Research on Information Retrieval Service Innovation of University Library

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Abstract: With the rapid development of modern information technology, library users have higher and higher requirements for the information retrieval service of university library. Therefore, it is imperative to improve the information retrieval service of university library. In order to improve the level of information retrieval service and gradually perfect the system of information retrieval service of university library, this paper aims to develop and innovates the management mode of information retrieval service of university library by centering on the three parts of information retrieval service mode, retrieval mode and user training of university library.

Key words: University Library; Information Retrieval; Library Service

1. Part one Connotation of information retrieval service innovation of university library

1.1 An overview of information retrieval
Information retrieval, under the support of various hardware modules and algorithm models, is based on computer technology as a platform, quickly complete the target information sorting, analysis, induction and summary and other series of work, in a relatively short time. Different from traditional retrieval methods, university library users have strong autonomy in the process of using information retrieval. They can carry out target information reorganization according to their own needs and knowledge information usage needs, form new knowledge and information, and complete information activation and increment, better meeting the needs of information acquisition and use[1].

With the improvement of computer technology system, in the process of information retrieval, users can link information processing technology, information technology, database technology and so on to form an efficient information retrieval framework. After logging in the information retrieval platform, users can explore, summarize and apply the knowledge content of different disciplines such as humanities and nature according to their own information acquisition needs, ensuring that information retrieval serves relevant educational and scientific activities.

With the wide application of the Internet, the information retrieval of university library also appears in the form of network, which has been highly recognized by the majority of users. College library information retrieval adheres to the service concept of “simplification, intelligence, individuation and diversification”. With this service use concept, the service system of information retrieval in university library is constructed.

1.2 Connotation of information retrieval service innovation
In this new historical development period, in order to improve their own development level, colleges and universities need to establish and improve the relevant service measures to help improve the comprehensive ability of students. In the information age, the information retrieval service of university library needs to keep pace with the times, constantly carry out management innovation, and effectively improve the service level of university library. Information retrieval plays an increasingly important role in the new historical development period, which can shorten the time and improve the efficiency of users' retrieval work, improve the level of information retrieval, and promote the modernization construction of university libraries.

Library information retrieval technology has been developed for three generations. Compared with the first and second generation products, the third generation information retrieval system has made obvious progress in graphical interface, hypertext attributes and so on, which can meet the requirements of information retrieval service of modern university libraries.

With the rapid development of Internet and modern information technology, the service system of university
library information retrieval is constantly improving, so it is imperative to innovate the management mode of university library information retrieval service so as to meet the needs of users for university library information retrieval service. However, there are still many problems in the information retrieval service of university libraries, such as backward information service mode, and lack of professional information service team, service ability, hardware and software system maintenance ability, etc. Therefore, in order to effectively solve the problem, it is necessary to innovate the management of information retrieval service of university library, and make innovation on the basis of the original, so as to effectively solve the problems encountered in the process of information retrieval service, so that the information retrieval service can play an effective role and improve the informatization level of information retrieval service.

2. Part two The service system of information retrieval in university library

At present, the information retrieval service of university library is divided into three main contents: service mode, retrieval mode and user training mode, and each mode has its own functions.

2.1 Service mode

Traditional information service mode
The traditional information service mode is a kind of information service mode through which the demander obtains information from the information provider, which is realized through the “pull” mode. But with the advent of the information network era, it cannot better meet the needs of users. A series of problems such as long time to obtain information, high cost, low efficiency of information transmission, passive server service and waste of information resources become the bottleneck of its application in practice.

Active information service mode
Active information service mode is an information service mode, in which the information provider provides information actively to the information demander. Without user instruction or intervention, information resources can be automatically provided to library users according to their needs and preferences. The core idea realizes the transformation of information service system from “passive response” to “active response”, which is the development direction of university library information service in the approaching information age.

2.2 Retrieval mode

Classification language retrieval method
Classification retrieval refers to the retrieval method of information output according to the systematic classification system of information resources from the perspective of discipline and profession, including classification navigation, journal navigation and classification retrieval.

