Scientific
Research

How A Library Provides Enterprises with Personalized Information Services under the Network Environment?

Xiaohong Zhang [1], Guomin Zhou [2], Lirong Song [3], Yanling Li [4]

1. School of Economy and Management Beijing Institute of Petrolchemical Technology Beijing, China
2. The Agricultural Information institute of the Chinese Academy of Agricultural Sciences Beijing, China
3. Institute of Scientific and Technical Information of China Beijing, China
4. The Library of the Beijing Institute of Petrolchemical Technology Beijing, China
Email:Leadship999@163.com, zhougm@caas.net.cn, slro370@sohu.com, liyanling@bipt.edu.cn

Abstract: With the globalization of business competition, and the updating of knowledge accelerates, the traditional library service model has failed to meet the enterprises needs of business competition on the information services. In particular, used by some modern information technology, personalized service model of digital library has become increasingly important trend in the future development of libraries. So, how to provide library individualized information service for enterprises based on network environment become an urgent problem for library development. This paper discusses several aspects of individualized information service in building of library, such as the necessity, the characteristics, and some countermeasures.

Keywords: library; personalized service; information service; countermeasure

1. Introduction

Under the modern network environment, the requirement of enterprises for information starts showing a diverse, personalized trend. In terms of quality demand, they require more comprehensive and accurate information which can provide authoritative solution to a certain issue or a certain field of knowledge, and they hope to get some knowledge that has been further integrated and processed to assist themselves to solve the practical problems. So, under the new environment, library not only needs to provide personalized information according to individual requirements from different enterprises, but to analyze the features of enterprises' requirements to get the potential characteristics of the information needs. Thus, the information provided to the enterprises could be of more pertinence and more help to improve the competitiveness of service enterprises.

2. Necessity of a Library Offering Personalized Services under a Network Environment

2.1. Personalized services are necessary requirement of the development of modern library information services

In the past, libraries have been serving the enterprise users through the traditional manual operation. Library information services are based on users' demands. Users only go to the library when they want to get the information they need. With the computer technology, communication technology, network technology, multimedia technology and intelligent technology applied in the library work, library information services begin to shift from manual-based to automatic. Meanwhile, in this knowledge-economy era, different enterprises users have raised their personalized demand to library. In order to meet the needs of the business users, the library, as a community information center, offering targeted information to effectively meet the needs of individual enterprises is necessary. Personalized information service can meet the needs of enterprises in the information age, and this is the inevitable result of the development of modern information technology [1].

2.2. Personalized services allow libraries to better meet the needs of enterprises

With the rapid increase of network information resources, it is a big problem for enterprises to find the accurate information they need among the vast sea of information. Although the online search tools and search engines largely alleviate the pressure of information searching for enterprises, but it cannot fundamentally meet their specific requirements. On one hand, enterprises' needs for personalized information become increasingly prominent, and many of the services provided by information providers cannot meet the company's deep-seated specific needs; on the other hand, different companies own different abilities of accessing information, therefore, we need a library to provide differentiated, personalized help. Library itself has a wealth of information resources and human resources and a unique advantage of information services. The development of information technology and the emergence of digital libraries make the idea that the library provides differentiated and personalized information services practical. Through offering differentiated, personalized information services,

libraries can meet the needs of different enterprises in large scope [2].

2.3. Personalized services improve service level of library

In the past, the traditional model of library information services is limited to borrowing the document, answering users' questions and helping users search documents, etc. It is a typical passive service "what I can offer is what you will accept", while the scale of library collections is the main evaluation standard for a library. In the network information environment, a library uses a variety of information online to make the information services timely, interactive, in-depth, diverse and personalized, which has become a trend. And users need the library to provide initiative service, that is, "What I need is what you can offer". Now users not only attach importance to the size of collections, but also focused on whether libraries can meet the varieties of the enterprises and the need of personalized information. To the library, launching the differentiated and personalized service and developing the effective information services can lock a particular group of users, provide dynamic and new resource, reduce the time of the browsing and finding the information for corporate users, change passive service into active service and realize the service concept of "user-oriented", making users feel the attention and care from the modern library. Improving service level means to elevate library service from the traditional and low level of borrowing and returning documents to a higher level of personalized information services [3].

2.4. Personalized services optimize library's resources

Over the years, as literature and information center, a library has a large number of loyal users. Enterprises and communities are often inseparable from the library's information services, so libraries have gradually got great public attention from many fields around the society. At the same time, the state also increased the fund for library. Whether in the electronic literature resources, network database, and software and hardware equipment or in the system building, human resources and culture attainments, the library's advantage in resources goes beyond any other information departments and institutions. Little input producing large output and fully utilizing the library information resources is such an important problem that a library must pay attention to. By carrying out the in-depth information service, a library can take advantage of their talent, resource and technology on one hand, on the other hand it also can meet different users' need of the library's information, improve the different users' satisfaction even loyalty to the library and optimize the resource allocation in the library.

3. Content of Library's Personalized Services

Personalized service is constantly changing the content of its concept, with the change of people's demand and the corresponding implementation techniques. In general, the types of library's personalized service include the following.

