

Retraction

Retracted: Library Personalized Service System Based on Computer Network Technology

Security and Communication Networks

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

- [1] Z. Song and L. Dang, "Library Personalized Service System Based on Computer Network Technology," *Security and Communication Networks*, vol. 2022, Article ID 2550820, 6 pages, 2022.

Research Article

Library Personalized Service System Based on Computer Network Technology

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In order to solve the library's demand for computer network technology, a research on the library's personal system service is proposed. A library-based self-service model was originally designed and developed. The system is developed from six aspects: resource association analysis and mining, reading interest analysis, data collection, personal service, personal service scheduling, and data warehouse. Secondly, it shows that this study has done some research on library application itself and completed some research. Finally, libraries can accomplish personal services in a variety of ways, such as distributing modifications, smart administrators, vertical portals, pushers, and more. In foreign libraries and universities represented by North Carolina State University and the Data and Information Center of the Chinese Academy of Sciences, the construction of personal data in digital libraries has become an important part of future development. According to the law, 57.9% and 65.0% of users ranked search engines as second only to e-mail in the China Internet Improvement Data released by the China Internet Network Information Center in 2000 and 2005, respectively.

1. Introduction

With the continuous development of computer network technology and communication technology, people's demand for information is higher and higher. They are no longer satisfied that computer network can help them quickly deal with specific business, but need to explore the law of business activities and market operation trend from a large number of business data and make important decisions for them to participate in market competition. However, due to its limitations, the conventional database management system cannot meet the analysis of large-scale decision support data. Decision support system is very different from information management system in data processing, organization, and management. In addition to processing historical and current information, data inside and outside the system, mastering as much true and accurate information as possible, and then finding problems, it also produces value-

added data such as prediction results, implementation conditions, and consequences and impact of decision-making scheme. As the center of information resources collection, processing, and service, the library has accumulated rich information resources in the library with the continuous development of information technology. The database system of the library can efficiently realize the functions of data entry, query, and statistics and provide readers with more convenient, fast, and efficient services, as shown in Figure 1.

2. Literature Review

Computer network technology is the basis of contemporary information transmission. Its development and the development of networked system represent the new direction of the development of computer network technology. With powerful functions and fast speed, it continues to spread and

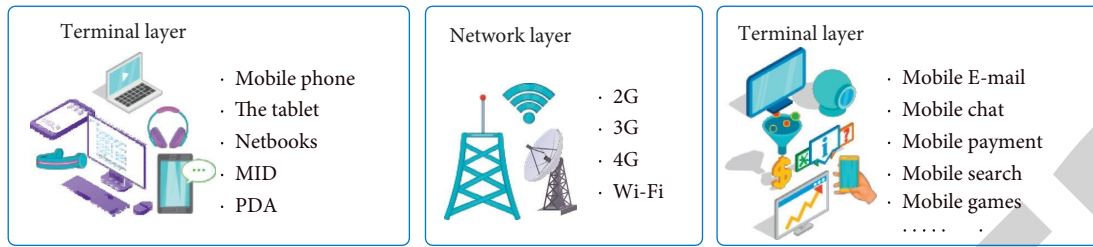


FIGURE 1: Personalized library service based on computer network technology.

develop rapidly in all walks of life, bringing the world into the network information age. As an important information resource, library information occupies a special position and role in the social information system. In order to meet the requirements of the development of information processing technology and improve the modern management level of library information, computer network technology, as a new technical means, should be more widely used in library information management [1].

At the beginning of 1990, the U.S. government began to build digital libraries, followed by libraries in other developed countries, such as France, Britain, Italy, Japan, and Germany. Zhang used ontology to solve the problem of user information description and provided a feasible method to obtain user personalized information [2]. Since 1998, the team led by Tang et al. developed MyLibrary@NCState. MyLibrary System has become a typical model of library personalized service [3]. Zhou and Nie believe that computer network application will play an important role in the scientific decision-making process of enterprise development in the era of knowledge economy [4]. Zhang et al. put forward the term “computer network” for the first time [5]. Zeng and Peng believe that the most precious information of mathematics in the network era is massive educational data, which is the core cornerstone of the development of intelligent education. Computer network technology and learning analysis technology are important fields under the computer [6].

Based on current research, research on library self-service is being proposed. With the rapid development of library informatization, becoming a self-service library has become a model. Its biggest advantage is that it can provide information services that meet individual needs according to the reader’s characteristics, background, and purpose. To get familiar with the job, the library had to use the latest information I had and check the various loan records stored in the library. First, classify readers according to their library information so that each category has the same information and then create a design template; second, delete datasets in different formats and use mining law organizations to find cooperation models. Due to the above two steps, a personalized service is provided to the readers. This not only helps to understand the characteristics of readers, improve the visiting rate of readers, improve the writing structure, and provide research data for management decision-making but also is important to understand the service level of the library [7].

