A Case Study of a Joint Virtual Reference Network in Jiangsu Province, China

Bing Wang
Nanjing Library
China
bobwang8888@hotmail.com

Xiaolu Tang
Nanjing Library
China

ABSTRACT: This study discusses the development of a collaborative digital reference service in Jiangsu Province, China. 13 city and 6 county libraries have participated in the Joint Reference Network of Public Libraries in Jiangsu Province hosted by Nanjing Library.

I. Introduction

In 1998, the National Library Information Network (NLIN, 国家图书馆信息网), run by the National Library of China, proposed an initiative on the delivery of collaborative digital reference. The main objective of NLIN was to create a vibrant information service environment and share collections and reference personnel resources. The advantage of the Network is synergy. Libraries that possess a certain amount of information resources and are of a certain size, that have consultation and patron service capabilities, or that need long-term Selective Dissemination of Information service, are qualified to be a member of the Network (Zhu, 2010). NLIN currently has 19 public and university libraries in China, including Guilin Library, Shanghai Library, Hebei University Library, and Shanghai Jiao Tong University Library.

Among the Chinese public libraries, Shanghai Library and Sun Yat-Sen Library in Guangdong Province were the first ones to launch Collaborative Digital Reference Service, built on the Collaborative Online Reference Services (CORS) platform of Shanghai Library and the Combined Reference and Consultation Network of Sun Yat-Sen Library.

The CORS platform of Shanghai Library was the first cooperative online reference service in China. Initially based on the Shanghai Resource Sharing Network, it was organized by Shanghai Library and other academic libraries, research libraries, and related institutes around the world. Since its establishment on May 28, 2001, the CORS system has played an important role in library public services, sharing library collections and online information resources as well as combining reference services from different types of libraries worldwide (Ran, 2008).
Zhejiang United Knowledge Navigation Network (浙江省联合知识导航网) is a public online reference service platform established by Zhejiang Library, Zhejiang University Library, and Zhejiang Provincial Scientific and Technological Information Research Institute in 2005. It was created to take full advantage of their respective information resources and talents. Each of the three libraries shares its information resources with the others. In 2006 alone, 19,910 users logged in and accessed the network.

The Consortium of Libraries in Jilin (CLJ) was jointly initiated and established by 13 individual institutions in Changchun, including the Library of Jilin Province, Jilin University Library, and Northeast Normal University Library. The aim of the Consortium is to create a unified strategic plan, establish common standards, and work together in developing member libraries (Liu, 2010). The Consortium members have cooperated by developing collections as a group, sharing materials via interlibrary loan, providing joint reference services, making consortial purchases, etc.

Combined Online Reference (联合在线咨询) is a public reference service platform sponsored by the Hunan Documents Information Resources Cooperation Network (湖南省文献信息资源共建共享协作网), which has 11 member institutions, including Hunan Library, Hunan University Library, Hunan Provincial Science and Technology Information Research Institute, and the Central South University Library. The aim of the Network is to avail each member library of the information and personnel resources from other member libraries and supply free online reference and remote delivery services for their users. In 2004, it provided 884 reference consultations and delivered 4,650 documents. In 2005, it provided 2,735 reference consultations and delivered 11,870 documents. In 2006, it provided 5,973 reference consultations and delivered 22,870 documents.

Among the existing digital reference service cooperation models in public libraries in China, there is no public library alliance within a province. Libraries participating in cooperative efforts generally do so because they are geographically close to each other rather than they are of the same type.

The CORS platform of Shanghai Library, the Combined Reference and Consultation Network of Sun Yat-Sen Library in Guangdong Province, the Consortium of Libraries in Jilin, and Hunan Combined Online Reference join together public libraries, scientific research libraries, university libraries, and related institutions within their respective regions. The National Library Information Network (国家图书馆信息网) and Expert Joint Navigation of Sun Yat-Sen Library of Guangdong Province (中山大学图书馆专家联合导航站) are alliances that cross geographic boundaries. The former is an alliance of public libraries, university libraries, and related institutions in different regions while the latter is a cooperation of libraries and information agencies across the Province of Guangdong. But from the perspective of developing digital reference services in public libraries, these cooperation patterns are not enough (Bai, 2007).

