Research on the Application and Influence of Computer Information Retrieval Technology in Library and Information

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Abstract. From the beginning of computer information technology to now, the computer technology as the core of information retrieval technology has been widely used in various fields of life. At the same time, with the increasing demand of information users, the application of information retrieval technology in Library and information is gradually explored. It is also found that the application of computer technology in information retrieval can quickly and accurately search out all kinds of books and information needed by users[1]. This paper briefly analyzes the current situation of information retrieval, the evaluation of Library and information research, the application and advantages of information retrieval in Library and information. Finally, the corresponding conclusions are drawn.

Keywords: Information Retrieval, Library and Information, Application

1. Introduction

Through a lot of research on Library and information science by many scholars in our country, we can see that the main body of Library and information science mainly focuses on the measurement of literature, scientific measurement and information measurement. In addition, the basic theory and method of information science, competitive intelligence and network information organization are also included in Library and information science. After that, Webometrics and competitive intelligence gradually replaced the traditional bibliography and digital library in the process of information development. The application of computer information retrieval technology in Library and information science has become very extensive.

Information retrieval means to help users search data and intelligence. With the gradual popularization of computer technology in all walks of life, information retrieval technology has played an increasingly important role[2]. The application of computer information retrieval in Library and information enriches the service mode of Library and information. It improves the efficiency of
information retrieval. In fact, the application of information retrieval promotes the modernization of Library and information. According to this concept, this paper will analyze and elaborate the application of computer information retrieval technology in Library and information and the main effect.

2. Analysis of the present situation of computer information retrieval

2.1. The development of computer information retrieval

In fact, the development of information retrieval at home and abroad provides a more intuitive solution to the trust between users and electronic equipment. Talking about the development process of information retrieval, we should first explain the development process of Library and information. A long time ago, most of the work of collecting library and information was done manually. It can be imagined that this kind of manual work is relatively inefficient. Under normal circumstances, it is difficult for people to get the information they need quickly from a large number of books. After the emergence of information retrieval, it provides users with a platform for knowledge retrieval. It makes people have a new understanding of knowledge search platform. In short, the essence of computer information retrieval technology is to simplify the process of information search in books[3].

2.2. Exploration of computer information retrieval technology

Through a large number of information retrieval process and results of the display, the information users need is re organized and analyzed (see Figure 1). This feature of information retrieval exposes the importance of retrieval requirements in information retrieval platform. Compared with the traditional retrieval methods, today's information retrieval process is not limited to the closed management during the user's use. It will display the complete information to the user through the retrieval process. Users can understand the number of books retrieved and the accuracy of retrieval information by watching the process of literature retrieval. It can also help users harvest information other than basic information.

Figure 1. The scope of computer information retrieval
2.3. The realization of key technology of computer information retrieval

According to the research of information retrieval at home and abroad, we can see the characteristics and difficulties of information retrieval. The discovery of a large number of information retrieval methods can help users enhance their cognition of the system[5]. The organization, transmission and arrangement of a large amount of information can effectively improve the efficiency of information retrieval. Generally speaking, the realization of the key technology of information retrieval is a process that can be disclosed. According to the theory of foreign retrieval technology, the key technologies are based on reference point visualization model, spatial feature model, association network and multi-dimensional model. These information retrieval models meet the various functions of computer information retrieval technology in Library and information.

3. The application of computer information retrieval in Library and information

3.1. Retrieval of joint equipment information

Joint equipment information plus unlocking mainly searches information through communication lines and links between terminal and computer database. The user's information is collected by the electronic system. Electronic systems look for similar information in a computer database. After that, the joint device feeds back the information to the user. Compared with the traditional manual retrieval method, this information retrieval method is very convenient and fast. It has many advantages. However, the cost of establishing the information search system of the combined equipment is very high. If the budget cost of the book report retrieval system is not high, it is not recommended to use the combined equipment retrieval form(see Table 1).

| Main Application       | Content                                           |
|------------------------|---------------------------------------------------|
| Combined equipment     | Connect device retrieval                          |
| CD                     | CD-ROM combined with computer information retrieval|
| Basic multimedia       | Multimedia joint computer information retrieval   |
| Comprehensive application | A combination of the above three                 |

