

STUDY OF SUSTAINABLE DEVELOPMENT OF INFORMATION TECHNOLOGY AND LIBRARY

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ABSTRACT

To our traditional library management, pursuing small and comprehensive library blindly or big and comprehensive one, which makes amounts of waste. In information society, people have varied requirements. To meet their requirements, library must positively develop more resources, positively organize the online Chinese information resources, provide effective online video service, greatly cultivate our fine cultural tradition and enhance combination between international advanced network technology and Chinese Characteristic information resources. This paper mainly discusses the problems existing in traditional library construction, application of information technology, effects of information technology on library management mode and its effects on sustainable development of library, etc.

Keywords: *Information Technology, Library Construction, Sustainable Development*

1. INTRODUCTION

Influenced by network and digital innovation development, how to utilize its advantages to realize sustainable development of library is urgent. It has to be brave to innovate, select position correctly, clear the current situation, and make most use of varied advanced modern science and technology to promote its sustainable development. To current situation, there are 2562 public libraries and 3662 archives in our country, owning abundant information. However, when we search for foreign databases in different terminals and network, we rarely transmit our resources into foreign countries. So Chinese information is in short, which is not suite to our situation. We must make use of information technology to create our "China car" on the information highway. As a public main body to conduct information resources service and development for a country, library is also the main fundamental power to process, collect, transmit, develop and serve information resources. Library has long-term cultural heritages and deep culture basis, besides electrical data is increasing continuously. Large information resource is the wealth. We can take advantages of information resources to grasp chances, devote to the development of modern information network positively, and create an important information transfer station. On one hand, it can get relative information from network and share resources rapidly. On the other hand, as main producer of information, it can load information for network, so

as to make us activated. Figure 1 shows the external service of library[1].

In information society, people have varied information requirements. To meet such requirements, library should positively develop more information resources, positively organize online Chinese information resources, try to provide online full-text database search, original text browsing and library interaction, etc and effective sound-image service. Cultivate our fine traditional culture tradition, enhance combination between international network technology and Chinese characteristic information resources, improve our images continuously and reduce the gaps of foreign libraries as soon as possible. The modern information technology has great effect on our library construction. The continuous development of information media industry and computer technology promotes the development of communication technology and multi-media technology effectively. In information highway, traditional information center, intelligence center, document center and library are no longer the unique provider and owner of information resource. Any league, person, computer center and enterprise can share services through the network, which compete the traditional library construction. It triggers the basic reforms of information transmitting, process, collection and acquisition method. As a service industry, library is a special information mechanism for information query, analysis and process. The resources in information network are developing rapidly and in large scale.

So we can promote the continuous development of information technology and propel the rapid progressing of our library construction[2-4].

2. PROBLEMS IN TRADITIONAL LIBRARY CONSTRUCTION

Inconvenience. In the traditional library, it takes lots of time to return and search relative books. Readers are also restricted by borrowing time, borrowing number, open time and library position, etc. In the digital library, network is the main method for document transmission. A online computer in the certain IP area can download and search relative digital information. The Figure 2 is the requirement analysis of library management system.

Small storage density and it occupies large physical space. In traditional library construction, the books are papyraceous. So they are restricted by storage density. Their volumes are big. Therefore, big library is required. In recent years, with the continuously increasing of library content, the book base has to be expanded. However, the volume of electronic carrier is small, and the density is correspondingly big, so the space occupied is also small[5].

