Innovation and Development of Digital Archive Management in Universities

Juan Li

Archives, Zhongyuan University of Technology, Zhengzhou 450007,CHINA
Corresponding Author: Juan Li

ABSTRACT: *With the rapid development of information technology, digitalization of university archive management has become an inevitable trend. This article aims to explore the current situation, existing problems, and innovative development strategies of digital archive management in universities. Through research on relevant theories and practices, suggestions have been put forward to strengthen technical support for digital archive management, optimize management processes, and ensure information security, in order to improve the efficiency and service quality of university archive management and provide strong support for the development of universities.*

I. INTRODUCTION

University archives are various forms of historical records with preservation value, such as text, charts, audio and video, formed in various activities such as teaching, scientific research, and management. They are important witnesses and valuable assets for the development of universities. With the widespread application of information technology, digital archive management has become an important development direction for university archive work. Digital archive management can improve the efficiency and quality of archive management, better meet the needs of university teachers, students, and society for archive information.

II. THE CURRENT SITUATION OF DIGITAL ARCHIVE MANAGEMENT IN UNIVERSITIES

THE APPLICATION OF DIGITAL ARCHIVE MANAGEMENT SYSTEM

At present, many universities have established digital archive management systems, achieving digital collection, storage, retrieval, and utilization of archives. For example, our archive adopts an archive utilization service platform system, which can classify and manage student archives, faculty archives, scientific research achievement archives, etc. Through keyword search, users can quickly obtain the required archive information, greatly improving the efficiency of archive search.

THE CONSTRUCTION OF DIGITAL ARCHIVE RESOURCES

Universities have achieved certain results in the construction of digital archive resources, accumulating a large amount of digital archive resources through digital scanning of paper archives and collection of electronic files. In the construction of digital archive resources, our school's archive not only meticulously scans and digitizes historical documents, but also actively collects electronic works and research reports from teachers and students, enriching the types and content of archive resources.

THE CULTIVATION OF DIGITAL ARCHIVE MANAGEMENT TALENTS

Universities are gradually attaching importance to the cultivation of digital archive management talents, and improving the information technology level and business ability of archive management personnel through training and introducing professional talents. Our school's archive regularly organizes archive management personnel to participate in various information technology training courses and encourages them to participate in relevant academic exchange activities, which enhances the professional competence of the team. At the same time, my archive has also provided training and guidance on the archive system to the college multiple times.

III. THE PROBLEMS IN DIGITAL ARCHIVE MANAGEMENT IN UNIVERSITIES
INCONSISTENT TECHNICAL STANDARDS

Due to the lack of unified technical standards and norms, digital archives in universities have differences in format, coding, storage, and other aspects, resulting in poor compatibility and interoperability of archive data, which affects the sharing and utilization of archive resources. For example, when exchanging and sharing archival data between our school and sister schools, it requires a lot of time and effort to convert due to inconsistent formats.

INFORMATION SECURITY ISSUES

Digital archives face security threats such as network attacks, data leaks, and virus infections during storage and transmission. There are still some weak links in information security protection in universities, such as incomplete security management systems and inadequate technical measures, which pose hidden dangers to the security of digital archives. My brother's school has experienced hacker attacks, which resulted in the leakage of some student file information and had a negative impact.

THE QUALITY OF DIGITAL ARCHIVE RESOURCES VARIES GREATLY

In the process of constructing digital archive resources, some universities face problems such as low scanning quality, incorrect data input, and incomplete archive information, which affect the utilization value of digital archives. In the early stage of archive digitization work, sister colleges encountered difficulties in subsequent utilization due to aging scanning equipment and inexperienced personnel operation, resulting in some archive images becoming blurry.

INCOMPLETE MANAGEMENT SYSTEM

The management of digital archives in universities involves multiple departments and links, and it is necessary to establish a sound management system and coordination mechanism. However, currently some universities still face problems such as unclear responsibilities and poor communication in their management systems, which makes it difficult to carry out digital archive management smoothly. In the digital archive management work of sister colleges, due to the unclear division of responsibilities between the academic affairs office, research office, and archive, some important research achievement archives were not archived in a timely manner.

