

Construction of Library Digital Resources Construction Policy Based on Demand under the Ubiquitous Information Ecology

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Abstract: In today's era of rapid development of digital information, the construction of digital information resources is an important part of Library work, which is related to the speed and extensiveness of book information access. Eco-knowledge service is the service goal of contemporary libraries in the face of information imbalance. The study of information ecology theory has played a great role in promoting this service. The theory of information ecology uses the theory, viewpoint and method of ecology to study the constituent factors of information ecosystem. Excess information and meeting the needs of readers have become the main contradictions in library services. The emergence of knowledge services has escalated these contradictions. How to alleviate these contradictions has become the top priority of modern library services. Under the information ecology, this paper regards the digital library as an information ecology system, focuses on the system model construction and the system characteristic analysis, and discusses the library digital resources construction policy and its construction process.

1. Introduction

1.1 Background

With the vigorous economic growth and rapid social development, information, especially network information, shows signs of geometric growth [1]. With the popularization and application of network technology, computer technology and digital library, the information needs of university library users show new characteristics [2]. Information resources are characterized by high digitalization, networking and multimedia. However, in the face of the immensity of information, people suddenly find it difficult to find the information they really need. As a social information service organization, the library provides the most reasonable structure, the most comprehensive disclosure, the most scientific organization and the most continuous category of information resources by comparison [3]. The university library website has become the bearing place of university knowledge, and it has become a broad platform for university libraries to provide users with information resources services and interactive exchanges. How to solve the problem of information imbalance and non-ecological problems, many scholars have used the theory and methods of natural ecosystems to explain and study and have achieved certain achievements, which has also led to research topics on information ecosystems [4]. How to effectively manage the massive information resources of the digital library and further transform it into the actual needs of users has become a realistic issue of concern to the industry.

1.2 Significance

In order to meet the different information needs of various users of university libraries, libraries should understand the characteristics of users in a timely manner and analyze the information needs of users [5]. The theory of information ecology is based on the research of information science and ecology. It uses the theory, viewpoints and methods of ecology to study the components of the information ecosystem. Through data standardization work, the overall data planning is more solid, so that the overall data planning results can play a guiding role in the construction of integrated information systems. This is what we call information resource planning [6]. Under the background of the knowledge innovation society, the traditional information service of the library is difficult to

meet the knowledge needs of readers and users. It is urgent to require the library to provide knowledge services for the knowledge content to track the reader's needs and solve the reader's problem [7]. Whether the information construction of the university library website is successful depends on whether the library website can attract the attention of college users, and whether it can finally achieve the purpose of effectively transmitting information on the library website [8]. In the information ecology, this paper regards the digital library as an information ecosystem, focusing on the construction of the system model and the analysis of the system characteristics, and discusses the library digital resource construction policy and its construction process.

2. The Concept of Library Information Resource Planning

The concept of library information resource planning is put forward on the basis of the broad concept of information resource planning and the nature of Library work. From the point of view of using library, the users of university library are divided into two parts: in-library information users and out-of-library remote information users. The digital library we discuss is essentially an artificial system based on computers and various information technologies, supported by information resources and with people as the core. The ecosystem service evaluation system evaluates a knowledge service according to the feedback of knowledge users and the solution of users' problems and the service process, including the evaluation of information resources, the evaluation of information ecological subjects, and the evaluation of service strategies. The construction of university library website information based on information ecology requires the real realization of information ecology concept to guide the construction of university library website information, and the theoretical method of university library website information construction to achieve the purpose of information ecology. The arrival of the era of knowledge economy has brought the society to a knowledge-based society. Knowledge learning has become the lifelong need of the members of the society, and knowledge innovation has become the main theme of the knowledge-based society.

Information resource planning can effectively solve the contradiction between the limited life cycle of information resources and long-term needs. Users of remote information outside the library cannot come to the library in person, but with the help of the network information service platform provided by the university digital library, they can access and log on the homepage of the university library remotely to realize the information demand. The ecological information management subsystem will make corresponding decisions according to the evaluation results of the ecological service evaluation subsystem, including some adjustment decisions, optimization decisions, etc., and transfer the decision information to the ecological knowledge management database [9]. Since data, information and knowledge are the basic raw materials on which library services depend, the comparative analysis of information services and knowledge services should start with the relationship between data, information and knowledge. Based on the information ecology, the construction of university library website information, infiltrating the green ecological concept into the construction of university library website, provides a new perspective for the construction of university library website. Information is the fact that people are given a certain meaning and interconnection after systematically organizing, organizing and analyzing data through human cognitive ability. Higher than knowledge is wisdom. Wisdom condenses past knowledge and experience, showing people's insight and forward-looking power toward the development of things and things.

