Research on the Dilemma and Countermeasures of "Going Out" of Chinese Academic Journals

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Abstract: *Academic journals are an important window for the international academic community to observe the development of Chinese learning. Speeding up the pace of "Going out"of academic journals is conducive to enhancing the soft power of Chinese culture. However, in the process of applying for the DOAJ database, there are many problems in academic journals in China, such as small number, slow growth, uneven distribution of disciplines, inconsistent classification standards, prominent language barriers, low popularization rate of open access knowledge, unclear copyright policy and low publication efficiency. Taking the application of DOAJ database as an example, this paper analyzes the contents of academic journals in China, such as their inclusion, discipline distribution and publication language, and makes a 7-month observation and investigation on "the application of DOAJ database to discuss WeChat group", it is suggested that the international influence of Chinese academic journals should be gradually expanded through the joint efforts of state guidance, management traction, platform construction and personnel training.*

Keywords: *Academic journals; DOAJ; "Going out"; Open access; Creative commons license*

Introduction

DOAJ (Directory of Open Access Journals) has included 16,092 peer-reviewed open access journals since its establishment in 2003, making it the most extensive international database of open access journals in the world. Through preliminary research, we found that 142 academic journals have been entered into this database in China (as of June 7, 2021), which is far behind western countries. Therefore, we should increase the research on academic journals applying to enter the DOAJ database, with a view to providing reference for more academic journals to enter the DOAJ database and providing path references for China's academic journals to go out.

At present, the relevant research on DOAJ in China's journal community mainly stays at the superficial level. For example, Zhang Jinzhao (2018) analyzed and explained the basic situation of 125 journals entered into DOAJ, mainly describing and analyzing disciplinary classification, journal type, publication cycle, publication time, language type, peer review, paper format, publication cost, and organizer. Other scholars have explored the OA journals in different subject areas included in DOAJ, including architecture and art (Xiao, 2012), economics (Wang, 2013), medicine (Luo & Zhang, 2020; Lei & Dong, 2015), graphology (Mao,

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2017), chemistry (Yuan, 2016), language and literature (Zhou, 2014), etc., aiming to optimize the construction of resources in related disciplines and promote the development of open access in the discipline. There are also scholars who deal with a hot issue and core regulations in the basic standards of DOAJ inclusion, such as Creative Commons licenses for OA journals (Yang & Wu, 2020; Zhu & Niu, 2020), article processing charges (APCs) (Liu & Yi, 2015), etc. To a certain extent, these studies provide theoretical guidance and practical reference for Chinese academic journals to enter the DOAJ database.

In order to further study the issues related to the entry of Chinese academic journals into DOAJ, I joined the "DOAJ Database Journal Application Discussion Group" created by Ms. Shen Cenyu, Chief Editor of DOAJ China, on December 17, 2020. The WeChat group provides a platform for Chinese journal editors to enter DOAJ, and most of the 300+ members in the group are Chinese journals that want to join DOAJ. Through the observation of the group for 8 months (December 17, 2020 – July 17, 2021) and the author's personal practice, it is found that there are many hidden problems in DOAJ application and open access journal development in China's academic journals, which also highlight the real dilemma of going global for China's academic journals.

Analysis of the Development Status of China's Academic Journals into DOAJ

Slow Growth Rate and Relatively Small Numbers

Already statistics show that on March 31, 2018, 125 academic journals in mainland China were indexed by DOAJ (Zhang & Liang, 2018), and by June 7, 2021, this figure becomes 142. The number of Chinese academic journals grows by only less than 20 titles during the three-year period. In contrast, the overall number of journals included in the DOAJ database has grown rapidly. DOAJ grew by 2000 titles per year from 2010 onwards, with a period of decline in 2015, followed by a linear upward trend. The reason for the decline is the change in DOAJ's inclusion policy in 2014, when the inclusion criteria became stricter and all journals needed to resubmit their application materials, thus eliminating some journals. In contrast, Chinese academic journals have lagged significantly.

