Research on Intelligent Service Mode of University Library in Mobile Environment

Nan Chunjuan

Nanyang Institute of Technology, Nanyang, Henan, 473004, China

Keywords: Mobile Environment, University Library, Intelligent Service

Abstract: under the Mobile Environment, the Characteristics of Intelligent Service of University Library Mainly Include High Utilization Rate of Resources in the Library, Accurate and Rapid Positioning of Resources, Obvious Intelligent Characteristics of Librarians, and Intelligent Service for Readers. This Paper Discusses the Innovative Measures of the Intelligent Service Mode of University Library in the Mobile Environment from Five Aspects: Innovating the System of Intelligent Librarian Training, Attaching Importance to the Development and Application of New Technology, Improving the Capacity of Resources Intelligent Co Construction and Sharing, Perfecting the Laws and Regulations Related to the Intelligent Library, and Deeply Excavating the Collection Resources.

1. Introduction

The Intelligent Library is a Mode That Connects the Internet and the Internet of Things, Applies the Intelligent Technology to the Library, Improves the Level of Library Knowledge Service, Creates a More Intelligent Knowledge Reading Space, and Satisfies the Readers' Knowledge Needs to the Greatest Extent[1]. At Present, University Library, as the Cultural Center of University Campus, Focuses on Literature Service, Information Service and Knowledge Service, But Pays Little Attention to Intelligent Service. under the Mobile Environment, the University Library Should Strive to Innovate the Service Mode, Transform the Knowledge Service into the Intelligent Service, Strengthen Its Own Networking, Digital and Intelligent Construction, Build the Library into an Intelligent Building Based on Cloud Computing, Mobile Internet and Internet of Things, and Provide Efficient, Interconnected and Convenient Intelligent Service for Users.

2. High Utilization Rate of Resources in the Library

According to the Different Needs of All Kinds of Readers, Librarians Will Analyze and Integrate Massive Information Sources, and Carry out Intelligent Screening. with the Help of Intelligent Bookshelf, Internet of Things, Cloud Computer and Other Advanced Equipment, They Will Provide Readers with Efficient and High-Quality Information Services. in the Process of Processing the Library Documents, the Basic Information of the Documents Can Be Saved in the Rfid Chip[2]. If Readers or Librarians Find the Required Documents, They Can Directly Obtain the Whole Row of Bookshelves or the Whole Borrowing Center Document Information with the Help of Intelligent Equipment, So as to Meet Their Own Needs. the Construction of Intelligent Library and the Application of Internet of Things Technology Improve the Utilization Rate of Resources and the Working Efficiency of Librarians.

2.1 Accurate and Fast Positioning of Information Resources

Advanced intelligent technology is the necessary foundation of building intelligent library. At present, RFID technology and Internet of things technology are widely used. Under the mobile environment, the construction of University intelligent library is inseparable from the high-speed transmission technology of information resources, various information terminal interaction technology, organization technology of multimedia resources, information acquisition and perception technology, big data analysis technology, etc[2]. Only in this way can we realize the co

construction and integration of knowledge, convenient access, barrier free transformation and cross time and space access. The use of RFID technology is the premise of smart perception, which can help university libraries to realize self-service loan and return, navigation, tracking and positioning services, and is conducive to the construction of smart bookshelves. At the same time, with the help of Internet of things technology, it can meet the needs of teachers and students to accurately locate and use the collection resources anytime and anywhere [3].
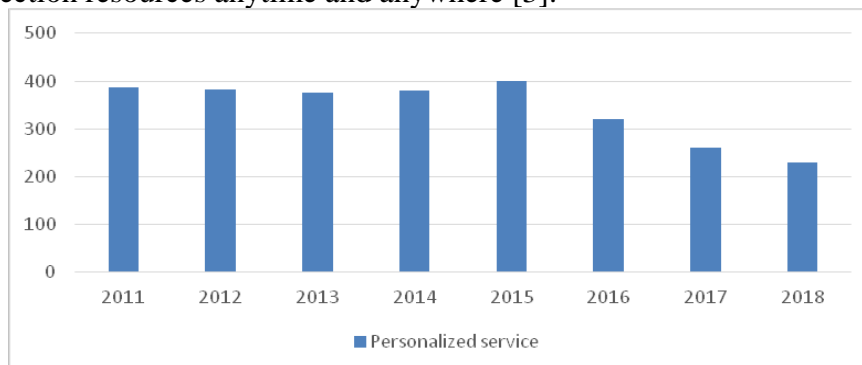

