

Effect of Open Access on the Document Delivery Services in Chinese University Libraries: a Case Study in Capital Normal University Library

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Purpose-The purpose of this paper is to provide a case study in China to show whether open access (OA) affects document delivery services.

Design/methodology/approach-The authors adopt the method of statistics analysis and also carry out an investigation through questionnaire.

Findings- Compared with the rapid OA development around the world, China has published a small amount of OA journals. At present the effect of OA on the document delivery service in Capital Normal University Library is positive in the sense that librarians can use OA as an extra resource to afford document delivery service. Users in this university know little about document delivery service or OA, but they frequently look for free internet resources. Library should do more advertising activities. Considering users' behavior and the development of OA in future, the number of document delivery service may be affected. We need to redesign document delivery service in the library.

Originality/value-The paper will be relevant to librarians interested in OA and document delivery services in China.

Introduction

The last ten years have seen a massive increase in the amount of Open Access (OA) publications in journals and archive repositories in the world, with the support of researchers, funding agencies, universities, scientific institutions, and publishers. According to the statistics of Open Access Journals (DOAJ), by June 2013, there are more than 9000 peer-viewed academic OA journals from 120 countries. Besides, OpenDOAR has over 2200 OA repositories listings by June 2013. It has been investigated that since the year 2000, the average annual growth rate has been 18% for the number of OA journals and 30% for the number of OA articles (Laakso M, Welling P, Bukvova H, Nyman L, Björk B-C, et al, 2011). Overall, the results show a very rapid growth of OA publishing recent years either in the form of Gold OA or Green OA.

This paper discusses how OA affects document delivery services in Capital Normal University and how librarians should assume a proactive and effective role during this redesign process.

Development of OA in China

China's participation in OA movement can be dated to ten years ago. In December 2003, the president of Chinese Academy of Sciences Lu Yongxiang signed Berlin Declaration to show the Chinese scientists' attitudes to support OA (Chu Jingli, Li Lin, 2009)

Compared with the rapid OA development around the world, China has published a small amount of OA journals. By June 2013, 47 OA journals have been registered in DOAJ. According to a survey, there are 308 scientific OA journals owned or led by China Association for Science and Technology among the 1050 journals, which means the rate of OA journals is 29.3% (Chu Jingli, Li lin, Shen Dongjing, et al, 2013). However, the development of OA journals in the fields of humanities and social sciences is relatively slow. Taking Chinese Academy of Social Science as an example, it has published 93 journals in all. But at present, only one journal *Koreana* whose Chinese edition is supported by the Korea Foundation is OA journal and can be accessed on line. Besides, there are several journals such as

Japanese Studies afford free full text for several papers (Jiang Ying, 2012).

Qiji.cn and Sciencepaper Online are two main repositories for Chinese researchers to publish their own papers. The latter is owned by the Ministry of Education. Both Qiji and Science paper Online publish papers in all subject fields. By June 2013, there are 33 institutional repositories in OpenDOAR. The actual number of institutional repositories is far more than that and it can't be counted because most of them are not registered in OpenDOAR.

Document delivery service in Capital Normal University Library

Capital Normal University is a comprehensive normal university under the supervision of Beijing Municipal Commission of Education. The majors cover humanities and history, science and technology, economic management, pedagogy, psychology, language, art, etc. There are 15,000 registered students and 2600 faculty members.

Capital Normal University Library (CNUL) afforded document delivery service for users through China Academic Social Sciences and Humanities Library (CASHL) in the first half of the year 2006. CASHL is a national system for delivering foreign languages documents in fields of social sciences, humanities and arts between university libraries in China. By May 31st 2013, there are 342 registered CASHL users in CNUL, among which, graduates accounts for 55%, undergraduates accounts for 24%, faculties accounts for 21%. The library has provided 1050 papers for CNU users through CASHL. Because the library doesn't belong to the service library in CASHL, we can't deliver documents for users outside the school.