INSUFFICIENT CAPITAL INVESTMENT

Digital archive management requires a significant investment in hardware equipment procurement, software system development, personnel training, and other aspects. However, due to financial constraints, some universities have insufficient investment in digital archive management, which has affected the progress of digital archive management. Due to financial constraints, a sister college was unable to update servers and storage devices in a timely manner, resulting in slow operation of the archive system and affecting work efficiency.

IV. INNOVATIVE DEVELOPMENT STRATEGIES FOR DIGITAL ARCHIVE MANAGEMENT IN UNIVERSITIES
ESTABLISH UNIFIED TECHNICAL STANDARDS AND SPECIFICATIONS

Universities should follow relevant national and industry standards and norms, and develop unified digital archive management technical standards based on their actual situation, including standards for archive format, coding, storage, retrieval, etc., to ensure the compatibility and interoperability of archive data, and lay the foundation for the sharing and utilization of archive resources.

STRENGTHEN INFORMATION SECURITY PROTECTION

Establish a comprehensive information security management system, clarify the security responsibilities of each department and personnel, and strengthen access control and permission management of the digital archive management system.

Adopt advanced information security technologies such as firewalls, intrusion detection, encryption, etc. to encrypt the storage and transmission of digital archives, preventing data leakage and tampering.

Regularly conduct information security training and emergency drills to enhance the information security awareness and emergency response capabilities of archive management personnel.

IMPROVING THE QUALITY OF DIGITAL ARCHIVE RESOURCES

Strengthen the quality control of the construction process of digital archive resources, standardize the operation processes such as scanning and input, and ensure the accuracy and completeness of archive

information.

Establish a quality evaluation mechanism for digital archives, conduct regular quality inspections and evaluations of digital archive resources, and promptly identify and correct existing problems.

Strengthen the protection and management of original archives to ensure the reliable source of digital archives.

IMPROVE MANAGEMENT SYSTEM AND COORDINATION MECHANISM

Clarify the responsibilities and authorities of the digital archive management department, establish a sound archive management workflow and system, and strengthen supervision and assessment of digital archive management work.

Strengthen communication and coordination with other departments of the school, establish a collaborative work mechanism, and jointly promote digital archive management.

Establish a leadership group for digital archive management to coordinate and plan major issues in digital archive management.

INCREASE CAPITAL INVESTMENT

Universities should increase investment in digital archive management to ensure the smooth progress of hardware equipment updates, software system optimization and upgrading, and personnel training. At the same time, actively seek support from the government and society, and expand channels for funding sources.

IMPROVE THE QUALITY OF ARCHIVE MANAGEMENT PERSONNEL

Strengthen information technology training for archive management personnel, so that they can master the operation and maintenance skills of digital archive management systems, and be proficient in using information technology to carry out archive management work.

Encourage archive management personnel to participate in relevant academic exchanges and training activities, continuously update their knowledge and concepts, and improve their business level and innovation ability.

Introduce composite talents with information technology background and archive management experience to enrich the digital archive management team.

EXPAND THE SERVICE FUNCTIONS OF DIGITAL ARCHIVES

Utilize technologies such as big data and artificial intelligence to deeply mine and analyze digital archive resources, providing data support and reference for school decision-making and management.

Strengthen the online utilization services of digital archives, provide convenient archive query and utilization services for teachers, students, and society through online platforms, and improve the efficiency and service quality of archive utilization.

Carry out personalized archive services, provide customized archive information services according to the needs of users, and meet the diverse needs of different users.

V. CONCLUSIONS

The management of digital archives in universities is an important component of information technology construction, which is of great significance for improving the level of university management and promoting the development of universities. Faced with the current problems in digital archive management, universities should actively adopt innovative development strategies, strengthen the construction of technical standards, information security protection, resource quality control, management system improvement, capital investment, and personnel quality improvement, continuously expand the service functions of digital archives, achieve the scientific, standardized, and efficient management of digital archives in universities, and provide strong support and guarantee for the development of universities.

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