

Innovations of subject service in National Science Library, Chinese Academy of Sciences and the implications

CHU Jingli

National Science Library, Chinese Academy of Sciences, Beijing 100190, China

Received May 22, 2008

Revised Jun. 23, 2008

Accepted Jan. 5, 2009

Abstract Looking at the development of subject librarians and subject services in Chinese libraries during the past decade, this paper highlights the innovative concepts and practices of subject librarians in National Science Library (NSL), Chinese Academy of Sciences (CAS). After a two-year trial period, NSL, CAS, with 39 full-time subject librarians, has begun to provide personalized, subject-specific, and knowledge-based services to the end-users since 2006. Such a practice manifests that subject librarians and subject services should be embedded into the research process and working environment. And, the subject service should be made available to the users beyond the space restriction and time limit, and finally create a congenial environment for users. Librarians should develop new expertise to offer the user-oriented service, changing the role from book keepers to research instructors, advisors, even chief information officer (CIO) or chief knowledge officer (CKO).

Keywords Subject librarian, Subject service, User service, Information environment

Subject librarian system has a long history, which can be traced back to the early 18th century^[1] and its rapid development in the mid-19th century. In China, it has been exactly a decade for the development in this regard. In the past few years, facing the changes of information environment, users' behaviors and the emerging pressure on the library, subject librarians and corresponding services have been identified as an effective solution to the problems. More and more libraries offer subject librarian positions, either part-time or full-time, the responsibilities of which may be to provide instruction and reference service, strengthen the communication between the library and users, establish the relationship with researchers, and assist the subject collection development. NSL, CAS adopted subject service comparatively late, but develop rapidly in that field, the innovative practices of which arouse great interests and acknowledgement within Chinese library community.

1 Overview of the subject services in China

In 1998, Tsinghua University Library introduced, for the first time, the subject librarian system into academic libraries of mainland China, which was then followed

Correspondence should be addressed to Chu Jingli (E-mail: chuyl@mail.las.ac.cn).



CJLIS
Vol. 1 No. 3/4, 2008
pp 139–146
National Science Library,
Chinese Academy of
Sciences

Library Practice

by many other academic libraries. Hongkong and Taiwan introduced it in late 1980s. According to a survey conducted in 2005, nearly 14% of the academic libraries in China adopted subject librarian system and provided subject services^[2]. Since then, at least 1,314 papers have been published, according to the author's retrieval to the database of China National Knowledge Infrastructure (CNKI) on April 26, 2008, with "subject librarian" as the search term.

The typical practices may include communication and liaison, promotion and publicity, collection acquisition and development, user instruction and training, reference and consultation, research guidance and support. The subject services offered by libraries differ from 2 or 3 items to more items as above. Tsinghua University library has been continuously involved in subject services, to enlarge and deepen traditional reference and user training, which has greatly improved the quality of the library^[3]. One of the innovations raised by Tsinghua University Library is the setup of library professors, who are selected from the major faculties and serve as consultants of the library. In 2006, library professors were renamed as faculty consultants, and student consultants were newly put forward and added to the subject service system^[4]. The faculty consultants and student consultants have greatly improved the relationship between the library and faculty/students, and made collaborative efforts in library services. The practices in different libraries varied. A 2006 survey by email to 117 subject librarians in 34 Chinese academic libraries and 48 responded (respond rate is 41%), indicated that the 8 core services provided by subject librarians were ranked as follows: liaison between the library and the faculties (91.7%), user information literacy education (66.7%), reference services (66.7%), subject collection development (66.7%), retrieval for users (50%), trial appraisal of e-resources (50%), subject tracing (41.7%), and project support (8.3%)^[5], see Table 1.

Table 1 The services provided by subject librarians in China (N=48)

Core services	Percentage
Liaison between the library and the faculties	91.7%
User information literacy education	66.7%
Reference services	66.7%
Subject collection development	66.7%
Retrieval for users	50%
Trial appraisal of e-resources	50%
Subject tracing	41.7%
Project support	8.3%

Over the years, more and more Chinese libraries have begun to offer part-time or even full-time subject librarian positions. Every subject librarian should take the responsibilities of liaison and serve one or more faculties to improve the relationship between libraries and users greatly. Some subject librarians develop their own blogs to share their own experiences of information services with users. Some take information literacy education into the formal education programs. In brief, the subject services are becoming more and more popular in Chinese libraries.



