Construction of Information-based Management Platform in College Archives in the Big Data Environment

Ming Nie, Qi Fu

Shandong Agriculture and Engineering University, Jinan City, Shandong Province, 250100, China

Abstract: This paper studied the related concepts of personnel file management in colleges and universities, clarified the significance of the development of big data for the construction of information-based management of personnel files in colleges and universities, and found out the deficiencies and problems in the management of personnel files in colleges and universities. Moreover, the paper combined the advantages of big data technology to improve the information-based management of college personnel files, which aimed at effectively ensuring the orderly development of information-based management of personnel files in colleges and universities, and laying a solid foundation for the stable development of colleges and universities.

1. Introduction

The arrival of the era of big data has provided favorable conditions for the good development of big data technology. In people's daily lives, big data technology also shows its advantages. After cloud computing and the Internet of Things, big data has become a major subversive technological revolution in the IT industry, and has rapidly applied to many industries, such as finance, e-commerce, military, education, and meteorology, which becomes an unstoppable trend[1]. The arrival of the era of big data is both a challenge and an opportunity. As an important source of big data, the information-based construction of archives in colleges and universities is crucial. Applying big data technology to the information-based construction of college archives, gradually increasing the amount of data, improving the management mode of archives, and enhancing management efficiency are important goals for the information-based construction of archives in colleges and universities in the era of big data.

2. The Necessity of Information-based Management of College Archives in Big Data Environment

Big data can enhance the efficiency and accuracy of information retrieval currently in the continuous development of high-end technology and it has been applied to the management of college archives. Big data can establish a more practical file management system for colleges and universities, which can provide new opportunities for the development of file management. Institutional reforms in colleges and universities have always been very arduous tasks, and the amount of information used in this work is also quite large. The file belongs to the basic content of the resource information. The content of archives is an important basis for learning, employment and information, and is an indispensable part of everyone's development. However, relying solely on manual inspection of paper documents not only consumes a lot of manpower and material resources, but also makes the work inefficient. It is difficult to meet the information reform requirements[2]. In the era of big data, archives should design an information-based management system with big data technology. Extracting complete personal information with the computer can better carry out the management of archive information, and know each person more accurately and comprehensively. Furthermore, this will enhance the work level of college file management, thereby improving the efficiency and accuracy of information retrieval[3].

It has certain significance for colleges and universities to transfer more resources to the society. The reform in colleges and universities needs to focus on establishing a reasonable mechanism,

actively and effectively explore and cultivate more resources, and use resources scientifically and rationally to enhance the level of resource informatization in colleges and universities, thus enhancing the comprehensive ability of college archives information management personnel. For the management of college archives, the information-based management system of archives is an important tool for information management. It can collect, organize and store information, and meet the information-based management requirements of archives with the help of corresponding technical equipment and technical means. This will provide corresponding reference and services for talent selection and employment for the society.

3. Construction of Information-based Management Platform in College Archives in Big Data Environment

3.1 To do a good job in system construction and form a clear system.

(1) It is necessary to collect information content scientifically and reasonably. In the structure of colleges and universities and the setting of disciplines, the archives information of colleges and universities is more complicated and diverse. In the past, file information was mainly based on paper files, which was not very convenient in practical application. The application of big data technology to the information-based management of college archives can realize scientific and reasonable collection of files and accurate classification and clear labeling. This work is the most basic and key part of the information-based management of college archives[4].

(2) It is necessary to manage information reasonably. In the past, files in colleges and universities are managed manually. The efficiency is generally not high, and there are more actual errors. Because the data of internal archives in colleges and universities is more complicated, it is difficult to increase information utilization rate of archives with lower degree. Big data technology combines the advantages of aggregation and dynamics, which can provide a new direction for college file management. This mainly use computer, cloud storage and other modern technology to effectively carry out the digital and information-based storage and management of college archives information. Moreover, it uses big data technology to carry out analysis and sorting work more clearly and effectively to manage the complex file information, thus providing convenience for the use in the future.

(3) It is necessary to use information effectively. With big data technology, it is possible to organize and store file information reasonably, and users can use information technology to search for corresponding information, making it easier to retrieve. Moreover, this makes file management more flexible to provide users with favorable conditions and enhance the use efficiency of files.

3.2 To improve technical content and strengthen management effect.

Under the special background of the era of big data, to play the central role of big data technology in the information-based construction of archives, government, universities and society should actively participate in and coordinate with each other[5]. They need to improve legal policies, capital investment, technical facilities, staff cultivation and security mechanisms to take efforts to promote the new process of the information-based construction of archives in colleges and universities in China.

(1) It is necessary to improve the legal system and enrich the archives information resources. First of all, the state should make up for the legal system of college archives information construction, formulate unified, standardized and special rules and regulations as soon as possible, and establish an effective and reasonable incentive and restraint mechanism for the information-based construction of college archives to provide guidance and strengthen supervision. Second, the government needs to strengthen the archives publicity and raise the archives awareness of colleges and universities. Countries and universities can regularly hold archives exhibitions, increase archives publicity, break through the scope of colleges and universities, popularize the archives awareness of the whole society, and encourage all sectors in society to participate in the provision, development and utilization of archives. Finally, college archives should expand the amount of

information resources and enrich the archives resources in terms of quantity, type, and field.