Fig.1 The Volume of Literature Publication Related to Personalized Service and Knowledge Mining in Libraries over the Years

2.2 Obvious Intelligent Characteristics of Librarians

The construction of University Intelligent Library puts forward higher requirements for the comprehensive quality of librarians. The intelligent characteristics of librarians are more obvious. Librarians need to be proficient in the Internet of things and intelligent technology, and be able to actively and flexibly provide users with various and ubiquitous knowledge services and knowledge innovation applications [4]. At this stage, the core work of librarians is to help users transform knowledge into wisdom, improve users' ability to acquire knowledge, manage knowledge and innovate knowledge, and help users to smoothly transition from "having knowledge" to "having wisdom"[5]. Librarians should not only love their jobs, but also have the connotation of innovation and creation. For users, smart librarians are knowledge managers, guides, and close partners and instructors. Librarians should integrate into the field of teaching and research, provide users with all-round intelligent services in daily teaching and research, and sublimate from information guidance to knowledge value-added management services.

3. Smart Service with Readers as the Core

With the help of cloud computing technology, relying on the Internet and using the new generation technology, the intelligent library has realized the deep connection between people and resources, resources and resources, and people. This provides strong technical support for the realization of intelligent service for readers. The intelligent information service of university library has built a bridge of communication and exchange between readers and knowledge, which can provide readers with humanized and convenient knowledge service, and plays an important role of resource owner, knowledge arranger and wisdom enlightener. It pays close attention to the readers, timely perceives the service needs of the readers, scientifically analyzes the daily behavior data of the readers, fully understands the readers' reading preferences, integrates the topics and research contents of various scientific research institutions in Colleges and universities, extracts and integrates high-quality knowledge resources, and accurately pushes high-quality scientific research information for the readers and scientific research institutions. The library's intelligent service is oriented to the readers, which is the sublimation and deepening of literature service, information service and knowledge service.

4. Advanced Intelligent Mobile Internet Technology

RFID radio frequency technology, cloud computing, Internet of things and other new

information technologies have laid a solid foundation for the construction of intelligent library, improved the response speed, clarity and mobility of knowledge demand, greatly changed the mode of knowledge resource exchange between readers and library, and can realize intelligent management and service. Intelligent library is characterized by high efficiency, convenience, interconnection and pleasant experience. It tries to transform the past "Information Center" and "knowledge center" into "intelligent center", and sublimate knowledge service into intelligent service[6]. It is a more advanced transformation and transformation on the basis of digital library, which realizes the best barrier free communication among knowledge, readers and library Methods: open the library intelligent service mode: collaborative cooperation, individual interconnection, highly intelligent integration of resources, efficient and convenient knowledge resources, quality service everywhere, personalized push, active participation of readers, pleasant experience, etc.

5. Training and Construction System of Innovative and Intelligent Librarians

The development of University intelligent library can not be separated from the participation of intelligent Librarians in the whole process. Librarians can not only be the "gatekeeper" of the library, but also the living soul of the humanistic spirit of the library. The comprehensive quality of librarians directly affects the quality of intelligent service. Therefore, librarians should keep pace with the development of the times, change the service concept, enhance the service consciousness, innovate the service mode, and provide high-quality mobile reading service for college students. They must have rich library and information knowledge, be able to effectively integrate and analyze library information resources, track user behavior in real time, deeply tap user needs, timely push knowledge resources, and closely integrate with scientific research activities, so as to provide personalized academic services for teachers and students. Relying on intelligent technology equipment, ubiquitous mobile wireless network and massive big data resources, the intelligent library is committed to providing users with unique knowledge services, in which the intelligent librarians play an important role [7]. The university library should regularly carry out intelligent vocational training for librarians, provide degree further education, actively cultivate librarians with innovative and struggling spirit, focus on advantageous resources and carry out intelligent service in depth, carry out subject knowledge education for librarians with library and information background, and provide library and information related knowledge training for librarians with other subject knowledge background, through mutual communication To achieve common progress[8]. In order to change the old way of librarian recruitment, we should not only focus on the professional direction and educational level, but also adopt the mode of qualification certification, unify the proposition and conduct comprehensive assessment. Arrange the existing librarians according to different departments and positions, optimize the comprehensive use of smart librarian resources, arrange the appropriate librarians to the right positions, and make the best use of human resources. Stabilize the team of smart talents, create a platform for smart librarians to display their talents and realize their own value, and avoid brain drain.

