

Research on the Construction of Periodical Network in University Libraries

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Abstract—By investigating the construction of periodical network in Colleges and universities, the author finds that the periodical network classified by disciplines are rare, and the digitization level of periodical networks is low as a whole, showing a state of single periodical. This paper discusses the possibility of periodical network construction in university libraries from the aspects of construction background, construction significance, construction conditions and existing problems. The establishment of periodical network will play an important role in academic exchanges, subject services and resource retention.

Keywords—university periodical; periodical network; construction condition

I. INTRODUCTION

Colleges and universities are the gathering place of academic and scientific research talents; the journals published by them have high academic reference value. However, due to the independence of colleges and universities, there is no unified system platform to integrate journals. Periodicals in colleges and universities are decentralized. Universities build their own database which has permissions. Outsider can only see titles but cannot browse and download content. This situation seriously hinders the academic information dissemination and academic exchange. In view of this situation, the author suggests that periodical networks should be divided according to subject, such as medical periodical networks, construction periodical networks and agriculture periodical networks, universities with the most abundant information resources and human resources should take the leading role in this process. Each periodical network should upload all journals related to the subject, organize and edit them, promote open access and speed up the process of establishing first-class institutions in the world.

II. CONSTRUCTION MEANING

First, it can provide academic support for the construction of high-level institutions. Taking medicine as an example, after the completion of the platform, all medical journals can be uploaded, and foreign medical materials and journals mastered by various institutions can also be uploaded to improve the level of academic exchange.

Second, it can promote open access. Nowadays, visitors are not allowed to browse and download the website resources of colleges and universities, which greatly limits the accessibility of information. The platform will be open to all readers, which is convenient for teaching and researching staffs.

Third, it can enhance the inheritance and preservation of information. The platform will organize and preserve all resources since the establishment of the journal, so as to ensure the long-term integrity of resources.

Fourth, it can enhance the long-term preservation of resources. The integration platform can improve the long-term preservation mechanism of periodical resources.

Fifth, it can provide the best practice guide. Relying on the rich and high-quality academic journal resources of colleges and universities, the feasible solutions of centralized integration, content construction and online publishing of academic journals can be explored.

III. RELEVANT RESEARCH

At present, colleges and universities at home and abroad have begun to build their own periodical network (see "Table I"). Foreign periodical network is leading in periodical quality and technical support. By the joining of advanced periodicals, it improves its influence and academic services quality. For example, the HIGHWIRE Publishing House, founded by the Stanford University Library, supports more than 3,000 queries of journals, books and reference books on

its intelligent platform. DOAJ, a journal platform of Lund University Library in Sweden, has included 11643 journals by 2018. It has made important contribution to improve the visibility of peer-reviewed and open access academic research journals worldwide. Peking University Journal Network is the most famous journal network in China. At present, 113 journals were included, of which 1 was included by SCI, 1 by EI and 9 by CSSCI. From 2015 to 2018, the total number of visitors reached 356,355. The author has browsed the webpages of many university libraries. Except for some high-level universities such as Peking University (see "Fig. 1") and Tsinghua University (see "Fig. 2"), there are few specialized periodical websites. Each university only includes all periodicals in one database. The information resources are not classified, which is not convenient to the search and utilization of readers. The specialization is not strong and the attraction for academic research is not strong.

TABLE I. CONSTRUCTION OF UNIVERSITY PERIODICALS NETWORK PLATFORM

| Website Name | Periodicals Number |
|--|--------------------|
| Peking University Journal Network | 113 |
| Tsinghua University Journal Network | 24 |
| Zhejiang University Journal Network | 20 |
| Beijing University of Technology Journal Network | 7 |
| Xian Transport University Journal Network | 19 |
| National Taiwan University Journal Network | 29 |