In 2008, CNUL began to provide document delivery service through another system named Beijing Academic Library and Information System (BALIS) besides CASHL. BALIS is a cooperation system among university and college libraries physically located in Beijing. Because of the government subsidies, users can get the required documents for total free. Different from CASHL, users can get documents in Chinese and other languages in all subject fields. Compared with CASHL, there are more registered users in BALIS. By May 31st 2013, the number is 1048, among which graduates amounts for 62%, undergraduates amounts for 23% and faculties amounts for 15%. It can be concluded that graduates are the main users for document delivery service in CNUL. Different from CASHL, through BALIS the library can also provide documents to users from other universities and colleges. Table 1 shows the numbers of document delivery service in CNUL in recent five years.

Table 1 the numbers of document delivery service in CNUL

| Year | Requests from CNU | Requests satisfied for CNU | Requests from other universities | Requests satisfied for other universities |
|------|-------------------|----------------------------|----------------------------------|---|
| 2008 | 168 | 66 | 41 | 2 |
| 2009 | 214 | 141 | 173 | 84 |
| 2010 | 432 | 319 | 241 | 172 |
| 2011 | 650 | 445 | 123 | 94 |
| 2012 | 466 | 385 | 165 | 148 |

It can be concluded that in recent five years the number of document delivery service in CNUL increases by year. Although in 2012, the requests from CNU decreases, that from outside the school

increases. There is no evidence to show that OA has a direct negative impact on document delivery service in CNUL.

On the other side, OA has become an extraordinary source for librarians to carry out document delivery service. Generally speaking, once the librarian in CNUL receives a request, he will firstly enquire the electronic resources purchased by CNUL, and then the free internet resources, such as Google Scholar, DuXiu(a Chinese academic search engine), DOAJ, etc. If the document is not found, he will check out the print resources in the library. During this process, free internet resources are supplementary source for document delivery service. Although they are very important (meaning the second category of resource for searching process), our statistics before 2013 shows that the contribution of free internet resources (mainly OA) to document delivery service is relatively low. Taking CNUL as an example, during 2010-2012, the library has afforded 414 papers for users, among which, only 17 papers came from free internet resources.

However, as we joined in the CALIS document delivery system (the national academic document delivery system) on March.2013, our new experiences in this half year show that free internet resources (mainly OA) constitute a contribution far more important than we experienced before. And that is manifest in terms of requests satisfied (unfortunately with no statistic yet) and particularly in terms of speed.

The speed is very important for the document delivery service. Users will lose patience if the speed of delivery we provide is not good enough. Thanks to the collective searching power of colleagues from the entire CALIS system (connected through QQ, a Chinese instant chat system), free internet resources are found far more quickly than before, and the quantity is also bigger. Free internet resources can play a more important role than we've experienced before 2013.

A survey on the attitudes of users towards OA

The authors carried out an investigation to find out the attitudes of users towards OA through questionnaire in April 2013. We got 100 available questionnaires, among which 67% of respondents were undergraduate students, 32% graduate students, 1% faculties. There were two questions involved with free internet resources.

The first question is as follows: Which way is more suitable for meeting your document needs? Document delivery service or free Internet resources? 28% of the respondents chose document delivery service, and 72% chose free Internet resources. It seems that users are inclined to find documents by themselves. Compared with the process of registering system and filing tables necessary for document delivery system, users like the easy and convenient use of internet resources. Therefore, in the future, if most journals can be accessed for free through Internet with the development of OA, there is a great possibility that the number of document delivery service will decrease.

However, considering the publishing status in China, the proportion of OA journals is relatively low. It seems that document delivery service is still going full blast. Although only 28% of the responders chose document delivery service, it didn't mean this service lost its meaning. As a matter of fact, the main reason is that most of users in CNU don't hear about the service. This investigation shows that 74% of the responders didn't use document delivery service, and 90% of them considered this service useful for study, teaching and research. It means that the potential of document delivery service in CNUL is far from being realized.

The second question is: Do you know Open Access Publishing? 87% of the responders showed that they didn't know OA. Only 13% of the responders have heard of OA model and half of them will

especially search for OA resources. It can be found out that users in CNU know little about OA Publishing and the library should do more publicity campaign for OA resources. Besides, 94% of the responders hoped to participate in the lecture held by the library about how to use OA resources.

