

Research on the Development of Digital Library in the Information Era

Zhaoxia Liu

Zhongshan Torch Polytechnic, Zhongshan City, Guangdong Province, 528436, China

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Abstract: With the rapid development of social science and technology and information technology, the development and application of digital library have gained popularity, most colleges and universities have set up their own digital libraries. However, there are many concrete problems urgently to be addressed in the construction of digital libraries in terms of current domestic situations. Based on this, by integrating the years of working experience, the author conducted the research on the development of digital library in information era, which can be used for reference and of help to others. [1]

With the continuous development of national information technology, a lot of achievements have been obtained in the field of education. With the advent of the era of science and technology and network, digital libraries have been widely used in all universities to the wider extent, and a series of digital libraries have emerged correspondingly. [2] Nowadays, digital libraries are playing a more and more important role in the education industry in China for the prominent roles.

1. Concept of Digital Library

Essentially, digital library is used for secondary processing of the acquisition, organization and standardization of the extensive information as pictures, audio, characters, procedures and databases with great value with the help of modern information technology with the purpose to transform this information into digital information and computers can be adopted for high quality storage and management. [3-4] As a result, knowledge can be of value added one and the network communications can be used for the rapid promotion and receiving of digital information so that the various services can be available in the network at any time and at any place. In addition, the construction of digital library project also involves intellectual property rights, information security management, storage rights management, strengthening the association and cooperation among relevant organizations, research departments, related enterprises, education and other groups.

It can be said that digital library is the best stage in the step-by-step development of all libraries, which is a information database system without limitation, with organizational characteristics and great openness. Students in and out the campus can visit the resources in the database and acquire the information they want in the areas which the internet covers so that the students can be free of the limitation in space and time in library. Students can read various books as the signal is strong supported by internet regardless of the place they are and whenever it is with the purpose to form resources sharing to the true meaning. The emergence of digital library exerted great and favorable influence on the reading forms of the general public and social development. [5-6]

2. The Changing Process of Digital Library

2.1 Changes in Library Collection

The actual connotation of the collection has been completely expanded, and the specific content of the collection has gradually been developed into the inherent collection and virtual collection, which contains a variety of different information formats and information types, and the webified information resources, is also its virtual collection. Therefore, based on the previous information services as application, information search, bibliography documentation, virtual network information service also began to stand out in a gradual manner, students can also obtain

information from a wide variety of books and a large number of database, database and image library. Besides, the first information and research results can be available through computers. The collection quality of physical information is no longer the most important determinant, and the memory pool of information or access of network data is more important factor. The actual development system of library collection also needs to be adjusted and changed according to the needs and characteristics of specific information environment. Digital libraries will also be increasingly rich in content in novel forms, which can be fully accessible. The resources it supplies will gradually change in a way with a medium as the core to information as the core.

2.2 Changes in Library Functions

Digital library is regarded as a national center of data resources. The amount of stored information by people will increase with the passage of time, which contains a lot of network information. These network data is mostly scattered in the information center and website in response to where such information should be placed, which is not scientific in the long run and needs to be fully concentrated. In the past, libraries assumed the main responsibilities of data acquisition, storage, publicity and copyright control, etc., which should be done by digital libraries, but there will be changes in the content, forms and service mode to some extent.[7-8] Digital library is an advanced platform of digital education in China. Naturally, this does not mean that digital libraries can replace higher education. Generally, students study by themselves or for a second learning in aspects as humanity and leisure in the library. Therefore, digital library serves as an educational place for students in their spare time.

3. Research on the Development of Digital Library in the Information Era

3.1 Resources Sharing

Nowadays, in information-based society, self-reliance characteristics of the university library in obtaining resources fails meet the requirements in enriching the mounting amount of information. It will be necessary to have cooperation with the rest of the libraries, and even with the international information resources to achieve the maximization of information resources, and thus the sharing mechanism of data information with data exchange and resources complementary can be established. Borrowing among libraries is an information sharing model that is conducted in the earliest time and most widely used for cooperation, all colleges and universities should accomplish the effective sharing and mutual circulation of library resources according to the requirements in professions. The resources of a library are limited, the cooperation between the libraries is the best and effective way to enrich the collection of the library such as the six libraries of Technology University of Guangzhou, South China Normal University and Guangdong University of Technology and so on were required for cooperation in jointly running libraries on the premise of joint cooperation in running universities and the reciprocal recognized book borrowing certificate, reading certificate will be issued to purchase international journals and formulate all the catalogues of domestic and foreign journals.[9]

A data resources pool is a collection of data that stores related information on the Internet according to certain criteria. The database is the basic condition for the application of information technology in all libraries. The information in the resource database of university libraries in each region is endowed with its own characteristics. The combination of a large number of university libraries can achieve the effective cooperation and scientific application of various resources. For example, 11 university libraries in Guangzhou are required to jointly create multiple sharing resource databases, namely the joint catalogue of network database, based on which, it is helpful to reflect the unique characteristics and advantages of all university libraries in data resources. Besides, the creation of information sharing of resources pool is the key approach of achieving resources sharing.

3.2the Characterization of Information Resources

The university libraries characterized with information and digitalization will be required for development toward multi-data sharing of “big libraries”, which requires that all university libraries shall reach the goal of sharing of digital information of library collections. It is of no importance for the sharing in terms of the mere overlap of information resources. Only by building books and information resources with certain characteristics and key points that help each other, complement each other, and learn from each other, can we benefit from resource sharing and achieve the goal of supply. If we want to make data resources more characteristic, we must build a unique information database. In essence, characteristic database refers to the targeted database constructed by information departments such as libraries according to their information resources and students' demands for information. The library with more unique characteristics in the materials and data will be equipped with more value in application and the data will have more value in collection.

3.3 Personalization of Service Forms

Library information resource database refers to the collection of text, images and audio of the library and so on, which can be processed with the help of some digital means, all these can be stored in the magnetic disk and CD according to some effective methods. People can search the data as required with fixed methods, which is easy and convenient for operation. Effective resources search system should be developed and search engine can be optimized so as to help people find corresponding journals and data in the library database. Personalized resource push service is a service mode to inform students of the latest contents in the database within a fixed time according to their needs for resources and search criteria.[10]As the information of various platforms, especially academic resource platforms, is not daily updated, students fail to visit the corresponding platforms every day.

When users notice changes in platform information, the library will automatically push corresponding content to users. In recent years, some of the latest news tracking tools have been developed, which can timely push a variety of information on the page, including changes in page content, new search results of search engines or the latest news information on the Internet. School of Information, Renmin university of China, for example, cooperated with the library for research and development of APP in personalized push for digital libraries, which not only can supply all kinds of information, according to the actual needs of the people and also track people behavior, and the field that the people are interested in can be spontaneously obtained. Besides, the changes of interests can be traced for better grasp of personality preferences, and new information will be pushed accordingly.

With the help of database, information exploration, content extraction, artificial intelligence and other ways, in-depth processing of resource data can be conducted with the purpose to provide users with countermeasures that can be used for decision support, functional search, reasonable research, and problem handling.

Conclusion

Above said, the development of library in information era is in constant change. Besides, information sharing, characterization of information resources, personalized service form are the inevitable trend of the future development of all libraries. The development of libraries must correspond to the continuous development of national economy and science and technology. Scientific outlook on development can be used to instruct the development orientation of library so that the nature, purpose and objective of library are consistent with each for balanced and coordinated development, which is just the key factor determining the fast and better development of the libraries.

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