

A Study on the Measures for the Informatization Construction of University Library Management

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Abstract:

In the current era, as the internet integrates seamlessly into various industries, the transition towards informatization in university libraries has emerged as an unavoidable progression. This paradigm shift has significantly bolstered the efficiency and effectiveness of library staff, facilitating swift access to data regarding book inventory and lending rates, streamlining workflows, conserving valuable work hours, and promoting the judicious utilization of library resources. This scholarly article initiates a discourse on the indispensable nature of informatization in the realm of university library management. It delves into a meticulous analysis of its distinctive features within the informational ecosystem, and, drawing from the contemporary developmental trajectory of university libraries in China, it advocates for and elucidates a spectrum of pertinent strategies and initiatives. The objective is to navigate through the intricacies of this digital transformation, ensuring a seamless integration while elevating the standard of library services and resource management to unprecedented heights.

Keywords:

University, Library Management, Informatization Construction, Measures Research

1. Introduction

With the popularity of network technology, network and computer technology have gradually integrated into people's work and study, simplifying problems encountered in life and learning, and bringing convenience to work and life. With the widespread application of network technology in universities, the traditional management mode of university libraries has also changed. The traditional management mode of university libraries cannot meet students' requirements for quickly finding the books they need, nor can it satisfy their reading needs. Therefore, informatization management of university libraries will become a trend in the future. Managing libraries through informatization can better improve students' borrowing rate and provide better reading services for students.

2. Current Status of Informatization Construction in University Library Management

2.1. Traditional Borrowing Mode Results in Low Work Efficiency of the Library

Even though some university libraries in China have initiated the transition towards informatization management for book handling, there are glaring gaps in the implementation, particularly due to the imperfect state of the associated equipment. This results in numerous operational challenges within book informatization management. Additionally, many universities continue to rely on traditional management practices in library informatization, positioning students and teachers solely as service recipients. In the traditional borrowing and returning process, librarians are required to manually register information of borrowed books, a practice that is not only time-consuming but also requires significant manpower. This inefficiency in the borrowing or returning process adversely affects students and teachers, highlighting an urgent need for a more advanced level of informatization in university libraries. The manual processing involved in traditional borrowing and returning methods exemplifies the inefficiencies of the old system. It is labor-intensive, prone to human error, and leads to operational bottlenecks, resulting in longer waiting times and diminished user satisfaction. To address these issues, it is crucial for university libraries to not just adopt, but to excel in informatization management. This necessitates investing in cutting-edge equipment, updating existing systems, and overhauling outdated management methodologies. By undertaking these measures, university libraries can evolve from being mere book repositories to vibrant knowledge centers, thereby enhancing efficiency, user-friendliness, and providing an enriching environment for students and faculty alike.

2.2. Lack of High-Quality Professional Management Talent

The traditional staffing model in university libraries, where family members of teachers or retired educators are appointed to manage book borrowing and returning processes, poses significant challenges in today's digital age. Often, these individuals, despite their connections to the academic community, may lack the necessary educational background and specialized skills required for managing a modern, informatized library. This deficit in cultural education and professional knowledge leaves them ill-equipped to handle the complexities of digital library management, leading to inefficiencies and an inability to meet the evolving demands of teachers and students. In the context of our rapidly progressing information society, the expectations placed on library services by both faculty and students have increased substantially. They require swift, efficient, and user-friendly processes for borrowing and returning books, alongside access to a broad range of digital resources. Traditional management methods, reliant on staff without specialized training in library science or information management, fall short of meeting these expectations. As a result, there is an imperative need for a paradigm shift. Investing in high-quality professional management talent, individuals who possess both a deep understanding of library sciences and the technical skills required for digital library management, becomes essential. By doing so, university libraries can enhance their service quality, significantly improve the efficiency of borrowing and returning processes, and successfully navigate the transition towards comprehensive informatization, ensuring they remain relevant and valuable resources for the academic community [1].

2.3. Low Efficiency in Resource Allocation

Currently, a prevalent phenomenon in most libraries is the low efficiency in resource allocation, which hinders effective resource management. Additionally, there is an issue of irrational book collection structure, impeding the development of library informatization. Despite the vast collections and broad coverage of most libraries, inefficient book collection measures result in many resources being underutilized. Although electronic books have become increasingly common in libraries, they can never fully replace physical books. A significant reason for this is that, under the current social environment, most publishers still rely on traditional physical books and newspapers as their main source of income. Physical books also offer convenience for readers. Furthermore, not all publishers have the financial capability to digitize all their physical books, nor are all users willing to purchase them, and schools may not provide sufficient electronic book reading devices.