And of all the journals included in DOAJ, Indonesian journals are included in the largest number of journals at 1827. An interview with Ms. Shen Cenyu, Editor-in-Chief of DOAJ China, revealed that although Indonesian journals are generally of low quality, the open research ecosystem, the generally low cost of processing OA journal articles, and the supportive government incentives for the publishing system have led to the rapid growth of open access journals in Indonesia. In addition to Indonesia, the UK (1779 titles), Brazil (1629 titles), the US (930 titles), and Spain (864 titles) are also countries with a high number of journals included in DOAJ. Especially in the last decade, "more open and inclusive" has become a new tool to define the impact of scientific research. It can be seen that the development of open access journals in the above countries is extremely rapid, but it also reflects that the development of open access journals in China is basically stagnant, slow and lack of attention. Both the open access movement and information sharing in China are of great importance

Uneven Distribution of Subject Areas

DOAJ is divided into 20 first-level categories under DOAJ, and this paper classifies the first-level categories of the disciplines to which 142 open access journals belong, and finds that Chinese journals cover only 10 categories. The development of journals in the existing 10 disciplines is also extremely uneven. As shown in Table 1, there are 52 open access journals in "engineering", accounting for 36.6% of the total number of journals; 46 open access journals in "medicine", accounting for 32.4% of the total number of journals; 22 open access journals in "natural science". There are 22 open access journals, accounting for 15.5% of the total number of journals. "Agronomy", "Geography", "Social Sciences", "Language and Literature" "Naval Science", "Cataloging", "Art", and "History Auxiliary Science" have a smaller percentage of applications and collections. And like "History Aided Science", "American History", "History and European History", "Library Science", "Music", "Philosophy", "Psychology", "Religious Studies", "Politics" and "Pedagogy", no periodicals were included.

Table 1. Distribution of DOAJ-included journals by discipline

Academic discipline	Quantities	Proportion (%)	Academic discipline	Quantities	Proportion (%)
Technology	52	36.6	Auxiliary sciences of history	0	0
Medicine	46	32.4	Bibliography, Library science, Information resources	0	0
Science	22	15.5	History and European History	0	0
Agriculture	9	6.3	History America	0	0
Geography. Anthropology	6	4.3	Music and books on Music	0	0
Social Sciences	3	2.1	Philosophy. Psychology. Religion	0	0
Language and Literature	1	0.7	Political science	0	0
Naval Science	1	0.7	Education	0	0
Bibliography	1	0.7	Military Science	0	0
Fine Arts	1	0.7	General Works	0	0
Aggregate	142	100	Aggregate	0	0

Low Number of Chinese-Language Journals

Among the 142 Chinese academic journals included in DOAJ, as shown in Table II, there are 116 journals that use English as the language of publication, accounting for 81.7% of the total, while there are 21 journals that use Chinese as the language of publication, accounting for 14.8% of the total, and there are also 5 journals that are bilingual journals that accept both Chinese and English.

Although DOAJ claims to conduct a fair review of journals in any language, the number of journals in English is 12,677, or 77%, of the total number of journals included in DOAJ. This shows that English is still

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the common language of international journals.

Table 2. Language distribution of DOAJ-included journals

Language	Quantities	Proportion (%)
English	116	81.7
Chinese	21	14.8
English + Chinese	5	3.5
Aggregate	142	100

The Basics of Open Access Need to be Further Disseminated

Open Access (OA), as defined by DOAJ, is literature that is freely available on the public Internet, allowing any user to read, download, copy, share, store, print, search, link to the full text of an article, or use it for any other lawful purpose, and without seeking prior permission from the publisher or author. Although this definition has been popularized in the international community for more than 20 years, it is still vague in the perception of domestic journal editors.

For example, "Is it considered OA when an article is publicly available on a journal website and the author can download and read it for free, but the article is included in CNKI and requires payment?" Such similar questions are not uncommon. At present, the dissemination and recognition of domestic journals mainly relies on the knowledge network, so once retrieved by the knowledge network, it is inevitably marked with the opposite label of openness. This also shows from the side that domestic journals also have a relatively shallow perception of foreign open access journal databases. Many editors believe that if they enter a particular database that charges a fee, they cannot enter an open access journal database again. Some journal editors also report that journals are often denied access to DOAJ databases on the grounds that they "cannot effectively support the development of the journal" due to the vague, scattered, weak or even missing descriptions of open access policies on their websites.

Journal Copyright and CC Agreements Remain a Focal Point

In the journal application process, issues related to copyright agreements and Creative Commons licenses (CC agreements) have become a key concern in the journal application process. Some journal editors have reported that there are few cases of failed applications due to inconsistencies in the content of the journal's own copyright policy or conflicts with the "open access" nature of DOAJ. The DOAJ Basic and Seal Criteria for Inclusion (Version 2020) suggests that "the website needs to clearly state the terms of the license for use and reuse of published content, and if the journal does not use a CC agreement, it must choose to use similar license terms.