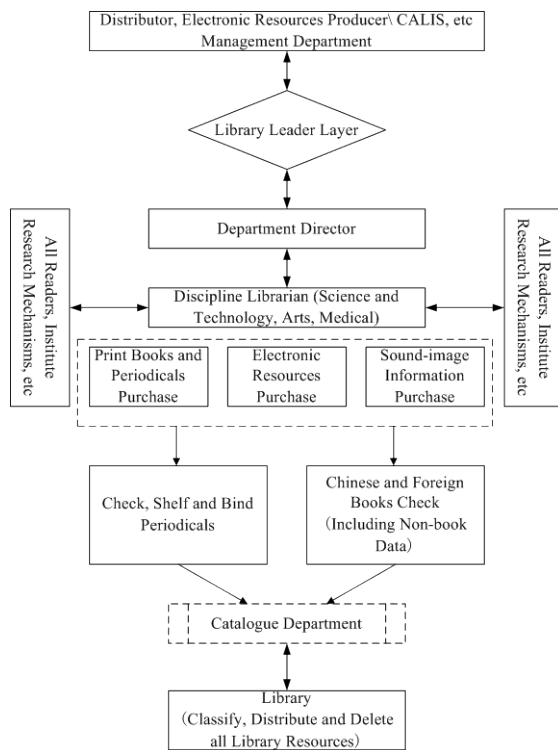


Figure 1: External Services of Library

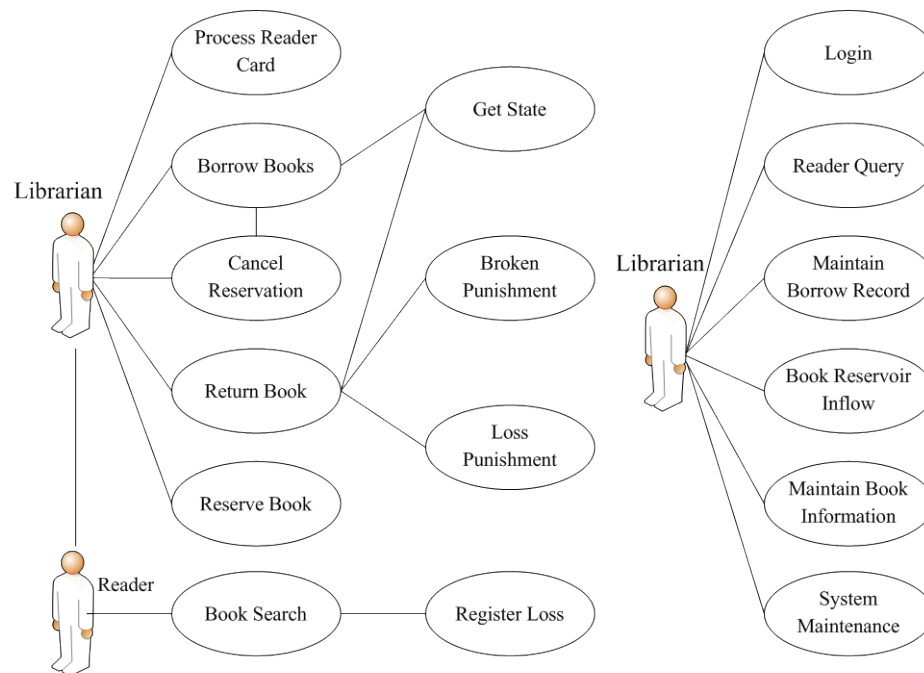


Figure 2: Requirement Analysis

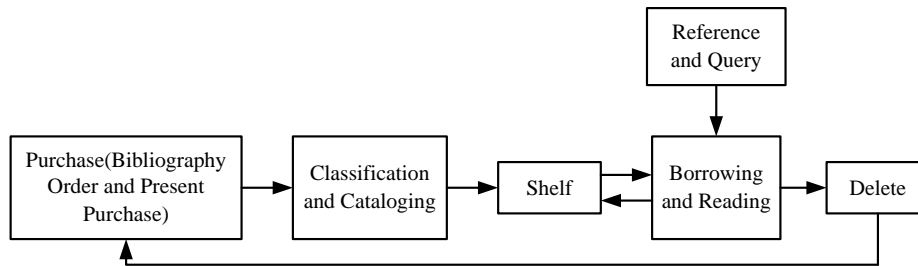


Figure 3: Process of Traditional Library

Traditional library needs more staffs. Restricted by geographic positions, in the application of traditional library, reading room and each stack room requires many staffs, which increases the number of workers greatly. It is bad for enhancing efficiency. The utilization ratio of many stack rooms is low and few services are developed. But it needs the talents with special knowledge and the workload for daily maintenance is big. To digital library, it only needs a few database query staffs and maintenance staffs. Generally, readers can search the document all by themselves, which reduced the work content obviously. Besides, the number of staffs is also reduced. The comparison figure between traditional work processing and modern one is shown as Figure 3 and Figure 4.

