Research on the Information Retrieval Service of Digital Archives in China

Wenguo Liao

Aba Teachers University, China

648705594@qq.com

Keywords: Digital archives; Information retrieval; Research

Abstract: This paper attempts to make research on the information retrieval service of digital archives in our country in order to provide operable countermeasures to improve the quality of the information retrieval service of digital archives, to enhance the efficiency of the information retrieval and utilization of archives, to promote the practical progress of the construction and service of digital archives and to improve the public service capacity of archives.

1. The Current Situation of the Construction of Digital Archives in China

After more than a decade of development, our country has been in the process of planning and promoting the informationization of archive and the construction of digital archives in the administrative area. digital archives have emerged among the county three-level archival institutions with advanced equipment and high level service in our cities. Provincial-level archival institutions in Shanghai, Beijing, Zhejiang, Jiangsu, etc., conducted the informationization of archive earlier and has constructed digital archives with higher level of information service, The enthusiasm of prefecture-level digital archives construction also runs high, which has become the vital forces in the information-based design of the archives, the country has been continually promoting the digitization of paper archives and the construction of digital archives earlier in Shenzhen city, Qingdao city and in Changzhou city, Zhangzhou city which have only been better developed for several years. The typical examples in the provincial-level archives appeared in cities like Nanjing city, Taicang city in Jiangsu province, of which, the digital archives have been rated as the national demonstrative level digital archives. At the same time, we have also found that the development progress of the digital archives in some regions are slow and still stayed at the stage of the traditional archival service, even if the process of resource digitization of the archives in some developed cities is also relatively slow which has affected the construction of digital archives. There is disparate development although the construction of digital archives is promoted in various regions.

2. Analysis of the Information Retrieval Service in Digital Archives

2.1. The Unbalanced Construction of Digital Archives Infrastructure.

We must first strengthen the construction of digital archives infrastructure to improve the information retrieval service of digital archives. The author found in the survey that there are many issues in digital archives such as the nonsupport of retrieval technique, the search method is single and the search results cannot be handled. The main reason for this is that the process of archival informationization is slow, and the infrastructure construction of digital archives is not balanced which can be manifested in two aspects: Firstly, the imbalance between digital archives in different regions. At present, the overall situation in China is that the digital archives in the developed coastal provinces in the east are developing rapidly, followed by the central region and the western region and the construction of digital archives in cities of the same province are also of very different level due to factors such as urban development and policy emphasis; the second is the unbalance in the development of the informationization of resources and the modenization of service in the construction of digital archives. The problem is focusing too much on "construction" but neglecting

the "service", and also is paying one-sidedly attention to the accumulation of digital archive resources, and neglecting to develop various service means to better provide archival resources to users but only single service means.

2.2. Deviation Existed in the Concept of File Information Retrieval Service.

Judging from the research, the author found that there are many problems caused by multiple digital archives when providing information retrieval services for users such as too many settings in the search interface design column, and a single search method. The means of service are not humanized enough. These problems have profoundly demonstrated that the service concept of the archives still has a certain deviation from its own positioning. Archives as a file custodian in China, it is more important as a social and cultural service organization. Its most important function is to keep social archives resources and provide services to the society. It can be seen from the design of the search function, most of the digital archives in the search function design can not meet the diverse search needs of users; at the same time from the archives website feedback can be seen that there are cases where the feedback is not timely, and the feedback content is too stylized which reflects the file staff of the archives has deviations from the positioning of their own service organizations in terms of service concept cognition, which is not conducive to the improvements in archival information search services.

2.3. Process Management of Archives Information Retrieval Service is not Standardized.

In the survey, the author found that the information retrieval services of various digital archives have done well in some aspects, such as consulting the files by WeChat in Qingdao Archives; the development of Zhangzhou Archives APP in Zhangzhou City to provide software search files which can expand the channels for search services. However, we also found that there are certain problems, such as we can't open the link of WeChat when consulting the files, few resources that can be retrieved by APP when searching for files. For example, Tianjin Archives has realized the sharing of archive resources, but it is difficult for users to effectively sort and screen the search results. The digital archives cannot maintain a relatively consistent level in all aspects of the information retrieval service provided to users. Some links are well done, and some links are not satisfactory. The reason is that in the process of providing information retrieval services for users, the digital archives did not disassemble every link in the whole retrieval service process, and set the goals and requirements that each link needs to achieve. Process management and quality control of information retrieval services cannot be achieved. Establishing a standardized process management for search service allows the archives to evaluate their own service capabilities and levels, to solve the problems and to improve the search service level. At present, various digital archives lack effective management for their information retrieval services, which is not conducive to the improvement of service quality.