According to the Provincial (including autonomous regions and municipalities) Library Work Ordinance promulgated by the Ministry of Culture of the People’s Republic of China in 1982, “Provincial libraries have the task of providing counseling to public libraries in the area. Their
main objectives are to promote the services of rural, street, factory, school and other libraries through regional (city) and county (district) libraries.”

A provincial library should play the role of coordination among public libraries and guide them in matters that include library staff training, standardization of processes, promotion of featured digital resources, and development of digital reference service. Only in this way can the development of city and county libraries be facilitated to meet the information needs of patrons from all areas. Such coordination will promote the development of public libraries in the province, augment digital resources of the libraries at the city or county level, and result in the formation of a regional system that guarantees the sharing of information resources.

II. Joint Reference Network of Public Libraries in Jiangsu Province

In recent years, the public libraries in Jiangsu Province have seen developing on a relatively large scale. However, disparities in development exist between regions. Because of inadequate collections, especially digital collections, libraries are unable to meet their patrons’ demands. In June of 2008, the authors surveyed the digital resources of 13 public libraries in prefecture-level cities in Jiangsu Province and the findings are shown in Table 1.

Table 1. Basic Library Resources in the Prefecture-level City Libraries of Jiangsu Province

<table>
<thead>
<tr>
<th>City Libraries</th>
<th>Material Types</th>
<th>Funds (Yuan)</th>
<th>Purchase Rate</th>
<th>Network Provider</th>
<th>Server Ownership</th>
<th>Service Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changzhou</td>
<td>1</td>
<td>80k</td>
<td>5%</td>
<td>Telecom</td>
<td>Library</td>
<td>LAN</td>
</tr>
<tr>
<td>Huaian</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Telecom</td>
<td>Library</td>
<td>LAN</td>
</tr>
<tr>
<td>Jinling</td>
<td>10</td>
<td>280k</td>
<td>10%</td>
<td>Telecom</td>
<td>Library</td>
<td>LAN</td>
</tr>
<tr>
<td>Lianyungang</td>
<td>1</td>
<td>200k</td>
<td>25%</td>
<td>Telecom</td>
<td>Library</td>
<td>LAN</td>
</tr>
<tr>
<td>Nantong</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Telecom</td>
<td>Library</td>
<td>LAN</td>
</tr>
<tr>
<td>Suqian</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Suzhou</td>
<td>2</td>
<td>573.1k</td>
<td>11%</td>
<td>Telecom</td>
<td>Library</td>
<td>LAN</td>
</tr>
<tr>
<td>Taizhou</td>
<td>10</td>
<td>30k</td>
<td>5%</td>
<td>Unicom</td>
<td>Library</td>
<td>LAN</td>
</tr>
<tr>
<td>Wuxi</td>
<td>8</td>
<td>600k</td>
<td>20%</td>
<td>Telecom</td>
<td>Library</td>
<td>LAN</td>
</tr>
<tr>
<td>Xuzhou</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Telecom</td>
<td>Library</td>
<td>LAN</td>
</tr>
<tr>
<td>Yancheng</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Yangzhou</td>
<td>N/A</td>
<td>80k</td>
<td>10%</td>
<td>Telecom</td>
<td>Library</td>
<td>LAN</td>
</tr>
<tr>
<td>Zhengjiang</td>
<td>2</td>
<td>50k</td>
<td>5%</td>
<td>Telecom</td>
<td>Library</td>
<td>LAN</td>
</tr>
</tbody>
</table>