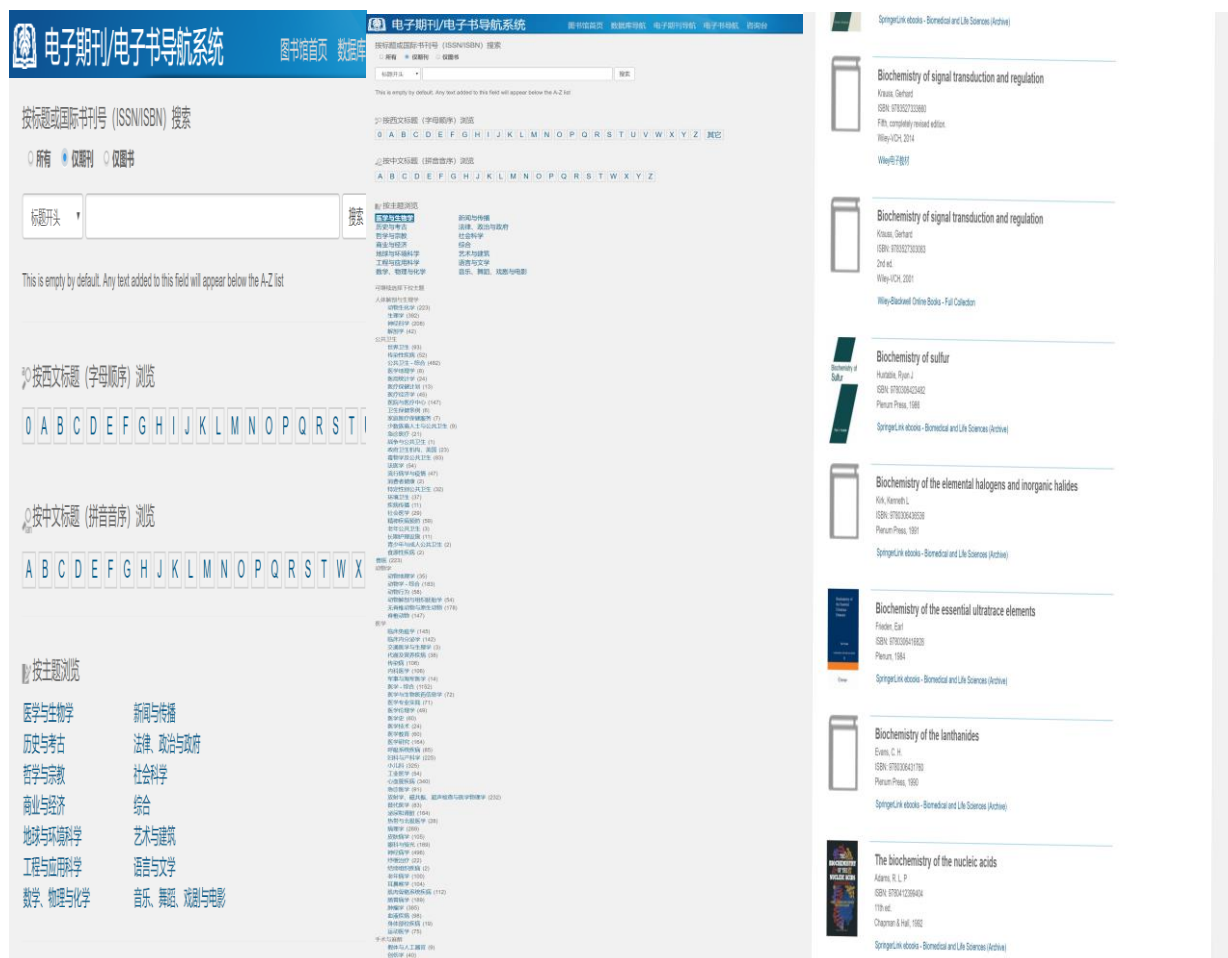


Fig. 1. Peking University electronic journal network.



Fig. 2. Tsinghua University electronic journal network.

