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Research on Archival Data Management in Local Universities under the Context of Educational Informatization 2.0

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Abstract: This study aims to explore the theoretical and practical issues of archival data management in local universities under the context of Educational Informatization 2.0. Initially, the concept of Educational Informatization 2.0 and its impact on higher education are defined. Subsequently, the challenges and opportunities faced by local universities in archival data management are analyzed. Through literature review and theoretical analysis, the study identifies issues such as inadequate digitalization, information security risks, and non-standardized management processes in current local university archival data management, and proposes corresponding optimization strategies. The research methods include theoretical framework construction, literature analysis, comparative research, and logical reasoning. The research process follows a scientific design, ensuring systematicity and depth. The conclusion suggests that local universities should enhance digital transformation in archival data management, improve information security protection, optimize management processes, and introduce intelligent technologies to increase efficiency and quality in archival data management. This research provides theoretical support and practical guidance for archival data management in local universities under the context of Educational Informatization 2.0, contributing to the modernization of university archival management.

Keywords: Educational Informatization 2.0; Local Universities; Archival Data Management; Digital Transformation; Information Security

1. Introduction

1.1 Research Background and Significance

In the context of the rapid development of information technology, education informatization 2.0 refers to the comprehensive innovation of education model, teaching method and management means through the deep integration of information technology and education and teaching in the field of education. With the continuous progress of information technology, education informationization 2.0 has become an important force to promote education modernization. As an important part of higher education, the archival data management of local universities is facing new challenges and opportunities under the background of education informationization 2.0. Archival data management is not only an important part of university management, but also an important carrier of university historical records and cultural inheritance. Through the research of local university archives data management, it can provide theoretical support and practical guidance for the modernization of university archives management, and improve the management level and service quality of university.

1.2 Review of Research Status at Home and Abroad

In China, the research on archival data management in colleges and universities under the background of education informatization 2.0 has made some progress. the proposal of education informationization 2.0 marks that China's education informationization has entered a new stage of development, emphasizing the deep integration of information technology and education and teaching, and promoting the process of education modernization. According to the study of Bi Dapeng (2023), under the background of education informatization 2.0, the archival data management strategies of colleges and universities need to be discussed and optimized from multiple aspects such as informatization construction, data security and archival resource sharing [1]. In his doctoral thesis, Meng Xiaonan (2022) discussed in detail

the status quo and challenges of archival data management in colleges and universities in the era of education informatization 2.0, and proposed a new archival management model based on big data and artificial intelligence technology [2]. She pointed out that there are problems such as data islands and insufficient information sharing in current university archives management, which need to be integrated and optimized by information means. Luo Chunyu (2017) pointed out in his research that under the background of "Internet plus", archival data management in universities is facing new opportunities and challenges. She believes that the application of Internet technology can improve the efficiency and accuracy of file management, but it also brings problems of data security and privacy protection [3]. In addition, the application of blockchain technology in university archives management has also attracted the attention of scholars. Wang Wenjun et al. (2021) studied the application of blockchain technology in the archives management of state-owned assets in universities, and believed that blockchain technology could improve the transparency and security of archival data [4]. Ding Xiuying and Xiao Fangliang (2017) discussed the current situation and problems of archives management in local municipal public institutions under the background of informatization from the perspective of teaching departments of local universities, and put forward corresponding countermeasures [5]. Lu Ting (2017) studied the innovation path of university archives management under the background of digital informatization, and proposed a new file management model based on cloud computing and big data technology [6]. Tan Junhong (2019) discussed the management of university teachers' personnel files under the background of education informatization in his research, and proposed specific measures for informatization management [7]. Zhai Xiaodan et al. (2010) studied the application of university teaching archives management under the information environment and proposed a new file management model based on information means [8]. Xie Yongjin (2016) pointed out in his research that in the era of educational information, the construction of university archives information management should be comprehensively considered from multiple aspects such as technology, management and

system [9]. Yuan Xiaoyan (2015) discussed the existing problems and countermeasures of teaching archives management in colleges and universities under the background of informatization, and proposed an optimization plan for archives management based on informatization means [10].

