Optimization of University Talents Archives Management Method Based on the Development and Utilization of Scientific Research Data

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Abstract*: talents are the most important link in the scientific research system of colleges and universities. However, for a long time, there are many imperfect conditions between the scientific research archives system and talent management in Chinese colleges and universities, resulting in less contribution of scientific research archives to talent management. In this paper, scientific research data is archived as an important scientific research file, so as to lay a foundation for the development and sharing of scientific research data, so as to give full play to the value of scientific research data to talent management. Promote the optimization and improvement of the overall scientific research archives policy of Chinese universities.

Keywords: Archives management, Talents archives management, Optimization

INTRODUCTION

The scientific research management departments of colleges and universities should deeply realize the significance of scientific research data for scientific research innovation and even the construction of an innovative country, and archive and preserve scientific research data as an important scientific research file, so as to lay a foundation for the development, sharing and utilization of scientific research data, so as to give full play to the value of scientific research data. At present, China should focus on "double first-class" colleges and universities, speed up the improvement of relevant scientific research archives policies, and on this basis, play its leading and exemplary role to promote the optimization and improvement of the overall scientific research archives policies of colleges and universities in China. Specifically, attention should be focused on the following.

IMPROVE THE DEFINITION AND SCOPE OF SCIENTIFIC RESEARCH ARCHIVES

Most of the foreign countries include the original data and records in scientific research into one of the important types of "scientific research records". The domestic "Regulations on the management of scientific and technological research archives (Exposure Draft)" also specifies that scientific research data is one of the important types of scientific research archives. Therefore, it is necessary for colleges and universities in China to include scientific research data into one of the types of scientific research archives in the definition of scientific research archives policy, and on this basis, lay a foundation for the development and utilization of scientific research data in scientific research archives.

Refine the filing management of scientific research archives

On December 21, 2018, the regulations on the management of scientific and technological research archives (Exposure Draft) issued by the national archives administration and the Ministry of science and technology indicated that the management mechanism of scientific research archives needs to be further improved. In addition to bringing the scientific research data generated in the process of scientific research activities and projects into the archiving scope of scientific research archives, it is also necessary to refine the specific rules of scientific research data archiving management. For a large number of miscellaneous scientific research data, scientific and orderly archiving and preservation can help to improve the utilization rate of scientific research data and the return on investment of corresponding scientific research projects. At present, the management of scientific research data in scientific research archives can be refined from the life cycle management of scientific research data: for each stage of the life cycle of scientific research data management, scientific research data management can be refined to each cycle of data: mainly including the stages of data collection, collection and storage.

Data collection stage: the project leader is required to make a scientific research data management plan before the start of the scientific research project. The scientific researchers use corresponding equipment to record the scientific research process during the project, and process and sort out the data according to the scientific research data management plan;

Data collection and submission stage: the scientific research management department is required to

uniformly summarize the scientific research data generated by the scientific research projects and submit them to the archives, and establish the corresponding collection and submission system of scientific research archive data to standardize the collection and submission of relevant stakeholders;

Data storage stage: it is required to reasonably configure necessary facilities for data storage, custody, security and service, and establish a data storage system for scientific research archives to meet the requirements for scientific research data storage.

Define the management responsibilities of scientific research archives

The scientific research archives work shall be managed according to the principle of unified leadership and hierarchical management of national archives work. From the perspective of development and utilization of scientific research data, the file management responsibilities of project leaders, scientific researchers, scientific research management departments, responsible departments, academic units, archives, etc. shall be clarified.

Attach importance to the informatization of scientific research archives

In the digital and networked environment, according to the requirements of scientific research archives management, this paper puts forward the specific work contents of digital archiving, preservation, development and utilization of scientific research archives, such as interface setting, platform construction and technology optimization of scientific research electronic materials, so as to meet the current information development trend.

Pay attention to the development and utilization of scientific research archives

The development and utilization of scientific research data is of great significance to promote the development of scientific research. In order to strengthen the development and utilization of scientific research data in scientific research archives, it is mainly necessary to solve the problems of unclear expression of information resources in scientific research archives, unobstructed communication channels and weak acceptance ability of recipients. First, it requires in-depth analysis and mining of the value of scientific research data, and the integration of scattered and non-standard data to facilitate the reuse of data; Second, it is required to actively promote the sharing and dissemination of scientific research data, establish a sharing mechanism, and constantly expand and strengthen the exchange of scientific research data in scientific research archives; Third, to ensure the safety and controllability of scientific research data is the premise of development and utilization. While developing and utilizing scientific research data, data ownership and access authority should be determined.