IV. CONSTRUCTION CONDITIONS

First, most university network rely on the bandwidth of the Internet. There are many Internet users. When a large number of users search the website, the retrieval speed will be very slow, or even cannot be connect. If something similar happens, it can be solved by setting up an open mirror site.

Second, it is important to build a database by disciplines, which has clear classification and clear content. When searching interdisciplinary topics, it saves time of selecting the database and retrieves the content of the same theme scattered in different albums.

Third, it is easier for universities with the same disciplines to communicate and cooperate with each other. Because of the same research directions, it is easier to reach consensus on fund allocation and resource sharing.

V. MAIN PROBLEMS AND SOLUTIONS

First, the technical force is weak. The construction of periodical network involves technical aspects such as server, public data network, mirror service, disk display, black horse proofreading software, etc. Librarians in libraries have different majors because of their work needs, and they are not able to master these operation technical aspects skillfully. This requires leading units to organize some high-quality lectures or training every year to explain the construction of periodical platform, the proofreading of references and the metadata production of periodical articles for librarians. For example, the library of Peking University provides the

following support for the editorial departments of journals: first, digital publishing services of journals; second, retrospective services of outdated journals; third, hosting services of servers; fourth, procurement and installation of black horse proofreading software, which helps the editorial department to realize the automatic management of proofreading work and alleviates the workload of editorial department personnel, also improve proofreading efficiency and accuracy; Fifth, periodical articles click to download usage analysis report.

Second, the integrity of data is difficult to guarantee. Periodicals of various colleges and universities started at different times. Some of them were very early. At that time, they did not have advanced computer storage technology. They could only collect paper periodicals. Time past, they would lose their periodicals. Some of them had four issues a year, and now they can only find two periodicals. Some of them were reluctant to invest all their funds because of the uniqueness of their own collection characteristics. Source sharing is difficult, which greatly affects the integrity of Journal data.

Third, data quality is difficult to guarantee. Because the data upload involves many technical issues, and the number of librarians involved in data processing is large, the technical level varies greatly, which will affect the quality of data processing.

Four aspects should be paid attention to solve this problem. Firstly, it is necessary to formulate a unified data standard, develop data quality inspection and control module,

eliminate non-standard data upload, and automatically eliminate duplicate uploaded data.

Secondly, the librarians involved in data processing should be trained in reference proofreading, metadata production of journal articles, etc. Only when they are qualified can they start their work.

Thirdly, it is needed to ensure the integrity of data. Because of the limited resources of ISSN, many human science research centers publish collections in the form of books instead of periodicals. These collections have high quality and deep academic accumulation, but there is no external publishing platform. These collections are organized and promoted by the publishing platform network, which greatly improves the publicity of the collections. At the same time, the periodicals joining the platform of the periodical network try to complete the papers, covering all the papers from the beginning to the present.

Fourth, in the initial stage of the platform establishment, there may be many obstacles to the promotion of the platform, such as less resources and inconvenient use, which make it difficult to attract readers. It can be promoted by other means, such as designing and printing publicity brochures for periodical websites, actively striving for publication on the home pages of colleges and universities, and publicizing major activities in libraries. At the same time, for the large number of teaching and research workers, it is necessary to make targeted explanations, solicit their opinions, and constantly improve the content of the periodical network.

VI. CONCLUSION

Colleges and universities have many high-quality academic journals, but the overall level of network digitalization is low. There is no integration mechanism and system platform. It is urgent to overcome all obstacles, establish a unified periodical network platform which can timely disseminate and exchange academic information and improve the service level for teachers and students. The leading institutions of various disciplines should provide complete technical and financial support, expand the scope of Journal collection, actively seek the cooperation of institutions within the industry, and promote the formulation and implementation of relevant standards, policies and regulations. Updating the content of the platform timely and accurately after the establishment of the industry platform, realizing data association with the national main body knowledge service platform, promoting the digital promotion of the subject periodical network, enhancing the dissemination of periodicals, relating to academic research, and integrating it into the subject service

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