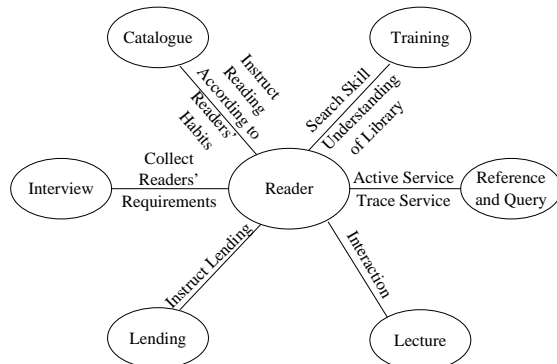


Figure 4: Process of Digital Library

3. APPLICATION OF INFORMATION IN LIBRARY CONSTRUCTION

Taking books and documents as objects, library construction considers reader's service as purpose, transmitting information as method. In varied processes of library construction, information is demonstrated to different degree. Its application is indicated in all process.

Information collection and processing stage. It is the first step, which directly affects the service ability of library and costs, which is deeply influenced by the development and application of information technology. The traditional way to collect information is to communicating with distributor and press for dynamic information in telephone and letters, etc. It has certain delays, and takes lots of time. As modern e-commerce develops rapidly and computer network technology is made the most use of, we can utilize the press website to understand the newest press news and finish relative services like query, subtraction and paying, etc. It effectively improves the efficiency, saves the money and time greatly. We can reflect the requirement information to relative units and proposes advices to effectively exert our actions. While taking the readers' and specialists' advices, the network can be utilized to get more advices, so as to meet the readers' requirements. The carriers are mainly the print ones. Nowadays, the sound-image ones are also developing. The computer information network makes online document subtraction to come true. In the traditional cataloging, the rule is to conform standard and regulation, mainly includes the international and national rules and varied cataloging regulations, which effectively laid the foundation of library writing. As the information technology develops, the marc gradually coming up, marking a big leaping for library cataloging. An important standard for modern information process is MARC. It can promise the database quality, which has important effects on library construction and components. Computer network can improve its efficiency and qualities of library data[6].

Effects on information transfer and usage. The final purpose of information collection and processing is to realize the information transfer, to realize the value of library. In the flowing service process, some sections like library interaction and lending can change the traditional methods. By

scanning the relative stripe code on the readers' identity into computer, some processes can be finished quickly, and the relative data will be saved in the database. The relative errors can be automatically corrected and checked. The circulation file is built. It can improve the service quality and ability effectively. Computer network promises the new development of expansion and meaning of circulation service, which can realize the internet linking and introduction of library functions. The circulation service mainly includes reservation on line, renewing on line and search on line, etc. Readers can search and query on line to get the information they need by themselves, which effectively improve the efficiency and truly saves the library resources and time. In the circulation, if readers borrow other books without returning previous the books on time after they canceling their cards, the traditional way can't identify such bad operation, which brings many troubles. Set reader's information on line can update the reader's right effectively to avoid such problems appearing. The information technology helps to expand the developing space of relative intelligence service. The future developing direction of digital library is shown as Figure 5.

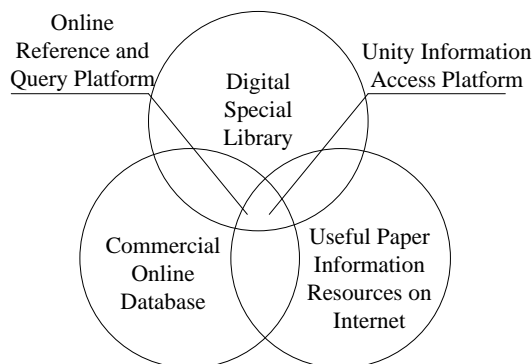


Figure 5: The Future Developing Direction of Digital library

After 21st century, gradually the information big bang coming, large amounts of information purges into people's views every day. We should select the available information. The artificial way is difficult to accomplish such task and it is not accurate. The special database and computer network information service is easy to search intelligence information. Nowadays, there are many professional information databases. Only with some pays, relative intelligence service can be achieved easily. There are many query methods, correct, comprehensive and rapid. By sharing service from internet, different users can access the same database and paper at the same time, which improves the

efficiency obviously. Information technology makes the environment and operation method to change a lot, and propels it to step into network and electrical era.