2.4. Insufficient Efforts in College Informatization Construction

Libraries in universities and colleges stand as critical entities, significantly enriching the educational experience for students. Their transformation towards comprehensive management informatization is a paramount progression, ensuring broader access to diverse resources and robust technical support for the student community. This shift transcends the enhancement of library services, playing a pivotal role in nurturing a flourishing information culture across the campus. It propels the educational institution towards modernization, establishing a learning environment that is both highly accessible and superior in quality, thereby raising the overall educational standards. Further emphasizing the importance of informatization in academic libraries, this advancement enables a more adaptive and user-friendly system for course selection, offering students a richer array of elective courses to choose from. Additionally, it facilitates the strategic curation of resources, ensuring the availability of professional books and materials tailored to the needs of the local student body. This not only aids in deepening their expertise but also promotes continuous development and excellence in their respective fields of study. These comprehensive benefits underscore the imperative for unwavering dedication to the informatization of college libraries, promising not just immediate advantages for the current student generation but ensuring the sustained progression of the educational institution at large [2].

3. The Necessity of Implementing Informatization in College Library Management Work

3.1. Enhancing the Efficiency of Library Management Work

The advent of the network era has further developed and matured our country's information technology, which is now widely applied in various domestic industries. Although it is necessary to realize informatization in college library management work, it is crucial to first recognize its significant role in library development. Library informatization management applies network technology to library management, allowing for more scientific and efficient management. By using network technology to efficiently organize and collect information on library book loans and returns, continuous innovation in library management models can be achieved, alongside improved work efficiency and maximized utilization of library materials and books. Traditional library management methods rely on manual storage, registration, and

logging of book borrowing and returning information. This not only consumes the time of library managers but also reduces work efficiency, making it difficult to meet the borrowing needs of teachers and students. Additionally, as most traditional library materials are in paper form, manual management and organization can cause some damage to books and materials. This is detrimental to book preservation. Furthermore, information errors may occur during registration, causing inconvenience in library management work. Nowadays, most books and materials have QR codes. Simply scanning the QR codes on books or materials can classify and place them. Additionally, an informatization management system can be used to inquire about the library's borrowing and returning situations, assisting librarians in organizing and recording the books and materials in the library, enhancing the level of library informatization management, and significantly reducing the possibility of errors in data management. However, regular management and maintenance of the library's management system are also required in routine work to prevent system crashes and avoid inconveniencing teachers and students in borrowing books.

3.2. Simplifying the Borrowing Process and Saving Manpower

Traditional books are physical, and purchasing and managing them requires a significant amount of manpower and time, especially when entering book information. Implementing informatization management in libraries allows for the input and update of book information via computers and other devices, as well as updating book resources and information through an online management platform. Simultaneously, establishing a library information management platform realizes the self-service borrowing and returning of books and newspapers, alleviating the work pressure on administrators. In traditional libraries, staff need to regularly manage and maintain books, consuming a significant amount of energy. Coupled with the low professional level of library management staff and lack of professional management capabilities, and considering the increasing number of library resources, the demand for library management staff is ever-increasing. Utilizing information technology in libraries can effectively improve work efficiency and reduce the work pressure on administrators. Additionally, using the network management platform, book resource information can be registered, and teachers' and students' borrowing situations can be recorded, making the borrowing and returning process simpler and more convenient for school teachers and students.

4. Characteristics of University Library Management in the Context of Information Technology

4.1. Dependence on Software Systems

In the era of rapid technological advancements, university libraries have extensively integrated sophisticated software systems to optimize their operations, embracing devices like management software, automated book lending and return kiosks, and self-service borrowing machines. All these tools operate on intricate intelligent management systems, ready for deployment after careful setup and calibration. The implementation of these systems undoubtedly alleviates the workload of librarians, providing consistent and reliable services to readers around the clock. However, this transition towards a technology-centric operation introduces a set of challenges, particularly evident when systems require updates or maintenance. During such periods, these automated services become inoperable, disrupting the flow of

borrowing and returning activities. This situation exposes the library's profound dependency on software systems, a risk factor that could lead to a temporary paralysis of library operations if not adequately addressed. Thus, while intelligent book service systems have their advantages, the overreliance on software necessitates the development of robust backup systems and alternative procedures, ensuring that library services remain uninterrupted, even during unforeseen technological setbacks [3]. This balanced approach safeguards the library's functionality, ensuring the academic community continues to receive uninterrupted access to vital resources.