Many editors also questioned "Is there a contradiction between copyright transfer agreements and CC agreements?" In this regard, DOAJ Shen Cenyu said, "In China, journals generally require authors to sign a copyright transfer agreement, which assigns the copyright of the article to the editorial board and the publisher, and we need to make it clear that this kind of copyright agreement is for the author; while the CC

agreement, as a kind of public copyright license that allows others to distribute the work, is for the third party "others," so there is no conflict between the two."

Publication Efficiency as a Constraint to the Development of Open Access Journals

The DOAJ Basic and Seal Criteria for Inclusion (2020 Edition) does not specify the time lag between publication and uploading to the website. According to DOAJ volunteers' answers, "no time lag" means that journal articles are immediately available on the official website for free once they are published, while the corresponding "time lag" means that some articles are published in subscription mode for a period of time, requiring Authors need to pay to read. In fact, many domestic academic journals not only do not have a time lag, but some journals even publish some of their papers in advance on WeChat. However, the long publication cycle and low efficiency of journals is a common dilemma.

Exploring the Path of Promoting China's Academic Journals to "Going Out"

With the change of academic communication scenario, open access has become the mainstream operation mode in the global publishing world. To promote China's academic journals to go global, a series of supporting development strategies need to be formed according to the types of journals and the actual situation through the joint efforts of multiple bodies such as national guidance, management traction, platform construction and talent training.

National Guidance: Strengthening OA Awareness and Improving Relevant Policies

In terms of the overall layout, although China committed to jointly promote international open access programs as early as the beginning of this century, China's open access journal policy has not been substantially updated, developed or implemented.The 2014 "Policy Statement on Open Access to Scientific Research Papers Funded by Public Funds" and "Policy Statement on the Implementation of Scientific Research Papers in Funded Projects" issued by the Chinese Academy of Sciences and the National Natural Science Foundation of China, respectively The Policy Statement on Open Access to Scientific Research Papers of Funded Projects", requires that the published scientific research papers of funded projects be stored openly through institutional knowledge databases and require open access no later than 12 months after publication. However, there is no detailed deployment and explanation on the rules of open access to scientific research papers, the establishment of open access knowledge base and storage standards, and the follow-up of relevant science and technology plans.

In contrast, the open access policies in Europe and the US are more elaborate, such as (1) guided open access, i.e., helping authors to best match journals by submitting manuscripts once; (2) self-archiving policies for journal articles, where the published scientific results of research institutions and researchers are kept in publicly accessible repositories or personal websites for a long time; (3) Creative Commons licenses, i.e., allowing others to distribute public copyright licenses for works.

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Therefore, China should introduce supporting policies as soon as possible to increase the policy, funding and project inclination for the open access external promotion of funded OA journals, and also provide low-cost and sustainable storage solutions and policy support for journals that are not funded to protect the open access journal content to be continuously accessed in the long term, especially for social science open access journals. Incorporate open access to journals into various funding programs such as publication projects and translation projects to provide a solid policy guarantee for open access to journals. For the storage system of OA journals, the storage version, storage channel, and storage time lag period of the knowledge base should be uniformly stipulated to provide referenceable standards for the dynamic operation of publishers and journal clubs (Yan, Zheng & Mao, 2021).

As for the copyright issue, it is suggested that the State Press and Publication Administration is needed to take the lead and work together with local copyright administrative departments, large-scale publishing enterprises and direct affiliated institutions of journals to establish regulations and methods of copyright management applicable to open access journals, and to divide the distribution of interests, rights and obligations among the stakeholders involved, such as authors, journal publishers, platform databases (DOAJ), libraries and other related subjects and thus reduce and avoid disputes over rights and interests.

Managing Traction: Accelerating the Creation of English Journals and Increasing the Number of Chinese Journals Included

English is still the main language of international academic communication and research, and we need to use English journals to build Chinese brands and use the international influence of English journals to promote Chinese research results, so it is very necessary to accelerate the establishment of Chinese English journals. But on the other hand, it is also necessary to further study the language policies of various databases and speed up the pace for Chinese journals to enter various international databases.

For English-language journals, China can motivate other journal societies to actively create English-language journals by implementing incentives for open-access English-language journals that are the first to enter international databases. For example, according to relevant statistics, more than half of the Indonesian journals included in DOAJ are published in English. The Indonesian government emphasizes that the results of state-sponsored research should be widely and freely available to the public, so to a certain extent, the publication of English-language journals can meet the needs of a global audience to the greatest extent possible. In addition, one of the most significant advances in international scholarly communication in Brazil in recent years has been the increasing use of English in internationally indexed journals. Since 2014, more articles have been published in English than in Portuguese. With the emergence of Brazilian journals in international indexing, the guidance for English-language journals will move further towards the position of international benchmark, both in terms of building an efficient journal management platform and a special national funding program.