Internationally, the research of education informatization and archives management has also made remarkable progress. European and American countries started earlier in education informatization and archives management and have accumulated rich experience. Foreign scholars generally believe that the application of information technology can significantly improve the efficiency and accuracy of archives management. For example, American universities generally adopt Electronic Records Management Systems (ERMS) to achieve digital management of archives by means of information technology. ERMS can not only improve the efficiency of file management, but also realize remote access and sharing of files, which greatly facilitates the use of files. European countries also have many successful experiences in archives management. For example, universities in the United Kingdom generally adopt a cloud-based file management system to achieve centralized management and sharing of files through cloud computing technology. German universities pay attention to the standardization and standardization of archives management, and improve the quality and efficiency of archives management by formulating strict archives management standards and norms. In addition, foreign scholars also pay attention to data security and privacy protection in archives management. For example, universities in the United States generally adopt encryption technology and access control technology to ensure the security and privacy of archival data. European countries have adopted strict data protection laws and regulations to ensure the security and privacy of archival data.

To sum up, the research on archival data management in colleges and universities under the background of education informatization 2.0 has made some progress both at home and abroad. Domestic scholars have carried out in-depth research on information construction, data security, archive resource sharing and so on, and put forward many valuable views and suggestions. Foreign scholars have accumulated

rich experience in electronic file management system, cloud computing technology, data security and privacy protection. However, there are still some shortcomings in the current research. First of all, most of the research at home and abroad focuses on the technical level, and there is a lack of in-depth discussion on the archives management system and policy. Secondly, although the application of information technology can improve the efficiency and quality of file management, it also brings problems of data security and privacy protection, which need to be further studied and solved. Finally, most of the current studies focus on the university level, and lack of attention to the local university archives management.

2. Overview of Education Informatization 2.0

2.1 Definition and Characteristics of Education Informatization 2.0

Education informatization 2.0 refers to the comprehensive innovation of education model, teaching method and management means through the deep integration of information technology and education and teaching under the background of the rapid development of information technology. Its main features include: first, the extensive application of information technology, covering cloud computing, big data, artificial intelligence and other advanced technologies; the second is the innovation of education model, emphasizing personalized, intelligent and interactive teaching methods; the third is the modernization of management means, through information means to improve the efficiency and quality of education management.

2.2 Development Trend of Education Informatization 2.0

The development trend of education informatization 2.0 is mainly reflected in the following aspects: First, the continuous progress of information technology provides strong technical support for education informatization; Second, the continuous innovation of education model, personalized and intelligent teaching methods are gradually popularized; Third, the continuous optimization of education management, through information means to improve management efficiency and service quality; Fourth, the continuous enrichment of educational resources. the wide application of

digital educational resources provides rich content support for educational informatization.

3. Analysis of Current Situation of Archival Data Management in Local Universities

3.1 Basic Situation of Archives Management in Local Colleges and Universities

Archives management in local colleges and universities is an important part of university management, which covers many links such as collection, sorting, preservation and utilization of archives. At present, the local university archives management mainly faces the following problems: first, the digital level of archives is insufficient, and the traditional paper archives still occupy the dominant position; Second, the information security risk is high, and the security protection measures of archival data are not perfect; Third, the management process is not standardized, and the standardization and standardization of file management is low.

3.2 Problems in File Data Management

Under the background of education informationization 2.0, the archival data management of local universities is facing new challenges. First of all, the level of archival digitization is insufficient, which leads to the inefficient use of archival data. Secondly, the risk of information security is high, and problems such as leakage and tampering of archival data often occur. Thirdly, the management process is not standardized, and the standardization and standardization of file management is low, which affects the efficiency and quality of file management. Finally, the application of intelligent technology is insufficient, and the intelligent level of file management needs to be improved.

4. Influence of Education Informatization 2.0 on Archival Data Management in Local Colleges and Universities

4.1 Opportunities Brought by Education Informatization 2.0

Education informationization 2.0 has brought new opportunities for archival data management in local universities. Firstly, the wide application of information technology provides technical support for the digitization of archival data. Through cloud computing, big data, artificial intelligence and other technologies, the efficient

management and utilization of archival data can be achieved. Secondly, the innovation of education model provides a new idea for archival data management. Personalized and intelligent teaching methods need the support of archival data, and the importance of archival data management is further highlighted. Thirdly, the modernization of management means provides a new method for archival data management. Through information means, the efficiency and quality of file management can be improved.

