

Research on the Innovative Mode of University Archives Management and its Institutionalization

Xiaowei Huang

Yancheng Teachers University, Yancheng Jiangsu, 224007, China

Abstract: Facing the real challenges such as the surge of university archives data, the inefficiency of traditional management mode and "data island", this paper systematically discusses the innovative mode of university archives management and its institutionalized construction path. The research constructs an innovative model from three dimensions: technology-driven, service-oriented and management process reengineering, and proposes to empower the whole life cycle management of archives with technologies such as big data, AI and blockchain to promote the transformation of archives resources from "physical collection" to "digital empowerment"; Guided by the needs of multiple subjects, reconstruct the archives service system and realize the deep integration of archives service and university core business; By means of process reengineering, optimize the organizational structure and power and responsibility system, and establish an inter-departmental coordination mechanism. On this basis, the article further puts forward the path of institutionalized construction, including the hierarchical design of institutional system, the standardized management and control of the whole process and the construction of multiple guarantee mechanisms, and forms a long-term governance framework of "system-based, standard-based and guarantee-oriented". The research expands the application boundary of new institutional economics in university public data governance, and provides theoretical support and practical paradigm for the modernization of university archives governance.

Keywords: Innovation Mode; Institutionalization Construction; Archives Management; University.

1. Introduction

The data volume of newly added archives in universities all over the country is constantly breaking through, and the traditional file cabinet management mode is facing challenges. The application of new technologies such as distributed storage and blockchain storage is lagging behind, which makes it difficult to trace the source of files and high risk of tampering; The phenomenon of "data island" between departments is prominent, and the response time of cross-system access is long, far exceeding the requirements of "Archives Management Standard of Colleges and Universities"; Only a few "double-first-class" universities in China have established emergency plans for archives security, and the coverage and implementation efficiency of the system need to be improved urgently [1]. As the core data asset of teaching and scientific research, personnel training and cultural inheritance, the governance level of university archives directly affects the modernization process of university governance. This study reveals the interactive mechanism of technology adoption, service innovation and institutional evolution, and expands the application boundary of new institutional economics in public data governance.

2. Present Situation and Problem Analysis

At present, many university leaders don't know enough about the importance of file management, and there is a tendency to emphasize teaching and scientific research and neglect file management. They think that file management is only a simple file arrangement and preservation work, and they don't realize its important supporting role for the development of the school. This concept leads to the limited manpower, material resources and financial resources invested by schools in archives management, which affects

the normal development of archives management [2]. The file management system of some universities is not perfect, and there is a problem of lagging system update, which is difficult to meet the needs of file management under the new situation. For example, in the case of new businesses such as cross-border education cooperation and interdisciplinary integration, the original file classification system and business process can no longer meet the actual needs [3]. At the same time, some universities lack clear and detailed regulations on the collection, sorting, archiving and utilization of archives, which leads to the lack of standardization and standardization of archives management and is prone to problems such as missing, omission or duplication of archives [4].

Although informatization construction has brought new opportunities for university archives management, at present, the archives digitization level of universities is uneven, and the archives digitization rate of some "double-first-class" universities has reached a high level, but there are still many ordinary undergraduate colleges whose archives digitization work is still in its infancy and the overall development is relatively backward. In addition, the archives management system in some universities has a single function and lacks intelligent and personalized service functions, which affects the utilization efficiency of archives. Moreover, electronic files lack effective security measures during transmission, and data security risks are prominent [5].

Most university archives management departments still adopt the traditional passive service mode, lacking the consciousness and ability to actively develop and utilize archives resources, and the depth of archives information mining is not enough to meet the needs of teaching, scientific research, management and other aspects of the school. At the same time, due to the limitation of management system and technical conditions, the sharing of archival resources among universities is low, forming "information islands", which is

not conducive to the full play of archival value. The professional quality and professional ability of university file managers are uneven, and some file managers lack professional file management knowledge and skills, and their application ability of new technologies is insufficient, which makes it difficult to meet the requirements of file management modernization. Because universities do not pay enough attention to archives management, archives management posts are often regarded as marginal posts, which leads to low enthusiasm and stability of archives managers and serious brain drain.

3. Innovation Mode Construction

Based on the actual demand and development trend of university archives management, the construction of innovative mode focuses on three core directions: technology empowerment, service upgrading and process optimization, and forms three innovative paths: technology-driven, service-oriented and management process reengineering, which support each other and work together to promote university archives management from traditional transactional management to intelligent, accurate and standardized governance transition (Figure 1).

