Open access full-text databases in Asian countries

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Abstract

Open access promotion methods are generally divided into the 'gold road' and the 'green road.' Asian countries most commonly focus on the gold road while others focus on the green road. According to data from the Directory of Open Access Journal and the Directory of Open Access Repositories, Indonesia has the largest number of open access journals in the world, while Japan has the third largest number of institutional repositories. In contrast, in Korea, the extensible markup language services of the original text of journal articles are more popular than other Asian countries. In this article, the current status of open access in Asian countries is investigated, and typical open access journal service platforms in Asian countries are reviewed.

Keywords

Asian countries; XML full text; Journal databases; Open access

Introduction

Open access of academic journals has been promoted in order to allow anyone, without financial, legal, or technical barriers, to access journal articles that could not otherwise be read due to expensive subscription fees [1]. However, another important reason why many countries in Asia are interested in open access journals is to increase the accessibility and visibility of their journals [2,3]. The Asian region is rapidly increasing in prominence on the world stage, both in terms of research activity as well as scientific production. In terms of research outputs, the Asian region is already prolific and is growing quickly [4]. In contrast, the share of journals published by Asian countries in international indexes such as Science Citation Index and Scopus is relatively low. Thus, open access is a good way for Asian countries to increase the visibility of their journals.

In this article, the current status of open access in Asian countries is investigated using data from the Directory of Open Access Journal (DOAJ, <https://doaj.org>) and the Directory of Open Access Repositories (OpenDOAR, <http://www.opendoar.org>), and typical open access journal service platforms in Asian countries, including full text articles, are reviewed.

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Current Status of Open Access in Asian Countries

There are 2 representative open access sites, DOAJ and OpenDOAR. DOAJ provides country-specific statistics for open access journals, while OpenDOAR provides national and continental statistics for institutional repositories.

DOAJ was launched in 2003 at Lund University, Sweden. It is a community-curated list of open access journals and aims to be the starting point for all information searches for quality, peer reviewed open access material [5]. Over 10,000 open access journals from around the world are included in DOAJ.

OpenDOAR provides a quality-assured listing of open access repositories around the world. OpenDOAR staff harvest and assign metadata to allow categorisation and analysis to assist the wider use and exploitation of repositories. It is maintained by the Centre for Research Communications at the University of Nottingham, United Kingdom [6].

Fig. 1 shows the current status of the Asian journals regis-

Fig. 1. The top 10 Asian countries registered in the Directory of Open Access Journal.

tered with DOAJ. Indonesia, India, and China have many journals registered with DOAJ. Indonesia has the largest number of open access journals in the world. In Indonesia, which has the fourth largest population in the world, all undergraduate and graduate students are required to publish 1 or more journal articles before final examinations [4]. Therefore, many journals exist and the number of open access journals is also greater than that of other countries.

India and China are the next largest number of journals registered with the DOAJ, but they are relatively small compared to the country size, and it is rather remarkable that Korea is the fourth. The reason for this is that the evaluation of academic journals in Korea gives an advantage to open access. Therefore, Korean academic societies became interested in open access to get the better grades in the evaluation.

Fig. 2 shows the statistics from OpenDOAR, a directory of open access repositories. Asia accounts for 20.2% of such repositories, following Europe. Japan has the most repositories among Asian countries because the Japanese government has been investing in the construction of institutional repositories since 2006. In return for receiving funds through a public contest, universities are required to make practical suggestions based on their experience in operating the institutional repositories [3]. Various types of academic content have been deposited in the institutional repositories, including journal articles. Since 2012, National Institute of Informatics (NII) has provided universities Japanese Institutional Repositories Online (JAIRO) cloud service, which is a shared institutional repository using WEKO system, repository software developed by NII. As of September 2017, 811 institutional repositories are installed in Japan.

Open Access Journal Databases in Asian Countries

Overview

As with other regions, open access policies and practices are

Fig. 2. Open access repositories (A) by continent and (B) by country in the Directory of Open Access Repositories (OpenDOAR).

being adopted in Asia, although progress varies greatly across the different countries [7]. Many Asian countries do not only have a cohesive national open access strategy, but also lack funding to develop the infrastructure needed to support open access. As a result, open access activities are uncoordinated, which ultimately reduces their impact [4].

In this article, cases of countries that have relatively well established open access journal sites were introduced for reference in other countries. The Asian countries that operate well established national platforms of open access journals are Korea, China, and Japan. Therefore, this article introduces the major journal service platforms of these 3 countries.

Korea

Korea has been interested in open access since the early 2000s, but since 2009, research and business related to open access have begun. The Korea Institute of Science and Technology Information was the first institution to build open access infrastructure as a national center of scientific and technological information in Korea. The Korean Federation of Science and Technology (KOFST) have been supporting open access journals. In the private sector, the Korean Association of Medical Journal Editors has been built journal database in the field of biomedical sciences.