(2) It is necessary to increase investment in colleges and universities and introduce advanced technology and facilities. First, capital investment requires extensive participation by the state, universities, and society to improve the infrastructure construction of college archives, such as offices, computers, scanners, and cameras. Second, colleges need to use big data technology to serve the information-based construction of college archives. In terms of quantity, big data technology can store huge amount of information. As of 2012, the amount of data has jumped from terabytes to PB, EB, and ZB. The store of rapidly growing amount of information requires big data technology. This contains hardware infrastructure construction, including the necessary digital archive room hardware equipment, such as servers for running various types of file management applications, electronic archive data discs (libraries), disk arrays and tape drives for data storage, software and hardware equipment for ensuring the security of electronic file data, and input and output equipment to meet the requirements of electronic file management; software infrastructure construction includes digital archives application system and related software to achieve electronic file collection, management, storage, utilization, and data exchange with the unit OA system and business system; the archives are equipped with operating system, database software, scanning software, image processing software, anti-virus software, anti-intrusion software and backup software compatible with storage; it is necessary to conduct network construction, which can be connected to the e-government network to realize online data transfer and sharing with the same-level digital archives[6].

(3) It is necessary to innovate file management model and strengthen employee training and education. The information-based construction of archives in colleges and universities should be based on the basic principle of efficiency, speed and convenience and fundamental purpose of serving the public. The following two measures should be taken. First, the file management model should be changed from national model to social model. College archives should establish a social archives concept, strengthen the social publicity and exhibition of archives, increase the openness of information resources, set up characteristic resource pavilions in a targeted manner, establish integrated information service methods, and improve information utilization and social sharing. The second is to introduce performance management into the university file management model, transform employees' work attitudes from material and spiritual aspects, and from passive to active aspects to enhance work enthusiasm.

(4) It is necessary to improve information security awareness and establish an effective early-warning mechanism. In the era of big data, information security is a major problem that needs to be solved urgently in all countries in the world. It is also a severe test for the information-based construction of archives in colleges and universities. To ensure information security, the following measures should be conducted. First, it is necessary to build a strong legal security system and popularize social information security awareness. We need to combine the actual reality of China's archival work, learn from foreign experience, and construct a reasonable and effective legal security system. It is necessary to strengthen information security awareness, popularize common sense of network security, improve vigilance of social security, and regard information security as the primary task of information-based construction of college archives. Second, it is necessary to create a reasonable information security system and establish an effective information security early warning mechanism. College archives should establish multiple technical safeguards, such as data backup and recovery, firewall opening, information encryption technology, access rights settings, anti-virus software use and fingerprint verification. Information management software design, information input, information processing and information preservation should be based on prevention to achieve maximum security at the lowest cost.

(5) It is necessary to strengthen education and training. The purpose of information-based construction of archives in higher vocational colleges is to improve the efficiency of archive management and maximize the value of archives. In the era of big data, archives resources can provide a basis for educational decision-making after integrated analysis, and offer reference for the long-term development of colleges and universities. This puts new demands on the ability of file

managers. First of all, we need to improve the operational capabilities of archivists. On one hand, they must actively participate in professional training of various information skills and learn advanced working methods. On the other hand, they should go to other universities to conduct research and study, learn successful management experience, and apply them to practice. Incentives can also be established to encourage the progress and innovation of file managers.

4. Summary

The continuous progress of big data technology has provided many new ideas for the information-based management of college personnel files in China. Therefore, we need to rationally use big data technology to make the information-based management of personnel files in colleges and universities more flexible and effective. We can effectively display its advantages and functions in college education. Compared with the rapid development of big data technology, the current information-based management of college personnel files is still in the initial development stage. The lack of correct understanding of informatization has affected the development of information-based management of personnel files in colleges and universities. We must conduct scientific and rational analysis of the characteristics of big data technology, and truly optimize the information-based management system of college personnel files. This will lay a solid foundation for the future development of colleges and universities.

Acknowledgement

References

[1] Zhou Caiyun, Zhao Jingjing. An Analysis of the Information-based Construction of College Archives in the Age of Big Data [J]. Lantai World, 2015 (11): 27-28.

[2] Zhang Lina, Xia Qingli. The Realistic Difficulties and Countermeasures of Human Resource Management in Colleges and Universities - A Discussion on Information-based Construction of College Personnel Files Based on Big Data Thinking [J]. Academic Forum, 2016, 39 (04): 157-161.

[3] Lv Lihua, Yu Tao. A Research on the Information-based Management of College Logistics Archives Based on the Background of Big Data [J]. Institutional Expo, 2016 (21): 318+303.

[4] Huang Qidong. Information-based Construction and Exploration of Archives in Disease Control Organizations in the Big Data Era [J]. Money China, 2016 (16):341-342.

[5] Dong Xueyan. Information-based Management and Application of Hospital Documents and Files in Big Data Environment [J]. Modern State-owned Enterprises Research, 2018 (06): 72.

[6] Yu Yingxiang. The New Direction of Archives Information-based Construction from the Perspective of Big Data - Based on the Outline of the 13th Five-Year Plan for the Development of National Archives Industry [J]. Beijing Archives, 2017 (02): 9- 12.