3. Research on Library Personalized Service System Based on Computer Network Technology

3.1. Domestic Research Status of Library. The research and development of Chinese libraries really started in the 1990s. Compared with other developed countries, there are some differences in the functions of self-service libraries. At the end of 1999, the Ministry of Science and Technology’s “Chinese Library Demonstration System” project focused on self-service libraries; in early 2000, the “Network Library Customization Service System” funded by the Social Science Fund began to research and develop a functional library personalized customization system. This project is presided over by Professor Yu Jinfeng from the Department of Information Management of Peking University; it is a key project of Sichuan Province, which was started in October 2002 with the special fund for the research and technical work of Chinese library structure and structure development. In recent years, it has also begun to develop library service models and models; The 863 Program “China Library Project” proposes the application of information warehouse technology in library construction. An important part of this work includes the creation of large archives with central storage and management and intelligent management and mining, as well as network service knowledge and personal and intelligent human-computer interaction. At present, the self-help application of the home library is still in the early stage of research, and some work and materials are still being done, but the self-help application is still in use [8].

3.2. The Meaning of Library Personalized Service. In the past ten years, with the gradual adoption of the “computer network” model, the library has become more and more popular due to its characteristics of large data volume, less space, fast update, and freedom from time and space constraints. However, while people enjoy the convenience and speed of going through the library, they are also troubled by its large and diverse files. Because useful data are highly goal-oriented, the same data can show different benefits to different people. For a single user, it is impossible to have all the data services of the library, and the same data will not be available to all users. Self-help is the key to solving users’ “intractable” problems. It is an important means to meet the needs of different users. It is also an important measure for libraries to deal with information changes. The so-called

personal library service is a service that provides users with information content and functions that meet their personal needs based on information, user information use attitudes, behaviors, preferences, characteristics, and user-specific needs. First, it should be a service that can meet the personal data needs of library users, that is, to provide data services according to the specific needs of users or to provide users with the information they need frequently by identifying client users' behaviour of utilization. secondly, it should be a resource that supports attitudes and behavioural needs and can help people form attitudes, discover attitudes, and meet needs. Promote diversity and diversity. In recent years, computer network is an emerging computer technology and process. It has been widely used in scientific research, sales, credit management, medicine, and other industries and has shown great power. In recent years, the application of computer networks in the field of libraries has transformed and created the functions of libraries [9].

3.3. Library Concept. The library is a digital news feed with extensive information and rich content. It is a media service created with the support of information technology. It is a network data management system. It provides information to readers quickly and easily. Data are stored and user access is not limited by time and region. A library is not a simple library on the Internet, but a collection of products, distributions, and resources. Libraries can break data constraints and complete data mining and retrieval based on prior experience. Indeed, the importance of library life lies not only in changing the services of existing libraries but also in developing new ideas and tools and improving products by using its rich network and high network benefits. Library operations provide new resources for learning, living, and research, providing greater personal support [10]. Personal library service is a service that provides users with information, content, and functions that meet their personal needs according to their personalities, behaviors, preferences, characteristics, and special needs. The library uses modern network, inheritance, professional, and other technologies to obtain the professional information of library users and the information needs of users. Specifically, it stores data on the network, records the requested data, and then pushes it. The user provides the user with the required information according to the user's needs. In order to improve the quality of the library, good self-service is an important part of improving the quality of the library.

3.4. Proposal of Library Personalized Service. As early as 1992, the new US President Bill Clinton announced the concept of "highway information." With the rapid development of computer technology, network technology, and communication technology, mankind has rapidly entered the information age. As an organization specialized in the storage, use, and dissemination of information, the library is also updated with daily updates in a torrent of instructions [11].

The development of the library is mainly from the ancient times to the modern times. It can be said that the

development of the library is mainly from the electronic facilities to the digital facilities and then from the ancient times to the modern times. However, looking at today's service mode, although computer network technology has been widely used in the library, for a long time, in terms of personnel structure and organization, the personnel directly engaged in information service in the library are weak, pay insufficient attention to front-line work, and a large number of manpower are concentrated in management, book collection construction, document and information digitization, introduction of new technology, and equipment maintenance. In terms of fund operation, in addition to paying personnel salaries, most of the state funds are used for the construction of literature and information resources and the introduction of new technologies and equipment, and there are few funds for user research, publicity, education, and guidance. The current document information service mode is a popular service mode with document as the center and management as the center [12].

