

Research on the Path of Informatization Construction of College Archives Management in Digital Age

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Abstract: The arrival of the digital age provides new opportunities and challenges for college archives management. By digitizing archives, people can not only improve management efficiency and ensure data security, but also realize information sharing and cooperation, which provides strong support for the development and decision-making of colleges and universities. Based on this, this paper explores the path of the informatization construction of university archives management in the digital age, analyzes the significance of the informatization construction of university archives management in the digital age, puts forward the problems existing in the construction, and gives effective solutions, with a view to providing powerful support for the development and decision-making of universities through research.

1. Introduction

With the rapid development of information technology, the digital age has profoundly changed all aspects of education, including university archives management. The information construction of archives management in colleges and universities is no longer an option, but an essential measure. In this digital wave, the informatization construction of university archives management is not only a means to improve efficiency and reduce costs, but also a key path to promote the modernization of university management, improve the quality of education and meet the needs of society. Therefore, it is of great significance to study it in this paper.

2. Significance of Information Construction of Archives Management in Colleges and Universities in Digital Age

The significance of information construction of archives management in colleges and universities in the digital age is reflected in the following aspects: (1) Improve the efficiency and quality of archives management. Under the background of digital age, the information construction of archives management in colleges and universities can greatly improve the efficiency of archives arrangement, storage, retrieval and utilization. Digital archives through electronic storage, making information retrieval more convenient, greatly shorten the search time of archives. At the same time, the storage and backup functions of digital archives also provide reliable guarantee for the long-term preservation of archives. (2) Promote the sharing and utilization of archives resources. Information construction makes college archives no longer confined to a certain place, but can

realize network sharing. This change not only improves the utilization rate of archives resources, but also promotes academic exchanges and scientific research cooperation. Through the network platform, teachers, students and researchers can easily obtain the required archives, thus improving the efficiency and quality of teaching and scientific research. (3) Enhance data security and confidentiality. Data encryption technology and access control mechanism in information construction provide powerful technical support for the security protection of university archives. Compared with traditional paper files, digital files can effectively prevent files from being damaged or leaked due to natural disasters or human factors. This is particularly important for university archives containing sensitive information and important academic achievements. (4) Adapt to the needs of the development of modern education. As the front position of education and scientific research, the modernization of archives management in colleges and universities is very important for the reform and development of the whole education system. Digital archives management can not only effectively support the daily teaching and administrative work in colleges and universities, but also be an important foundation for education and teaching reform, scientific research project management and historical and cultural inheritance in colleges and universities. (5) Help the construction of intelligent campus. Information construction is the foundation of intelligent campus. Digitalization in the field of archives management can be connected with other intelligent management systems in colleges and universities, forming a pattern of data sharing and comprehensive utilization, and further improving the intelligent level of campus management. (6) Respond to the requirements of national policies and regulations. With the country's emphasis on information construction and digital economy, the digitalization of university archives management has become the need to respond to national policies. According to relevant laws and regulations, colleges and universities need to ensure the safety and standardized management of archives information, and digital construction provides an effective way.

3. The informatization construction of college archives management in the digital age

3.1. Weak information security protection

"Weak information security protection" is mainly manifested in the following aspects. System security vulnerabilities frequently occur, resulting in external attackers can easily invade and obtain sensitive information in the file management system. This involves not only the intellectual property rights of colleges and universities, but also the privacy rights of teachers and students. At the same time, the safety awareness of internal personnel is weak, which makes the information face the risk of leakage when circulating internally. Lack of professional information security team makes it difficult to find and deal with problems in time, and delays the opportunity to solve problems. Furthermore, the backup and recovery mechanism is not perfect, which makes it difficult to recover quickly when data is accidentally lost, which affects the continuity of file management. The resulting problems are even more varied. The disclosure of sensitive information may lead to legal disputes, which will cause huge economic and reputation losses to schools. Attackers may use the obtained information for unfair competition, fraud or extortion, which will bring substantial damage to teachers, students and schools. In addition, the tampering of information may lead to the deviation of the data referenced by schools in decision-making, and then affect the operation and management of the whole school [1].