In 2007, Korean Association of Medical Journal Editors launched KoreaMed Synapse (Fig. 3), the first Korean open access journal platform including approximately 130 Korean biomedical journals with full text articles in the form of Journal Article Tag Suite (JATS) extensible markup language (XML) [8]. KoreaMed Synapse, a reference linking platform

using Crossref's DOI (digital object identifier), was developed to be compatible with PubMed Central.

In the field of science and technology, Korea Institute of Science and Technology Information has been building an open access journal platform known as KPubS (Fig. 4) since 2014. KPubS originally provided only XML full text journals [9], but in 2016 it has expanded to open access PDF journals. As of 2017, KPubS includes 115 journals.

KOFST provides advantages to open access journals in the evaluation of journal support. Therefore, Korean academic societies became interested in open access to receive support from KOFST. Since Korean journals were mostly free access, it was easy to change to open access by just adopting an open access license such as Creative Commons Licenses. KOFST also operates a PubMed Central-compatible journal site called ScienceCentral that includes about 140 journals (Fig. 5).

In summary, almost all Korean open access journal platforms contain journals published in English or Korean, the interfaces are English, and full texts are in the form of JATS XML.

China

In early 2000s, the Chinese Academy of Sciences, and the Natural Science Foundation of China signed the Berlin Declaration. In 2010, the 8th Berlin Open Access Conference—the first one held outside of Europe—was held in Beijing. Like this, Chinese scientific communities have been very active in the promotion of open access [10]. However, China has also an open access journal service known as China Open Access Journals, operated by Chinese Academy of Sciences. It includes over 600 Chinese journals in all disciplines. The inter-

Fig. 3. KoreaMed Synapse (<https://synapse.koreamed.org>), operated by the Korean Association of Medical Journal Editors.

Fig. 4. KPubS (<http://www.kpubs.org>), operated by the Korea Institute of Science and Technology Information.

face is Chinese and readers can get the full texts through the links provided (Fig. 6).

To overcome low global visibility of Chinese-language open access journals, it is suggested that the publishers participate in the worldwide network of scholarly publishing, and engage in more interaction with their counterparts outside China so that they can be a part of a global publishing community,

keeping a sharp eye on new trends in journal publishing [11].

Japan

The situation of scholarly publishing in Japan is similar to those of Korea and China. Scholarly Publishing and Academic Resources Coalition (SPARC) Japan has been launched in 2003 by NII in order to promote open access journals it [12].

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Morphological, molecular, and chromosomal identification of dwarf haploid parthenosporophytes of *Taaya basicrassa* (Phaeophyceae, Laminariales) from the Sea of Okhotsk

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Abstract

Morphological, molecular and chromosomal studies were carried out on *Taaya basicrassa*, an endemic kelp species distributed on the northern continental coast of the Sea of Okhotsk in Russia. The sporophytes of *T. basicrassa* grow up to 3–6 m long, 1.8–2.2 m wide, and 6.5–7 kg wet weight. The thallus has a blade with very thick narrow basal portion and thinner and much broader upper portion, which usually splits into 3 bullated lobes. A dwarf laminarian alga, which did not show any morphological similarity to the other species of the order Laminariales.

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Fig. 5. ScienceCentral (<https://e-sciencecentral.org/>), operated by the Korean Federation of Science and Technology.

COAJ 中国科技期刊开放获取平台
 China Open Access Journals

中国科学院 主办

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Fig. 6. China Open Access Journals (<http://www.oaj.cas.cn>) operated by the Chinese Academy of Sciences [access on 2017 Dec 23].

Fig. 7. J-STAGE (<https://www.jstage.jst.go.jp>) operated by the Japan Science & Technology Agency.

After that, open access policy was adopted by Japanese government in 2013. The Japan Science & Technology Agency operates J-STAGE, which includes over 2,000 science and technology journals published in Japan. J-STAGE currently has a Japanese-language interface (Fig. 7). Japan Science & Technology Agency has been using J-STAGE as open access journal platform [13], and a new English-language interface is opened recently.

Conclusion

In this article, the current status of open access in Asian countries was investigated with data from DOAJ and OpenDOAR and typical open access journal service platforms in Asian countries are introduced. Indonesia has the largest number of open access journals of any country in the world, while Japan has the third largest number of institutional repositories. Meanwhile, in Korea, XML services of full texts are more popular than other Asian countries.

Other Asian countries do not seem to establish open access infrastructure well. Therefore, it is necessary to develop the open access infrastructure through cooperation between the countries where open access infrastructure is relatively good

and those that are not. For example, it would be desirable to work together through editors' community such as the Council of Asian Science Editors or through councils like Asia Open Access.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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