Personalized service mode is based on people's needs, people-oriented, caring, respecting and understanding users, and providing users with accurate information services, rather than displaying a large number of digital collection information to users. By providing personalized information services, the library can timely improve the collection construction according to the user's choice and feedback, give full play to the maximum utility of information, eliminate the purchase of "dormant" resources, improve the utilization rate of collection, and improve the service quality and service efficiency according to the user's suggestions. For users, it can improve their information retrieval ability, save the time and energy of searching data, develop their potential ability and quality, and constantly improve their knowledge level [13].

3.5. Application of Computer Network Technology in Management. Modern computer network communication technology provides the advantages of computer technology for the entire game. The storage of computer data has developed from offline retrieval and online retrieval to intelligent retrieval and network retrieval, realizing the networkization of computer data transmission and services. The realization of computer network retrieval is a high level of computer retrieval. It is the product of the combination of computer technology and network technology. As computer connectivity continues to increase, all community events are becoming more demanding and informative. Users want complete data, even if the product is more efficient. By controlling the computer, the network information is distributed, extracted, analyzed, and processed, thereby improving the relationship and efficiency of computer network operation [14].

4. Experiment and Research

4.1. Personalized Service Mode of Library

4.1.1. Personal Bookshelf. Personal bookshelf is a library that establishes a personalized information resource database for

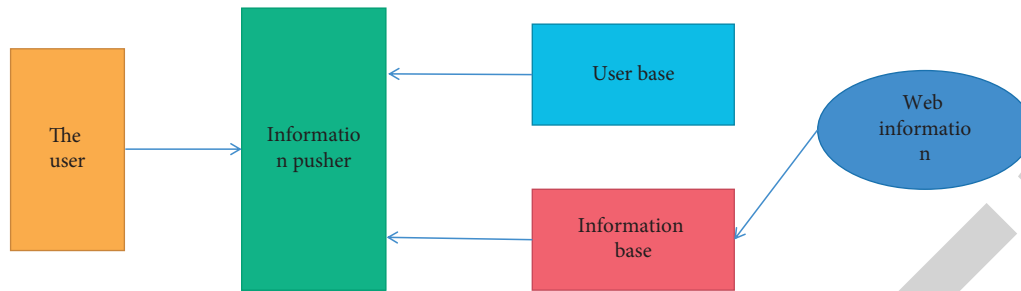


FIGURE 2: Schematic diagram of information push.

readers, that is, a private database. In the process of providing personalized services for readers, in order to provide space to save their private information, the resources found by readers that meet their needs are collected in the private database, also known as personal favorites. It is a storage space provided for each registered reader in the library server. The personal bookshelf classifies and stores the resources that readers like, historical access information resources, customization, push information resources, historical access keywords, and other information [15].

4.1.2. Personalized Retrieval. In the personalized service of the library, readers' personal files should be established, readers' interests should be identified, and readers should be classified according to readers' interest data and historical entry data. When different readers search, the search results will be different for the same research item. Provide readers with their favorite content, filter inconspicuous information, and return results that are more in line with the actual needs of readers [16].

4.1.3. Information Classification, Customization, and Push Service. Data modification distribution refers to how readers set the format, layout, and support functions required for data according to their own purposes and needs. At present, services such as distribution and modification are still the main body of library services. The customization process is based on user segmentation and data distribution [17]. When readers submit their personal information and options to the system, this information will be added to the user information. A reader's search will take advantage of this information and present the resource in one form or another. The basic process of the data push service is as follows: under normal circumstances, the user first accesses the personal data required by the system, including the user's personal information and the information required by the user and then the system or manual search. On the Internet, the affected data are continuously pushed to the user's desktop at the end. The important thing here is to actively use data retrieval, that is, to convert "searchers" into "human search data" and send the data to people through emails, "channel" pushes, special pages, etc. [18]. The special operation is shown in Figure 2.

4.2. Library Personalized Service System Structure. Through the combination of data mining and personal data mining services, readers can often find multiple ways to

access historical data, thus providing readers with private data mining services. These historical data that need to be identified and mined can be generated from archived data. Therefore, the library personal service developed in this form is a new order support system based on data warehouse, online investigation, and data mining. Its design is shown in Figure 3.

4.3. Functional Requirements' Analysis. As shown in Figure 4, the library is based on information resources and serves readers. It transmits information resources to readers through the network to form access service behavior. At the same time, the service information is recorded in the form of log.

In order to better improve the service quality and resource utilization for readers, we need to analyze the functional requirements of readers, resources, and access under the condition of understanding the characteristics and services of information resources and readers [19].

4.4. The Main Ways of Library Personalized Information Service. Self-help is the development of library services, the needs of library development are stable, and services are based on users' information needs, self-service, and performance attitudes. It is not only the deepening of the key service in the network environment, but also an important means to improve the service quality of digital library users [20].

