



# 68th IFLA Council and General Conference

## August 18-24, 2002

---

**Code Number:** 011-134-E  
**Division Number:** VIII  
**Professional Group:** Regional Activities  
**Joint Meeting with:** -  
**Meeting Number:** 134  
**Simultaneous Interpretation:** Yes

### **Library's Role in Bridging the Digital Divide: the Case of Community Libraries in Shanghai**

#### **WU Jianzhong**

Director, Shanghai Library  
1555 Huai Hai Zhong Lu,  
Shanghai, 200031, China.  
Email: [jzwu@libnet.sh.cn](mailto:jzwu@libnet.sh.cn)

---

#### ***Abstract:***

*Although in recent years the information environment has been greatly improved in many developed and developing countries, there is no indication that the digital divide is decreasing. Libraries are central to digital divide solutions. Through the example of electronic services at the community libraries in Shanghai, the paper shows that librarians are sharing the responsibility with other social and educational workers to work actively for the citizens' information literacy. As a vital new force, librarians will play a more eminent role in turning the digital divide to the digital opportunity with their knowledge, skills and professional spirit.*

---

#### **1. The digital divide is still real.**

There has been a spate of essays on the digital divide recently. It is touched off by the report "A Nation Online: How Americans Are Expanding Their Use of the Internet". The report shows that more than half the population of the United States is now online, an increase of 26 million people in thirteen months, and the number continues to grow (Nation, 2002). It is certainly cheerful news, but does this mean the digital divide has been solved? Should we disregard the growing digital divide between the developed countries and the developing countries? Should we disregard the fact that three out of four poor families in the United States still remain "on the wrong side of the digital divide" (Carvin, 2002; Arrison, 2002)?

According to certain sources, there are an estimated 429 million people online globally. Of those 429 million, 41% are in North America. But, 429 million represents only 6% of the world's entire population (Digital, 2002b). In the United States two people share one computer, 55 times as many as that in China, which means only one of 114 people has access to one computer (China, 2001).

In China, we can also see the growing sign of the digital divide between the East China and the Northwest China. According to the ninth CNNIC survey (Ninth, 2002a), there are 33,700,000 Internet users, constituting 2.6% of the total population of the country. The East China users account for 36% (Shanghai 9.2%, Jiangsu 8.0%, Zhejiang 6.6%, Anhui 2.5%, Fujian 3.6%, Jiangxi 1.8% and Shandong 4.3%) of the whole country while the Northwest China for only 4.6% (Shaanxi 1.5%, Gansu 1.3%, Ningxia 0.3%, Qinghai 0.2% and Xinjiang 1.3%). Although the Northwestern Internet users have grown rapidly thanks to the recent national strategy for developing the Northwest, the gap between the two areas is still increasing.

**Table 1. Geographical Distribution of Internet Users in China (1997-2002)**

	North China	North East	East China	South China	South West	North West
Oct. 1997	41.00%	5.20%	27.10%	20.50%	4.30%	1.90%
Jul. 1998	31.60%	9.60%	29.30%	22.60%	4.20%	2.70%
Jan. 1999	28.68%	6.79%	24.06%	30.52%	5.97%	3.98%
Jul. 1999	26.74%	6.65%	32.07%	21.28%	7.92%	4.69%
Jan. 2000	28.05%	7.43%	31.62%	23.64%	6.02%	3.24%
Jul. 2000	25.11%	6.41%	35.01%	22.91%	6.28%	4.28%
Jan. 2001	19.94%	9.53%	34.44%	21.84%	9.35%	4.90%
Jan. 2002	17.70%	8.40%	36.00%	24.30%	9.00%	4.60%

The fact shows that the digital divide is far from being solved. The ICT pushes the society forward into a Knowledge Age but at the same time brings us a new challenge. Because of the differences of the information infrastructure, educational level and information literacy, gaps of information, knowledge, opportunity and income between the developed and the developing countries and between the well educated, high income groups and not well educated, low income groups, are increasing. Ms. Zhu Lilan, former Chinese Minister of Science and Technology, points out that the developed countries control over 80% of the world technological development and the increasing divide pulls the low-income countries accounting for half of the world population out of the mainstream of the world economy (Zhong, X. and Ren, J., 2001). To make matters worse, the gap on the number of Internet users between the developed and the developing countries is wider than that of the national income (Long, 2002).

The digital divide is still real. Because the majority of the world population live on the other side of the digital divide and they need IT for basic living. That is why the World Telecommunications Day (May 17<sup>th</sup>) chose "ICT for all: empowering people to cross the digital divide" as the theme for 2002. Considering the fact that more and more jobs will either be in the information industry or will require IT-related skills in the coming years, we should not underestimate the social and economic impact of the digital divide.