From the strategic layout of DOAJ, many international databases attach great importance to the Chinese market, and most of them have Chinese offices and review teams specifically for Chinese journals, so there is a great need to increase the guidance and support for Chinese journals applying to international databases

in China. According to DOAJ journal selection criteria, although Chinese journals are allowed to enter the database, detailed and clear information about the journal's introduction, journal purpose, editorial board information, author guidelines, peer review, licensing terms, copyright policy, contact information, etc., still need to be explained in English on the journal website. The English titles, abstracts, and keywords of journal articles are also used as important indicators for judging the quality of the journal (Luo & Zhang, 2020). However, at present, most Chinese journals lack English websites, and there are basic problems such as no professional guidance on website construction, imperfect website information, inconsistent content of Chinese and English websites, and unstable website construction, leading to the rejection of journals by DOAJ in the primary review stage. It is suggested that the relevant management agencies should introduce the information specification template for the English version of Chinese journal websites as soon as possible, and provide targeted training and guidance to academic journals, organize and explain the format and specification for publishing some basic information of journals, so as to provide a basis and reference for Chinese journals to enter international databases.

Platform Construction: Accelerating the Construction of an Open Access Platform for Academic Journals in China

The China Open Access Journals (COAJ) platform was established in 2010 to enhance the academic influence of Chinese scientific and technical journals, and although it started late, it is a very forward-looking and innovative national strategy. However, according to the inclusion of journals platform in the past ten years, we can find that the development of COAJ is slow, with only more than 600 journals at present, and there are problems such as unclear criteria for journal inclusion, irregular inclusion process, lack of search function and low international recognition. Therefore, in order to expand the influence of China's open access platform, we need "vertically and horizontally" accelerate the pace of going out.

From a “vertical”point of view, COAJ needs to speed up the cooperation with domestic journal databases such as China Knowledge Network and Wipu, to be flexible in its inclusion policy, to include all open access journals in China and worldwide as much as possible and as fast as possible, and to assist more academic journals that wish to go out to "open access transformation". open access transformation" for more academic journals that wish to go global, and promote the development of all-round open access journals in China.

From a "horizontal" point of view, the COAJ can be borrowed from the DOAJ, which provides that journals previously indexed in the Keepers Registry, Internet Archive, PubMed Central (PMC) and other databases are eligible for the DOAJ seal of approval. , which means that one can get the benefits of long-term storage, permanent identification code for article use, discoverability, reuse policy, etc. Therefore, we can also cooperate with as many international databases as possible to take advantage of our quantitative and technical advantages to expand the international influence of COAJ.

Talent Development: Emphasis on Editorial Boards to Enhance the International Perspective of Journal Editors

The key factor for journals to go global is still people. It is important to speed up the connection of journal editorial teams and researchers with international standards, enhance the personal sense of professionalism

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of editors, cultivate the ability of innovation, learn more about international academic software and website browsing skills, develop information sensitivity, and cultivate "Internet + journal publishing" thinking (Xu, 2021).

At present, we lack professionals who can clearly understand the rules of operation of international databases. It is suggested that open access movement advocates such as journal authorities, industry societies, libraries or repository vendors hold conferences and trainings related to OA policies and invite editors of journals that have been included in DOAJ databases or relevant researchers to share and exchange experiences, which can target and efficiently solve the difficulties of Chinese academic journals in the process of applying for international journal data repositories. We expect more teachers like Shen Cenyu of DOAJ database to closely connect with Chinese academic journals through social media platforms such as WeChat group and WeChat public number, to regularly summarize and share the evolution of global open access movement and system, and to hold workshops to provide Q&A and pre-assessment services for the application process of scientific and technical journal societies. In addition, we need to be flexible in the selection of review methods, unify review rules, and improve the qualification review system for expert reviewers to continuously improve the open access level of journals (Li, 2019).

Concluding Remarks

On February 4, 2021, the South African government added DOAJ to its list of approved indexes, encouraging researchers to take full advantage of DOAJ's free, high-quality content for scholarly production. After nearly three decades of development, the open access movement has entered a substantial stage of implementation. Compared with the rapidly growing number of SCI publications by Chinese authors, DOAJ, as the only global index of open access journals, has become a construction path for Chinese journals to "go out" for in-depth exploration and research. Although there is still a big gap between the open access of Chinese academic journals and international journals, we believe that in the future, we can refer to DOAJ's journal selection criteria and inclusion rules, continuously improve the corresponding policy services and journal construction, and promote the rapid development of China's open access movement and information sharing.

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