Of the 13 prefecture-level city cities in Jiangsu Province, four have funds for digital resources for over twenty thousand RMB or Chinese Yuan ($3,220 US dollars). Four others have funds for digital resources for less than ten thousand RMB ($1,610 US dollars). And those digital resources bought by the eight city libraries mentioned above can only be used within their own libraries. Another five city libraries did not buy digital resources at all. Meanwhile, Nanjing Library has five million RMB ($804,985 US dollars) to purchase digital resources every year. If these digital resources are used only by Nanjing Library patrons, the utilization rate is very low. To remedy this situation, in August of 2008, Nanjing Library paid for the Superstar Digital Reference and Consultation Platform (超星数字参考咨询平台) developed by the Superstar
Digital Group, China and took the lead in the collaboration with 13 city libraries to set up the Joint Reference Network of Public Libraries in Jiangsu Province. Since then, it has been offering free online reference services and free access to digital materials to remote patrons. In July of 2010, the Joint Reference Network has also been providing services to six county libraries such as Yizheng Library and Jiangyan Library. This operation has not only effectively solved the problem of lack of funds for digital resources in the city/county libraries but also has effectively combined the digital resources of the whole province, improved the rate of utilization of digital resources, expanded public access to digital resources in all regions, and helped further the economic and social development of Jiangsu Province (Tang, 2011).

III. Reference Statistic

As shown in Table 2, from August 2008 when the Joint Reference Network of Public Libraries in Jiangsu Province (江苏省公共图书馆联合参考咨询网) went live to the end of December 2011, it has provided a total of 49,646 references consultations, a total of 97,824 quick responses, and a total of 210,148 text messages to the patrons.

<table>
<thead>
<tr>
<th>Year</th>
<th>Consultation</th>
<th>Response</th>
<th>Texting</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 (Aug-Dec)</td>
<td>6,626</td>
<td>15,162</td>
<td>1,905</td>
</tr>
<tr>
<td>2009</td>
<td>23,537</td>
<td>25,094</td>
<td>40,479</td>
</tr>
<tr>
<td>2010</td>
<td>8,116</td>
<td>25,412</td>
<td>43,517</td>
</tr>
<tr>
<td>2011</td>
<td>11,367</td>
<td>32,156</td>
<td>94,247</td>
</tr>
<tr>
<td>Total</td>
<td>49,646</td>
<td>97,824</td>
<td>210,148</td>
</tr>
</tbody>
</table>

Since the establishment of the Joint Reference Network of Public Libraries in Jiangsu Province, patrons’ requests have increased steadily and the librarians’ responses have reached 32,156 by the end of 2011. The Provisional Regulation of the Joint Reference Network of Public Libraries in Jiangsu Province was published in 2010. Since then, all member libraries are regularly supplied with their monthly usage statistics and performance. In addition, joint council meetings are regularly held to discuss issues and review metrics. The Best Member Award and the Best Reference Librarian Award have been created to encourage member libraries and librarians to provide high quality services to patrons. These measures have encouraged librarians to work more passionately and enthusiastically for the network and have greatly promoted the library services. In 2011, the Joint Reference Network of Public Libraries in Jiangsu Province was awarded with the First Prize for the Outstanding Service Achievement at the 5th Conference of the Public Libraries in Jiangsu Province.

IV. Research Methodology

In order to gauge patrons’ needs for digital resources and to improve the digital reference service at the public libraries in Jiangsu Province, an email survey was conducted. The targeted population was those registered patrons who visited the reference platform in November of 2011. The questions listed in the survey included patron’s age, education level, specialty, professional title, experience of using the digital reference platform, opinions on existing problems or
difficulties, suggestions for improvement, etc. One hundred copies of the questionnaire were sent out and 63 completed questionnaires were received. The rate of return was 63 percent.

V. Findings

1. Patron visits and utilization of the digital reference network

The survey revealed that 38.1% of the respondents used the network once a week, followed by 29.8% for twice a week, 17.9% for three times a week, and 12.5% for more than four times a week. Another 1.7% respondents used the network on an irregular basis.

2. Usage of different formats of reference consultations on the digital reference network

66.8% of the respondents knew how to use the form on the network for reference consultation. 21.6% of the respondents used the reference consultation in real time. 6.2% of the respondents were aware of the FAQ/knowledge base. 5.4% of the respondents used the BBS/message board functions.