## **2. The Information literacy needs attention.**

Librarians have worked to bridge the divide between the information "haves" and "have-nots" for more than 100 years (Digital, 2002a). As one of the library's missions, user education has been developed to help build up the learning skills for users regardless of age, race, language, religion, sex and physical ability. The term "information literacy" is evolved from the library education, for instance, the skill of catalogue search. With the advent of information communication technology, such education begins to be associated with the information abilities and becomes indispensable in the modern society. In 1989, ALA defined the information literacy as the following: to be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information (ALA, 1989). Information literacy is not just a combined skill of catalogue search plus keyboard operation; it is the ability of information problem

solving. The IFLA professional committee is considering changing the user education section to information literacy section so as to arouse the consciousness and awareness of librarians' role in the information society and to keep up with the new situation.

Libraries are central to digital divide solutions because librarians have played and are still playing an important role in improving information literacy for their users. The modern libraries should not simply be repositories for information; they should also be dynamic gateways to information. The Shanghai Library has emphasis on information education and 7,069 people have been trained since 1998 when its Training Center was established. The Municipality has granted the Training Center permission to organize examinations for information skill and a total of 17,006 people took examinations in the past four years. The Computer Learning Room, located at the ground floor of the new building, is equipped with 60 Internet-connected computers and rich electronic resources. They often give free lectures on information use to the public. Its modern facility and well-trained staff attract a large number of local users and tourists. In 2001 49,640 people used the services.

### **3. Programs for information literacy in community libraries of Shanghai.**

According to the Shanghai Information Action Plan 2000-2002, by 2002, hospitals and libraries above district and municipal level and all the city's high schools, colleges and universities will be connected to the city's broadband network. The "Information Community Project" will be realized in 50% of all the communities and the ratio of Internet users will increase from 8% to 30%, and those who have received information training will account for 30% of the total population of Shanghai (Shanghai, 2002). The plan gives prominence to social services and emphasizes information education among the citizens. The government recognizes the potential importance for public libraries to become information centers in communities.

In Shanghai, there are altogether 263 community libraries, including 33 district/county libraries and 230 street/town libraries. The size of the collection in each district/county library averages 300,000 volumes and in each street/town library averages 30,000 volumes. Besides, there are about 5,000 small reading rooms of an average of 500 books scattered in the residential areas and villages.

#### **3.1 The public libraries begin to stand out in the ICT drive.**

In November 1993 the Shanghai municipality started its first evaluation program on public libraries and its evaluation report revealed that the progress of computer development was "very slow" as the target set for computerization in at least 60% of the public libraries in the city had not been achieved (Report, 1994). In 1994 there were only 43 PCs in the community libraries and in 1998, the number rose to 643. The Zabei District Library opened the first Computer Learning Room among the community libraries of the city, providing Internet access and other electronic services. Encouraged by the municipal policy for information development in mid 1990s, the community libraries established computer systems one after another. In 1998 a joint loan service was developed among the community libraries and readers could use one card to borrow books from 27 district/county libraries (it has been replaced by the Shanghai Library's IC Card System since 2001) (Report, 1999). According to a recent survey by the Shanghai Society for Library Science (Jin, 2002), out of 263 community libraries, there are 39 electronic reading rooms with 896 Internet-connected computers. Twenty-three district/county libraries have electronic reading rooms. There are 396 people employed for the electronic services in the 39 community libraries, including 173 reading room staff, 70 database workers and 153 technicians. Some libraries are making great efforts in developing the electronic service, for instance, as many as eighteen staff members maintain the Green Land website for the two Hongkou district libraries.

In 2001, there are 13,526 items of electronic materials in the 39 libraries and 27,068 items were on loan. A total of 1,429,770 *yuan* (equivalent to 172,261 US dollars) were spent for the electronic services.

**Table 2. Staff employed for Electronic Services in Community Libraries of Shanghai**

District/county Libraries	Computer Technicians	Staff in Computer Learning Rooms	Database Workers
Huangpu	8	12	6
Luwan	5	10	2
Xuhui	12	2	1
Changning	6	5	3
Jing'an	5	30	2
Zabei	28	7	3
Hongkou	8	6	10
Yangpu	3	28	12
Putuo	10	5	5
Baoshan	4	10	2
Minhang	5	7	2
Pudong	21	30	6
Nanhui	1	3	3
Fengxian	3	2	1
Jinshan	11	-	1
Songjiang	6	6	3
Qingpu	10	10	1
Jiading	2	-	5
Chongming	5	-	2
Total	153	173	70

### **3.2 The community libraries begin to realize that improving information literacy becomes one of their new responsibilities in the Knowledge Age.**

Community librarians are aware that there is an ample scope for their abilities in information literacy programs. They find that they must train and teach their patrons to handle new electronic information formats as never before. They teach computer skills, Internet surfing, information searching and provide various electronic services for the local citizens. Fourteen district/county libraries have their own homepages providing various networking services. The volume of web information totals 65.31 gigabytes, which does not include mirror sites of commercial full-text databases. They provide catalogue search and special electronic databases including culture, arts, education, law, agriculture, health, environment, tourist, popular science and local documents.

