The Application of Computer Science and Technology in Libraries

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Abstract—The faster and faster development of information network drives the progress of the society. The application of computer in people's daily life is becoming more and more widely. Computer science and technology do not only provide university libraries with new tools and means, but also change university libraries profoundly, from theory to practice, from technology to model. At present, although we see the gratifying situation of libraries, there are also some problems which are worthy of thinking, such as the disconnection between the theory and practice, ignoring theory research and too dependent on technology. Through the discussion of the important role of the computer technology in the university library development, as well as the negative impacts to the university library caused by the one-sided emphasis on computer technology, this paper puts forward that both the two are the relationship between theory and practice. The university library development cannot leave the computer technology, the library theory also decides the breadth and depth of the application of computer technology in the library field.

Keywords-Computer Science; Libraries; Information; Network

I. INTRODUCTION

The development of computer science and technology is reflected by education, economy, military, defense departments and all aspects of society. Its generation and development brings a huge change for the life of people. In the third revolution of science and technology, the invention and application of computers was the core content, which made the human society get into the information society and marked the arrival of the "information age". The deep development of the knowledge economy makes the development trend of computers rise with a more speed update. The development of computer science and technology embodies the progress of people's living conditions, its application fields are also from simplification to diversification.

The application of computer science and technology changes the traditional management system, including the use of the library management system in colleges and universities. The collection in library is the direct embodiment of the value of libraries. As the symbol of the cultural value of colleges and universities, to a certain extent, libraries have a direct impact on the development of colleges and universities. Library management directly influences the the reading experience of students in the libraries. For the collection, the college management pattern can strengthen the application value of libraries and provide effective guarantee for borrowing and management.

This paper analyzes the promotion of computer science and technology. Cataloguing technology develops from manual catalog, machine catalog to online union catalog; Retrieval technology develops from field retrieval, full text retrieval to content retrieval, which produced a new technology of digital library. The influence on library structure and model is shown in the influence of the theory of library science, library evaluation criteria and the collection resources.

II. THE DEVELOPMENT REASONS OF COMPUTER SCIENCE AND TECHNOLOGY

（1）Rigid requirements of the time development. During the second World War, due to the fine processing and special counterintelligence processing to a variety of military information, the requirements of all aspects of computers improved, which promoted the development of computers and also successfully developed a lot of computers functions.

（2）The contemporary stable basis of mechanism about choice. A major factor which affects the computer selection mechanism is a raise of the technical value of competition, thus achieving a common question. It takes time to judge the common question, which is a kind of basis of computer selection mechanism. This selection mechanism is judgment and mechanism which is around the related development direction if computer technology.

（3）The development of science and technology needs the support of computers. The development of computers cannot leave the help of the various areas of the market, and the progress of computers is a base of support for the development of all walks of life. Computer development needs constant technical innovation, through which computers gradually become very important tools for communication and work people's life.

III. COMPUTER SCIENCE AND TECHNOLOGY'S INFLUENCE ON LIBRARY STRUCTURE AND SERVICE MODE

A. Influence on library science theory

The impact of library science theory mainly is the research category of the subject constantly updates. As computers are more and more used in books intelligence field, the traditional books intelligence work fades. The research focus shifts to books intelligence automation integrated system and document information management system, which attaches great importance to the coordination, collaboration, literature resources sharing and other macroscopic and reality problems. Entering the network stage, the research focus on from the electronic library, virtual library, finally to the study of digital library.

B. Retrieval technologies

Chinese literature reveals the studies of field automation, including automatic extraction, automatic weighting, automatic classification, automatic indexing, automatic summarization and machine translation technologies, which have entered the stage of trial. The development of the information processing basic technology strongly promoted the development of the information retrieval system, making the computer retrieval technology develop from a field retrieval, full text search to content retrieval of the network age.

C. Digital library technology

The rapid development of computer technology has greatly promoted the progress of network technology. With the continuous growing online information resources and the unceasingly enriching information types (text, images, audio and video), the way of information transmission is changing. Leading by the US, the western countries, under the background of the INTERNET, put forward the concept of digital library and digital library technology also arose at the historic moment.

IV. EFFECTS OF COMPUTER SCIENCE AND TECHNOLOGY TO LIBRARIES

A. Service work for readers

Readers will encounter many problems in the process of using libraries. The staff of libraries must reassure for readers in time and help readers to use libraries correctly. Face-to-face counseling is one of the commonly seen interactions with readers. And using computer technology to interact with readers is essential for a modern library, such as collecting reader comments, etc. With the development of science and technology, the network become the main channel to collect the opinions of readers. Compared with the traditional way, online opinion has its unique advantages.

B. The business work of the library

Library itself is an information center, so library should pay more attention to collect and organize information. Using computer technology in data statistical is good for the records, analysis and improvement in library work. Data information includes many aspects, such as readers information analysis, books borrowing statistics, books borrowing rate analysis, collection data analysis, library property statistics, library staff workload statistics, etc. The analysis and statistics of the above data cannot leave computer technology.

C. Management work for library staff

In order to improve the satisfaction of readers, libraries must pay special attention to the construction of staff team and provide more continuing education opportunities for library staff. Not only the contents of education, but also the training forms should have guidance and advanced. That is to say, use advanced computer-aided technology

training to improve the library staff's professional knowledge and skills, on the basis of which, focus on strengthening their knowledge of computer and multimedia learning and improving their ability of computer application.

V. CONCLUSION

Through the analysis of the library management of traditional library and the discussion of the existing computer technology, the application of the computer database technology in library management can largely enhance the efficiency of library management. Store book information in computer database in form of data by using the database management system will make the process of call and query be very convenient. In addition, in the process of borrowing, the database can provide students with the query function, which makes students can borrow books according to their own needs. If a book has been checked out, it can be annotated on database query system, which makes the borrow be easy and also improves the efficiency of management. The books managers' workload will be appropriate reduced. They only need to do some computer operation, such as annotate books on the system according to the actual situation of the library. The library management system makes the library be very simple and easy to build a modern library management system.

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