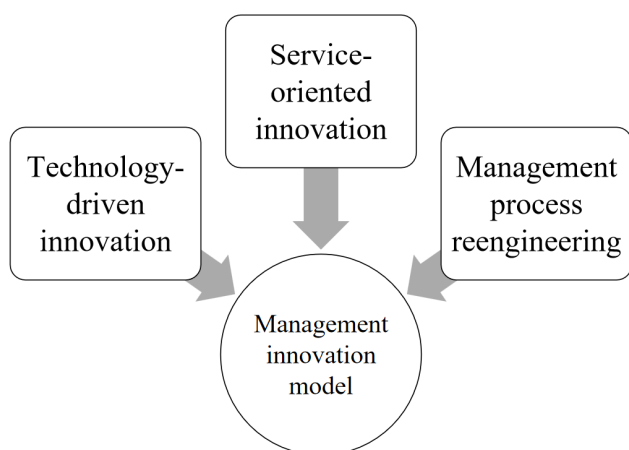


Figure 1. Innovative mode of university archives management

The three innovation models are interrelated and organically integrated: technology-driven provides technical support for service upgrading and process reengineering, service-oriented defines the target direction for technology application and process optimization, and management process reengineering provides institutional guarantee for technology landing and service supply. The three work together to build an innovative system of university archives management with "technology empowerment, service core and process guarantee", which lays a solid foundation for the institutionalization of archives management and helps universities realize the modernization of governance capacity.

3.1. Technology-driven Innovation

Technology-driven innovation is supported by digital and intelligent technology, which breaks the physical boundary and efficiency bottleneck of traditional file management and reconstructs the technical framework and operation system of file management. On the technical application level, the core relies on cutting-edge technologies such as big data, cloud computing, AI and blockchain to realize the technical empowerment of the whole process of file management: in the file collection process, through OCR recognition, voice

transcription, intelligent terminal collection and other technologies, the paper files and audio and video files can be rapidly digitized, and the collection efficiency and data accuracy can be improved; In the file storage link, the hybrid storage mode combining cloud storage and local backup is adopted, and the flexible expansion, remote sharing and security control of file resources are realized by relying on cloud computing technology, which solves the problems of large space occupation, inconvenient retrieval and easy loss of traditional file storage. In archives management, an intelligent classification, retrieval and early warning system is built with AI technology to realize automatic indexing, accurate retrieval, content traceability and risk prediction of archives, which greatly reduces the labor management cost [6]; In the file security link, the blockchain technology is used to build an unbreakable file data chain, so as to realize the whole process of file operation and trace the identity, and strengthen the integrity and security of file data [7]. The core value of this model lies in promoting the efficiency upgrade of archives management by technical iteration, realizing the transformation of archives resources from "physical collection" to "digital empowerment", providing efficient data support for university teaching, scientific research and management decision-making, and laying a technical foundation for long-term preservation and cross-domain sharing of archives resources.

3.2. Service-oriented Innovation

Service-oriented innovation takes demand as the core orientation, breaks the traditional thinking pattern of "focusing on storage and neglecting service" in file management, reconstructs the file service system, and improves the accuracy, convenience and personalization of service [8]. At the service object level, it breaks through the limitation of only facing faculty and students in the school, expands to alumni, social scientific research institutions, government departments and other diverse subjects, and constructs an all-round and multi-level service matrix; In terms of service content, it extends from traditional basic services such as file inquiry and borrowing to value-added services such as file editing and research, special service and decision-making consultation, builds special file database for teaching and research needs, provides customized services such as academic credentials and campus memory files for alumni needs, and provides file data analysis reports for management decision-making needs, thus realizing deep integration of file service and university core work.

At the service mode level, relying on the digital platform to build the service channel of online and offline integration: build a one-stop archives service portal online to realize the whole process of online processing of archives query, appointment borrowing, certificate issuance and other services, and break the time and space restrictions; Optimize the layout of service windows offline, implement the "one-window acceptance and integrated service" mode, and equip professional service personnel to provide face-to-face services such as consultation and guidance and file verification to meet the service needs of different groups [9]. A service feedback mechanism is established, the demands of clients are collected through questionnaires, discussions and exchanges, and the service process and content are dynamically optimized, thus forming a closed-loop service system of "demand collection-service supply-feedback optimization".

3.3. Management Process Reengineering

The goal of management process reengineering is standardization and high efficiency. Aiming at the problems existing in the traditional file management process, such as redundant links, unclear rights and responsibilities, and poor connection, the whole file management process is systematically reconstructed, the organizational structure is optimized, the boundaries of rights and responsibilities are clarified, and the circulation links are simplified, thus forming a closed-loop management system. At the level of process optimization, it covers the whole life cycle of archives from formation, collection, sorting, filing, storage, utilization to destruction (Figure 2). In the stage of file formation, establish a front-end control mechanism, standardize the standard and format of file formation, promote the collaborative linkage between business departments and file management departments, realize the synchronous formation and collection of files, and ensure the quality of files from the source; In the filing stage, simplify the filing process and implement the mode of "standardization of classification, standardization of filing and electronic filing" to reduce duplication of work and improve filing efficiency; In the stage of file utilization, the approval process is optimized, and differentiated approval authority and process are formulated for different types of files and different clients, so as to realize rapid retrieval of regular files and standardized approval of special files [10].