However, the subject librarian services in Chinese libraries develop comparatively slowly although there is an increasing interest shown in it. Most libraries still emphasize on the technology and equipment, while ignore the public services, especially subject services. For example, only part-time subject librarians are employed for the service. And many subject librarians serve just liaison work, and provide reference services or some other simple responsibilities. For the libraries, subject services are only a small part of the library services, with no direct and frequent interaction and coordination with other departments in libraries. In other words, subject services have not yet attracted strong support from the management level and other librarians. As a result, the effect of subject services is still limited.

With the development of the Internet and the powerful impact of search engines, users rely less and less on libraries to find information. A large number of users even never go to the library buildings to search what they need. The changes of information environment and the information behavior of the users have brought great challenges for libraries to re-think and re-design their service paradigms.

2 New subject librarian services in NSL, CAS

Subject librarian system in NSL, CAS was formally established in June 2006, following the formation of NSL, CAS, consisting of a main library and three branch libraries, after a two-year's trial period with 10 part-time subject librarians. Since 2006, NSL, CAS has shifted its emphasis from in-house services to front-line subject services. One of the most important measures is to establish a new department of subject reference service, with 39 full time subject librarians by the end of 2008. Among them, the average age is 36 year-old, 12 persons with Bachelor of Arts (BA) or Bachelor of Science (BS) degrees, 18 persons with Master degrees, and 9 persons with Ph.D degrees. 26 subject librarians have natural science background, 2 persons have language background, and 11 persons have library and information science (LIS) background, see Table 2. The department comprises a collaborative working team supported by librarians from departments of collection development, in-library services, information technology and information analysis. The subject librarian team serves 80,000 users including 47,000 researchers and 33,000 postgraduates in 116 academic institutes or units across 28 cities. By average, every subject librarians serve 3.5 institutes, and 2,300 users.

Table 2 Composition of the subject librarians in NSL, CAS

Attributes		Number
Average age		36
Academic degree	People with BA or BS	12
	People with Master degree	18
	People with Ph.D	9
Subject background	People with natural sciences	26
	People with languages	2
	People with LIS	11



National Science Library,
Chinese Academy of
Sciences

Over the past two years, fully considering the situation of CAS and referring to the experience of conducting subject services in both China and abroad, the subject librarians in NSL, CAS has developed some basic strategies of services, which have resulted in a quite satisfactory effect, and received positive feedbacks from the users. However, subject librarian services in CAS are still in its initial period, and more effective services are invited in the future.

2.1 More extensive publicity and promotion

One of the most urgent and serious objectives for subject librarians is the extensive publicity and promotion of library, library resources, services and tools. Libraries have changed greatly, and are not what they were a few years ago. But, quite a number of researchers and students know very little about that. Subject librarians and the subject services are still new to them. A lot of digital collection is hidden in the databases, unknown to them, too.

Many researchers and students are not familiar with the services and tools available in NSL, CAS, such as document delivery, interlibrary loan (ILL), cross search, RSS platform, EndNote, a bibliographic management software; E-key, a remote ID authentication to allow users to access the collection and services in remote locations without access permit; and Click and Connect, a desk tool developed by NSL, CAS to allow users to search document and request services directly during their research process.

In order to improve such a situation and make users recognize the corresponding subject librarians, subject librarians widely distribute information brochures, pamphlet, subject librarian liaison sheets, video presentation, and small gifts such as fluorescent pen, scratchpad, mini-DVD with subject librarians' email and telephone. Furthermore, the special designed business cards with subject fields, office telephone, cell phone, e-mail, and even MSN/QQ are disseminate to help users contact with subject librarians in any ways they like. And the duties of subject librarians are listed on the other side of the business cards for users' understanding. Meanwhile, a customized tablet called Subject Services Station was distributed in most CAS institutes for users to be aware of the subject librarians and the relevant service, and to be able to contact with them easily.

2.2 All-round and multi-dimensional reference services

Reference service is a regular duty for subject librarians in NSL, CAS. In addition to the in-house reference desk, users are welcome to subject librarians' office for consultation. More often, subject librarians go to the researchers' offices and/or laboratories to answer users' questions or solve the problems on information use, resources, information tools, etc. In addition, phone reference, including office phone, cell phone, are offered. Message service also becomes a frequently used means for both users and subject librarians.

Considering Internet is an indispensable media for communication, every subject librarian is required to open a MSN/QQ to the users, which allow users to



communicate with them online without space limit. Subject librarians' email addresses are made available to users in a variety of media. Enquiries via web are required to be answered in 2 days. In order to give a reply in time, a real-time reference service is available for 12 hours a day since October 30, 2006. During the users' searching process, they can click the button of "ask a librarian" below the searching results at any time to ask questions to subject librarians as they like.