4. EFFECTS OF INFORMATION TECHNOLOGY ON LIBRARY MANAGEMENT MODE

4.1. Effects on Library Thought

The general conception is to own certain document promising ability. It means improving the number of documents effectively. The more abundant the library is, the stronger such ability is. They blindly pursue the small and comprehensive, big and comprehensive library. It results in great waste. So the basis for our traditional library is to own real library, and expand its subsistence by more papers. Database and computer network also makes the traditional material bases to change a lot. It expands the contents and area of library information resources, including both relative documents and network information and electronic press. Traditional library construction should interview the print periodicals and books, and positively develop and utilize the network information resources to build virtual library. Besides, it needs to transform the tradition library into electronic one and broadcast and save in CD. The object should be positioned correctly. The acquisition ability of varied carrier information should be stressed. To promise its status in the exchanging process, library should make full use of network information resources to supplement its library, build the characteristic database, so as to have good effects on library interaction. The management mode of modern library is shown as Figure 6.

Change the requirements of staffs. Nowadays, most staffs master the enough professional knowledge. Modern information technology proposes higher and newer requirements for staff's knowledge structure and level. The staffs should have both professional knowledge and English level, knowledge of network operation and hardware and software. To improve the service quality, they should adapt to the time. The management department should organize trainings and lectures to cultivate some experienced professional network management staffs with computer knowledge and high service level. Build and perfect the staff competition system. Encourage staffs to activate, improve their operation levels and improve their comprehensive qualities, to makes them to adapt to the trends and requirements of

information technology and better serve readers, realizing the service function of library construction. The division is shown as Figure 7.