4.2. Large Volume of Information Storage

Library book management, which primarily deals with physical books, encompasses various categories including cultural, educational, economic, and computer books. In the traditional system, borrowers had to manually search for books on the shelves, a process that was not only time-consuming but also prone to disappointment when the desired book was found to be already borrowed by someone else. This manual system was fraught with inefficiencies, often necessitating multiple rounds of searching to locate a single book, only to find it unavailable. The advent of intelligent book management equipment has dramatically transformed this scenario. Today, libraries are equipped with systems capable of storing vast amounts of data related to book transactions. This includes detailed information about each borrower's history, such as the times and dates of book borrowings and returns, the total number of borrows, and the duration of each borrowing period. Additionally, facial recognition technology has been incorporated to streamline and personalize the borrowing process. On another front, the integration of intelligent devices has facilitated the conversion of some physical books into electronic files, making them accessible as digital books. While electronic books are more commonly found in provincial libraries, university libraries are increasingly leveraging intelligent equipment for efficient information management, ensuring that their resources are easily accessible and well-organized [4].

4.3. Simple and Quick Operations

With intelligent devices, borrowing and returning books only require a barcode scan, making the process very convenient and fast, with the entire process taking no more than 5 minutes. College students in the new century have been using these devices since they were very young, learning how to borrow and return books and search for information through reading devices. Assume a university has over 30,000 students. If there is only one librarian responsible for scanning books at the library entrance, the librarian would have to scan books all day long. Mistakes are easily made during the borrowing and returning process. Intelligent devices rely on a software system, and each reader's information is unique. Some devices can complete the entire borrowing and returning process through facial recognition, making it simple, fast, and less prone to errors [5].

5. Measures for the Construction of Information Management in University Libraries

5.1. Enhancing the Importance of Information Management in Libraries

Currently, society should regard strengthening the construction of information management in university libraries as a top priority in university construction.

Enhancing teachers' teaching abilities and providing students with more high-quality educational resources are the basic goals of university development. At the same time, library resources can also enhance students' academic performance, thus providing teachers with more educational materials. Therefore, universities must pay more attention to the information management of libraries. This requires school leaders to follow the trend of the times, actively introduce modern information technology into library work, and formulate a set of information management methods suitable for the school's development, in combination with the actual development of the school. The library is a place that can improve students' academic performance and enhance teachers' educational levels [6]. Therefore, universities must pay enough attention to the information management of libraries, put the information management work of libraries on the agenda, improve the library's collection, pay attention to the quality of the collection, purchase books according to the needs of school teachers and students, and maintain and manage the purchased books in a timely manner to ensure the normal operation of the library's information management system.

5.2. Increase Financial Investment for Library Information Technology Construction

To achieve a fully digitized library, there's a need to boost financial investments. Advanced equipment and machinery must be acquired to ensure the integration and functionality of an entire informational management framework. By augmenting financial commitments, both the realization of library information management and the sustainability of the system's health are possible. Moreover, be it the onboarding of skilled professionals or procuring equipment, substantial funds are imperative. If the school's budget is insufficient, alternative channels for fund-raising can be explored, including collaborations with local businesses, to financially support the library's growth and digital management endeavors.

5.3. Innovate Service Models in the Management Process

Given current societal advancements, universities must revamp their library management models. Beyond conventional methods, there's a dire need for innovative strategies merged with cutting-edge information technology to achieve a library's digital management. Universities should prioritize and expand their library's online management platforms. The proliferation of internet technology has enabled the digital transformation of library management, facilitating easier book loans for educators and students and offering an array of services online. Additionally, online technology can serve as an information guide in libraries, showcasing a plethora of book resources and aiding faculty and students in swiftly locating their desired books and periodicals, thereby reducing time consumption and enhancing search efficiency.