2.3 Diversity of information literacy education

User's information literacy education is a continuous process and deserves more attention and efforts. Librarians usually exaggerate the users' information competencies, and take it for granted that all are on the library website which can be easily found. In fact, users now seldom visit the library website. Most of them have little knowledge about the current library and the services.

It is believed that today's information literacy education should not only contain the introduction of library collection and databases, but also include the training of whole process of scholarly flow, from the idea origination to the impact assessment of the research.

In NSL, CAS, besides the introduction of databases, subject librarians spend more time in introducing the services and information tools offered by the library, such as cross search, cross-domain search, RSS portal, desktop tools, and EndNote software for writing and contributing. Research methodology and techniques of submitting a paper to a journal, especially an open access journal, are also explained for users. The methods include credit courses, reserved training, regular training in Information Commons on specific topics, and more often the active training in users' offices or laboratories. The PPT for presentation, tutorials and other courseware are then distributed to the users by email or on the web.

The information literacy education spread in many ways, from the training rooms in the library to the users' virtual community (i.e. BBS/Blogs), from information commons to users' laboratories, from users' institutes to the remote out-field observation spots. Wherever there are users, there is the information literacy education. In June, 2008, information literacy education series was held for a week in all 4 institutes located in Shenyang, Liaoning Province, simultaneously with 10 topics in information retrieval and services.

2.4 Optimization of information environment

Users now are living in an environment characterized by both information rich and information poor. Knowledge often loses in information^[6]. What users can get usually doesn't match what they need. At the same time, their real information needs have never been analyzed accurately, and a complete solution has never been provided. That seems to take a long time and needs a lot of efforts to make up.

Based on the academic journals, the citation information, as well as the document delivery records, subject librarians make a thorough analysis of the information environment for each CAS institute in order to get a clear picture of users' information



needs on journals and databases for their research projects. Then, a cost-effective solution is proposed based on that analysis, the expenditure of journal subscription, the frequency of usage, and the different conditions of CAS institutes.

For those resources with high-level requirement and frequent usage, the NSL, CAS tries to offer complete access to the whole institute. For those with lower-level usage but essential requirements, a specific IP of the institutes is authorized to access them. For those with much lower-level usage and high subscription expenditure, the document delivery service or ILL service is considered to satisfy the users' needs.

Subject librarians are helping build subject branches in some institutes to enhance the availability of the collection and services. Furthermore, special library portals and institutional repositories (based on MIT D-Space) are being set up.

2.5 Subject/project information analysis

The next stage for subject services is subject/project information analysis. Traditionally, librarians do much in information gathering, but less in information analysis. However, at present, a simple provision of library collection is not enough for the researchers. What they really want are high-valued information service involving information integration, synthesis and extraction. Professor Jiang Mianheng, Vice President of CAS, said in a recent visit to NSL, CAS that library and information services should be shifted from information to intelligence, then to solution^[7]. According to Wikipedia, intelligence is not information, but the product of evaluated information, valued for its currency and relevance rather than its detail or accuracy^[8].

Users' need is the dynamic motive of library and information services. According to a survey in NSL, CAS, the top requirement for subject librarians is to offer the cutting edge information of the research project. In 2007, the subject librarians wrote more than 50 information analysis reports covering different topics, such as, the core academic organizations in different fields, their rank analysis, literature review and tracking of specific projects, customized service, academic news updates, published paper statistics, information investigation on roadmap of eco-environment, investigation report on environment and health, and so on. With more subject librarians recruitment and the improvement of user's information literacy, the focus of subject librarians in NSL, CAS will be transferred to the subject/project information analysis, which will be considered as one of the most competitive capacities of the subject librarians.

3 The implications of the innovative subject services

Subject service is only a part of the library services. But its development indicates the changes of the library and library services in the future.

3.1 The library services should be available at any time and anywhere.

The subject service are not merely within the libraries, but more at researchers' offices, laboratories, even, on travel, on observatories, and in virtual communities,



such as BBS, Blog, MSN, or QQ, where users stay. Where there are users, there would be librarians and their services. Librarians should provide user-oriented service rather than library-oriented service. Librarians and library services should be merged into users' community and working process. The subject librarians in NSL, CAS without the desk PCs in their office, adopt the portable computer to support this kind of ubiquity of the services.

3.2 Library services must be user-centered to meet users' requirements by any means, and in a friendly, convenient and timely way.