3. How patrons discovered the digital reference network

36.1% of the respondents learned about the Joint Reference Network of Public Libraries in Jiangsu Province from media sources such as newspapers or television. 20.3% of the respondents learned about it by attending the training activity held by the libraries. 16.3% of the respondents discovered it by visiting library websites. 27.3% of the respondents learned about it from a colleague or friend.

The first three methods account for 72.7% of the discovery, which attests to the importance of marketing library programs effectively to patrons who may not visit the library regularly or attend library sponsored programs. The fact that 27.3% of the respondents were introduced to the network by a colleague or friend indicates that word-of-mouth is another effective marketing channel nearly as effective as public media campaigns.

4. Patron utilization of electronic resources

62.3% of the respondents frequently accessed full-text articles from available electronic periodicals. 20.6% of the respondents used the academic dissertation database on a regular basis. 11.5% of the respondents regularly accessed the Duplicated Materials Database of People’s University of China. 4.1% of the respondents frequently used the newspaper database. 1.5% of the respondents frequently read conference papers. Of all types of electronic resources available on the network, full-text electronic periodicals have the highest usage rate.

5. Issues with using the electronic databases

28.2% of the respondents believed that the greatest difficulty or problem in accessing information in the electronic databases is their lack of adequate database searching skills. 22.8% of the respondents thought that the greatest issue for them is the deficiency of appropriate or relevant contents in the available databases. 17.3% of the respondents acknowledged that their
level of English language proficiency is not high enough to successfully use the electronic resources. 14.8% of the respondents believed that the main problem is that they do not fully understand the content of the databases. About 12.7% of the respondents opined that the databases are too difficult to use. 4.2% of the respondents noted that there are other issues with the electronic resources.

55.7% of the respondents did not understand the databases or were not familiar with the database search, of which 28.2% were lack of information retrieval skills, 14.8% did not understand the content of the databases, and 12.7% found it too troublesome to deal with the databases. Such facts should prompt librarians to enhance patron training to improve their search skills, thus increasing the usage rates of the databases of electronic resources.

6. Patron demand for electronic resources in different formats

40.2% of the respondents expressed their need to access electronic databases of periodicals written in foreign languages. 35.8% of the respondents express their wish to check out e-books. 24% of the respondents requested access to commonly used database such as ASTM, ANSI, ASME, IEEE, UL, API, AIA/NAS, ISO, ITU, ETSI or other commercial databases.

VI. Future Developments

1. Enrich Electronic Resources

1.1. Providing access to free electronic resources

There are abundant free resources and services on the Internet. Public libraries could describe those websites and provide links to them on their own webpage. Proper maintenance of those links is necessary to ensure accuracy of the outside free resources. For instance, MIT Theses in DSpace (http://dspace.mit.edu/handle/1721.1/7582) is useful to find theses and dissertations written by MIT graduate students in various departments. Open J-Gate (http://openj-gate.org/) contains thousands of open access journals in various disciplines such as information technology, electronics, communications, life sciences, medical science, the humanities, and agriculture.

1.2. Adding academic databases

Academic databases are a widely used information resources in libraries. Nanjing Library should subscribe to some foreign language databases of high usage. It should also provide adequate instructions on the library website on how to search such databases and download articles.

1.3. Building subject-specific databases

Nanjing Library should build subject-specific databases relating to its unique collections. These databases would support the resource-sharing capabilities in the whole province and help to meet increased patron demands. For example, the Red Memory Database, the Trade Mark of a Century Database, the Jiangsu Culture Database, and the China's Modern Literature Picture Database (Tang, 2012).
2. Establish a Digital Reference Librarian Group