Classified navigation and periodical navigation refer to a retrieval service which uses the information retrieval system to browse and retrieve the required information resources layer by layer through the way of the owning relationship of the detailed classified subjects. Classification retrieval is a retrieval method that selects different levels of categories and uses the subject language retrieval method to limit the subject scope of the retrieval activities. Classification navigation, journal navigation and classification retrieval are all classification language retrieval methods, which complement each other but also have some differences: Classification navigation directly search for “papers”; The first retrieval of periodical navigation is “periodical”, and the second retrieval is “paper”; Classification retrieval is to set the scope of subject and specialty before retrieval, highlighting the classification language retrieval method.

Topic language retrieval method
Subject language retrieval can be divided into primary retrieval and advanced retrieval. The realization form of primary search includes fast search and basic search. Fast retrieval is a simple retrieval method that pays attention to speed and only needs to input keywords to query information results. Basic search relates to many aspects, and it is a search method that limits many approaches such as year, author, discipline, profession and institution. Both quick search and basic search use single search term. In addition, compared with primary search, advanced search is more complex. It requires not only formal limitation of search structure, but also limitation of contents through multiple search terms, and logical combination of multiple search terms through comprehensive use of Boolean logic, location logic, word truncation technology and limitation technology, so as to construct a search strategy that can express information search demands, and improve the accuracy of search results.

2.3 User training mode

Teaching and research training methods
This kind of user training method mainly focuses on teaching and research, and the main objects are teaching and research personnel and graduate students in colleges and universities.

In colleges and universities, such personnel have higher knowledge level and strong information awareness. They can be trained on information retrieval principle, information resource characteristics and information retrieval skills by means of “information retrieval” training course and computer information retrieval course, so as to comprehensively improve the comprehensive information retrieval literacy of teaching and scientific research user groups and make them have a command of retrieval skills. In addition, we can also use the explanation method of combining theory and practice to achieve good training results.

Training methods for technical personnel and college students
The training object of this user training method is the technical personnel and college students, because this kind of user groups pay attention to the application of knowledge. The training can be conducted by the training
methods of “information retrieval” training course and literature retrieval course, which mainly introduces the principle of computer retrieval and expresses information needs by using retrieval language through computer practice, so as to improve the retrieval efficiency and improve the ability of user group information retrieval. The normal operation of university library information retrieval service system requires the full cooperation of university library managers from the aspects of librarian team, resource library, technical support and service environment, so as to innovate the concept of information retrieval service and meet the needs of users for information retrieval.

3. Part three The way of information retrieval service innovation in university library

3.1 Bidirectional combination of new service mode

The development of information age has brought new tools for information retrieval service of university library. The purpose of the innovation of information retrieval service management in university library is to ensure the speed and accuracy of retrieval, and the realization of this goal requires innovation and reform of science and technology, so that university retrieval service can meet the needs of today's social development. At present, the service mode of information retrieval service of Chinese university libraries is more traditional, which does not meet the needs of modern technology development and has gradually fallen behind The Times. Therefore, under the background of the era of big data, traditional university library information retrieval service needs to be constructed and innovated, and use the current science and technology to improve its informatization level and promote the informatization construction of colleges and universities. However, due to the limited technical means, the problems of high cost and low efficiency of information transmission will appear in the process of innovation of information retrieval service management of university library, which will affect the development of information retrieval service management of university library. Therefore, in order to meet the needs of innovation of information retrieval service management in university libraries under the background of information age, a new two-way combination of “traditional + active” can be adopted. This will realize the effective combination of traditional mode and modern technology, rational application of modern information means, synergistic play between the advantages of the two, comprehensive advantages of the two, improve the computer user retrieval service system, realize the innovation of information service mode and retrieval mode, and promote the informatization level of university retrieval service. In addition, the information service mode of university library information retrieval service can make reasonable use of modern information filtering technology, intelligent push and pull, user agent and other information technologies to improve the active push system. The active push service system has the characteristics of actively releasing information, predicting demand, taking information, processing information, mining knowledge, man-machine interaction and actively using users. The system can automatically carry out the information retrieval service according to the user's needs, preferences or prior agreed events, and can take the initiative to send the information required by the user safely and accurately to the user, so as to improve the efficiency of the information retrieval service of the university library [2].