STRENGTHEN THE POLICY PRACTICE OF SCIENTIFIC RESEARCH ARCHIVES

Strengthen the informatization construction of scientific research archives

In order to solve the problems of information security of scientific research data archiving in scientific research archives, the complexity of technologies such as migration, storage and backup of archives system, and the transformation of development and utilization, scientific research data management platform and main tools are the main ways and methods to assist in the informatization construction of scientific research archives.

The construction of scientific research data management platforms and tools for world-class university libraries involves more comprehensive and extensive aspects. Liukunxiong and others sorted out data management planning tools such as dmptool and dmponline, data storage platforms such as dataverse and dash, data analysis tools such as SPSS, Stata, R and SAS, and data identification and reference tools such as endnote, Zotero and refworks provided by university libraries and archives. Among the two first-class universities in China, only Peking University has independently developed discipline open data navigation to link discipline free network information resources and data; Wuhan University, Fudan University, Tongji University and Renmin University of China adopt secondary research and development or other developed data management platforms and tools to collect, share and analyze scientific research data. The supply of technology platform and tool resources should become a major expansion field of domestic university scientific research archives. In addition, there are still problems about the security and stability of scientific research data, so it is necessary to strengthen technical management.

Domestic scientific research archives management institutions should actively learn from the above practical experience and strengthen the informatization construction of scientific research archives under the "Internet +" format. Mainly from three aspects: technical personnel, management system and technical department.

(1) Training relevant technical personnel

In order to cultivate technical personnel related to scientific research data, we should increase the intensity and depth of the introduction of scientific research and technical personnel, and carry out regular technical training for major management staff. First, the relevant departments should carry out technical training for the relevant personnel of scientific research archives management to cultivate their own technical talents; Second, due to the limited technical talents of the unit, in order to increase the efforts of talent introduction, the unit can introduce talents through various channels, provide excellent technical support for the management of scientific research data in the unit's scientific research archives, and ensure the stability and security of scientific research data

management and development and utilization; Third, due to the rapid development of information technology, the requirements for technology will also be strengthened day by day. In order to ensure the stability and security of the scientific research archives management system of the unit, regular professional technical training should be carried out for technicians to ensure that technicians can master new technologies in time, so as to update and upgrade the scientific research archives management system in time, so as to ensure the stability and security of the scientific research archives management system. It can be seen that technical personnel are the guarantee of technical support, and one of the ways to provide technical support is to ensure that the unit has professional technical personnel.

(2) Develop a stable scientific research archives management system

The number of documents, materials and data of scientific research archives management is very large, and the resource value can be divided into high and low. Because the digital informatization of scientific research archives management in Chinese universities is low, it is difficult to mine high matching information from thousands of data information. On the basis of digitalization and informatization of scientific research archives management, we can further build a smart university scientific research archives management system, make rational use of big data processing technologies such as "Internet +" and "Internet of things", configure professional software, optimize hardware facilities and management equipment, and devote ourselves to the development of a stable scientific research archives management system to develop stable A continuous and complete scientific research archives management system. Technical personnel shall provide a safe electronic environment for the reception and management of scientific research data through technical means to ensure the originality, integrity and reliability of scientific research data in archiving, transmission, management and other processes. In addition, during the development of the scientific research archives management system, technicians should fully consider the compatibility between the systems, ensure the simplicity of procedures between different departments in the authorization process, and then improve the utilization efficiency of scientific research data of this management mode.

(3) Establish a special technical department

Because of its special attributes, the safety of scientific research archives is the top priority in the management of scientific research archives. The establishment of a special safety maintenance technology department can be devoted to the maintenance and development of the scientific research archives management system, so that intellectual property rights can be effectively guaranteed, and the development and utilization of scientific research data in university scientific research archives can develop healthily and orderly. The

information security problems of scientific research archives in Colleges and universities mainly come from the loss of scientific research archives information caused by the instability of the carrier, the security loopholes of scientific research archives caused by human factors, and the problems existing in the network environment. Therefore, we should establish a special technical department or a special technical team in the units with scientific research archives to provide targeted services for the management, development and utilization of scientific research data, and timely solve the carrier instability factors, security vulnerabilities and network risks that may appear in the scientific research archives management system. At the same time, the main task of the department or team is to maintain the normal operation of the management system, Macroscopically, the overall development trend of the management system shall be ensured. Secondly, the upgrading and research of the system shall be carried out to ensure the security and stability of scientific research data in management, development and utilization. Technical personnel shall timely master the update and upgrading of technology, ensure that the team can timely upgrade and update the management system, and ensure the stability and safety of the management system.