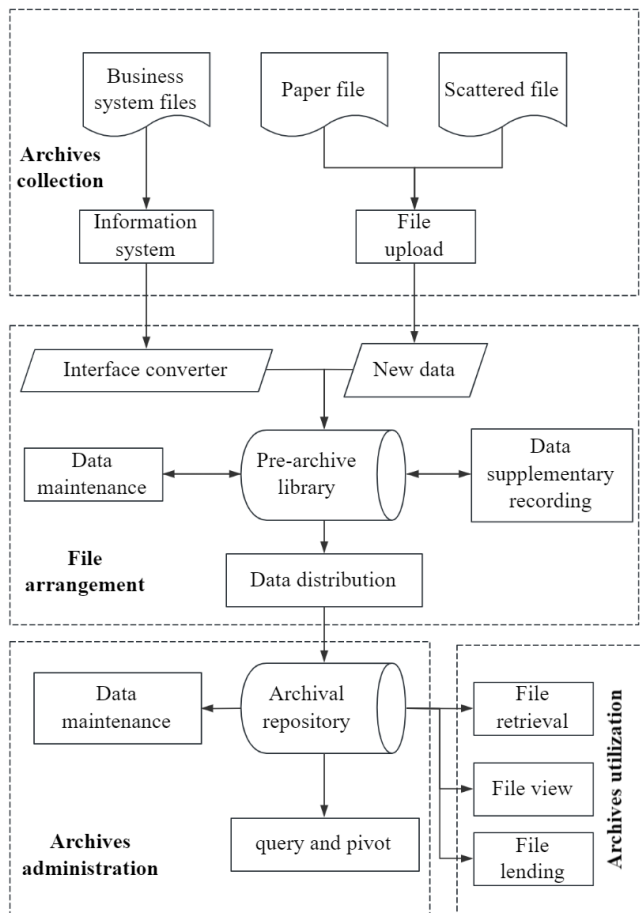


Figure 2. Optimization of archives management process

In terms of organizational structure, we should break the traditional pattern of single-handedness of archives management departments, establish an inter-departmental coordination mechanism, clarify the archives management

responsibilities of various business departments, embed archives management requirements into the whole process of business work, and form a collaborative management system of "overall coordination of archives management departments and division of responsibilities of business departments". At the same time, improve the evaluation mechanism, incorporate file management into the performance evaluation of departments and individuals, strengthen the importance attached by various departments to file management, and ensure the implementation of the re-engineered process. In addition, combined with the needs of institutionalized construction, the optimized process is solidified into rules and regulations, and the operating standards, responsible subjects and time nodes of each link are defined to realize the standardization and normalization of process management.

4. Institutional Construction Path

4.1. Institutional System Design

Formulate the Digital Transformation Development Plan of University Archives Management, clarify the innovation goal and implementation path, and incorporate archives management into the overall layout of the modernization of school governance system. Establish a governance structure of "school leaders take the lead, archives departments plan as a whole, and multi-departments cooperate", form an inter-departmental cooperation mechanism, and break down data islands and business barriers.

