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RESEARCH ON INFORMATIONIZATION CONSTRUCTION OF UNIVERSITY ARCHIVES MANAGEMENT IN THE INTERNET ERA

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Abstract: Archives management is a fundamental and long-term essential task that plays an irreplaceable role in the construction and development of universities. Currently, China has comprehensively entered the information age, and the Internet is integrating at an unprecedented speed with various industries. In the era of "Internet+", archival resources are transitioning comprehensively to electronic and digital forms. In the new era, strengthening the informationization construction of archival management is of great significance for improving archival management efficiency, enhancing the co-construction and sharing of information resources, and promoting development and utilization. This paper analyzes the current status and development trends of informationization in university archives management in the Internet era, focusing on the digitization of archival resources, the construction of information platforms, and the empowerment of artificial intelligence in archival management informationization construction.
Keywords: Archives Management; Informationization Construction; Trends; Pathways

1. Introduction

With the comprehensive arrival of the Internet era, archival management is gradually evolving towards informatization, digitization, and intelligence. The "14th Five-Year Plan for the Development of National Archives" explicitly proposes to "strengthen the application of new-generation information technologies such as big data and artificial intelligence in the construction of digital archives." The "Regulations on Archives Management in Higher Education Institutions" stipulate in the general provisions the need to promote the synchronous development of archival informationization construction with other university tasks. In the new era, further strengthening the informationization construction of archival management has become an important task for current universities. Simultaneously, with the changing external demands of the Internet era, archival users not only demand higher standards for traditional digital archive retrieval but also expect more innovative services in terms of personalization and intelligence. The informationized management of university archives is a crucial subject worthy of in-depth research.

2. Trends in the Informationized Management of University Archives

Table 1: Survey of Hotspots in Informationized Management of University Archives

Serial Number	Hotspot	Percentage
1	Construction of Smart Archival Rooms	34%
2	Development of Online System Platforms	30%
3	Data Compilation and Research	24%

4	Archival Information Security	27%
5	Knowledge Graphs	24%
6	Neural Networks	24%
7	Assisted Indexing	23%
8	Big Data Analysis	17%

With China's comprehensive entry into the Internet era, the development of informationized management in university archives is exhibiting new trends and characteristics. Surveys indicate that in recent years, the hotspots of informationized management in university archives mainly focus on the construction of smart archival rooms, the development of online system platforms, data compilation and research, and archival information security. Additionally, frequent terms include knowledge graphs, neural networks, assisted indexing, and visual presentation, as shown in Table 1.

2.1. Transition from Informationization to Digitization and Intelligence in Archival Management

In the Internet era, with technological advancements and changes in user demands, archival informationized management is gradually transitioning from a singular focus on informationization to digitization and intelligence. In addition to traditional functions such as preservation, storage, assisted borrowing, and retrieval, it has expanded to include online archiving, online borrowing, and full-text search capabilities. Online archiving facilitates comprehensive lifecycle management of documents, while online borrowing enhances borrowing efficiency, reducing the need for physical document copying. Full-text search strengthens users' in-depth utilization of information, thereby improving archival efficiency. Intelligent environmental control, smart archival management, intelligent security, and RFID radio frequency management systems comprehensively elevate the intelligence level of archival management [1].

2.2. Development and Utilization as Key Aspects of Archival Informationized Management

University archives have high value density and large quantities. Effectively developing and utilizing archives to enable users to precisely retrieve and match personal needs, maximizing the value of archives, is another key focus of current university archival informationized work. University archives should further strengthen the compilation and development of archival data resources. They should create vocabularies based on different disciplines, keywords, synonyms, and related terms, dynamically maintaining and updating them to provide a foundation for text mining and data analysis. Expanding applications such as knowledge graphs, hotspot analysis, assisted indexing, and digital visualization continually enhances the intelligence level of archival management to meet the needs of faculty and students.

2.3. Deep Integration of Archival Informationized Management with Teaching Work

Promoting the deep integration of informationized management with teaching work, fully leveraging the educational functions of archives, is an essential aspect of university archival work. In the new era, an increasing number of university archives are using informationized and intelligent means to create more learning scenarios, innovate more educational ecosystems, and achieve positive outcomes. For instance, the Archives of China University of Petroleum has established a digital platform for historical and cultural resources, effectively supporting the cultural construction and high-quality development of the university.

