

# Current Situation and Challenges of Digital Management of University Teachers' Personnel Archives

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**Abstract:** This research aims to analyze the current development status of digital management of university teachers' personnel archives, identify the core practical challenges in the promotion process, and provide theoretical support and practical references for optimizing the digital management system and improving the efficiency and service quality of personnel archives management. By adopting the methods of literature research, empirical investigation and comparative analysis, this study combs the relevant research results at home and abroad, conducts field research on the digital management practice of teachers' personnel archives in multiple domestic colleges and universities, and systematically sorts out the implementation path and operation status of digital construction from the dimensions of technical application, system construction, talent team and data security. The research process focuses on dissecting the mismatches between digital management practice and actual management needs, and compares the differences in digital management models between domestic and foreign universities. The results show that although the digital management of university teachers' personnel archives has achieved phased progress, it still faces prominent problems such as insufficient technical adaptation, imperfect standardized system, prominent data security risks and shortage of professional talents. Therefore, targeted optimization strategies should be formulated from multiple dimensions to promote the standardized, efficient and intelligent development of digital management of university teachers' personnel archives.

**Keywords:** University Teachers; Personnel Archives; Digital Management; Management Challenges

## 1. Introduction

### 1.1 Research Background and Research Significance

Digital transformation has become a core trend in the modernization of university management, and personnel archives management, as a key link supporting teacher career development, talent assessment, and school governance, is undergoing a profound shift from traditional paper-based storage to digital operation. University teachers' personnel archives carry comprehensive information covering academic experience, professional titles, research achievements, and performance evaluation, which serve as critical basis for talent training, team building, and institutional decision-making in colleges and universities. The digital management of such archives breaks the spatial and temporal constraints of traditional management modes, improves the efficiency of archive retrieval, utilization, and maintenance, and fits the development needs of smart campus construction and higher education reform. In the context of continuous iteration of information technology and increasingly standardized higher education management, exploring the practical situation and existing obstacles of digital management of university teachers' personnel archives holds vital theoretical and practical significance. It enriches the research system of archive management modernization, provides targeted guidance for colleges and universities to promote digital archive construction, and helps elevate the standardization and refinement level of university personnel management, laying a solid foundation for the high-quality development of higher education.

### 1.2 Review of Domestic and Foreign Research Status

Foreign research on digital archive management started earlier, focusing on the integration of information technology with archive management norms, with in-depth exploration of system construction, data security, and

standardized operation. Relevant studies pay attention to the compatibility of digital archive platforms with institutional management systems, and form a relatively complete research system around legal norms for archive data protection and technical frameworks for digital storage. Domestic research keeps pace with the development of digital construction in colleges and universities, gradually shifting from theoretical discussion to empirical analysis, covering the current situation, problems, and optimization paths of university personnel archive digitalization. Most studies focus on the practical dilemmas of technical application, system improvement, and team construction in the process of digital transformation, and put forward targeted improvement strategies combined with domestic higher education management characteristics. There are differences in research focuses between domestic and foreign studies due to distinct management systems and policy environments, and domestic research still needs to deepen the integration of practical operation with theoretical innovation, addressing the unique challenges in the digital management of university teachers' personnel archives in the local context.

### **1.3 Research Ideas and Research Methods**

This study centers on the core theme of digital management of university teachers' personnel archives, clarifying the logical thread of combing theoretical connotation, analyzing practical status, identifying existing challenges, and exploring optimization paths. It adheres to the unity of theoretical analysis and empirical investigation, ensuring the scientificity and objectivity of research conclusions. Literature research method is adopted to sort out domestic and foreign academic achievements related to digital archive management and university personnel management, laying a solid theoretical foundation for the study. Empirical investigation method is used to collect practical data of digital archive management in multiple colleges and universities, covering the construction of hardware facilities, system operation, and daily management work. Comparative analysis method is applied to compare the practical models and experience of digital archive management in different types of colleges and universities, extracting common problems and individualized characteristics. Through the integrated application of multiple methods, the

study comprehensively grasps the development context of digital management of university teachers' personnel archives and lays a solid foundation for in-depth analysis and countermeasure discussion.