3. Countermeasures for Improving the Service Level of Information Retrieval of Digital Archives in China

3.1. Strengthen the Organization and Resource Integration of Archive Information.

At this stage, most of the digital archives in China are still in the planning or constructing, and the opened archive database is a small amount of file data. Each comprehensive archive can take the advantage of file sharing to firstly continually promoting the development of the digitalization of archives in an orderly manner while striving to promote the implementation of electronic archiving and accelerate the construction of the volume of archived data, and secondly to actively promote the sharing of digital archive resources in the archive and strengthen the cooperation with other archives. Implementing the sharing of file information requires cooperation between the archives and needs scientific planning. It is recommended to adopt uniform technology and standard to achieve the completion of the construction and transformation of the digital archives which will facilitate the integration of different databases and the sharing of digital archives resources among

multiple archives. This will not only promote the renewal and enrichment of the archives' own collections, but also facilitate users by achieving cross-districts retrieve of files.

3.2. Optimize the Design of the File Retrieval Page.

As to the design of the search interface, the overall background style should be concise and clear, the columns should be set properly, and the functionality of the search should be protruding. In terms of interface background design, there should be no more than three colors in color matching, and more solid background or blur picture, the interface looks more refreshing, and can be combined with its own characteristics, innovative design, highlighting the history of the city or cultural characteristics; in the setting of the column, a special search box should be set in the prominent position of the page, and the searching catalogue should be offered, removing unnecessary descriptions and column settings in the page, avoiding placing too many images, flash animations and floating windows which may reduce the loading speed of the web page; in the code design of the web page, to simplify the web page design code and to use static page, while paying attention to the compatibility between multiple browsers to ensure the same display effect in the search interface.

3.3. Improve the Search Guidance and Assistance Function of the Website.

In order to facilitate users to familiarize themselves with the digital archives retrieval system as soon as possible, it is necessary to provide detailed information on the types of archived resources in the digital archives, the scope of information of archives and documents, and the number of archives; Note on the file, etc., the search process description should be presented by intuitive legend or animation instead of the boring text description. The file description should clearly identify the matters that should be paid attention to during the user's file search process.

Users will encounter various problems in the search process, and there should be certain channels in the digital archives for users to seek search assistance. Search assistance includes manual online retrieval assistance and automatic retrieval assistance for the system. The automatic retrieval of the system is generally assisted by the archives to answer some common questions in the retrieval process, forming a help document or a question answering system to help the staff solve part of the problem. The manual online search help is to launch a one-to-one search help or consultation with the user by opening various information exchange tools. At this time, the quality of the solution given by the staff according to the customer's needs will directly affect the level of service of the archival organization. The archival organization shall appoint a person to provide search assistance and consulting services to provide effective solutions for users. The consulting service personnel should have a people-oriented service concept, have a high level of business capability, understand how the retrieval system works, and be proficient in various retrieval technologies and the current status of the database of the digital archives in order to meet the information retrieval needs of users.

3.4. Regularize the Service Process for Information Retrieval of Archives.

To establish and improve the entire search service process, we must firstly establish and identify the lowest requirements and standards for each link of the search service so that to form a more elaborate specification of information retrieval service process, which is convenient for archival organizations to find problems. The archival organization shall form a certain record of the operation of each IP accessed by starting from the user to enter the digital archives website to ask for the start of the search, and then go to the feedback after the end of the search, and the main content of the record shall be including the file time, the brief content of the required files, the way to check files, the existing problems, the results of the files and feedback. Of course, this should be approved by the user in advance, and the purpose and scope of the use of these records should be strictly regulated. The purpose of recording the user's access and retrieval process is to facilitate the management of the daily retrieval service process and facilitate the division of competent authorities to analyze the process of various elements and links of services, to find out the problems that may exist, and standardize the service process of the information retrieval of digital archives

and enhances the quality of the file retrieval service. At the same time, according to the search records provided by the user, the file information related to the search term or what the user may be interested in can be recommend to users so that to realize the humanization and refinement of the information retrieval service.

References

[1] Wang Yanjun. Research on the Practice of Network Information Retrieval Service in University Libraries[J]. Journal of Library Science in Henan, 2016, 36(9): 46-48.

[2] Jiang Jiawen, Wei Zhaoxiu, Lin Hong, et al. Investigation and Research on Medical Students' Network Information Retrieval Behavior[J]. Library Research, 2005, 35(4): 52-54.

[3] Jin Hai. Development of Digital Library and Its Grid Application[J]. Modern Library and Information Technology, 2005(9).

[4] Zhao Jing. Research on grid structure model and scheduling algorithm of digital library [D]. Yanshan University.

[5] Xuemei Z , Shiming G . Statistical Analysis on the Research of Cross-Language Information Retrieval in China between 2001 and 2012[J]. Journal of Modern Information, 2013, 61(1):335-370.

[6] Lin C , Nicholas C , Txomin H , et al. Using Small-Footprint Discrete and Full-Waveform Airborne LiDAR Metrics to Estimate Total Biomass and Biomass Components in Subtropical Forests[J]. Remote Sensing, 2014, 6(8):7110-7135.