3. Current Status Analysis of Informationized Management in University Archives

Since the 18th National Congress, driven by the education and archival departments, universities have comprehensively promoted the construction of informationized management in archives, achieving positive results. However, practical challenges and issues have also emerged.

3.1. Lagging Archival Management Concepts and Insufficient Implementation

In the Internet era, archival management has gradually transitioned from traditional paper-based management to informationization, digitization, and intelligence, with diverse user requirements. In the new era, university archival management must keep pace with the times, actively update work concepts, and continuously innovate based on the needs of faculty and students. However, some universities still face challenges such as outdated concepts, incomplete institutional mechanisms, and weak service awareness that urgently need improvement [2].

3.2. Emphasis on Construction over Development and Utilization

Some universities lack overall coordination in archival informationization, expanding their initiatives too widely. They focus excessively on the electronic and digitized aspects of their collection resources, neglecting development and utilization. On one hand, an excess of online resources leads to significant storage pressure, increasing infrastructure demands and potential waste. On the other hand, the lack of developed digital archival resources fails to meet the needs of faculty and students, rendering the archival informationization efforts ineffective.

3.3. Superficial Development of Archival Information, Insufficient Deep Mining

In the process of archival informationization, some universities only scratch the surface, limiting themselves to cataloging and digitization without thorough research and organization. This results in insufficient data mining, preventing the maximization of the value of archival information, especially in aiding teachers' research work [3]. Additionally, some universities lack a systematic approach to archival informationization, leading to inefficiencies as various archives cannot be automatically filed online.

4. Informationized Construction Pathway for University Archives Management in the Internet Era

4.1. Upgrade Conceptual Thinking, Improve Regulations, and Strengthen Comprehensive Support

In the new era, university archival departments must proactively adapt to the new normal of informationized development, upgrade management concepts, innovate service thinking and modes, enhance service awareness, and strive to provide better services to faculty and students. It is essential to further improve archival management regulations, focusing on key aspects such as electronic archival management, archival equipment maintenance, archival confidentiality, and archival utilization. Strengthening the construction of regulations and systems for archival informationization, clarifying work processes and standards, ensures the standardization of processes such as information identification, data collection, submission, filing, verification, storage, organization, analysis, and borrowing. It is necessary to enhance comprehensive support for archival work, allocate special funds, improve hardware facilities, assemble professional personnel teams, and ensure the smooth progress of various tasks.

4.2. Accelerate the Digitalization of Archives, Construct a Mainly Digital Archive Resource System

University archives cover various fields such as science and technology, culture and health, historical humanities, and international exchanges. They have high value density and borrowing rates. Implementing a dual-track system for archives and promoting the digitization of paper-based archives not only reduces the frequency of traditional paper-based archival retrieval but also lowers the rates of physical archival copying and lending. This approach is conducive to the long-term preservation of physical archives and provides dual backups for various

valuable archives, enhancing archival security. Additionally, based on digital archives, online retrieval, borrowing, and printing can be realized, significantly improving user borrowing efficiency. Digital archives also create favorable conditions for further development of archival materials. Therefore, each university should tailor its approach, accelerate the digitization of traditional archives, and for high-value archives, employ both traditional scanning and image preservation, as well as utilize recognition software and manual transcription methods to implement full-text transcription and enhance accuracy. It is necessary to actively promote the archiving of electronic documents in OA office system and the docking of important business systems, so as to realize the return of all kinds of electronic documents and the collection of electronic files. It is also necessary to adopt microfilm, CD, hard disk and other storage media to establish text, image, audio and video resource libraries, implement heterogeneous backup, and ensure resource security [4].