3.1. Customized services

Customized services mean that users select the service provided by the supplier and reach the goal at the lowest cost. Library's customized service is the process in which users select the content of library services that meet their own needs of service process. A library customized service typically includes the customized service of personalized content, the customized service of personalized information searching, personalized interface and information classification.

3.2. Push service

Push service, a new information service based on push technology, provides service by the using of certain software. On the basis of previous information needs that users put into system, it takes the initiative to search out information that users need, then through classification, sorting, filtering and other processes, it sends the appropriate services (such as e-mail push, reserving pages, channel push, etc.) back to the appropriate place(such as e-mail address) at the proper time according to different requirements of different users, and thus change "people looking for information" into "information looking for people" [4].

3.3. Reference services

Reference service is an extension and development of traditional library services. The task of reference is to give users who are seeking information prompt and positive answers to their questions about knowledge or documentation. With the increasing needs of the users, reference service extends from the traditional book services, document retrieval services, read guidance to SDI (Selective Dissemination of Information service) service, technical services, network resources navigation services and so on. And the network reference, virtual reference, real-time reference, combined reference and other reference services emerge thanks to the network technologies [5].

3.4. Value added services

In the network environment, information exchange and service system have changed, and the breadth and depth of library information service have further expanded, too. So the library should enhance the information service function, improve information service ability and change the information service focus from providing

Proceedings of the 5th International Conference on Cooperation and Promotion of Information Resources in Science and Technology

Scientific Research

the original information to information content value-added service. Information content value-added service not only concerns about whether the user solves the problem, but also stresses on determining users' needs according to the users' problem and environment. Trough analysis, acquisition, restructuring and study on information, new information for the users' needs will be formed, instead of information transmission. These characteristics determine that the information content value-added service is a dynamic full-service, it adds up to value, it is an information service that runs through the user's problem-solving process [6].

3.5. Vertical information services

Vertical information service is to meet the in-depth information needs of users through collection of specific on-line information resources, and further mining and processing them. Its characteristic is to let the user's information needs get great satisfaction by providing differentiated, personalized and creative services, so as to improve the efficiency of information service. For the library, the vertical information service is an extension of the traditional SDI service. Vertical information service enable identifying, collecting, filtering, screening, organizing, describing and commenting on-line information resources, and it provides high-quality services in some industries. With professional search engine, it provides the source site address through the organization directory-style index. This service can effectively distinguish the type of information users, and effectively meet the information needs of users, so as to provide users with satisfying, personalized, and high quality service [7].

4. Personalized Measures which Library Should Take Personalized Services to Promote the Competitiveness of the Company

Personalized Information Service on the library is a systematic work, and so we need support and coordination from many aspects. To form an interactive platform, it not only needs perfect facilities but also the support of the advanced technology and abundant funds. Besides, the staffs should possess an advanced management concept and the safety of users and privacy must be protected. The information feedback should be made timely and a good service quality should be guaranteed. The author believes that in order to promote the company's competitiveness on personalized services, following measures should be done. Refer to figure 1.

4.1. Strengthen management and increase the labor, financial and material input

First of all, we should nurture stronger sense of services, change the concept of services, and arouse their

awareness of the importance of the library from the senior managers to the library staff, and from the top to the bottom.

Second, provide sufficient funds and personnel, as only enough funds and personnel can make library better development.

Third, strengthen the information services. Combine the traditional services and the modern services, and combine the classification services and professional services. Traditional services do not mean it cannot provide personalized services, because it involves using the manual method to provide personalized services, while modern services emphasize on the use of the modern information technique and the computer network in particular to provide personalized services. In the actual services, we can combine these two methods effectively, so that users can not only enjoy the convenient and fast network information services but also can get the help from the manually personalized services.

Fourth, improve the library business procedure system continuously. The library's internal organization must adapt to the need of the library's business procedure system, make adjustments timely, change from the traditional structure of editorial, circulation and administration to the structure of focusing on the basic business construction, users' services, and scientific research as the three main body, in order to meet the demand of the personalized information services [8].
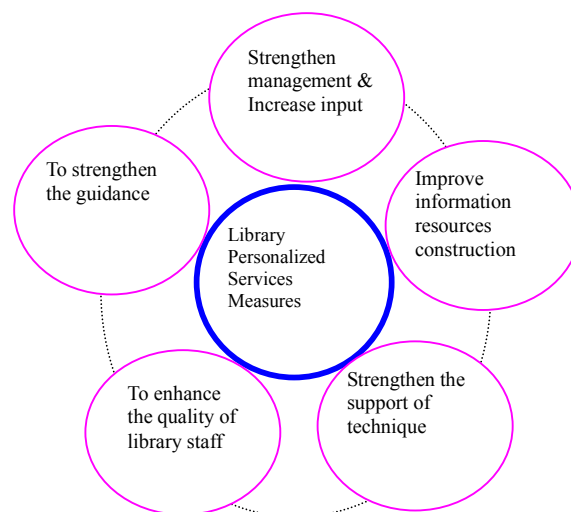

Figure 1 The content of library personalized services measure

4.2. Improve the construction of the information resources

Information resources are the basis for the personalized information services [9], and the library's personalized services have to depend on rich information resources and modernized information technology. So, the library should improve its software and hardware system, enrich its collection information resources, build special

database, purchase intentionally and forward-looking full text databases related to users to the personalized users. We should improve library resources system, build a professional database, and continue to improve it, so that the database system is a complete and unique one and it can meet the users' personalized information demand.