Define the responsible subjects and follow the hierarchical management

(1) Establish and improve special posts and related skills training

For the internal responsibility of scientific research archives management, the relevant literacy of scientific research archives management personnel has a great impact on the service quality of scientific research archives management. The management mechanism of scientific research archives can be improved through the setting of special posts and the training of relevant skills. Drawing on the value of data Librarians in each stage of data creation, use and supervision, and through research, it is found that the data librarians of foreign universities or libraries mainly have the following two job models: a. they do not set up the posts of data librarians separately, but let the responsibilities of Academic Librarians be included in the work of librarians, which is rare in universities; b. A data librarian post is specially set up, and relevant data librarians independently carry out relevant scientific research data and support services. At the same time, data supervision professionals are introduced to provide relevant services for comprehensively taking charge of data supervision. Most universities choose the second model, such as Princeton University, New York University, University of Michigan, etc. Therefore, relevant institutions of scientific research archives management can refer to the post of library data Librarian in foreign universities as a common post model to set up special posts related to scientific research data management to help researchers improve

the scientific research archives management plan, collect, archive, process, share, analyze and reuse the original data. With the help and support of scientific research archives management personnel, archived scientific research data can be made accessible, complete, persistent and easy to obtain. It will help to improve the organizational structure of the scientific research management team in Colleges and universities, make it more reasonable, and further improve the efficiency and quality of the scientific research archives management in Colleges and universities.

(2) Improve the joint management mechanism of departments at all levels

As far as colleges and universities are concerned, in order to ensure the smooth operation of scientific research data management in scientific research archives, it needs the cooperation of multiple departments. First of all, the relevant person in charge of the project should formulate a management plan for the early-stage scientific research data before the start of the project, and ensure that the scientific research project can fully manage, save and share the data according to the previous scientific research data management plan whether during the implementation of the activities or after the end of the project; Then scientific researchers should also, according to the relevant principles and requirements of the formulated scientific research data management plan and scientific research archives policy, collect the scientific research data produced in the scientific research process to the scientific research management, and timely open and share with the demanders to ensure that the scientific research conclusions can be verified. The scientific research management department is mainly an overall planning and coordination organization, which shall be responsible for organizing and implementing the decisions and arrangements of the project leaders, organizing the editing of scientific research data work policies and policies, planning, deploying and promoting the implementation of the scientific research data center system and the standardization of scientific research data management and open sharing. Each responsible department shall guide and promote the management, development and utilization of scientific research archives according to the special attributes of its own department. Relevant academic institutions are the main body responsible for the management of scientific research archives. It is necessary to clarify their own scientific research archives policies from a macro perspective, and establish a sound scientific research archives development and utilization system and scientific research quality control system; Secondly, in order to regularly publish the open catalogue of scientific research data and organize the sharing service of scientific research data in the database or data set used, the scientific research data collection, production, processing and sorting should be carried out in an orderly manner in strict accordance with the relevant standards, specifications or policies

formulated by the unit; Then establish the scientific research data talent system of the unit, set up relevant jobs, and establish assessment standards and promotion mechanism; The last is to do a good job in the confidentiality and security management of scientific research data according to relevant regulations. Archives should mainly undertake the collection, exchange and integration of research data in scientific research archives, be responsible for the classification, processing, sorting, analysis and mining of scientific research data, promote the wide application of scientific research data, form a strong guarantee for the safety of scientific research data, and promote the development and utilization of scientific research data in accordance with regulations.

(3) Establish a regulatory department to promote the cooperation of various subjects

The management of scientific research archives needs the cooperation between departments at all levels. Therefore, it is necessary to establish a special supervision department to conduct real-time supervision and assessment on the work of each main department and its collaborative management, so as to ensure the conscious cooperation between the main departments. The responsible subjects at all levels set up special regulatory departments, and the staff of the regulatory departments need to be strictly reviewed and assessed. The staff of the regulatory departments have not committed any violations of laws and disciplines in the past work process, and the principle of avoiding relatives is adopted, that is, there is no blood relationship between the staff of the regulatory departments and the staff of relevant departments, so as to ensure the fairness, openness and impartiality of the work of the regulatory departments. Secondly, the work responsibilities of the regulatory authorities are clearly stipulated: a. the regulatory authorities need to review the implementation of the responsibilities of the responsible subjects and punish the subjects who have defaulted, that is, circulate a notice of criticism and punish the responsible person; b. Supervise the collaborative work of each subject, ensure the mutual cooperation and smooth communication among the subjects, and punish the subjects that affect the collaboration; c. Supervise and review the effectiveness of subject collaboration. The archiving and management of scientific research archives under the development and utilization of scientific research data has higher requirements than that of General Archives. Therefore, in order to better provide the protection of scientific research archives management, colleges and universities should establish a hierarchical management coordination system, which requires the participation and cooperation of all responsible subjects.

