 million articles have medicine as one of their subject headings in contrast with, for example, education with 67,552 articles, or business and management/fine arts with about 17,000 each. Some subjects are one-offs, however many subjects contain significant amounts of content; for example, 36 subjects have more than 40,000 articles.

No special equipment is needed for browsing or searching DOAJ; all that is needed is an internet connection and browser. Manipulation of the DOAJ metadata requires, at minimum, a spreadsheet program such as Excel and careful attention to opening of the file to ensure retention of diacritics (non-English letters and accents). Inclusion of DOAJ in other library metasearch services is often included in metasearch packages. Custom use requires software such as an OAI-PMH metadata harvester or JSON for the most sophisticated reuses of DOAJ article-level metadata.

DOAJ is useful as a direct search for peer-reviewed scholarly journals or articles for anyone interested in scholarly peer-reviewed content, across all academic disciplines. It is also an important educational tool for scholarly communication librarians and journal look-up for researchers seeking a suitable publication venue. DOAJ's metadata is very useful for researchers in the area of OA. DOAJ membership is a valuable tool for libraries as a promotional tool for OA and for the library itself due to the popularity of the tool.

User Interface/Navigation/Searching

The user interface is clean, attractive, and intuitive (see Figure 1). The home screen features a familiar google-like basic keyword search that can be limited to journals or articles, and a link to the advanced search screen. The navigation bar at the top features an option to Browse Subjects. Journals and articles are classified using the Library of Congress classification scheme. The remaining buttons, Apply (for journals to be included), News, About, For Publishers, and API are more useful for journals seeking to be included and librarians than for the average content seeker. The right-hand side of the screen features basic statistics (such as number of journals and articles included), links to FAQs, OA and best practices information, and a link to the metadata download page. DOAJ service-level sharing tools (Facebook, Twitter, etc.) are to be found at the bottom right-hand side of the screen.

The advanced search screen offers the ability to search by specific fields, change the sort order and the number of items showing on the screen, capture a search to share or embed in another web page, limit the search to journals or articles, and add additional limiters with the options depending on whether journals or articles are selected (see Figure 2). The Search All drop-down menu features familiar options to libraries, the ability to search by Title, Keywords, Subject, ISSN, DOI, Country of Publisher, Journal Language, or Publisher. Fields specific to article-level searches are Abstract, Year, Journal Title, and Journal Alternative Title.

The ability to expand the number of items that appear on a page appears to be unlimited, which is a nice feature. There is no option to export metadata from a search, an unfortunate limitation.

Clicking on the title leads to the DOAJ information page about the journal (see Figure 3). The homepage link connects the reader to the journal itself. In the case of an article-level search an abstract appears as well. The amount of information available here varies with the journal.

Limiters that are available with journal-level searches are:

- Subject
- Article Processing Charges (APCs)
- DOAJ Seal (journals that meet a particular standard explained on the DOAJ website)
- Journal license (default Creative Commons or other license)
- Publisher
- Country of publisher
- Full Text Language