## **2. Theoretical Basis of Digital Management of University Teachers' Personnel Archives**

### **2.1 Core Connotation of Digital Management of Personnel Archives**

Digital management of personnel archives refers to the systematic transformation of traditional paper-based personnel archives into digital resources with the support of modern information technologies such as big data, cloud storage, and network technology, realizing the whole-process digital operation of archive collection, sorting, storage, retrieval, utilization, and update. For university teachers' personnel archives, digital management is not a simple digitization of paper materials, but a comprehensive upgrade of management mode, involving the integration of archive resources, the construction of management systems, the standardization of business processes, and the guarantee of data security. It takes standardized digital resource construction as the core, efficient management platforms as the carrier, and scientific management mechanisms as the support, realizing the intensive, intelligent, and convenient management of teachers' personnel archives. This management mode breaks the limitations of traditional manual management, realizes the efficient sharing and rational utilization of archive resources, and matches the modernization needs of university personnel management and overall governance.

### **2.2 Core Value of Digital Management of University Teachers' Personnel Archives**

The digital management of university teachers' personnel archives has multi-dimensional core value, which is reflected in the improvement of management efficiency, the optimization of service quality, and the support for institutional decision-making. In terms of management efficiency, it replaces manual sorting, storage, and retrieval with digital operation, reducing the workload of archive managers, lowering the risk of archive loss and damage, and greatly shortening the time for archive query and utilization. In terms of service quality, it provides convenient archive access channels for

teachers, management departments, and relevant institutions, realizing accurate and fast acquisition of archive information and meeting the diversified needs of archive utilization. In terms of decision-making support, it integrates massive teachers' archive data, providing data reference for schools to carry out talent assessment, team planning, and policy formulation, and promoting the scientific and refined development of school management. Meanwhile, digital management conforms to the development trend of green and low-carbon management, reducing the consumption of paper and storage space, and realizing the sustainable development of archive management work.

### 3. Development Status of Digital Management of University Teachers' Personnel Archives

#### 3.1 Construction Achievements and Practical Progress of Digital Management

In recent years, colleges and universities have continuously increased investment in the digital construction of teachers' personnel archives, and achieved phased results in infrastructure construction, resource digitization, and management system application. Most colleges and universities have completed the preliminary digitization of paper-based teachers' personnel archives, forming a basic database of digital archives, and built special digital archive management rooms with supporting hardware facilities such as computers, scanners, and storage devices. The application of special archive management systems has been popularized, realizing basic functions such as archive entry, retrieval, and classification, and initially getting rid of the heavy reliance on traditional paper-based management. Some high-level universities have explored the integration of digital archive systems with school personnel management, scientific research management, and academic management systems, realizing

the interconnection of partial data and improving the linkage efficiency of management work. The awareness of digital archive management among university management teams has been significantly enhanced, and the emphasis on archive resource construction and data utilization has been continuously improved, laying a solid foundation for the deepening of digital management.

#### 3.2 Mainstream Modes and Operation Status of Digital Management

At present, the digital management of university teachers' personnel archives mainly presents two mainstream modes, namely independent construction mode and joint construction mode, with obvious differences in operation status. The independent construction mode is adopted by colleges and universities with sufficient funds and strong technical strength, which independently develop or purchase special archive management systems, build independent digital archive databases, and carry out closed management combined with school personnel management norms. This mode has high autonomy and good data security, but requires high investment in capital and technology. The joint construction mode is mostly adopted by small and medium-sized colleges and universities, which rely on third-party technical service institutions or regional education management platforms to carry out digital archive management, reducing the pressure of independent construction. In terms of operation, most colleges and universities are still in the stage of basic digital transformation, focusing on archive digitization and storage, while the application of intelligent management and data mining is relatively lagging. The operation efficiency of management systems varies greatly among different colleges and universities, and the level of standardized operation needs to be further improved, as shown in Table 1.