3. Establishment of Information Ecosystem Model of Digital Library

3.1 Focusing on User Needs

The construction of library digital information resources is the foundation and core of Library construction. Library information construction and service should focus on the needs of users. For most libraries, the implementation of information resource planning does not need to rebuild the whole process, it is to ensure the full coupling between traditional libraries and digital libraries [10].

With the popularization of the network and the wide application of digital libraries, the number of remote information users outside the library is increasing. More and more users are accustomed to using digital resources on the network to meet their information needs. The library information ecosystem based on knowledge service can not only adapt to the environment, but also perceive the changes of the environment in advance and react actively. Promoting the development of knowledge service is the most perfect embodiment of the system construction. With the rapid development of science and technology, the technology of information processing has made great progress, which makes it possible to process digital information of books quickly. Data will not automatically become information and information will not automatically become knowledge.

The information ecology emphasizes that the contents of each part of the information construction should not be seen in isolation, but should be studied skillfully from the perspective of coordinated development, so as to better meet the needs of users and provide reference for university library website staff. In the information age, creating a document integration process has become a new concept. It is a process of integration of work links, work posts and work steps after division of labor. Fig. 1 shows the structure of digital resources construction under the information ecology.

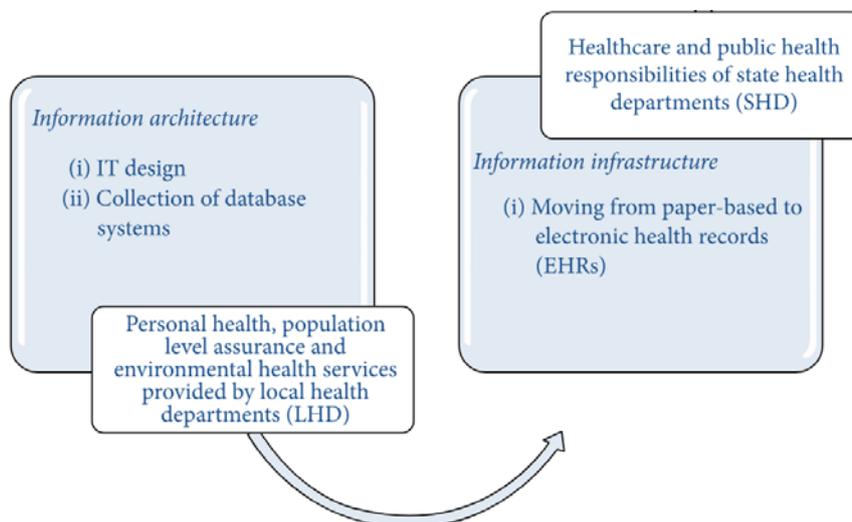


Fig.1. Digital resource construction structure under the information ecology

Librarians should be able to use the powerful information resource management functions of the digital library to collect and filter information for users in a comprehensive and systematic manner according to the characteristics of changes in user information needs. Information producers and information consumers have overlapping status. Sometimes they not only browse and obtain information, but also publish information as a communicator of information. With the continuous development of network technology, in order to meet the diversified and all-round information needs of users, the construction of digital information service platform oriented by user needs should transform the idea of focusing on a single digital library. Organizational system uses various information organization schemes to organize the information of the whole website according to the specific structure. Information organization system is the basis of identification system and navigation system. The sub-system of ecological factor regulation will adjust the ecological subject and information resources of the ecosystem according to the decision information of the database of ecological knowledge management, and further improve the quality and structure of the information ecological subject. The application of system theory and system method in ecology has promoted the development of ecology and laid a new foundation for the research and development of ecosystem.

