Problems and Countermeasures in the Informatization of Archives Management in University Library

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Abstract: To improve the level of informatization of university library archives management, the problems existing in the information construction of university library archives management are analyzed and some practical solutions are proposed in this paper. These solutions can effectively reduce the investment in human resources and equipment and facilities and improve the utilization rate of resources for computer application of university library archives management.

Keywords: Library; Archives management; Informatization

1. Introduction

Under the background of the rapid development of information technology, the information age has come, and with the increasingly close connection between network information technology and people's lives, information technology has penetrated into all walks of life in the society, especially the informatization in the archives management of university libraries. At present, there are still many problems in the informatization of university library archives management. Information resources have become an important basis for the development of social economy and science and technology, especially under the background of the rapid development of information technology. Informatization has become an inevitable trend in the current university library archives management, thus problems in the archives management should be addressed. At present, although the archives management of university libraries have mostly been informatized, but the archives still have not been fully informatized, and information technology has not been well utilized in our country's university libraries archives management. Besides, there are still many shortcomings in the technologies used in our country's university archives management. The application of computer in the archives management of university library can effectively reduce the investment in human resources and equipment and facilities, and the use of advanced computer network technology and highly skilled professionals will be more conducive to improving the utilization of information resources [1-4].

2. Utilization of library resources in China in 2016–2021

The utilization of library resources has been increasing from 2016 to 2020, with an average utilization of more than 10 million times, as shown in **Table 1**.

Table 1. Utilization of library resources in China in 2016–2020

Year	Issue valid library cards (10,000 cards)	Library circulation (10,000 visitors)	Person-times of loan of books and periodicals (10,000 person-times)	Loans of books and periodicals (10,000 copies)
2016	5593	66037	24892	54725
2017	6736	74450	25503	55091
2018	7263	82032	25814	58010
2019	8627	90135	26609	61373
2020	10251	54146	17467	42087
2021	11201	74614	26036	58730

3. Problems in the information construction of archives management in university libraries

3.1. Lack of effective electronic archival resources

The application of electronic archives is a very important aspect in the informatization of archives management. Therefore, it is crucial to address the problems in the application of electronic archives to ensure successful informatization of university library archives management. First of all, the integrity and authenticity of the resources are crucial while using the electronic file system of archives and libraries, or else it will cause great losses to the archives management department [5]. There should be a backup for electronic documents in the university libraries, so it is necessary to strengthen the construction of information security system during the establishment of electronic archive resources [6]. In addition, it is necessary to carry out real-time backup of electronic data, computer terminal data and database information in archives and libraries. Secondly, the security and confidentiality of electronic information technology in the university library needs to be ensured. This is because a university library is a relatively closed and independent environment, hence, if the electronic information technology is used by criminals or stolen, it will cause great losses to the university archives. Moreover, information security protection measures are not well-constructed, the security of electronic archives will be threatened. Finally, we should pay attention to the construction of technical system and corresponding mechanism for the security management of archival resources. In order to ensure the security of electronic documents of archival data in university libraries, it is necessary to establish a perfect database, network security system, confidentiality system, and other related security system.

3.2. Backward concept of management personnel and low quality of staff

At present, the overall quality of Chinese university library staff and archive management personnel are generally low, in which they lack archive management informatization-related professional knowledge and skills, which is also an important reason for the low efficiency and poor effect of archive management informatization. Besides, the application of modern equipment and technology is not enough, with many operations still done manually. There is also lack of professional skills training, learning, and communication opportunities for archive management personnel. In addition, the lack of emphasis on and understanding of archive management led to many problems in the informatization of university library archives management. In short, with the continuous development of science and technology and socioeconomic status in China, as well as the social development trend brought by the increasing demand for informatization, the informatization of university library archives management is inevitable and trendy. A lot have been done in the process of informatization of university archives, but because there are many differences between archives and other units in terms of institutional settings, personnel relations and work nature. Therefore, archives are subject to more constraints to adapt to the requirements of the development

of the times, resulting in the slow modernization process of university library archives management and the inability to keep up with the social and economic development.

3.3. Lack of electronic archives management technical professionals
The informatization of university libraries requires a large number of electronic archives management technical professionals due to the complexity of the project. Therefore, the staff needs to be highly professional and have strong business skills, and most importantly able to master the technical knowledge of electronic file management business. In practice, because of the lack of understanding and attention towards information technology of university archives, insufficient training is given to the personnel of archives. Hence, in order to complete the informatization of university archives, universities need to train their library staff in terms of professional quality and business ability. Besides, when universities do not pay enough attention to the training of relevant talents, the lack of professional talents will affect the students learning. Moreover, some institutions of higher education do not set up the corresponding departments or employ relevant personnel to manage the archives, resulting the underutilization of the archives.

