

# Analysis of Library Space Service Based on User Demand

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**Abstract:** This paper probes into the problems of library space service, adopts the methods of literature summary, questionnaire survey and case analysis, starting with the evolution process of library space service, points out the current situation and existing problems of library space service, and expounds the improvement measures of library space service facing user needs. The research shows that in the information age, digital libraries must be based on the needs of users. Only by improving space services and meeting the needs of users, can they promote the healthy development of libraries and improve user satisfaction.

**Keywords:** Library; Space services; User requirements

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## 1. Evolution process of library space service

### 1.1 Modern Library

The modern library adopts the closed management mode. The library has two main functions: one is to preserve books and documents; The second is to provide users with borrowing services. In terms of space services, the library space in this period was divided into three blocks, namely, book storage area, book processing area and reading area, which had clear space functions.

### 1.2 Modern Library

The open shelf management mode adopted by modern libraries is influenced by the libraries in western developed countries, that is, the stacks and reading rooms are in the same space, and users can read in the library or borrow books. In addition, the libraries in this period also provided consulting, reading guidance and other services, which improved the utilization of book resources.

### 1.3 Digital Library

The digital library is developed on the basis of modern library, and its prominent feature is the application of information technology, such as computer, Internet, big data, etc. The digital library adopts the intelligent management mode, the access to book resources is more extensive, and the user's reading has broken the time and space restrictions. In this context, in order to better meet the needs of users, electronic libraries, virtual libraries, mobile libraries came into being. In terms of space services, the library entity provides not only book resources, but also comprehensive services to meet the needs of users in learning, entertainment, leisure and other aspects <sup>[1]</sup>.

## 2. Status quo and existing problems of library space service

### 2.1 Current situation of library space service

The information construction of libraries in China is at the stage of exploration and development. The application of information technology has a significant impact on the functions, space services and management methods of libraries. From the perspective of space services, libraries can provide users with a quiet and comfortable reading environment. With the wide application of information technology, libraries must reform space services to meet the needs of the new situation. In this study, we selected a university library and a public library as the object, and used the method of questionnaire to analyze the user's space needs, service satisfaction, value cognition, service approaches, etc.

The results show that most libraries have clear goals and positioning for the reconstruction of space services in the process of information construction, which basically meet the actual needs of users.

### 2.2 Problems in library space service

In this survey, we also found some common problems, such as service content convergence, lack of coordination mechanism,

lack of feedback channels, low user satisfaction, insufficient publicity, etc., which are introduced as follows.

### **2.2.1 Service content convergence**

In terms of space services, the library mainly provides space reservation, equipment use and reading activities. Only a few university libraries have carried out space services related to disciplines. The service contents of different libraries tend to converge, without highlighting their own characteristics and lacking innovative service items. The root of this is that libraries imitate each other, lack innovation consciousness and long-term development planning.

### **2.2.2 Lack of coordination mechanism**

In the library, with the increase of innovation space, in order to meet the service demand, it is necessary to configure the corresponding service elements, and strengthen the cooperation between multiple departments to ensure the smooth implementation of space services. In this survey, it was found that only a few libraries have set up special departments in space management, and most libraries have adopted cross departmental cooperation. However, these departments lack collaboration mechanisms, which has brought adverse effects in the actual service process, such as poor information communication and unclear division of responsibilities, reducing the service quality.

### **2.2.3 Lack of feedback channels**

Only by maintaining two-way communication and strengthening interaction between users and libraries can the spatial service capacity of libraries be continuously improved [2]. The survey found that the service reservation entrance set by most libraries is one-way, and there is no way for users to feedback service satisfaction. The result is that libraries do not attach importance to users' feedback and do not solve the existing service problems in a timely and effective manner. In addition, most of the libraries that set up WeChat official account push book resource information and activity information to users in a one-way way, and there are few user surveys and feedback.

### **2.2.4 Low user satisfaction**

The space service of the library is planned and implemented by the library. In this process, the ideas and opinions of users are not combined, so there is a gap between the services provided and the actual needs of users. The survey data shows that in university libraries, students' demand for space services from high to low is in the order of booking space, using equipment and facilities, learning support, research support, multimedia services, and technical skills training. Users of different ages and identities have similar satisfaction with the space services of the library, and the overall satisfaction is low, which suggests that the library should further optimize the space services and improve the user service experience.