Optimize scientific research archives management services

Only by doing well in the management and service of scientific research archives can we fundamentally improve the reuse efficiency of scientific research

archives. From all levels, the promotion and implementation of scientific research archives management is of great significance. The administrative leaders of colleges and universities should pay more attention to the management of scientific research archives and give timely guidance, so as to fundamentally strengthen the integration of management service and management work. Each subordinate responsible management department shall implement and promote the work of scientific research archives management. On the premise of continuously improving the attention of internal personnel of the unit, through the Internet, cloud computing, big data and other technologies, it shall strengthen the ability of data collation and calculation analysis, establish a new set of information-based scientific research archives management concept, and fundamentally change the traditional management methods with low efficiency and poor quality, Through the establishment of a public network communication local platform, data information can be shared in the cloud, which can maximize the functionality of scientific research materials and expand the popularity of the concept of scientific research archives management. At the same time, because of its standardization and authority, laws and policies play a guiding, controlling and coordinating role in the regulated behaviors and objects, so as to promote the healthy development of scientific research archives.

(1) Establish an assessment and evaluation mechanism for the archiving behavior of scientific researchers

Performance appraisal and evaluation mechanism plays an important role in the effective implementation of a policy. A perfect assessment and evaluation mechanism can not only effectively guide and motivate the behavior of the staff of the unit, but also detect and analyze the implementation effect of the policy. It is also conducive to quickly identify the deficiencies in the implementation of the policy, and solve and correct them. Therefore, it is very important to establish corresponding assessment and evaluation mechanism. Firstly, it is helpful to guide and regulate the behavior of scientific researchers. Secondly, it can improve the efficiency of finding and solving problems, so as to promote the development of the unit. At the same time, in order to ensure that a large number of jumbled scientific research data are not lost and damaged, and to archive them scientifically and orderly, it is necessary to create a set of mandatory and encouraging evaluation mechanism.

By establishing one-stop support of hardware platform, software environment and algorithm model, the research of various disciplines can benefit from the development of scientific research data. The quantity and quality of scientific research data collected and generated in the process of scientific research practice, the way of management and preservation, the ratio of use and reuse and other indicators related to the management and utilization of scientific research data are included in the scope of scientific research

personnel assessment and evaluation, so as to establish a scientific research evaluation system, and commend and reward individuals and teams who have made outstanding contributions to scientific research data management and sharing according to the above assessment indicators, To promote the sustainable development of scientific research data development and utilization.

(2) Multi directional coordination to promote service awareness

The modern management service of modern scientific research archives not only serves the scientific researchers and the academic unit, but also serves the whole society. As the main users of scientific research archives, researchers lack of subjective initiative in the use of scientific research archives. If the vast amount of scientific research data can not be used for learning, it will be a great pity. Only when it is used for the people can it really play its role. To achieve this goal, we must take the initiative. Scientific research archives should make full use of Internet, new media and other technologies, expand media publicity channels, build a sharing and interactive platform for both sides by combining internal and external information to push dry goods hot spots and other ways of interest to the public, and carry out relevant offline interesting activities of the archives to arouse the public's attention and interest in scientific research, and truly integrate scientific research archives into the public's life, so as to achieve a subtle effect. Under the new situation, it is indeed a new and efficient way of development and utilization of scientific research archives to realize the network utilization of scientific research archives through a multi-directional service network, which can realize the cross time and space sharing of archives information.

(3) Strengthen the awareness of legislative protection

In order to promote the healthy development of scientific research archives from the perspective of the development and utilization of scientific research data, laws and policies can also play a certain enforcement and mandatory guarantee for the work in the development and utilization of archives. The development and utilization of scientific research archives archived and preserved in the course of scientific research activities must involve issues related to intellectual property rights. Therefore, for the development and utilization of scientific research archives, it is necessary to distinguish which materials in scientific research archives are protected by intellectual property rights and which are not. The development and utilization of archives protected by the intellectual property law shall comply with the relevant intellectual property law, avoid affecting the rights of others, and respect the intellectual property rights of others. For the relevant users, we should not only correctly deal with the protection of the free reading, downloading, copying and reprinting of archival information resources under the legal power,

but also prevent illegal utilization. Therefore, we should establish a strong sense of autonomy, constantly strengthen the awareness of protecting intellectual property rights, pay attention to the protection of the legitimate rights and interests of file formers and providers, and effectively avoid disputes and losses.

CONCLUSION

Under the protection of intellectual property rights, we can lead the correct development and utilization of scientific research archives, constantly strengthen the awareness of intellectual property protection, improve the norms of legislative protection, and the development and utilization of scientific research archives can develop healthily and orderly.

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