3.2. The data fusion strategy is invalid

The failure of data fusion strategy is mainly reflected in the following aspects. In the selection of data sources, some universities blindly choose data sources without in-depth evaluation, which

leads to unstable data quality, thus affecting the results of fusion. At the same time, the negligence in the data cleaning and preprocessing stage is also one of the reasons for the failure of the strategy. The quality of integration will be directly affected if the data that has not been properly processed is added to the fusion process. When the strategy does not keep pace with the times and fails to deal with new data types and structures in time, it may also lead to the results of data fusion deviating from expectations [2]. In addition, the failure of data fusion strategy may also lead to a series of chain problems. For example, for those departments or research teams that rely on accurate data to make decisions, they may make wrong decisions because of inaccurate data [3]. This not only affects the management efficiency of colleges and universities, but also may affect the reputation of colleges and universities to some extent. At the same time, for colleges and universities, time and resources are precious. However, the failure of data fusion strategy means that data integration needs to be carried out again, which undoubtedly increases the cost and time cost.

3.3. The system integration effect is not good

College archives cover a wide range, including teaching, scientific research, personnel, finance and many other aspects, which need an efficient system integration to ensure the smooth flow of information and the accuracy of data. However, at present, there are some problems in system integration in many colleges and universities, which are mainly manifested in several aspects [4]. Incompatibility between systems is a major problem. Information transmission between different systems is not smooth, and data formats and standards are not uniform, which leads to low efficiency of information exchange. In addition, some system integration ignores the design of user experience, which leads to complex operation and is not conducive to efficient use by users. Furthermore, the scalability and flexibility of the system is insufficient to adapt to the rapidly changing information needs, and it is difficult to update and upgrade in time, which makes the whole file management system difficult to adapt to new technology and management needs. The existence of these problems has many influences on the archives management in colleges and universities. The inefficiency of data exchange will directly affect work efficiency, and staff need to spend more time and energy on data conversion and adjustment. Operating complex systems will reduce the enthusiasm of users and affect the quality of the whole file management work. However, the inflexibility of the system will make the file management unable to follow the pace of technological development in time and affect the modernization level of management [5].

3.4. Low satisfaction with user experience

User experience covers all the feelings when using a product or service, from functional practicality, interface design to response speed. In the information construction of archives management in colleges and universities, good user experience means that teachers, students and administrators can easily and efficiently access and manage archives. "Low user experience satisfaction" is mainly manifested in the following aspects. The interface design is too complex and lacks humanization consideration, which makes users feel confused in the use process. The slow response speed of the system causes users to encounter unnecessary waiting when querying or uploading files [6]. The function setting is unreasonable, some commonly used functions are buried, and some rarely used functions are too prominent. In addition, the lack of effective feedback mechanism makes it difficult for users to solve problems in time. The existence of this situation brings many problems to the archives management of colleges and universities. Due to the inhumanization of interface design, new users may need to learn for a long time to operate skillfully, which increases the threshold of use. The slow response speed directly reduces the work efficiency, which undoubtedly increases the workload of teachers and students who often need to inquire about

archives. Unreasonable function setting will cause users to jump pages frequently, which makes the operation process cumbersome. However, the lack of effective feedback mechanism may lead to the accumulation of users' dissatisfaction with the system, and the trust and satisfaction of users will be greatly reduced for a long time [7].

4. The path of informatization construction of university archives management in the digital age

4.1. Strengthen the information security mechanism

In order to ensure the information security in the information construction of university archives management in the digital age, a series of measures should be taken to strengthen the information security mechanism. First of all, establishing a comprehensive security system is the key. This includes developing clear safety policies and procedures to ensure that every university member understands and strictly abides by these policies. At the same time, colleges and universities should set up special information security teams to monitor and assess risks and take timely measures to deal with potential security threats. Secondly, technical support is also an indispensable part. Colleges and universities should invest in modern security technologies, including firewalls, intrusion detection systems and data encryption, to ensure that sensitive information is not stolen by unauthorized visitors [8]. At the same time, colleges and universities should also establish backup and recovery mechanisms to deal with data loss or damage. Finally, establishing a close cooperation network can also contribute to information security. Universities can establish cooperative relations with government departments, other universities and security companies, share security intelligence and best practices, and jointly meet security challenges across campuses and fields. This kind of cooperation can improve the information security level of the whole university system and ensure the smooth progress of the information construction of archives management.

4.2. Optimize the data fusion algorithm

In order to optimize the data fusion algorithm, firstly, colleges and universities can adopt advanced data cleaning technology to improve the data quality by identifying and correcting errors, repetitions or inconsistencies in the data. This can include automated data validation and repair tools, as well as manual audits to ensure that high-quality data is available for fusion. Secondly, for the optimization of data fusion algorithm, machine learning and artificial intelligence technology can be used. By establishing the model, we can automatically choose the best fusion strategy and algorithm according to the characteristics and relevance of different data sources. This intelligent method can improve the accuracy and efficiency of data fusion and reduce the need for manual intervention. In addition, data standardization is also a key step of data fusion. Universities can formulate unified data standards and specifications to ensure seamless integration of data from different data sources. This includes uniform data formats, naming conventions and data element definitions to reduce confusion and errors in the data fusion process. In addition, the performance evaluation and optimization of data fusion algorithms are also essential. Universities can establish performance evaluation indicators and processes, regularly monitor the quality and efficiency of data fusion, and adjust and optimize algorithms and processes according to the evaluation results. This helps to continuously improve the effect of data fusion and ensure that data quality is always maintained.