The Joint Reference Network of Public Libraries in Jiangsu Province includes 13 city and 6 county libraries of the province. Their combined collections cover a wide range of disciplines and specialties. However, few reference librarians have high-level professional knowledge, and even fewer have knowledge about information technology and digital resources. It is difficult to satisfy multi-disciplinary and multilingual patron needs with individualized consultation services. The Joint Reference Network of Public Libraries in Jiangsu Province should pay attention to each member library’s collections and their professional characteristics in order to satisfy patrons’ information needs. The characteristics of each library and the questions asked by patrons should influence the distribution of reference librarians throughout the network. And the reference librarians at different levels should be allocated in varying numbers to best serve the patrons of each library. Such distribution should consider the following:

2.1. Perfecting the professional structure by subject

It is necessary to distribute reference librarians according to the subjects covered by its collections in each library, implement a subject-based consultation system, and let subject librarians serve patrons in one or more relevant subject area, thus forming a reference librarians’ group with complementary subject knowledge. This group is responsible for every subject area. They conduct patron analysis, provide subject-specific reference services, help patron to retrieve needed information, and offer patron education.

2.2. Utilizing subject-specific expertise of part-time staff

At present, the reference consultants of the Joint Reference Network of Public Libraries in Jiangsu Province are full-time library staff. There are many researchers from scientific institutions and university faculty members and students in Jiangsu Province. They have not yet been explored as potential resources for the reference network. They could be engaged as network reference consultants on a part-time basis to answer more complicated inquiries from patrons and to provide patrons with effective and authoritative academic assistance beyond what the full-time reference librarians can offer.

2.3. Optimizing the age composition of reference consultants

Reference services require strong analytical and interpersonal skills. Middle-aged staff has accumulated a large amount of knowledge and experience during his or her practice as a librarian and is thus most suited for the role of main consultants. Newer librarians are more aware of new information technology and recent developments and are more apt to answer patrons’ inquiry related to new technologies. Main consultants can mentor young consultants and help them mature into more comprehensive reference librarians.
3. Increase Marketing to Patrons and Patron Training Sessions

At present, the number of questions put forward to the Joint Reference Network of Public Libraries in Jiangsu Province is low. So is the number of registered patrons on the Network. To increase the utilization of the Joint Reference Network of Public Libraries in Jiangsu Province, marketing efforts need to be strengthened to reach out to existing patrons and prospective patrons.

When offering the network of collaborative digital reference service, it is important to disclose the aim of the service, how the service works, when the service is available, and what subject areas are covered.

A link or an icon for the Network service should be prominently visible on the website of each participating library and relevant organizations.

Fully utilize the strength of personal recommendations. All library staff at the front desk should take the opportunity to promote the Network and encourage patrons to spread the word.

Patron training is also an important component of the library reference service. Patron training can help patrons understand what library services are available to them and improve the usage rates of different library resources. In the digital age, patrons access library resources and work with library staff mainly through the Internet. Familiarity with information technology has become an important prerequisite to access the offerings of the library. Educating patrons in knowledge searching and knowledge processing is an important component of serving patrons well. Additionally, training programs should pay attention to the patron diversity and modify the programs to suit different ages, subject backgrounds, and education levels. Lectures, marketing materials, and online study courses are different examples in which the training methods can differ to allow patrons to learn about, use, and request for library resources (Zheng, 2010).

VII. Conclusion

Developing the Joint Reference Network of Public Libraries in Jiangsu Province will be a long-term task. Although the Network has been well received by patrons since its inception in 2008, there is much room for improvement. Marketing must be enhanced. And changes to the platform must be undertaken to fully utilize the advantages of a networked modern library service. Digital resources must be accessible to more patrons, more quickly, more cheaply, and more conveniently. Once done, people will be benefited more from its services and digital resources whereas the Joint Reference Network of Public Libraries in Jiangsu Province will be used more, thus exerting greater impact on the socio-economic development of society.
Reference


Authors:
Bing Wang is Assistant Provincial Librarian and Research Librarian at Nanjing Library, China. Email: bobwang8888@hotmail.com

Xiaolu Tang is Associate Research Librarian at Nanjing Library, China.

Submitted to CLIEJ on 26 February 2014.
Copyright © 2014 Bing Wang and Xiaolu Tang