3.2 Using multiple search methods

In order to realize the management innovation of information retrieval service in university library, it is necessary to innovate the retrieval method effectively. University libraries can set up various forms of information retrieval, such as classified retrieval, advanced retrieval and low retrieval. Different search methods have their own conditions of use and service objects, generally speaking, the most commonly used is primary search, the least commonly used is classified search. Colleges and universities set different retrieval methods to meet the different needs of different users, solve the problems of blind retrieval methods and repeated construction of low grade, and improve the efficiency of retrieval and user information collection. This will enable users to understand accurate and effective data information in a short time, realize the information retrieval service of university library, meet the development needs of the network information age, and promote the informatization and network construction of universities themselves. In order to obtain the best results, users can try to use a variety of search methods. The diversification of search tools and methods enables users to obtain more search tools, such as web search engine, bibliographic retrieval system, database retrieval system, etc. At the same time, different search tools also provide different search methods, such as keyword retrieval or field retrieval [3].

3.3 Innovative content-based information retrieval technology

The innovation of information retrieval service of university library can realize the innovation of service level by referring to the form of data search of current network system. The concept of network information retrieval is the same as that of Internet information retrieval, which uses terminal system to query data information. This mode enables the end user to process the data effectively at anytime and anywhere without the limitation of time and space in the process of data search, and effectively establish the index on the basis of relevant content, so as to achieve the purpose of information retrieval service of university library. At the same time, the innovation of content-based information retrieval technology can take various forms in terms of content, such as content-based image retrieval, content-based video retrieval and content-based audio
retrieval. In this way, diversified retrieval modes can be realized to meet the needs of university library information retrieval service management in the new historical period, and improve the innovation ability of university library information retrieval service management. The information retrieval service of university library needs to pay attention to all kinds of latest information technology, and timely apply it to the daily service of library, so as to improve the convenience and satisfaction of users to retrieve information [4] .

3.4 Improving the information literacy of university librarians

The era of big data brings not only development opportunities but also challenges. In the new historical development period, the management innovation of information retrieval service of university libraries needs to improve the work level of university librarians. Librarians need to be fully aware of the development trend of The Times, constantly improve their ability, deepen their understanding of network technology, improve their application level and proficiency in computer use and network-related knowledge, and realize the management innovation of information retrieval service in university libraries.

First of all, it’s necessary to improve the ability of university librarians to analyze and process retrieval topics and extract content. Librarians need to have a certain understanding of science and technology, improve the level of information retrieval service management of university libraries, understand the core content of retrieval service, and improve their own service level.

Secondly, it’s necessary to improve the comprehensive analysis ability of university librarians. The management of information retrieval service of university library needs a huge database, and librarians must have a certain ability of comprehensive analysis. They need to conduct comprehensive analysis of data and screen effective information from massive network information. Therefore, librarians must enhance their own service ability to meet users' search needs.

Thirdly, it’s necessary to improve the ability and level of university librarians to train users. In recent years, the quality of user training is not optimistic. Many information retrieval training teachers in colleges and universities have not actually mastered various methods and skills of constructing retrieval strategies, so it is obviously powerless for them to teach practical retrieval skills. Only experienced and well-trained professional searchers can be qualified for information retrieval training [5] .

In addition, the hardware and software system maintenance should be strengthened to ensure the stability of the service system. Since software and hardware systems are the basis of information construction, if libraries want to form stable information retrieval service mode, they should ensure the stability of software and hardware systems and reduce the incidence of system failures.

4. Part four Conclusion

To realize the construction of university library information service, modern university library information retrieval service should adhere to the service concept characterized by “simplification, intelligence, individuation and diversification”, where “Simplicity” aims to improve the ease of use of information retrieval system, “Intelligent” is designed to automatically analyze the needs of users, “Personalization” aims to provide search services with different characteristics for different users, and “Diversification” aims to retrieve information resources from multiple perspectives and information carriers.

References