4.2 Challenges Brought by Education Informatization 2.0

Education informationization 2.0 also brings new challenges to the archival data management of local universities. First of all, the rapid development of information technology has put forward higher requirements for the professional quality of archives management personnel. File managers need to master cloud computing, big data, artificial intelligence and other advanced technologies in order to be competent in file data management. Secondly, the risk of information security increases, and the security protection measures of archival data need to be constantly improved. With the wide application of information technology, problems such as leakage and tampering of archival data become increasingly prominent, and information security protection has become an important task of archival data management. Thirdly, the complexity of the management process puts forward higher requirements for the standardization and standardization of file management. File management needs to establish scientific and standardized management process to ensure the efficient management and utilization of file data.

5. Optimization Strategy of Archival Data Management in Local Universities

5.1 Strengthen the Digital Construction of Archival Data Management

Local universities should strengthen the digital construction of archival data management and improve the utilization efficiency of archival data. First of all, we should speed up the digitization process of archives, transform traditional paper archives into digital archives, and realize efficient management and utilization of archival data. Secondly, a file data

management platform should be established to achieve centralized management and sharing of file data through cloud computing, big data and other technologies. Thirdly, we should strengthen the standardization construction of archival data, formulate scientific and standardized archival data management standards, and ensure the efficient management and utilization of archival data.

5.2 Improve the Security of File Data Management

Local universities should enhance the security of archival data management to ensure the security of archival data. First of all, the archival data security protection system should be established, and the security protection capability of archival data should be enhanced through firewall, encryption technology and other means. Secondly, the backup and recovery of file data should be strengthened, and the backup and recovery mechanism of file data should be established to ensure the security and reliability of file data. Thirdly, we should strengthen the access control of archival data, formulate scientific and standardized access control strategy of archival data, and ensure the security of archival data.
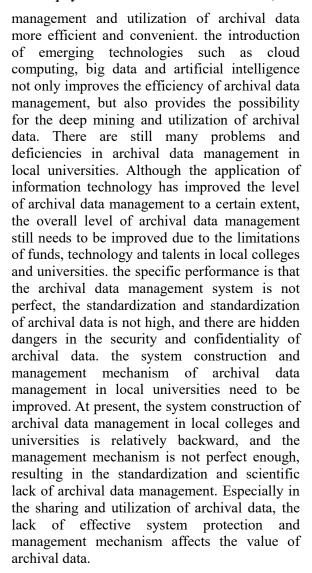
5.3 Enhanced intelligent Application of File Data Management

Local universities should strengthen the intelligent application of archival data management to improve the efficiency and quality of archival data management. First of all, artificial intelligence technology should be introduced to achieve efficient management and utilization of file data through intelligent means. Secondly, we should strengthen the intelligent analysis of archival data, and realize the intelligent analysis and utilization of archival data through big data analysis technology. Thirdly, we should strengthen the intelligent retrieval of archival data, and realize the efficient retrieval and utilization of archival data through intelligent retrieval technology.

6. Conclusion

The advancement of education informationization 2.0 provides technical support and development opportunity for archival data management in local colleges and universities. the application of information technology makes the collection, storage,

management and utilization of archival data more efficient and convenient. the introduction of emerging technologies such as cloud computing, big data and artificial intelligence not only improves the efficiency of archival data management, but also provides the possibility for the deep mining and utilization of archival data. There are still many problems and deficiencies in archival data management in local universities. Although the application of information technology has improved the level of archival data management to a certain extent, the overall level of archival data management still needs to be improved due to the limitations of funds, technology and talents in local colleges and universities. the specific performance is that the archival data management system is not perfect, the standardization and standardization of archival data is not high, and there are hidden dangers in the security and confidentiality of archival data. the system construction and management mechanism of archival data management in local universities need to be improved. At present, the system construction of archival data management in local colleges and universities is relatively backward, and the management mechanism is not perfect enough, resulting in the standardization and scientific lack of archival data management. Especially in the sharing and utilization of archival data, the lack of effective system protection and management mechanism affects the value of archival data.

Acknowledgements

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