3.4. Outdated equipment
With the continuous development of information technology, university library archives management has entered the information age, making the information construction of archives management more and more important, which requires the archives management personnel to constantly improve their comprehensive quality. However, at present, there are still many problems in the archives management of university libraries, which are mainly manifested in the immature development of e-government network and information transmission system due to the imperfect construction of the hardware facilities of the archives management unit of university libraries. At present, the hardware facilities of e-government network and information transmission system are still not up to standard, resulting in a series of problems such as slow network speed, serious security problems, and outdated communication equipment, which makes it difficult for electronic documents to be uploaded to the relevant departments for processing in a timely manner. In addition, the archival information resources can be damaged or corrupted in different degrees during the process of transmission, which is also one of the important factors affecting the informatization of archives management.

3.5. Insufficient funding for electronic archive development of universities
At present, although the informatization of university archives has been carried out, there is still a huge difference among investment on archives of different universities. Some schools have only renovated their archives room, while some schools have not established electronic archives. Insufficient investment in informatization is also a very important reason. The archives management in university library is more complex and requires many equipment and personnel. In addition, if there is no funds for the comprehensive upgrading of archives management, it is impossible to achieve the objectives of library archives informatization. We also found out that quite a few librarians in university libraries do not realize the importance of archive informatization on the development of libraries, they only pay attention to the collection of materials, but neglect the importance of financial support. In addition, some university libraries have not set up special departments for the electronic documents or lack financial support, which causes the failure in carrying out electronic document archiving.

4. Strategies for informatization construction of university library archives management
The workflow reengineering method can be applied to improve overall management and carry out real-time

monitoring of college archives entering the library, so as to kickstart college archives informatization [7-11].

4.1. Build the university archives information exchange platform
Sometimes, poor communication occurs between the archives department and the archives transfer department in which information is not exchanged in time, and there are also information barriers between different departments within the archives department. By establishing an archival information exchange platform, various archival work requirements can be released in real time to ensure that timely communication can be carried out between relevant business personnel.

4.2. Publishing archive information
The information technology file management department of the university should create a special guidance team to organize the transfer of files. This team should come out with the collection scope of files, quality requirements, and other norms on the information platform, so that the transfer party can obtain information in time to work according to the rules. At the same time, we should collect information corresponding to the archives. For example, if they learn that a major construction project will be carried out in the next year or at the end of the year, they can publish relevant information on the platform in advance and update the implementation progress in time. After seeing the relevant information, the collection personnel should have enough knowledge on that topic while inspecting the files and discover and solve any problems that occur in the process.

4.3. Archival information confirmation
The collection personnel will publish the relevant information collected in the archives on the information platform for the supervision of the third party. At the same time, the information released by the guidance team in the early stage is confirmed. Once any unsuccessful transfer is detected or there is information that does not comply with the requirements, it is necessary to mark it in time and inform the relevant personnel to address the issue in the early supervision of the informatization of university archives.

4.4. Review of archiving information
In many universities, only one person is responsible for of collecting archive information, and the professionalism and dedication of this person becomes the key to decide whether the archives can be entered into the library, causing many risks due to human factors. The comprehensive sharing of information on online accessioning allows supervisors to keep an eye on the collection dynamics, review the information released on the information platform in a timely manner, and approve the accession of archives only after the review is qualified. In the end, the archives will be like assembling cars on the production line, and each volume of archives will no longer be arbitrary, and the authentication and traceability of archives can be achieved.

4.5. Improve the awareness of the importance of information archives in colleges and universities and increase capital investment
Archival informatization should be emphasized and be included in the planning and development with urban planning and construction business, so as to strengthen the informatization of university archives. Secondly, we should vigorously publicize the archives management in colleges and universities, so that all departments fully understand the importance of archives in colleges and universities. Only by making people realize that archives are closely related to their daily work and life can we better support the informatization of university archives. In addition, in order to realize the informatization of university archives, it is necessary to ensure that the infrastructure is well-developed. In particular, it is necessary to

be equipped with an integrated software for university archives and document processing that is operable, adapts to the situation of universities, and can meet the needs of engineering projects, documenting, archiving, and digitalizing the information. Therefore, to realize the informatization of university archives, it is necessary to increase the capital investment in the college archives department [12-15].

5. Conclusion

With the continuous development of society, the role of university libraries as an important carrier of university scientific research is becoming increasingly prominent. In order to improve the level of informatization of archives management, we must give full play to the role of archival information resources and collect, process, and sort existing archival information. Aside from the need to improve the awareness of the importance of archives management, we also need to actively innovate the relevant technical means and methods. It is very necessary to develop the informatization of archives management in light of the new era, and we also need to actively introduce and adopt local and foreign advanced technology. In addition, we should strengthen the supervision and management of the information construction in the existing archives management work. Of course, in order to realize the informatization of university archives, we also need to constantly improve the rules and regulations and formulate clear technical standards.

Disclosure statement

The authors declare no conflict of interest.

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