4.3. Improve system integration capabilities

In order to achieve success in the informatization construction of university archives management in the digital age, it is very important to enhance the system integration ability. First of all, colleges and universities should establish a special system integration team, which is composed of experienced professionals. The main task of this team is to be responsible for integrating different systems and applications to ensure that they can work together seamlessly. This requires deep technical knowledge and rich practical experience to meet various complex integration challenges. Secondly, colleges and universities can adopt standardized integration methods and tools to improve the efficiency and quality of system integration. This includes the use of uniform data formats and interface standards to reduce compatibility issues in the integration process. In addition, colleges and universities can also use mature integration platforms and tools, such as Enterprise Service Bus (ESB) or Integrated Development Environment (IDE), to simplify integration tasks and improve development speed. In addition, colleges and universities should pay attention to the planning and design of system integration. Before you start the integration project, you should do enough requirements analysis and system design to define the goals and scope of integration, as well as the relationships and dependencies among the various systems. This helps to avoid later problems and adjustments and ensure the smooth progress of the integration project. In addition, universities can adopt service-oriented architecture (SOA) or micro-service architecture to improve the flexibility and scalability of system integration. This architecture splits the system into small, independent services that can be independently developed, tested, and deployed, reducing the complexity of integration. At the same time, SOA or micro-service architecture also allows universities to dynamically add new services or applications according to their needs to adapt to changing needs. Finally, colleges and universities can establish an integrated test and monitoring system to ensure the stability and reliability of system integration. This includes detailed testing during the integration process, including unit testing, integration testing, and system testing, to discover and resolve problems. At the same time, colleges and universities should also establish a monitoring system to monitor the running status and performance of the integrated system in real time, and find and solve potential problems in time.

4.4. Improve user experience design

In order to achieve success in the informatization construction of university archives management in the digital age, improving user experience design is a crucial step. First, colleges and universities should conduct a comprehensive analysis of user needs. This includes in-depth communication and investigation with various user groups, including students, faculty and managers, to understand their needs, preferences and pain points. By fully understanding the expectations and needs of users, colleges and universities can better design information systems and provide functions and interfaces that are more in line with actual needs. Secondly, colleges and universities need to pay attention to the design of user interface. The friendliness and ease of use of the interface are very important to the user experience. Universities can adopt the best practices of user interface design, including intuitive navigation, clear layout, clear labels and buttons, etc., to provide a user-friendly interface. At the same time, we should consider the differences of different user groups and provide them with customized interfaces and functional options. Thirdly, colleges and universities can adopt responsive design to ensure that the information system can run and display well on different devices. This includes different terminal devices such as desktop computers, tablets and mobile phones. Through responsive design, colleges and universities can provide a consistent user experience, no matter what device users use to access the system. Fourth, colleges and universities should pay attention to the performance and stability of the system. Long

waiting times and system crashes will seriously affect the user experience. Therefore, colleges and universities need to ensure that the information system has good performance and stability, can quickly respond to user requests and avoid system failures. Fourth, colleges and universities can adopt the mechanism of user feedback and evaluation to continuously improve user experience. This includes collecting feedback from users, conducting regular user satisfaction surveys, and analyzing user behavior data. By continuously collecting and analyzing user feedback, colleges and universities can identify problems and improvement points, and optimize system design and functions to meet changing user needs. To improve user experience design, we need to analyze user needs, pay attention to user interface design, adopt responsive design, ensure system performance and stability, and make continuous improvement by using user feedback. Only through these comprehensive measures, colleges and universities can provide better user experience for the informatization construction of college archives management in the digital age, and improve the acceptance and use efficiency of the system.

5. Conclusion

In the digital age, the information construction of university archives management is not only to meet the needs of the development trend of the times, but also an inevitable choice for university management. It improves management efficiency, enhances file security, provides data support for decision-making, promotes information sharing and collaboration, and conforms to the general trend of digital age. However, to realize the informatization construction of digital archives management requires continuous efforts from colleges and universities, including technical input, personnel training and risk management. Only by actively responding to challenges and making good use of digital technology can colleges and universities improve their management level, provide better education and make greater contributions to students and society.

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