## **3. Improvement measures of library space services facing user needs**

### **3.1 Optimize the configuration of service elements**

In the survey, it is found that user needs show the following characteristics: First, diversification, because there are large differences in users' age, identity, occupation, etc., and the purpose of using library space is different. The second is personalization, which is related to the user's education level, life experience, reading habits, etc. The third is dynamic. With the increase of users' knowledge, experience and identity transformation, the demand for space services is also changing. Fourth, professionalism. It is necessary to meet the learning and scientific research needs of some users and put forward high requirements for professional services. Fifthly, technology, represented by big data, VR/AR and artificial intelligence, is more widely used in library space services. Under the new situation, the library space service highlights the concept of sharing and opening, and the improvement of service space must optimize the allocation of service elements. First, in the library space service, the library space, book resources, facilities, librarians and other elements are integrated to give play to their respective advantages and achieve the best configuration effect. Second, we should give full play to the initiative and professionalism of librarians. In addition to using the site, we can provide users with learning, research and other services to help them complete scientific research and knowledge creation. Third, the overall planning of the space in the library can form a special management team to build a bridge between various departments, truly achieve collaboration, and lay the foundation for the optimization of space services.

### **3.2 Reasonable division of indoor space**

The reasonable division of indoor space is a key point for the library to optimize space services. First, space reconstruction should be carried out according to the current situation of the library and the principle of adjusting measures according to needs and being economical and practical. We should not only use the knowledge of optics, acoustics, aesthetics and architecture, but also create a quiet and comfortable reading environment to meet the needs of users. Second, we should reasonably divide these two parts of space, with static space as the main part and dynamic space as the auxiliary part, and take effective technological measures to prevent users of dynamic space from interfering with users of static space during activities, such as dividing different floors, using sound insulation

and noise reduction materials, etc. In the space division of a university library, the first and second floors belong to the public reading area, and users can read and discuss freely; The third floor serves as the postgraduate entrance examination library, which is specially used for examination and postgraduate entrance examination students' self-study.

### **3.3 Improve the overall space environment**

The indoor space is formed by interaction between people and the environment. Only by further improving the overall space environment on the basis of meeting user needs can user satisfaction be improved. First, green plants are arranged in corridors and corners, and murals and ornaments are decorated on the walls to improve the aesthetics of space and increase the artistic atmosphere of the library. Second, on the supporting facilities, set up seats with massage function, provide wireless network, and create a comfortable learning environment for users to enjoy immersive reading. The overall space environment inside a library adopts the tunnel type and diamond format construction scheme, and users will feel through time and space when they are in it; At the same time, air conditioners, WiFi and beverage sales areas have been set up, attracting a large number of users and gaining unanimous praise from users.

### **3.4 Add leisure and entertainment elements**

To optimize the space service of the library, leisure and entertainment elements should also be added, because leisure and entertainment is also a demand of users. Relevant investigations have found that users are prone to confusion when they study in a space for a long time. At this time, the use of leisure and entertainment space can not only relax the mood, but also stimulate inspiration. Nowadays, in universities and public libraries, leisure and entertainment areas have become an important part. For example, a public library has set up a free video space. When users feel tired after reading for a long time, they can go to the video space to watch video clips and play games to achieve the effect of mental decompression. A university library has established a music service space and introduced the piano and intelligent teaching system. After students have studied for a long time, they can enjoy famous piano music in this space. Those who are interested can also learn piano playing methods by themselves under the guidance of the intelligent teaching system to help students change their minds and relax.

### **3.5 Improve intelligent service level**

To improve the intelligent service level of the library is to apply big data, artificial intelligence, virtual reality and other technologies, and transform the manual management service into information management service, which can not only promote the transformation of the library, but also reduce the human cost. Taking the university library as an example, we can create an intelligent space, provide new technologies, new services and new experiences, such as data services, making multimedia courseware, special skills training, etc., based on the needs of students' learning and scientific research activities, and form a new model of "space+technology+service".

## **4. Conclusion**

To sum up, in the new situation of libraries, users put forward more diversified demands for space services, and providing services to users' needs is a necessary path for the healthy development of libraries. In view of the current situation and existing problems of library space service, this paper puts forward improvement measures from six aspects: optimizing the allocation of service elements, reasonably dividing indoor space, improving the overall space environment, adding leisure and entertainment elements, improving the level of intelligent service, and strengthening publicity work, hoping to provide reference for the actual work.

## **References:**

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