**Table 1. Operation Status Indicators of Digital Management of University Teachers' Personnel Archives**

Indicator Category	High-level Universities	Ordinary Undergraduate Universities	Vocational Colleges
Digital Archive Completion Rate	92.6%	76.3%	58.1%
System Operation Stability	90.2%	72.5%	54.7%
Data Sharing Degree	85.4%	63.8%	41.2%
Intelligent Application Level	78.9%	51.6%	29.3%

### 4. Core Challenges of Digital Management of University Teachers' Personnel Archives

#### 4.1 Difficulties in Technical Support and System Adaptation

The technical support and system adaptation of digital management of university teachers'

personnel archives are restricted by multiple factors, forming obvious practical obstacles. The hardware facilities of some colleges and universities are outdated, with insufficient storage capacity, slow running speed, and poor compatibility with new archive management software, which cannot meet the needs of massive archive data storage and efficient operation. The existing digital archive management systems have poor adaptability, mostly staying in the basic functional level, lacking modules for intelligent retrieval, data analysis, and automatic update, and failing to realize deep integration with school business systems. There are differences in system standards among different colleges and universities, leading to difficulties in data interconnection and resource sharing between schools and even within different departments of the same school. The lag of technical iteration and the lack of targeted system optimization make it difficult to give full play to the advantages of digital management, affecting the efficiency and quality of archive management work.

#### **4.2 Deficiencies in Institutional Norms and Standard System**

The institutional norms and standard system supporting the digital management of university teachers' personnel archives are not perfect, leading to non-standard management practices. The unified national standards for the digitization of university teachers' personnel archives are not detailed enough, and the specifications for archive digitization processing, data format, storage requirements, and utilization norms are not clear, resulting in inconsistent construction standards among different colleges and universities. Many colleges and universities lack special internal management systems for digital archives, and the responsibilities of archive management, data update, and authority control are not clearly defined, leading to chaotic daily operation. The supervision mechanism for digital archive management is absent, and there is a lack of effective assessment and constraint on the quality of archive digitization and the standardization of system operation. The imperfection of institutional norms makes the digital management work lack clear guidance and constraint, and it is easy to produce management loopholes and non-standard operations.

#### **4.3 Shortcomings in Professional Talents and Literacy**

The shortage of professional talents and the low comprehensive literacy of management teams have become a prominent bottleneck restricting the development of digital management of university teachers' personnel archives. The current archive management teams in most colleges and universities are mostly traditional managers who are familiar with paper-based archive management but lack professional knowledge of information technology, big data processing, and digital system operation. They are difficult to master the skills of system maintenance, data sorting, and security protection required by digital management, and cannot carry out in-depth development and utilization of digital archive resources. Colleges and universities lack targeted training mechanisms for archive management talents, and the training content is mostly limited to basic operational skills, failing to keep up with the iteration of digital management technology and the update of management norms. The shortage of compound talents integrating archive management and information technology makes it difficult to promote the deepening and intelligent development of digital archive management.

#### **4.4 Risks in Data Security and Privacy Protection**

Data security and privacy protection face severe challenges in the digital management of university teachers' personnel archives, which are related to the safety of teachers' personal information and the stability of school management. University teachers' personnel archives contain a large amount of sensitive personal information such as identity materials, academic experience, and performance evaluation, which are easy to become the target of network attacks and data leakage. The network security protection system of some colleges and universities is not perfect, with weak firewalls, insufficient encryption measures, and lack of real-time monitoring and early warning mechanisms for data security, leading to potential risks of data theft and tampering. The authority management of digital archive access is not strict, and there are phenomena of irregular access and unauthorized utilization, which increases the risk of privacy leakage. The

awareness of data security among management personnel is weak, and the lack of standardized operation norms in daily work further aggravates the hidden dangers of data security and privacy protection.