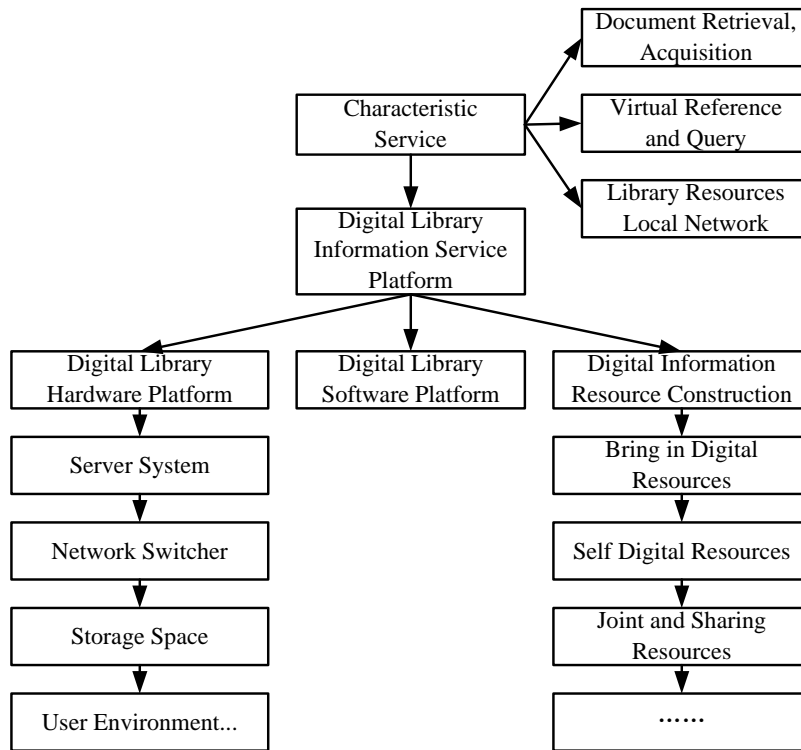


Figure 6: Management Mode of Modern Library

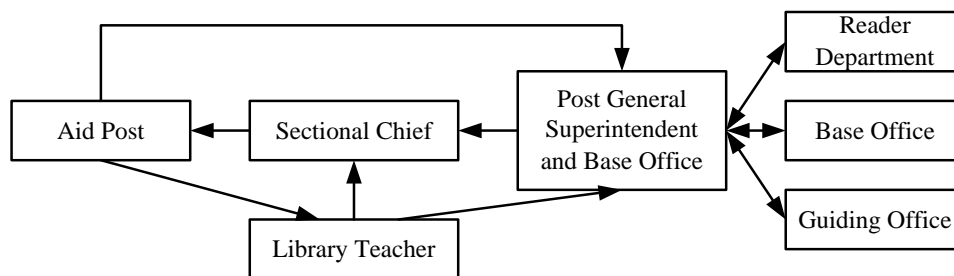


Figure 7: division in Library

Construction requirements. The widely application of information generates reforms on library techniques and theories. Mainly demonstrate on service method, catalogue organization, library structure and intelligence. The construction has some new characters. There are nine characters: flexible internal facilities; reasonable building layout; convenient usage; expansible library utilization; practical devices; unified internal configuration; comfortable reading environment; adaptive document protection; economy. In the

construction process, its features should adapt to the requirements of time. It should have fine functions. It should indicate its flexibility, adaptability and opening-up, etc. It should meet the requirements of modern technology devices, and fine environment qualities. It should indicate the culture features of modern library, adapt to the new problems and requirements of library development. The trend is to constructing diverse, network, standard, automatic and scientific library. Diversity refers to multi carriers. Library has to provide

condition, device and space including communication network, electrical lines and temperature or moisture conditions. Service is the point. A library reaching such standards can be a modern one. The funds for traditional library are used for buying documents. They are no longer paid for maintaining. The information technology needs continuous fund input[7-9].

5. EFFECTS OF INFORMATION TECHNOLOGY ON SUSTAINABLE DEVELOPMENT OF LIBRARY

5.1. Innovation Of Information Technology Is The Power Of Sustainable Of Library

With the social progressing continuously, the social increasing requirements of culture and information become the main power. Meanwhile, it provides the new chances for development of library. It both stimulates its new energy and provides effective service basis for technology. To adapt to the requirements of knowledge economy and new technology revolution and better serve the knowledge innovation, it must set the advance conscious. Set the sustainable conscious. We should not only stand on current developing situation but also overview the future, pursuing the overall and healthy development. Set up the scientific information management conception. Effectively improve the digital degree of information resources. Hold the thinking that all is for readers. Develop the information resources positively. If library to develop, sustainable development should be held. Positively consider the inputs, which is the input of human and funds, etc. It is essential to promise the progressing of information transferring. Besides, the basic rule should be conformed.

5.2. Information Science And Technology Is The Effective Guarantee

Information technology effectively propels the process of computer management for library, which brings lots of benefits. The process mode uniting as document gradually becomes that uniting as knowledge, realizing the network and computerized methods. It is essential to enhance the basic library construction and character construction according to potential market and real requirements. Meanwhile, build the network information resource. Effectively supplement the library resources. Improve the perfect degree of resources. It to be larger, library should develop various services. Build proper talent application system on talent usage, talent cultivation and talent

management. Set proper posts. Compete fairly. Optimize the employment system. Make the requirement and quality standard of various posts. Make rigid examination system. Exert each staff's specialty. Try to reach high effective and high efficiency[10].

6. CONCLUSION

Nowadays, we still have many problems like not enough funds, etc, which can't meet the requirements of information technology. The basic way is to conduct new modification on original buildings. Such method can only meet the temporary requirements, which will be difficult to reach long-term benefits. Information technology also has big effect on fund operation. As the application of information technology increases, its input fund should also increase. Therefore, the usage and distribution of funds should change.

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