"Users come first" in libraries is of paramount importance. One of the most important characteristics of subject services in NSL, CAS is that subject librarians provide services based on the users and their requirements. They do not merely assist users finding what the library has, but try to collect, organize information even not available in the library, but necessary for the users. Librarians try to break down the barrier between librarians and users, to bridge the gap of the efficient and effective information flow between the library and the users. All the relevant departments, including collection development, information technology, and document delivery/ILL, have to fully support subject librarians' services and guarantee users' services be met collaboratively.

3.3 The focus of library services is to create an environment for information and knowledge, and not just for information transfer.

Nowadays, users' requirements become more complicated and diverse. They aspire a well-ordered information or knowledge environment, in which all the problems for scholarly flow, including idea creation, project application, research process, writing and publishing, and impact feedback, can be solved straightway. This breaks the old library borders and extends the library services.

In NSL, CAS, subject librarians try to develop a new environment to support users' scholarly activities. A new-established website called cross-domain search provides good support for this objectives, which focuses on non-document searching as to finding scientific data, courseware, equipments and facilities, conferences, research institutes, scientists, tools, etc.

3.4 Librarians should further develop their role as from collection keepers to instructors, advisors, navigators, and even CIO or CKO.

Traditional librarians rely greatly and even solely upon the library and could not work outside. However, libraries and librarians today should accommodate themselves to the changes of new information environment and users' behaviors, and adjust their roles in communities. Librarians should be more like lawyers or family doctors, making use of their professional knowledge and expertise to help users. Subject librarians in NSL, CAS are acting as roles of those. They not only work in the libraries, but spend more time with users in their offices or laboratories to help users at any time, at any places, and in any ways.



4 Conclusions

Any good service must result in good effects. Users' satisfaction is the most important evaluation of the service. The practice of subject librarians in NSL, CAS in the past two years indicates that subject services have greatly matched the users' current needs and expectations, and gained popularity and recognition among the users. Users have a new view of the library, librarians, and the services, acknowledging the librarians' suggestion and instruction. The librarians in NSL, CAS have won a very good reputation in CAS institutes, from the principal investigators to graduate students.

Many people from different communities have given very positive comments and feedbacks on the innovation of library services in NSL, CAS. Professor Jiang Mianheng said after his visit in NSL, CAS: "The changes of NSL are fresh and wonderful. Your service consciousness, service forms, and service quality have exceeded greatly what the library was". Professor Bai Chunli, Executive Vice President of CAS, pointed out: "The subject librarian services embedded in research procedure have impressed me very much, which is a very good and unique method."

Many users express their gratitude toward the subject librarians and subject services. Some remarks are as follow: "The upgraded library services are appreciated and facilitate us greatly"; and "Today's NSL is good indeed, your services are recognizable". Some researchers change their attitude from "I can do myself" to "you are so great that I will consult you whenever I have any problems".

Subject librarians and subject services in NSL, CAS, are successful and fruitful. Users begin to have a new view of the library and librarians, and increasingly resort to librarians for information and intelligence. That results in more support from the users as well as the management. Facing the new changes, libraries have to change from in-house services to ubiquitous services. The position and roles in the community need to be revised.

References

- 1 Danton, J. P. Selection and collections: A comparison of German and American university libraries. New York: Columbia University Press, 1963.
- 2 Chen, J. H. Current situation and prospect of subject librarian system in Chinese academic libraries. *Library Theory and Practice* (in Chinese), 2007(2):88-89, 148.
- 3 Shao, M. Subject service framework and subject librarian team construction in Tsinghua University Library. *Library and Information Service* (in Chinese), 2008(2):11-14.
- 4 Subject services at Tsinghua University Library. Retrieved on August 2, 2008, from http://www.lib.tsinghua.edu.cn/service/sub_librarian.html.
- 5 Chen, Y. P. Research on establishing mechanism of subject librarian services and the strategies in the academic library (in Chinese) (thesis). Beijing: Graduate School of Chinese Academy of Sciences, 2007.
- 6 Ma, C. Knowledge lost in information. Retrieved on August 2, 2008, from <http://www2.sis.pitt.edu/~dlwshop/report.pdf>.
- 7 Zhang, X. L. Preface of the Volume. *Newsletter of Library and Information Service* (in Chinese), 2008(1):1.
- 8 Wikipedia. Intelligence. Retrieved on August 4, 2008, from [http://en.wikipedia.org/wiki/Intelligence_\(information_gathering\)](http://en.wikipedia.org/wiki/Intelligence_(information_gathering)).

