

Empirical Study on the Development Mode of the Subject Service in University Libraries

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Abstract: By means of website survey, literature research and field research, this paper made a profound investigation on the development status, construction goals and plans of the subject service of four typical university libraries in China. Through analyzing the characteristics, achievements and challenges, the key factors and the future trend of the subject service development is summarized. This paper would like to provide a useful reference for the further development of the subject service.

1. Introduction

Subject service is the biggest highlight achieved during the service transformation and innovation of university libraries, representing the highest level of library services^[1]. Since Tsinghua university library took the lead in developing subject service in 1998, more and more university libraries started their own subject services. After years of development, what is the current situation of the subject service of university libraries in China? What achievements have been made? What are the challenges? What is the future trend?

In order to answer these questions above, this paper selected four typical university libraries from Shanghai Jiao Tong University, Beijing University of Aeronautics and Astronautics, China University of Petroleum (Beijing), and North China Electric Power University as the research objects. By applying the empirical research method, this paper conducted thorough investigation on the development status, service mode and tool application of the subject service. Through summarizing the key influencing factors, the future trend of the subject service development can be predicted.

2. Investigation Method

Investigation data in this paper is mainly obtained through website research, literature investigation and field interviews, etc.

(1) Website research: The four typical university library service platforms represent the basic aspects of providing personalized subject information services, such as subject librarian and subject service content, subject service platform, integrated retrieval and institutional repository. From this, related statistical data, annual planning, etc. of the development of subject services can also be obtained.

(2) Literature investigation: Through the comprehensive search and study of the research literature related to the subject service and personalized service of the university library, the staged summarized results and possible planning contents of the subject construction of the university library were obtained.

(3) Field interview: It is a main investigation method adopted in this paper. From June 2017 to June 2018, the project team discussed with relevant librarians of four typical university libraries on the basis of previous website research and literature investigation. They discussed over the service theory, current status, future planning and existing problems, which provides a strong material support for this research.

3. The Status Quo and Analysis of the Construction of Subject Services in Typical University Libraries

3.1 Overview of Basic Information

In terms of the characteristics, the platforms status quo and the tools of the subject services of the four typical university libraries of Shanghai Jiao tong University, Beijing University of Aeronautics and Astronautics, China University of Petroleum (Beijing), and North China Electric Power University, a preliminary understanding of the current status of subject services in university libraries is made as follows. As shown in Table 1:

Table 1 Current status of subject services in typical university libraries

Typical universities	Subject services	Subject services platform	Knowledge discovery platform	Institutional repository platform
Shanghai Jiao tong University	Established a complete subject librarian system to provide embedded services covering all subjects.	Gradually stop updating the subject service of the Lib-Guides platform, and focus on maintaining the subject blog. The WoS, Scopus, InCites and ESI analysis tools for subject service were purchased.	"OUR Explore" provides readers with an integrating resource discovery and access service.	Established an institutional repository platform to comprehensively integrate the academic achievements resources of teachers and students of the school.
Beijing University of Aeronautics and Astronautics	Established a subject librarian system to provide demand-based services covering all subjects.	Subject services for the Lib-Guides platform and subject blogs are not provided. The WoS, Scopus and InCites analysis tools for subject service were purchased.	"Resource Discovery" provides readers with an integrating resource discovery and access service.	Established an institutional repository platform to comprehensively integrate the academic achievements resources of teachers and students of the school.
China University of Petroleum (Beijing)	Initially established a subject librarian system to provide demand-based services covering all subjects.	Subject services for the Lib-Guides platform and subject blogs are not provided. The WoS, InCites and ESI analysis tools for subject service were purchased.	"YOYO Search" provides readers with with an integrating resource discovery and access service.	Established an institutional repository platform to fully integrate the academic achievements resources of teachers and students of the school.
North China Electric Power University	A subject librarian system is being established to provide demand-based services for key subjects.	Subject services for the Lib-Guides platform and subject blogs are not provided. The WoS, Scopus, SciVal and ESI analysis tools for subject service were purchased.	"Unified Discovery" provides readers with with an integrating resource discovery and access service.	Prepare to build an institutional repository platform.

According to the subject service form, functional localization, service items, etc., four typical university library subject service models above can be roughly divided into two categories: embedded services and demand-based services. Among them: (1) Embedded service represented by Shanghai Jiao tong University Library, presents the library-college-subject group service model, works very systematically and perfectly, and is positioned to provide subject performance or literature information services for all subjects of the university. The subject services include university competitiveness analysis, discipline evaluation, subjects-consulting, industry intelligence analysis and teaching training. The applied tools include subject service platform, subject blog, knowledge discovery system and institutional repository. (2) Demand-based services are represented by Beijing University of Aeronautics and Astronautics, China University of Petroleum (Beijing) and North China Electric Power University. The focus of work is to resolve major conflicts and provide subject performance or literature information services for key subjects in the school. In terms of subject services and application tools, comparing with the embedded subject services, the content provided by demand-based services is basically the same, but the speed of development is different.

3.2 Current Achievements in the Development of Subject Services

3.2.1 Assisting the Construction of "Double First Rate" in Colleges and Universities

With the implementation of the “Double First Rate” construction strategy in colleges and universities, university library, as a literature information and scientific and technical information service center, actively participates in the “Double First Rate” discipline evaluation and has completed the construction of related service platform, providing basic data support for university discipline construction, college comprehensive reform, and undergraduate professional certification.

For example, the subject librarians of Shanghai Jiao Tong University Library were seconded to the Ministry of Education to participate in the fourth round of national evaluation. The subject librarians of Beijing University of Aeronautics and Astronautics Library provide research performance and information consulting services for key disciplines of the school. The subject librarians of the China University of Petroleum (Beijing) Library provide data support for the “Double First Rate” subject evaluation and college assessment. North China Electric Power University is applying SciVal to analyze performance of scientific research.