From the statistics of document delivery service and the questionnaire of users, it can be found out that:

Firstly, at present the effect of OA on the document delivery service in CNUL is positive. Librarians can use OA as an extra resource to afford document delivery service.

Secondly, users in CNUL know little about document delivery service or OA. Library should do more advertising activities.

Finally, considering users' behavior and the development of OA in future, the number of document delivery service may be affected. We need to redesign document delivery service in the library.

Suggestions

Taking advantage of OA resources to provide document delivery service

OA resources provide a new way to find more useful academic information for users. However, because of the diversity of the OA resources and search interfaces, users still need to learn more about how to find and use various and distributed OA resources.

On one hand, libraries should pay more attention on the promotion program about OA resources. It is investigated that at present 87% of the users in CNUL don't know about the new publishing form of OA. The library could carry out different programs to make users know about OA, including setting up a new column called OA resources in the library website in order to introduce the common and famous OA resources organized by subject or by letter, integrating OA resources into OPAC system to let users easily find OA resources through library search platform, making special lecture about OA resources and how to use them effectively, giving out OA brochures to users to make them know and use more OA resources.

On the other hand, the library could use OA resources to help document delivery service. Librarians can use OA integrated platforms such as DOAJ, OpenDOAR, Open-Jate and J-Stage, websites of OA publisher such as High Wire Press, PloS and BioMed, websites of subject service such as EMIS and Free Medical Journal, and academic search engine to find out whether the required paper is included in those free resources. During the search process, some techniques should be mastered. If searching with the title gives zero result, the field of resource title or the author could be considered. Most of the results may come from journal websites or OA websites, and we should hit the link to try if we can access the full text (Yang Wei, Zhang Pingguo, 2011). Besides, more and more OA resources come up day by day, we should accumulate new resources in the daily work and use them to find articles for users.

Integrating document delivery service into other information services

Each year CNUL carries out a promotion program about document delivery during the User Service Month. However, it is investigated that users still know little about document delivery service provided by the library. Therefore, we should integrate document delivery service into other information services and go to the users' study and research environment.

Firstly, integrate document delivery into virtual learning environment. At present, students in CNU use BlackBoard to study and get information about courses. We could build a link with the

course references. If the references exist in the library's catalogue, then the link will go to the appropriate collection. If the library collection doesn't include the reference in question, then users will be guided to the document delivery service and get documents from other libraries.

Secondly, integrate document delivery into subject services. Subject librarian is the person who keeps a good communication with students and faculties of a specific college. He could make them know about document delivery through many ways such as the training and the subject service website.

Thirdly, integrate document delivery into mobile service. The International Telecommunication Union predicted in 2010 that in five years the number of connection to internet through mobile subscriptions would exceed that of computers (ITU, 2012). Mobile service is an important development direction for libraries. Both the library and users could benefit a lot from mobile service platform for document delivery process. We could also carry out some promotion activities through mobile service.

Optimizing the resources development

In future, if OA becomes the main form of publication for peer-viewed papers in all subjects, the librarian charged of document delivery may be forced to adapt in two ways: One is to organize and find OA resources for users. The second one is to provide appropriate advices, based on his experiences, for specialized collection development. And by this way, he will contribute to the library's adaptation to our changing world, meaning building up specialized resources collection in a globalised and electronic environment.

So Libraries should optimize the resources development and pay more attention on the specialized resources considering the demands of users. Besides, libraries should also provide the catalogue of specialized resources in the internet to let more users find resources easily and then access specialized resources through document delivery service.

Extending the mode of document delivery

The traditional document delivery is to provide the library's collection for outside users. In the background of diversified information, libraries should redesign document delivery service and expand its service mode, and pay more attention on the supply chain management, no longer confined with current collections.

Libraries could integrate and organize all OA resources. Considering the library's characteristics, provide integrated platform on some subject with the function of a strong multi-database and deep-web retrieval.

Libraries should start from the actual or potential needs of users, and work hard on how to help them to get what they need or may need, whether it may come from library collection or from internet, in the form of document or other forms (Zhang Xiaoli, 2012). It is librarian's responsibility to access information needed by users and organize them in a good order before delivering to uses.

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