3.2 Integration of Digital Information Resources

The integration of digital information resources is to organize relatively dispersed resources and independent information services in accordance with certain purposes and corresponding ways to

facilitate users' use. In the data layer, the purpose of information resource planning of university library is to improve the data sharing ability of library by formulating data element standard, information classification standard and user view standard of department. Digital information consumers are users or readers of digital libraries. What they are most concerned about is whether they can receive and effectively screen out the useful digital information resources for themselves and make use of them. From information to knowledge, it mainly establishes the relationship between information and user needs, interprets information and gives meaning to information. Based on the information construction of information ecology, information construction theory is applied to adjust the balance between users and environment, between users and content, and between content and environment. Information demanders are no longer satisfied with obtaining only documentary clues or original documents from the library, but require the library to provide them with excellent information that can solve practical problems. Integrating traditional libraries, digital libraries and other digital information resources can not only avoid repeated development, but also provide users with convenient and efficient information services.

The purpose of the informatization construction experiment based on information ecology is to study the influence of different vector dimensions on the judgment results of emotional orientation. Table 1 shows the accuracy results of data sets in different feature dimensions. The change trend of accuracy rate under different feature dimensions is shown in Fig. 2.

Table 1 Informational experiment results based on information ecology

Feature dimension	20	40	60	80	100
Accuracy (%)	78.17	74.35	78.57	81.39	70.89

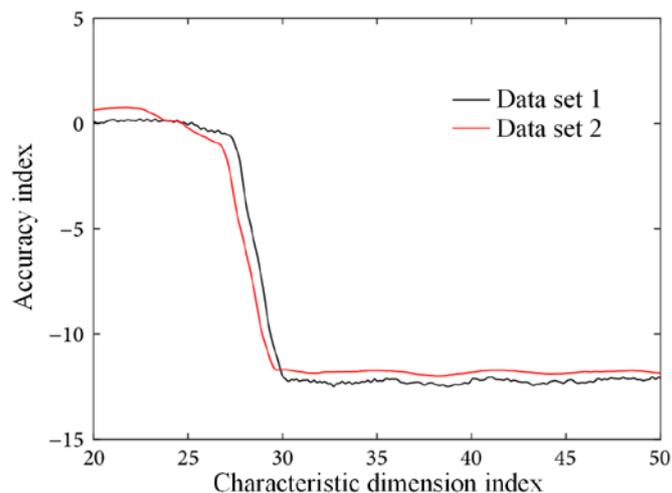


Fig.2. Trends in the construction of information dimensions construction patterns under different feature dimensions

With the integration of the one-stop digital information resource platform, users put forward higher requirements for the time and interaction functions in the information collection process, and shortened the waiting time, real-time communication and other user requirements prompted the generation of information digital resources interactive services. At the application level, the purpose of university library information resource planning is to use modern information technology to improve work efficiency and service quality. It is to deploy relatively independent application systems on a unified data platform and to determine the roles and relationships between each other. After entering the system, digital information is transmitted to consumers and decomposers by producers, and then processed by decomposers and fed back to producers. The transmission of digital information among information users forms an information ecological chain. The establishment of any ecosystem depends on the objects, contents, methods and angles people study. The ecological service evaluation subsystem can comprehensively evaluate the information environment and generate prediction data for transmission to the ecological knowledge

management database. An entire ecosystem can be divided into several subsystems, and the ecosystem has the characteristics of organization, inclusiveness and hierarchy, thus the ecosystem has a hierarchical structure.

4. Conclusion

With the continuous increase of the state's investment in the construction of colleges and universities, all aspects of the level of colleges and universities are steadily improving, and the construction of digital libraries, which can best reflect the overall level of schools, has gradually become the focus of attention from all walks of life. On the basis of fully analyzing and studying the supporting mechanism, subject and flow of library information ecosystem based on knowledge service, this paper constructs the library information ecosystem subsystem, system model and structure, and puts forward the management measures of information balance. The library information ecosystem based on knowledge service consists of information ecological subject, information and information ecological environment, and the information ecological subject is the core of the system. The construction of library information ecosystem is to realize knowledge service in the process of optimizing the main body of information ecosystem, improving information ecological environment and improving the quality of information resources. It is of great significance for the development of library to construct a healthy and rational library information ecosystem. Through the construction of digital information platform and mobile information service, the construction of library digital information resources promotes interactive experience and provides targeted personalized services, and ultimately achieves a win-win situation between resource construction and information service.

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