4.3. Strengthen the Construction of Archival Information Platforms, Enhance the Efficiency of Archival Management

Universities should accelerate the construction of digital archival rooms, systematically integrate various archival resources, and achieve comprehensive management throughout the entire process of collecting, managing, storing, and using paper-based, audio-visual, and electronic archives. This involves providing one-stop services such as rapid retrieval, full-text search, and on-demand printing for digitized archives. Universities should focus on strengthening the construction of specialized databases related to faculty and student records, teaching records, graduate degree records, document archives, undergraduate and graduate theses, and flagship disciplinary resources. This will provide ample resource support for the further development and utilization of archival resources. Regions should actively promote the collaborative construction and sharing of resources among universities, creating a universal query and utilization platform for all participating universities. This platform enables rapid retrieval of relevant archival information and provides social tagging services, allowing users to add tags based on personal needs, with the system simultaneously offering tag quantities as retrieval service guidelines.

4.4. Uphold Artificial Intelligence Empowering Archival Management, Comprehensive Enhancement of Archival Intelligent Management

The first is to rely on artificial intelligence to strengthen the construction of archives resources, introduce artificial intelligence into the whole process of file generation, sorting and sorting, and realize automatic identification, automatic analysis, automatic collection, automatic sorting and automatic filing of all kinds of online archives. Through artificial intelligence assistance to collect system information, compared with manual operation, work efficiency can be greatly improved. The second is to actively promote the development and utilization of artificial intelligence enabling files, relying on AI technologies such as natural language processing, voice processing and computer vision to build an intelligent file management system, which can greatly improve the intelligence of retrieval, better understand user intentions, and automatically generate visual lists to improve the accuracy and pertinence of services. The third is to actively promote the security management of archives with artificial intelligence. In the Internet era, the focus of archives security management in colleges and universities has shifted to the whole process monitoring including archives formation transmission and storage carrier. Relying on artificial intelligence technology, AI can realize the perception and adjustment of the whole process of archives security by embedding AI into access control system, environmental information perception and system firewall, and automatically intervene and adjust, which not only reduces the work pressure of

librarians, but also improves the security of archives. The fourth is to rely on artificial intelligence to comprehensively improve the personalized and precise service level. On the premise of protecting privacy and ensuring security, it is necessary to collect and analyze data such as search habits and keywords, outline "user portraits", associate them through big data and AI systems according to user needs, and visually present them by means of GIS and VR, and actively promote them to users [5].

4.5. Strengthen Archival Resource Exploration, Aid in Building a Comprehensive Education System for Universities

Small carriers, significant impact. Archives not only carry the glorious history of universities but also inherit cultural spirit and impetus for progress. University archives should fully explore their archival resources, showcase the educational and cultural philosophy of the school, and integrate archival work into the broader framework of teaching. For example, the archives of Sichuan University have established a platform for interactive broadcasting of digital school history resources, creating platforms such as "Online School History Exhibition Hall," "Entering Sichuan University: Sichuan University Timeline," and "Online 3D Jiang Jie Memorial Hall." These platforms promote the red spirit and traditional culture of Sichuan University, achieving positive teaching effects. The archives of Guangzhou University have taken the lead in building a school history museum, launching the university magazine, and actively organizing historical and cultural activities. It has become an important window for the school's publicity and display.

5. Conclusion

University archival work is an essential component of the country's archival development. In the context of the Internet era, university archival management departments should proactively adapt to the new normal, closely follow the societal development trends, focus on high-quality development of universities, adhere to technology empowerment, and comprehensively advance the pace of archival management informationization and intelligence. This aims to enhance management efficiency, improve service awareness, and strive to construct a modern archival management system with informationization as its core, which can make new and greater contributions in serving the overall situation, faculty and students, and society.

References

Wang, A. R. (2023). Exploration of Informationized Construction of University Archives Management in the Internet Era. Science and Technology Management, 43(11), 232.

Fu, J. J. (2023). Current Status and Enhancement Strategies of Informationized Construction in University Archives. Office Business, (10), 118-119+122.

Li, Q. Y. (2023). Research on the Transformation and Optimization of University Archives Management Mode in the "Internet+" Era. Inside and Outside Lantai, (05), 1-3.

Liu, J., & Liu, D. P. (2022). Informationized Construction of University Archives Management in the Digital Era. Office Business, (11), 98-100.

Wu, Y. (2022). Construction Path of Informationization of Logistics Service in Universities under the Background of Mobile Internet Era. Leadership Science, (05), 154-155.