4.3. Strengthen the support of technique

It is essential to build special databases for the library to provide better personalized information services, because this provides technical guarantee to the personalized information services [10]. For example, library can use the internet to share online resources at home and abroad, and make various types of databases as the basic of the personalized information services. According to different users' needs, libraries should identify their position and theme, so they can choose their special resources，and then make these resources stored in the databases in the style of digital and electric. Thus, the offers of the literature resources can be transferred from as a whole into personalized units, and then widen the content of personalized information services. Then the library can offer relevant information to the users by integrate the library resources and the related websites on the internet.

For the website conduction, the library should adjust itself to the demands of the users and highlight the personalized service interface. The design of the interface should be attractive, the screen concise, the distribution of forums reasonable, and the subjects clear, and all these features can draw the attention of the users and facilitate them to search and read the information more easily.

4.4. To enhance the information literacy of library staff

For a library, the information literacy of the staff tends to have a direct effect on the promotion of the personalized information services. Thus, what we need are the ones that have extensive knowledge, better technical skills (such as the capability of searching information), comprehensive analysis abilities, and do well in communicating, organizing and cooperating, doing research, and the ones are equipped with the abilities of writing and grasp the foreign language. However, today most of the staff are limited in the knowledge diversity and are insufficient in some knowledge concerning related majors and subjects, which make them short of sense of service, lack technical and professional skills, thus it is difficult for them to advance a higher level of personalized information services, such as the reference of digital data, information mining, topical survey, special topic retrieval, and the information analysis, and so on. All these will have a direct impact on the accuracy and the value of the information that the users get. Therefore, the library should carry out various types of continuous learning and professional training courses to improve the information

literacy of the staff and to better the advancement of the personalized information services.

4.5. To guide users to better use of information

The demands of the users are the prerequisite for the library to carry out their task, and they will directly influence and determine the content of the information services. Therefore, we should do more researches on users' demand behavior for information and conduct the service work of personalized information to meet their personalized information needs. In the environment of network, if the information services are to have further development, they have to be supported by the users. Thus, for the library what requires is to attract the users to use it. And the library should give lectures on the use of the library resources, conduct seminars and forums concerning personalized information service, which will enlarge the influence of the new library sevice item and then attract more people to notice it and use it. The new library should not simply provide the services such as recommendation of books and journal about new books, but by various methods, such as announcing information on the bulletin board, websites and BBS, introduce and publicize itself to make more people have a better understanding of the work of the library, which will draw users to utilize the library resources and accept the personalized information services. In addition, the library should introduce the latest data and databases to the users, and regularly give training and lectures on the latest information about the professional technology for the development of companies, and build a quick online query system and domestic and international online retrieval service in order to feedback the search and query results to the users in time and make the users accept the personalized information service more widely.

5. Conclusion

With the progress of the society and the arrival of knowledge economy, the enterprises increasingly demand for information and knowledge resources. Computer technology, network technology and information technology provide technical support for library to supply personalized information service. So many network information resources provide guarantee for the information service. Individual needs provide the impetus for the library service. So being the information resource center of enterprise and society, library should provide users with personalized information resources services, and make contribution to enhancing the competitiveness of enterprises.

References

[1] J. C. French, A. Powell, and W. R. Creighton. Efficient Searching in Distributed Digital Libraries[C]. In Proceedings of the Third ACM Conference on Digital Libraries, pages 283-284, Pittsburgh, PA, June 1998.

Proceedings of the 5th International Conference on Cooperation and Promotion
of Information Resources in Science and Technology

Scientific
Research

[2] Liu dan. The Library of personalized information service under the Network Environment. Shaoyang University (Social Science) [J]. 2005,(6):164-165. （Ch）.

[3] Yuan huixiang. Research on Digital Library Information personalized Service[J]. University Library and Information Science. 2005,(6):57-59. （Ch）.

[4] Zhou ping. Research on University Library personalized Information Service[D]. Master Thesis of Jilin University, 2006. （Ch）.

[5] Luo caidong, Yang yongmei. Modern Library Reference[M]. Ocean Press, 2007:1. （Ch）.

[6] Han Jinglun. Knowledge sharing and Risk Prevention [M]. Press of Guizhou people, 2003. （Ch）.

[7] Tan fenglan. Personalized service: New Measures of University Library Services[J]. Journal of Information , 2005,(7)：129-131. （Ch）.

[8] Liu zhongyang. University Library Information Services in Information age[J]. Taiyuan Science and Technology, 2000,(04):12-13. （Ch）.

[9] Huang xinpei. Library Information Services in Knowledge Economy Environment[J]. Information Development and Economy, 2003 ,(07)：7-8. （Ch）.

[10] Chelimoge. Research on University Library Information under the Network Environment[J]. Science & Management Research,2004, (S1):155-156. （Ch）.