4.5. Research on Personalized Service. Personalized service is a new research direction rising with the development of library. The development of library has entered a period of rapid development (after 2000) with the development of computer and network, especially broadband, after the initial period of origin (before 1993) and the period of concept formation (1994~1999). Personalized service is also born, and the research results have gradually entered the vision of professional researchers from scratch, as shown in Figure 5 [21].

4.5.1. The Distribution of Personalized Service Research Topics Shown in Table 1. It can be seen from Table 1 that the research on personalized service in China's Library and information circles focuses on theory rather than technology and focuses on introduction rather than analysis [22]. Nearly

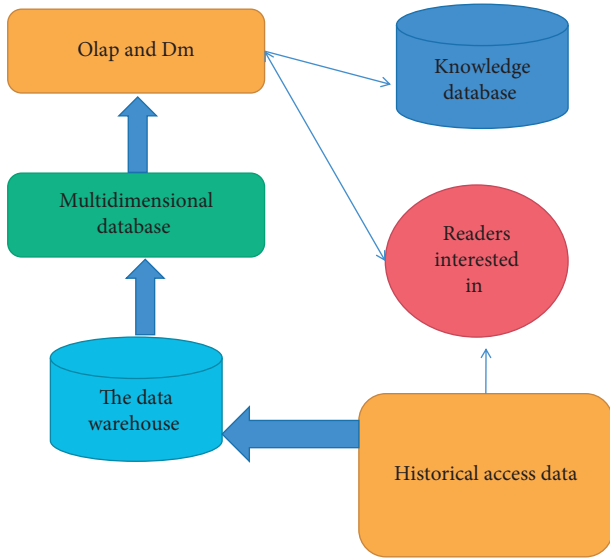


FIGURE 3: Library personalized service system structure.



FIGURE 4: Library service relationship.

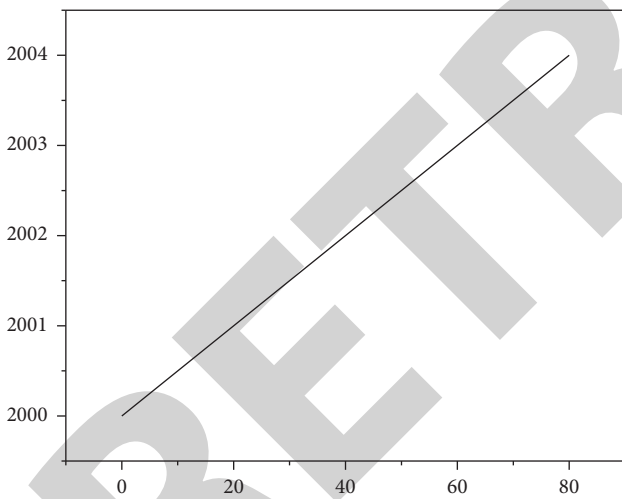


FIGURE 5: Distribution of personalized research.

one third of the articles are introducing and recommending personalized services, many of which are repetitive, refer to each other, and have no new ideas. Most of the remaining discussions are about the impact of personalized service on reader service and reference work, but most researchers can clearly foresee the changes that personalized service will bring [23].

The following research focuses on the introduction and comparative research of foreign systems. Papers in this regard are more concentrated in the first two years, and the number of papers published in this regard has decreased in recent three years [24]. The main reason is that the foreign personalized system is in a stable operation period, and there

TABLE 1: Distribution of personalized research topics.

Primary theme	Secondary theme	Number of papers	Ratio
Theoretical research	Generation background	96	12.36
	Reader service	32	32.36
	System introduction	20	8.36
	Service innovation	9	12.39
	Knowledge management	3	6.96

is no breakthrough new technology and new ideas applied to practice. For example, the typical system update period of Cornell University is 2002, while North Carolina State University is even using the 2001 system version, and it did not start to upgrade the system until 2005. In the discussion of related technologies, the number of documents issued has not increased in the past five years. With the introduction of new concepts and technologies in the first wave, the research on personalized service support technology has fallen into a low tide [25].

5. Conclusion

With the rapid development and wide application of communication and information technology, libraries in our country have been transformed into teaching and digitalization. In recent years, my country has increased investment in libraries, the storage and archiving of library information has continued to expand, and the network and servers have been popularized and improved. Aiming at the problems existing in the personal service library, such as unknown data, important information on isolated islands, and personal services, this paper introduces data warehouse online analysis into library personalized service system and combines computer network technology to carry out in-depth theoretical and practical research. In the information age, modern information is advancing by leaps and bounds, providing network management services for various functions and stages. Therefore, all communication activities are suitable for the design of the network direction. Therefore, in order to better understand its data and business environment and meet the needs of design and development, a data management network should choose the owner of the network to guide its practice.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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