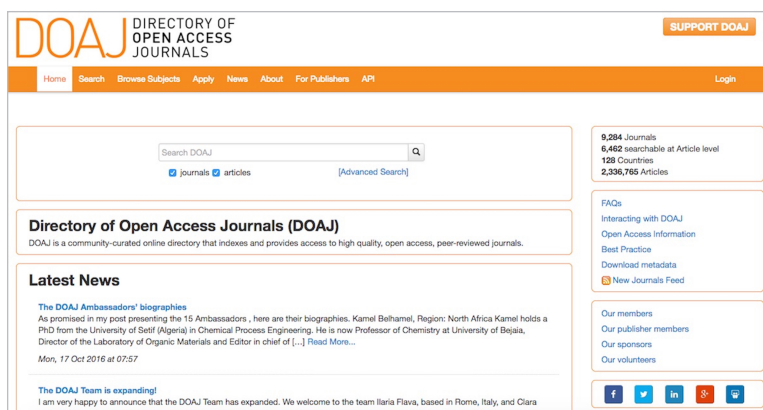


FIGURE 1 DOAJ Home Page

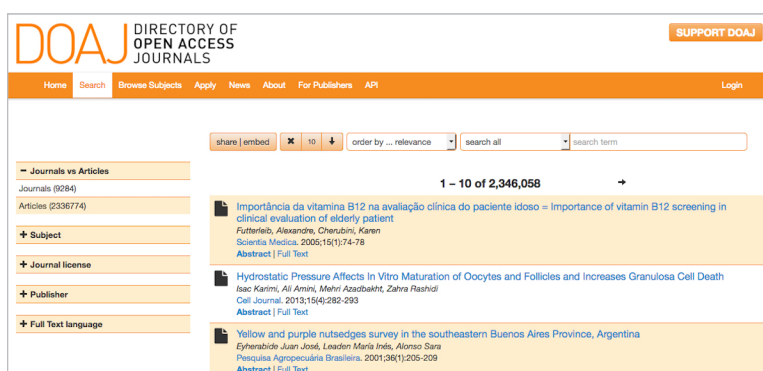


FIGURE 2 DOAJ Advanced Search Options

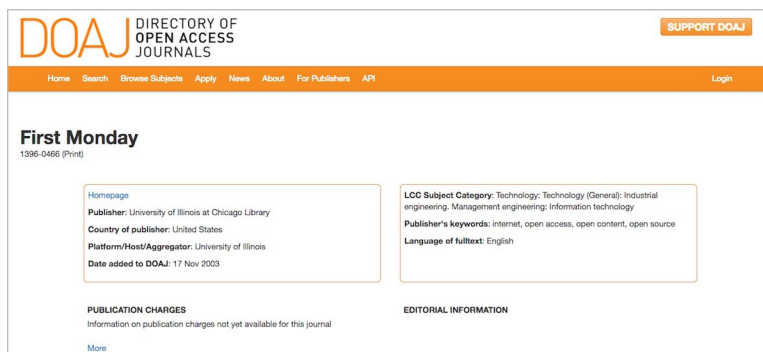


FIGURE 3 DOAJ Journal Detail Information

Peer review (type of peer review used)
Date Added to DOAJ

Limiters that are available with article-level searches are:

- Subject
- Journal title
- Journal license
- Publisher
- Full-text language
- Year of publication

As of November 2016, DOAJ is beginning a process of examining web accessibility/ADA compliance and should be considered non-compliant for now.

Critical Evaluation

Strengths of DOAJ include: its vast and inclusive content reflecting many disciplines, 128 countries, and many languages; a strong brand and easy-to-remember URL (<<https://doaj.org/>>); its reputation for vetting and hence quality content; a clean, easy-to-use user interface; and sharing of metadata to facilitate other searches of content.

The weaknesses of DOAJ appear to stem from its multiple purposes. DOAJ is a search service, a mechanism for promoting a particular vision of the technical aspects of scholarly journal publishing, a research tool, and a tool for authors and funders to search suitable publication venues. By attempting to accomplish all of these things, DOAJ is less than optimal as a library search service, the primary focus of this article.

The orange navigation bar at the top of the search screen illustrates the potential for confusion. The three items on the left (Home, Search, Browse Subjects), are all useful for the searcher who is seeking knowledge to read, while the five buttons on the right (Apply, News, About, For Publishers, and API) seem more likely to confuse than to help the searcher. A clear separation of information for different audiences would be helpful as would bringing like items together, such as the two buttons designed for publishers.

In Advanced Search, the limiters available for journal and article-specific searches also illustrate potential for confusion. If journal-level searching is selected, nine limiters are presented. The items most likely to be useful for a content searcher are at the top of the list (Subject), then seventh (Full Text Language), then fifth (Publisher). Of the other limiters, the only one that seems likely to be of interest to a potential reader is Country of Publisher. This may be of limited use, however, as the Country of Publisher may suggest country-related content, but this will often not be the case as few journals limit content to the country of publication.

The remaining limiters are of questionable use for the average content searcher and might be better grouped lower on the list or removed. APC information may be of interest to authors seeking a publication venue, but is often incomplete. Because this field was added fairly recently, information in this field where available may be reasonably up-to-date but seems likely to become stale or dated unless every journal updates their DOAJ record every time there is a price change. The peer review limiter, when expanded, leads to further limiters based on type of peer review. This information seems more suited to the researcher in this area than someone looking for content to read. The average searcher for peer-reviewed content is not likely to want to choose between blind and double blind peer review. The date added to DOAJ is not useful at all to the reader. It would be beneficial to replace this with the first date of online OA content, a metadata field in DOAJ that would be more useful for limiting searches at the journal level.

The Journal license limiter will be of interest to people specifically looking for content to reuse. However, it is not clear what percentage of people seeking to read academic articles and searching at the journal level are specifically looking for content to reuse. For users in that category, journal-level license information, where available, must be interpreted with caution. The default journal license may have changed over time. For example, no journal that began publishing before Creative Commons (CC) was founded in 2001 could possibly have used a default CC license throughout its history. Within a particular issue of a journal, different content or types of content may have different licenses. Third party content is under separate copy-

right—even when the CC license is the same—and will often be covered under different copyright terms. This may be an important issue for reuse, as it seems logical that third party content selected by an original author for purposes of reuse would be particularly attractive to downstream users for further reuse. This is an area that could benefit from further research.