3.2. The retrieval form of CD information

The main principle of CD-ROM information retrieval is to connect the CD-ROM data with the network data. Users can directly retrieve the data stored in the CD-ROM through the network data. This method is the only way to retrieve information outside the network under the situation of computer retrieval. It can be seen that the scope of its information search is very large. Fortunately, the cost is also relatively low. However, this way puts forward higher requirements for the network CD-ROM Database. If the reading speed of the drive of the electronic device is very slow, the information retrieval speed of the optical disk will also become very slow.
3.3. Information retrieval form of Multimedia

The principle of multimedia information retrieval is to search the corresponding multimedia information through multimedia database. Multimedia information that can be searched includes image, video and audio. Multimedia retrieval has been developed for a long time. With the delay of time, its retrieval speed becomes faster and faster. Its retrieval accuracy has become higher and higher. However, if the compression of the device is used to save space, the transmission time will be long. In the process of compression, the information itself will be damaged.

3.4. Comprehensive search method of network information

The search method of network information combines the advantages of the above three information retrieval methods. It also makes up for their shortcomings[5]. We can think that the comprehensive network information search is a relatively perfect information retrieval system. Network information retrieval focuses on the advantages of various retrieval methods in one system, which perfectly meets the different needs of different users for literature retrieval. With the continuous update of technology, I believe that this kind of retrieval service will be more humanized.

4. Research on the influence of computer information retrieval technology on Library and information

4.1. It greatly improves the accuracy and efficiency of Library and information retrieval

The credibility of literature resources refers to the quality and trust of Library and information required by users. Validity means that library and information meet the needs and comprehensiveness of users. In the process of Library and information work, the application of computer information retrieval technology can effectively provide users with more accurate information. In addition, the update of computer information technology can also promote the timely update of literature. This method can improve the quality of literature retrieval. With the advantages of computer and joint retrieval, the comprehensive use of multiple retrieval methods can improve the accuracy of information retrieval according to the needs of users.

4.2. It improves the professional quality of Library and information personnel

In the traditional manual retrieval stage, library and information staff need to carry out literature retrieval according to the fixed operation. First of all, find the corresponding similar literature. Secondly, some information is briefly summarized and sorted out. Finally, the staff will sort out the information provided to users. After the popularization of computer information collection technology, this kind of collection method requires higher professional quality of staff. In short, staff should not only be clear about the collection of library information. They also need to understand the specific operation and function of computer information storage system. Therefore, the application of computer information retrieval technology in Library and information can promote the staff to accumulate professional knowledge. This can improve their professional quality.

4.3. It improves the service quality of Library and information

Compared with the traditional manual retrieval, computer information retrieval has obvious
advantages. Advanced equipment hardware, efficient retrieval methods and complete database resources can promote the efficiency and personalization of Library and information work. Facing the different requirements of different users, the traditional manual retrieval staff will feel helpless. Computer information retrieval technology is a worldwide network of retrieval methods. It only needs a search terminal to access the world's literature resources. This way greatly improves the service quality of book report (see Table 2).

| Influence                        | Primary coverage                           |
|----------------------------------|--------------------------------------------|
| Accurate information search      | Credibility of literature resources        |
| Professional quality of staff    | Professional needs in the computer age     |
| Information search service quality | Advantages of computer information search |

5. Analysis of the advantages of computer information retrieval technology in Library and information

After the information retrieval technology has been developed, all the management work of Library and information has become the mode of network control. This way greatly improves the efficiency of management. It simplifies the work of library management and saves a lot of financial, material and human resources. On this basis, the automatic management of Library and information and the service level of users have also been strengthened[6].

In addition, the enrichment of book resources will also integrate the world's book resources in a small terminal. With just one electronic device, we can use the search system to find all kinds of similar information in the world according to the user's information. At the same time, the security of computer information is also guaranteed. Therefore, the database security of computer information retrieval technology is also very high.

6. Conclusion

With the rapid update of computer information technology, information retrieval technology has brought opportunities for the development of Library and information work in China. At present, there are still many books management in our country that adopt traditional management methods. These inefficient work limits the use of book resources. It brings great inconvenience to people's life. Therefore, the application of computer information search technology in Library and information should be vigorously developed.

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