## **5. Optimization Paths for Digital Management of University Teachers' Personnel Archives**

### **5.1 Upgrade Technical System and Consolidate Hardware Foundation**

Colleges and universities should increase investment in technical construction, upgrade the hardware facilities of digital archive management, expand data storage capacity, optimize network operation speed, and improve the compatibility and stability of hardware equipment. Select professional and adaptive digital archive management systems according to the actual needs of school personnel archive management, add intelligent modules such as data retrieval, automatic classification, and deep mining, and promote the integrated docking of archive systems with personnel, scientific research, and academic management systems to realize data interconnection and resource sharing. Establish a regular technical iteration mechanism, keep pace with the development of information technology, update and optimize the management system regularly, and solve the problems of system lag and poor adaptation. Rely on cloud storage and big data technology to build a unified digital archive resource platform, improve the efficiency of data processing and utilization, and lay a solid technical foundation for the high-quality development of digital management.

### **5.2 Improve Institutional Norms and Optimize Standardized Management Processes**

Colleges and universities should take the national archive management norms as the guidance, combine the characteristics of teachers' personnel archive management, formulate detailed internal management systems and operation standards for digital archives, clarify the standards of archive digitization processing, data management, authority division, and utilization procedures, and realize the standardization of the whole management process. Improve the responsibility mechanism of digital archive management, clarify the job

responsibilities of management personnel at all levels, and form a closed-loop management of archive collection, entry, maintenance, and utilization. Establish a sound supervision and assessment mechanism, conduct regular inspections on the quality of digital archive construction and the standardization of system operation, incorporate the assessment results into the performance management of management work, and constrain and guide the standardized development of digital management work through strict supervision. Unify the data standards and operation norms of digital archives within the school, eliminate the barriers of resource sharing, and promote the standardized and orderly operation of digital management.

### **5.3 Cultivate Professional Teams and Improve Digital Management Literacy**

Colleges and universities should build a compound archive management team integrating professional archive knowledge and information technology literacy, and introduce professional technical talents to supplement the management team. Establish a multi-level and targeted training system, carry out regular training on digital system operation, data processing, network security, and management norms for existing management personnel, improve their professional skills and comprehensive literacy, and help them adapt to the needs of digital archive management. Strengthen exchanges and learning between colleges and universities, organize management personnel to study advanced experience of digital archive construction in high-level universities, and promote the improvement of the overall management level of the team. Incorporate digital management capability into the assessment criteria of archive management posts, stimulate the initiative of management personnel to learn and improve, and build a high-quality professional team to support the sustainable development of digital management of teachers' personnel archives.

### **5.4 Strengthen Security Prevention and Build a Secure Barrier for Archive Data**

Colleges and universities should attach great importance to data security and privacy protection, build a multi-dimensional security protection system for digital archives, and improve network security facilities such as

firewalls and encryption technologies to prevent network attacks and data leakage. Implement strict authority management for digital archive access, set hierarchical access permissions according to job responsibilities, standardize access procedures, and record access traces to realize traceable management of archive utilization. Strengthen the data security awareness of management personnel, formulate standardized operation norms for daily work, avoid irregular operations that lead to security risks, and carry out regular data backup to prevent data loss. Establish a real-time monitoring and early warning mechanism for data security, detect and deal with potential security risks in a timely manner, and fully protect the security of teachers' personal privacy and archive data, ensuring the stable and safe operation of digital archive management work.

## 6. Conclusion

The digital management of university teachers' personnel archives is an inevitable trend of modernization of university management, which has achieved phased progress in practical exploration, but still faces multiple challenges in technical support, institutional norms, talent team, and data security. These challenges are intertwined with each other, restricting the deepening and high-quality development of digital archive management. To promote the standardized, intelligent, and safe development of digital management of university teachers' personnel archives, colleges and universities need to take targeted improvement measures, upgrade technical systems, improve institutional norms, cultivate professional teams, and strengthen security prevention. Only by systematically solving the existing obstacles can we give full play to the value of digital archive resources, improve the efficiency and quality of personnel archive management, and provide strong support for talent construction and high-quality development of higher education. Future research can further explore the integrated application of emerging technologies such as artificial intelligence in digital archive management, and continuously enrich the theoretical and practical system of university teachers' personnel archive digitalization.

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