

Application of Computer Technology in Library Resources Management

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Abstract: Combining library science with computer science, the application of computer technology in library resources management requires managers to actively summarize and study from the former experiences and scientific practices. Moreover, scholars are also supposed to think over the use of computer technology so as to bring out the best state and development in library resources regulation. On the basis of computer development and application, the work probed into library resources management and the utilization of computer technology, as well as analyzed the advantages and disadvantages from different perspectives. Aiming to improve library resources management to a better level, this research provides a more comfortable service for the public to ensure the development of economical and social benefits of library.

1 INTRODUCTION

The application of computer technology in library resources management marks the progress and development of an era. With advanced science and technology in place of part of human labor, the library resources management becomes more scientific, accurate, efficient and effective to reduce problems of service quality caused by human errors in the process of library resources management, which enhances the management level to a new step. Facing the management advantages brought by computer technology, it is also important to realize its practical problems and disadvantages in the meantime. By carefully analyzing and studying the application of computer technology through integrating theory with practice, the small cracks can be further refined to better serve the public and society, and additionally, achieve more comprehensive benefits.

due to the high cost. Gradually, computers were spread more extensively, from vacuum tubes to transistor computers. But affected by factors like performance constancy, the application of computers still has a certain limitations. After entering the integrated circuit computer era, computer technology began to popularize, especially the birth of large-scale integrated circuit computers and development of network that promoted the computer technology to the forefront of human social development. With the advancement of computer network, multi-media and intelligence, computers have turned into an indispensable part of life and work, particularly widely applied in aspects of science and technology, data processing, office automation, production automation and intelligent management. As an important tool of learning, entertainment and work today, computers have made great contributions to the social and economic development. Without the support of computer technology, such as computers and network, the modern society will fail to make progress.

2 DEVELOPMENT AND APPLICATION OF COMPUTERS

Since the first computer came into being nearly a century ago, computers have gone through four critical periods of development. At the beginning of its birth, the application of computers was limited

3 MANAGEMENT OF MODERN LIBRARIES

Dating from the emergence of libraries, the management of a library has undergone a long period of development. As a result, library

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management is blended with historical and cultural heritage and exuding extraordinary management art through the following three periods of development. In the first period, library management integrated with human thoughts and will. With more managerial experiences accumulated and summarized, the management philosophy found continuous improvement. In the second period, library management, based on human consciousness and experience, was kind of arbitrary and lacked standardization. In order to solve these problems, a series of rules for post setting were formulated to effectively restrict the behaviors of managers and play a role in enhancing the management level. However, as the society moved forward and abundant resources appeared, it was increasingly difficult and challenging for the regulation of a library. Managing a library with traditional methods could no longer satisfy public demands for quick, convenient and simple inquiry services. Besides, with so much book sorting work to do, managers' thoughts were imprisoned. Heavy manual work was so boring and dull that caused trouble for the improvement of management level. The third period, also the intelligent management era of computer technology application, was an inexorable trend in the development of library management. Combined with the former two methods, regulations under the support of computer technology were relatively more scientific, convenient and efficient, which brought in higher boundary and social effects.

4 APPLICATION OF COMPUTER TECHNOLOGY IN LIBRARY MANAGEMENT

4.1 Necessity of Computer Technology Application in Library Management

The computer itself has a strong function of storage and data information processing. Moreover, thanks to the advancement of network technology, it is easier to spread and circulate books and materials. More flexible management of library resources and simplified process ensure that all the library resources can be fully taken use of and well protected. For example, encoding and storing books and materials by means of computers can, on one hand, make it easier to add and delete book entries through operations on the computers, and on the other hand, enhance the efficiency and use value of

library resources management through quickly and accurately getting information and borrow time on the computers. In addition, with the development of society, economy and culture, more material information needs to be handled. Demands for high capacity and quick circulation can never be fulfilled just by manual work. Therefore, only by virtue of strong storage and data processing functions of computers, can materials collecting, filing, searching and using carry out smoothly in the process of library management. At the same time, the application of computer technology is conducive to improving the efficiency of document management and comprehensive effects of libraries. Thus, the library resources management is proved to be more accomplished, ensuring the social function and use value of libraries, as well as providing more convenient and considerate services for the public.

4.2 Deficiency of Computer Technology Application in Library Management

In the practices of applying computer technology to library regulation, some detailed questions may affect the management level of library resources. Firstly, it is too hard to control the environment in the computer room, especially temperature and humidity. Computers dissipate heat under the condition of continuous working. But once the temperature rises too much, the computer will run less smoothly. In the same way, if reduces too much, some parts of computers will freeze when humidity is not well controlled, and then cause damage and use failure to computers. Additionally, in cases with excessive humidity, it will result in a short in the circuits of some electronic components inside the computers, and then give rise to damages to computers and a loss of data. Moreover, people come and go frequently in the management process, so the control of dust must be taken very seriously. On the other hand, emphasis must be laid on the control of static electricity. With a large number of comings and goings, long-running computers will bring about static electricity. However, all these details of environment control tend to be neglected by managers, so there is no wonder that computers are often damaged and data information is usually missing. Secondly, the deficiency of computer itself is also one of the biggest obstacles, such as the network security issues. Due to the openness of Internet, the library management network is likely to suffer some virus invasions and hacker attacks so that the library management sometimes fails to

proceed on the rails with data and documents lost and leaked out. Besides, problems, like frequent upgrades of software and lagging upgrades of antivirus software, are also influencing factors of effective application of computer technology in the library management. In a word, the development of network brings a lot of convenience and rapidness for humans, while simultaneously hides some dangers. Therefore, it still needs further explorations and research on the application of computer technology in the management of libraries.