6. Pay Attention to the Development and Application of New Technology

Every leap forward development of the library is a process of change in the application of new technologies. The attitude of the library to the new technology has a direct impact on the future development direction of the library. The use of network technology and information technology, the smooth transition of the library from manual service to automatic service stage, to a large extent, reduces the complicated and trivial manual labor burden of librarians, and ensures the specialization and characteristics of library services. It is followed by the wide application of new generation technologies such as Internet of things, RFID radio frequency technology and cloud computing, which will promote the deep exploration of Librarians' intellectual resources and provide favorable guarantee for the realization of ubiquitous intelligent services in libraries. As the knowledge document center of university campus, university library is not an independent scientific and technological institution, but it should be an active user of new technology. In most cases, the

library is to use new technology to help its own leapfrog development, but it should be combined with its own characteristics, not blindly use new technology, to study new technology, improve the practicability and applicability of technology, and need to carry out innovative research on new technology. The intelligent library uses the Internet of things and RFID technology based equipment to carry out intelligent innovation services, pays attention to the integration and optimization of resources, perceives users' resource needs, and provides services such as humanized self-service information services, personalized characteristic resource services, automatic positioning services, multi-dimensional interactive services, etc., to create an intelligent integrated collection platform.

7. Conclusion

In the mobile environment, the construction of Smart Library needs to be guaranteed by sound laws, regulations and relevant service systems. The ubiquitous Internet is prone to hidden dangers in the open access to massive resources, network security, intellectual property rights, information security and other aspects. Improving the laws and regulations related to the intelligent library is conducive to creating a good external environment and removing obstacles for the development of the intelligent library. At the same time, under the correct guidance of sound laws and policies, university libraries can better carry out long-term cooperation with social forces such as companies and enterprises, effectively solve practical problems such as shortage of funds and personnel, and inject vitality into the development of smart libraries. Relevant departments should deeply study the advanced experience of Library standardization in developed countries, make full efforts to promote the formulation of working standards of Smart Library in China, and improve the construction capacity of Smart Library from the aspects of system management, public participation, information acquisition, publicity and promotion, funding guarantee, etc[9]. The university library should scientifically plan the construction of the service mode innovation system of the intelligent library, formulate the overall plan, reasonably formulate the development strategic goal, define the direction of innovation intelligent service, and ensure the healthy and sustainable development of the intelligent library. Reform the inefficient management system of the library, optimize the internal management of the organization, establish a flat horizontal organization, avoid redundant layers of examination and approval, improve the efficiency of the organization and management, strengthen the overall standard consciousness of the service innovation mode, comprehensively consider the design and structure of the software and hardware platform of the intelligent library, encourage the cooperation and communication of all departments, and jointly improve the service innovation of the Intelligent Library New relevant system.

References

[1] Ngangbam Herojit Singh, Khelchandra Thongam. (2018). Neural network-based approaches for mobile robot navigation in static and moving obstacles environments. Intelligent Service Robotics, vol. 12, no. 1.

[2] Chi-Sheng Shih, Ching-Chi Chuang, Hsin-Yuan Yeh. (2017). Federating public and private intelligent services for IoT applications. 2017 13th International Wireless Communications and

Mobile Computing Conference (IWCMC). IEEE.

[3] Yanan Zhang, Hongyu Wang, Fang Xu. (2017). Object detection and recognition of intelligent service robot based on deep learning. 2017 IEEE International Conference on Cybernetics and Intelligent Systems (CIS) and IEEE Conference on Robotics, Automation and Mechatronics (RAM). IEEE.

[4] Qian C,. (2017). Nankai University Library. The Content and Development Trend of Library Service Innovation under the Environment of MOOCS--Based on the Analysis of Chinese Academic Journals Online Publishing.

[5] Mingxuan Chen, Caibing Liu, Guanglong Du. (2018). A human–robot interface for mobile manipulator. Intelligent Service Robotics, vol. 11, no. 2, pp. 1-10.

[6] Zhang jingjing, wang bosen. (2018). Reflections on experience design of university library. Design.

[7] Hajar Khallouki, Mohamed Bahaj. (2017). Multimedia documents adaptive platform using multi-agent system and mobile ubiquitous environment. 2017 Intelligent Systems and Computer Vision (ISCV).

[8] Kamil Radziak, Dariusz Litwin, Jacek Galas,. (2017). Mobile environment for an emission spectrometer. Photonics Applications in Astronomy, Communications, Industry, and High-Energy Physics Experiments 2017. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series.

[9] Machen, Andrew, Wang, Shiqiang, Leung, Kin K,. (2017). Live Service Migration in Mobile Edge Clouds. IEEE Wireless Communications, no. 99, pp. 2-9.