5.4. Focus on Enhancing the Quality of Management Personnel

Presently, some domestic universities are directing attention towards digital library management, but there's a discernible gap in both equipment and talent to meet current demands. Attracting skilled professionals is pivotal for establishing a digital library management system. To truly excel, managers must adapt to the times, embrace new ideologies, and possess professional competencies. Blind reliance on traditional management styles and thought processes won't suffice. A blend of contemporary online technology and management models is essential to devise an innovative digital management system. Therefore, universities should intensify

training programs for managers in information technology, enriching their computer skills, and familiarizing them with advanced online management systems. Additionally, elevating managers' professional competence and harnessing progressive management techniques to bolster their understanding of digital management tools can help ensure a library's successful digital transition [7].

5.5. Continually Refine the Library Management System

For the realization of a digital library management structure, constant workflow improvements and management system enhancements are vital. Thus, universities can draft pertinent rules and regulations in line with their libraries' unique conditions. The formulated guidelines should not only effectively supervise managers but also ensure seamless library operations, offering advanced directives for them. Crucially, a systematic approach can guarantee operational efficiency, elevate the quality of services, and present faculty and students with exceptional services and a congenial reading ambiance. Furthermore, to construct a digital library management platform, universities should fuse their pedagogical ideologies and institutional characteristics, continuously refine their library management systems, and architect an informational management system congruent with library operations [8].

5.6. Emphasize Innovative Management Philosophies and Concepts

The constraining nature of traditional management practices has significantly impeded the progression and establishment of efficient digital library management systems. These conventional approaches often lack the flexibility and adaptability required to navigate the complexities of the digital realm, resulting in systems that are outdated and inefficient. In order to construct a digital platform that not only meets but exceeds the expectations of users, there is a critical need for a paradigm shift in the way libraries are managed. Innovation should be at the forefront of this transformation, breaking free from the limitations of past practices and exploring new, more effective methods of management. This innovation requires a clear definition of roles and responsibilities within the library management structure, highlighting the distinctive features of digital management, and ensuring a perfect alignment with the specific needs and circumstances of the university. Creating a digital management platform necessitates addressing the inherent shortcomings present in traditional library management systems and integrating seamlessly with the latest internet technologies. The goal is to revitalize the library management model, turning it into an agile and responsive system capable of handling the diverse needs of its users. By doing so, we can establish a digital platform that is robust, efficient, and capable of providing superior services to its users. This digital transformation is not just about integrating new technologies; it's about reimagining and reinventing the entire library management system to create a platform that is ready to meet the challenges and opportunities of the digital age.

6. Conclusions

Building a library information management platform is a necessary progression in line with modern trends. The digital transformation of library management not only streamlines administrative tasks but also proffers a serene reading environment for faculty and students, simplifying the borrowing and returning of books. Consequently, universities must give due consideration to the digitization of library management. Throughout this journey, they should amplify financial support, enlist talented

professionals, enhance managerial proficiency, and perpetually advance the digital library management system to benefit the entire student body.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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References

- [1] Jing, O.Y. Personalized Management of university library and information based on the development of docking informatization. *Cultural Industry*, 2022, 21, 10-12.
- [2] Dong, Y.S. Analysis on Personalized Management of University library in connection with Informatization Development. *Archives of Heilongjiang Province*, 2023, 02, 320-322.
- [3] Wang, S.L. Problems and Countermeasures of University library management informatization construction. *Paper making Equipment and Materials*, 2022, 51(12), 188-190.
- [4] Tian, L. Research on Information Management of art University Libraries in the New Era. *Cultural Journal*, 2022, 07, 158-161.
- [5] Cong, L.Y. Research on Innovation of University Library Information Construction in the New media era. *Industry and Technology Forum*, 2002, 21(14), 282-284.
- [6] Xia, Y.L. Thoughts on the information Management of University library and the improvement of college students' cultural literacy. *Lantai Inner and Outer*, 2022, 13, 70-72.
- [7] Chen, Z. Analysis on Personalized library and information management of universities in connection with the development of informatization. *Media Forum*, 2015, 4(21), 144-145.
- [8] Li, Z.Y.; Zhang, S.Y.; Fang, Y.H. et al. Research on Innovation and Development of Library Information Management in Higher Vocational Colleges. *Paper Making Equipment and Materials*, 2021, 50(07), 62-63.



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