The limiters that appear in an article-level search are better suited for selecting content for reading, although the placement of Journal License third, above the more useful Publisher, Full-text Language, and Year of Publication is not optimal.

Another weakness in the Advanced Search is lack of full Boolean search ability. There is no OR, nor is there an ability to use AND to combine subjects and key words. Also, the inability to export metadata at the search level is a significant weakness.

DOAJ has begun to include content from ceased journals, an improvement over past practice. Journals must publish five articles per year to be included, an unfortunate omission as high quality journals in some academic areas publish infrequently (a point noted by Crawford (2015) in a recent review). DOAJ content is also limited in that many new journals are not included, partially due to the content requirement and partially due to the application and vetting process.

The application form for new journals is long (58 questions) and mixes highly useful questions (e.g., journal title, publisher, society or institution, ISSN, URL, whether article-level metadata will be provided, keyword, full-text language, etc.) with technical questions that appear to reflect a particular vision of scholarly journal publishing development that might be best considered as open for discussion. For example, question 25 asks “What digital archiving policy does the journal use?” Examples of answers are: No policy in place; LOCKSS; CLOCKSS; Portico; PubMed Central; etc. Although encouragement of digital archiving is to be applauded, it is not clear why DOAJ would assume that this is the responsibility of the journal, as opposed to other options such as national libraries or publishing services at universities or university consortia. Also CLOCKSS has its own list of participating publishers and PubMed Central maintains a list of participating journals, so this is redundant information.

The pricing for members is a bargain for libraries considering the substantial content. The membership for a single library costs less than a single subscription to many journals, and a tiny fraction of what libraries pay for bundled databases such as EBSCO’s Academic Search Complete that include a fraction of the content of DOAJ. It may be worthwhile for large library consortia to participate in order to negotiate library-friendly development such as prioritizing search services, streamlining the application form that scholarly communication librarians sometimes have to explain to journal editors, and ADA compliance. DOAJ might consider consortial discounts for smaller consortia (fewer than 10 members) in order to grow membership.

The areas for improvement noted above are minor taking into account the overall high quality and reliability of DOAJ.

Competitive Products

There is no direct competitor for DOAJ, although there are many search services for OA materials, including archives such as PubMed (the index) and PubMed Central, the Bielefeld Academic Search Engine (metasearch of over 100 million documents in over 4,000 archives, about 60% of which are OA), and the Electronic Journals Library, a combined subscription/free journals search developed by a



Directory of Open Access Journals

Review Scores Composite: ★★★★★ 1/2

The maximum number of stars in each category is 5.

Content: ★★★★★ 1/2

DOAJ provides substantive content for all academic disciplines and in many languages, at the journal, article, and metadata level—and all for free! Room for improvement: add smaller journals, new journals, and embargoed Open Access content.

User Interface/Searchability: ★★★★★ 1/2

Clean, attractive, and intuitive interface. Could use some improvement on organization to prioritize reader needs, exporting metadata for search results, and ADA compliance.

Pricing: N/A

Although not required, membership is a bargain and recommended for libraries.

Purchase/Contract Options: N/A

consortium of libraries in Europe that includes a wider range of free content (embargoed free content, free journals of academic interest that are not peer-reviewed) than DOAJ. This is just to name a few of the services that would be worthy topics for future TCA reviews.

Purchase & Contract Provisions

NA

Authentication

NA

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About the Author

Dr. Heather Morrison is an Assistant Professor in the School of Information Studies, University of Ottawa, Canada, the Principal Investigator of the Sustaining the Knowledge Commons research program funded by Canada's Social Sciences and Humanities Research Council, and a well-known long-time Open Access activist and researcher. For more about her work, see her webpage <<https://arts.uottawa.ca/sis/people/morrison-heather>>, the Sustaining Knowledge research blog <<https://sustainingknowledgecommons.org/>>, or her scholarly blog The Imaginary Journal of Poetic Economics <<http://poeticeconomics.blogspot.com>>. ■

Free Text Keywords: Open Access | scholarly communication | journal directories

Primary Category: Multidisciplinary (or interdisciplinary)

Secondary Categories: Other

Type of product being reviewed: Abstracting & Indexing; Aggregator database; App for mobile devices; Ejournal collection; Publisher or Organization content/repository; Website

Target Audience: General public; Undergraduate (including community colleges); Graduate/Faculty/Researcher

Access: Open Access (OA)

Contact Information

Infrastructure Services for Open Access (IS4OA)

E-mail: <<https://doaj.org/contact>> (form)

Product URL: <<https://doaj.org/>>

Producer URL: <<https://is4oa.org/about/>>