3.2.2 Constructing a More Comprehensive Disciplinary Service System

As of June 2018, the four universities have basically established subject librarian system. The subject librarians have carried out regular services such as resource construction, reference consultation, teaching and training in the assigned school. Shanghai Jiao Tong University did the best in the in-depth services such as scientific research support and subject lectures, while the other three universities are also gradually advancing. The work of subject librarians has gradually been recognized by the school, and the service enthusiasm of the librarians has also been improved. For example, the construction of research-type library at China University of Petroleum (Beijing) was listed as a key work in 2018.

3.2.3 Strong Demand for Subject Information Research Services

In the past, teachers, undergraduates, and postgraduates were the main groups of subject services. Nowadays, the group has further extended to administration departments such as graduate school, planning office, personnel office and some social users. Library has a relatively independent third-party perspective, more comprehensive literature data and analytical tools, so the entrusted

demand of school institutions and social enterprises are increased year by year, which is reflected in all four universities.

3.3 Problems Encountered in the Development of Subject Service

3.3.1 Incomplete Training Mechanism of Subject Librarian

Subject librarians are the planners, implementers and promoters of subject services. They are the core competitiveness in the development of library subject service. Subject librarians' abilities in professional subject service, information service and innovation service determine the broadness and depth of the development of subject information service.

Subject librarians are often only with a single discipline background. Limited by the staff size and service mode, the subject background of subject librarians in colleges and universities often cannot cover all subjects of the school.

The libraries have started to strengthen the training of subject librarians according to their actual situation. However, due to restrictions on funding, staffing and workload, no conventional system has been formed. During the research process, it can be found that all libraries of colleges and universities face similar situations^[2-3].

3.3.2 Rapid Change of Subject Service Tools

As shown in Table 1, the tools of the subject service change rapidly with the trend. Shanghai Jiao Tong University Library is the first to introduce the Lib-Guides platform in mainland China. However, the Lib-Guides platform stops updating gradually due to the low user interaction and the over-modular design. The Lib-Guides platform and the VP subject service platform are in a relatively awkward position.

With the progress of "Double First Rate", analytical tools are introduced by university libraries, eg. InCites or SciVal. In recent years, due to knowledge linkage and data collection functions, the knowledge discovery systems and university institutional repository have been valued by university libraries, and are being introduced and constructed in succession.

The rapid changes in the use of subject service tools bring a lot of confusion and inconvenience to subject librarians, which further affect the sustainable development of the subject services.

3.3.3 High Pressure of Subject Librarians

The work focus of subject librarians is no longer on the traditional passive services and the construction of library resources, but on active services and user requirements. The subject librarian's service includes library resource construction, subject consultation and subject evaluation, covering all aspects of the library. The services are not simple information resources collection, but require deep analysis and summary^[4-5]. Subject librarians are at the forefront of colleges departments and institutional services, and there is great difference in the enthusiasm of each department to cooperate with subject services. All the above have led to great pressure on subject librarians, and may influence mental or even physical health development if no correct measures are taken.

4. Analysis on the Development Situation of Subject Services in University Libraries

4.1 User Requirement is the Main Driving Force for the Development of Subject Service

Subject service must always take user requirement as the first principle, which is the driving

force constantly promoting the progress of subject librarians. Subject librarians can only improve their skills by constantly exploring, finding and solving problems under the guidance of user requirement. According to the survey, the average comprehensive quality of the librarians of the Shanghai Jiao Tong University Library is much higher than others, which stems from their large scale in user requirement and subject librarians. It requires subject librarians of university library to provide high-quality service support to schools, institutions, teachers and students, thus forming a virtuous circle of both sides.

4.2 Personalized Service is the Direction of Sustainable Development

Huang Meijun from the Tsinghua University Library has thoroughly studied the personalized library service model at home and abroad, and she pointed out that personalized service should be readers-centered and allow readers to customize their own information resources and service items according to their individual subject fields and interests; and construct a personalized service system integrating information resources and services^[6]. The four universities have basically established knowledge discovery systems to realize one-stop retrieval of electronic resources and paper resources. Through subjects and theme settings, the required information can be quickly and efficiently found and obtained from massive resources, and the subscription information of users can be pushed in real time.

The individualization of subject service is also reflected in the professionalization and hierarchicalization of subject librarian services. The services provided by subject librarians should vary according to different clients. Subject librarians should be familiar with the relevant professional background and subject frontiers so as to provide database introduction and document retrieval skills for undergraduates; for postgraduates, they should focus on professional database retrieval and the subject frontier analysis.

4.3 Equal Emphasis on Resource Construction and Service Promotion

In the case of limited increase in capital input and rising purchase funds, efforts shall be made to optimize resources construction through the selection and evaluation of subject resources. Subject resource requirement and development shall be promptly grasped in a timely manner to plan the scheme of subject resources construction. The collection and utilization of subject resources shall be inspected to develop evaluation of the subject document guarantee rate.

The application of mobile social media to promote subject resources and subject services is valued by university libraries, among which the We Chat library is most widely used. In addition to the basic services of resource introduction and counseling interactions, personalized and diversified high-level services shall be provided, such as subject frontiers, academic exchanges, studying abroad, and taking part in postgraduate entrance exams, etc., to improve interest in libraries and enhance the service experience of readers.

5. Conclusions

Based on the above analysis, it can be seen that after years of development, subject services are still the future trend of development of domestic university libraries. Most university libraries have basically constructed relatively comprehensive subject service systems, and have played their due role in the construction of "Double First Rate" in universities. At the same time, the common problems and future development directions in the development process of subject services are also pointed out, which provide a reference for further development of subject services of domestic university libraries.

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