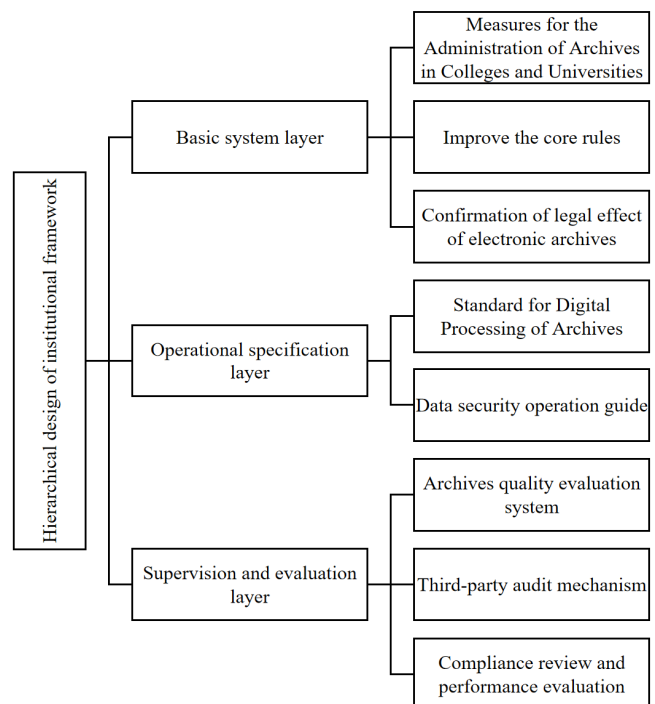


Figure 3. Hierarchical design of institutional framework

The system framework is designed in layers, as shown in Figure 3. At the basic system level, the Measures for the Administration of University Archives are revised, the core rules such as file classification, filing scope and storage period are improved, and the legal validity of electronic files is strengthened. The operational specification layer formulates detailed rules such as Archives Digital Processing Standard and Data Security Operation Guide, and defines technical standards and process specifications. The supervision and evaluation layer establishes a file quality

evaluation system, introduces a third-party audit mechanism, and regularly conducts compliance review and performance evaluation. Set up a special fund for archives management innovation, support technology pilot and model exploration, and dynamically adjust the system terms according to practical feedback. Establish an update mechanism of "annual revision+emergency response" system to meet the compliance challenges brought by the application of new technologies.

4.2. Standardization Construction

The whole process is standardized and controlled, and the concept of "front-end control" is implemented in the collection link, and the file generation module is embedded in the business system to realize automatic data capture and structured storage. In the finishing step, the Archives Metadata Standard is formulated, which unifies the description rules and coding system and supports cross-system retrieval and association analysis. Use links to establish a hierarchical open system, clarify the decryption cycle and access rights of different types of files, and balance the requirements of openness and security. Technical standards and interface specifications, formulate the Interface Standard of University Archives Information System, unify data formats and transmission protocols, and realize seamless connection with educational administration, scientific research and other systems [11]. Promote the use of internationally accepted standards for file description, and enhance the international interoperability of file resources. Select some departments to carry out standardization pilot projects, and form a template for the whole process of "collection-collation-storage-utilization" that can be popularized. Compile the Standardized Operation Manual of University Archives Management, and develop an online training platform to improve the standardization execution ability of all staff.

4.3. Construction of Guarantee Mechanism

In order to strengthen the sustainability of the innovation mode of archives management, it is necessary to build an all-round guarantee system: at the organizational level, an archives management committee led by school leaders should be set up to coordinate resources and cross-departmental cooperation, and a post of "digital transformation specialist" should be set up in the archives department to promote technology landing and system publicity; In terms of talents, we will implement the "archives+information technology" compound talent training plan, jointly build a training base with the archives society and science and technology enterprises, and establish a career promotion channel to incorporate digital ability into performance appraisal; Technically, an intelligent file management system integrating OCR recognition and natural language processing is deployed to realize automatic classification and semantic retrieval, and the "private cloud+blockchain" architecture is adopted to ensure that data can not be tampered with and read for a long time; In terms of security, formulate the Emergency Plan for Archival Data Security, conduct regular offensive and defensive drills, introduce a zero-trust architecture, and implement minimum access and dynamic identity authentication; As for the fund guarantee, we should set up special funds, adopt multiple financing methods of "school funding+social cooperation", and explore the outsourcing mechanism of archives services to reduce long-term operating

costs by market-oriented means.

Driven by digital transformation and high-quality development of higher education, university archives management is transforming from traditional mode to intelligent, service-oriented and open direction. As the core guarantee of innovation mode, institutionalization needs to build a management system that meets the needs of the new era through systematic design, standardization and long-term guarantee mechanism. The institutionalization of the innovation mode of university archives management needs to be based on the system, the standard as the rope and the guarantee as the wing, and solve the problems of fragmentation and inefficiency in traditional management through systematic design.

5. Conclusion

Technical empowerment is the core driving force to break through the bottleneck of traditional management. The application of technology such as blockchain deposit certificate and intelligent classified retrieval has significantly improved the efficiency of file traceability and data security; The service upgrade needs to reconstruct the "demand-supply-feedback" closed-loop mechanism, and realize the deep development of archives resources through online and offline integrated service channels; Process reengineering relies on the concept of life cycle management, establishes cross-departmental collaboration mechanism and standardized operation norms, effectively eliminating the problems of unclear rights and responsibilities and process redundancy. At the level of institutionalization, the institutional framework of hierarchical design and standardization system form double constraints, supplemented by the collaborative mechanism of organizational guarantee, talent training and financial support to ensure the sustainable landing of innovation model. The research expands the application boundary of new institutional economics in the field of public data governance. Its theoretical contribution lies in revealing the interactive mechanism between technology adoption and institutional evolution, and its practical value lies in providing a replicable transformation paradigm for the modernization of university governance capacity.

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