4.3 Reason Analysis of Inadequate Application of Computer Technology in the Library Management

Firstly, since human consciousness has a decisive influence on the development of things, it is the key factor of poor environment control that relative personnel lack awareness of the importance of environment in the computer room. In other words, inadequate application of computer technology is mainly caused by ignorance of environment construction in computer room. Secondly, most libraries at present pay much attention on the computer hardware construction, but invest little in the network construction and network security defense facilities. For instance, some libraries use free antivirus software to cut down expenditures. Once making a mistake in choosing download methods, it is even possible to download software with virus, which will seriously threaten the security and reliability of library regulation. Thirdly, when computer system is too slow to upgrade in time, it will cause big security risks to computers so that normal, secure and efficient application of computer technology cannot be ensured. Meanwhile, computer operators are void of safety awareness. On that account, it is likely to lead to a breakdown of library management system and a loss of data information, as well as affect the handling of some critical incidents and emergencies.

4.4 Advantages of Computer Technology Application in Library Management

Promoting the development of modernization, the application of computer technology also enhances the modernization and intelligentization levels of library resources management. Moreover, it effectively improves the efficiency of library work, and increases the library's benefits. More

specifically, the first advantage is that it is timelier to collect and file the materials by applying computer technology. At the same time, it is more convenient to inquire and borrow books and materials so as to help the public get wanted information as quickly as possible. Secondly, library resources management becomes more standardized with the application of computer technology, which reduces human errors in work and makes the materials and information more accurate and comprehensive. Thirdly, information and resources sharing is achieved in the utilization of computer information technology. Through the Internet, the public can have access to a large number of books and materials by various approaches. On one hand, it improves the service efficiency and the use value of library resources. On the other hand, it avoids the repetitive record of books and materials, which saves human and material resources and ensures the increase of library's benefits. Finally, computer technology is high-tech in modern society. Its application maximizes the efficiency of library resources management, saves the time, facilitates the customers and improves the service quality. That way, all the services of library are able to keep up with the pace of time and technology, factually stand at the forefront of culture, science and technology, and provide rich spiritual food for the whole society.

4.5 Specific Application of Computer Technology in Library Management

Computer technology saves the manpower in library resources management and realizes the modernization, automation and intelligentization of library regulation. For example, when borrowing books, borrowers can inquire books precisely through the computer and quickly find the book they want from the complex and cumbersome materials. Therefore, the process of borrowing becomes much more time-saving and convenient. Next, the application of computer technology digitizes and informationizes library resources. Duplication and spread of materials can be realized by copying, transmission and other operations, which accelerate the speed and enlarges the scope of knowledge dissemination. Meanwhile, long-distance transfer of materials and information by the Internet enriches work exchanges of library resources management, as well as satisfies public demands for books. Finally, computer technology facilitates the collection and organization of reader information and promotes the development of information extracting and

processing. In this way, invisible problems and implicit information hidden in the database of reader information can be found and controlled in time, which is of great significance to the improvement of library resources management.

4.6 Problems in the Application of Computer Technology in Library Management

The application of computer technology provides an opportunity for the development of library resource management. With the support of computer technology, domestic library cause achieves unprecedented development, bringing better services and benefits to the society. At present, the key point of computer technology application lies in the promotion and updating of software, as well as the perfection of hardware. First of all, in library resource management, much attention should be paid to the environment optimization of computer room in order to ensure appropriate temperature and humidity using all sorts of methods. In the mean time, the control of dust, moisture and static electricity should be emphasized to ensure the security and stable operation of computers in the computer room, as well as the smooth management of library resources. Then, books and materials should be collected, filed and amended in time so as to guarantee the accuracy and convenience of inquiring, borrowing, etc. Next, it should be highlighted to contribute to the construction of library resources sharing with the aid of computer network. Library resources are expected to be used, transferred and allocated scientifically, and by then the fruits of library management can be applied the most widely. As a result, the value of library resources management is increased and unnecessary repetitive work is reduced. Fourthly, with the development of society, the public demands for service quality and efficiency are in constant growth. In library resources management, on one hand, the content of library resources and management methods should be carefully studied. With constant improvement of library management experiences, it is conducive to better applying scientific theories, and creating intelligent management services of the times and high-quality in coordination with modern technology. On the other hand, it is of vital significance to focus on the efficiency and benefits of computer technology application in library resources management. Through an in-depth study of computer application technology, it is ensured to achieve timely renewal and update of software in

library resources regulation. Attaching importance on the development tendency of computer software and hardware, we can receive the maximized benefits of library services for the society.

5 CONCLUSIONS

Combining theories with practices is a scientific rule followed by the development of anything new. Hence, the study of computer technology application in library resources management also needs to put a high value on the management, analysis and research of practical materials. Recognition of problems sometimes is half the work to solve the problem, bringing us an unexpected harvest. As for the application of computer technology, we must not only look into the knowledge of library resources management, but also study further on the related knowledge, theories and practices. With these two aspects integrated effectively, it is useful to handle all the problems in library resources management and improve the management level as well. In this way, more compliments and praises can be received from the public.

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