### **3.3 Some libraries take advantage of Internet technology to share responsibilities and resources.**

Hongkou has two district level libraries and they have developed a joint homepage called Green Land, providing book reviews and a film/drama database. The homepage (<http://www.hql.online.sh.cn/>) was heavily visited, attracting 231,715 visits in the year of 2001, an average of 635 users every day and the volume of the databases has reached 27 gigabytes. The film/drama database includes 5,900 cultural figures and the reviews of 1,150 films and 6,000 books. There are also 1,000 films for viewing on demand. They also have a BBS forum with 2,490 registered users. 23,100 messages are shown in six subjects on the forum. They find the website an efficient way of combining the information services and their resources. The Nanhui District Library makes use of the Shanghai Library's networking system and the Jiaotong University Library's agricultural specialists to develop an Agricultural Navigator, providing plant information especially on five local products for the local farmers.

**Table 3. Electronic Reading Room Services in Community Libraries of Shanghai**

	PCs	Budget (Thousand)	E-materials (Item)	Loan (Yearly)
Huangpu District Lib.	50	50	755	-
No.2 Huangpu District Lib.	12	5	106	22
Luwan District Lib.	20	20	550	2490
Xuhui District Lib.	20	24	55	-
Changning District Lib.	32	36.24	675	980
Changning Children's Lib.	21	5	210	169
Jing'an District Lib.	16	24	444	1620
Zabei District Lib.	53	30	1021	-
Zabei Children's Lib.	15	3.15	499	-
Hongkou District Lib. Hongkou Quyang Lib.	20	100	814	516
Yangpu District Lib.	42	0.88	560	-
Yangpu District Yanjie Lib.	50	2.06	137	2660
Putuo District Lib.	20	72	485	-
Baoshan District Lib.	45	20	2850	300
Minhang District Lib. No.2 Minhang District Lib.	33	11	200	100
Pudong Central Lib.	86	895.70	485	-
Chuansha District Lib.	17	8	200	-
Pudong New Area No.1 Lib.	16	5.94	396	679
Chuansha Children's Lib.	20	3	100	-
Jiading District Lib.	8	2	50	-
Songjiang District Lib.	100	20	1355	3600
Nanhui District Lib.	24	2	50	-
Fengxian District Lib.	-	5	350	2050
Qingpu District Lib.	-	11	434	3482
Chongming County Lib.	56	-	-	-
Zhaotun Town Lib.	-	5.50	300	8400
Jiangshuan Street Lib.	21	-	-	-
Jingyang Street Lib.	-	0.50	29	-
Puxing Street Lib.	-	8	186	-
Huamu Town Lib.	16	-	-	-
Hudong Street Lib.	10	-	-	-
Puxing Street Lib.	19	-	-	-
Meiyuan Street Lib.	11	-	-	-
Nanmatou Street Lib.	16	20	80	-
Dongminglu Street Lib.	4	40	150	-
Shanggang Street Lib.	3	-	-	-
Beizhan Street Lib.	20	-	-	-
Total	896	1429.97	13526	27068

### 3.4 The enriched special databases stimulate the use of library electronic resources.

The city's community libraries have developed a series of special collections in the past twenty years. Each district or county library is encouraged to have one special collection according to the local needs. The No.2 Huangpu (formerly Nanshi) District Library has developed the Tourist Collection because Nanshi is well known for its tourist spots and cultural and historical remains. The Putuo District Library has started its Law Collection on the basis of the donations from some local law scholars. The Hongkou's Quyang Library for two reasons has developed the Collection for Film and Drama Reviews: many film directors and film reviewers and amateurs live in the district and often meet in the library. The Yangtze River Folklore Database has been developed in Baoshan District Library, cooperating with nine other libraries in the neighboring cities along the river in Jiangsu Province. The database has a total volume of one gigabyte, and can be searched through the homepage of Baoshan Library at <http://www.bslib.online.sh.cn/>. There are altogether 6.17 gigabytes of homemade databases in the community libraries of the city.

When entering the electronic age, these libraries take advantage of their rich resources and attract more users through electronic means. The special databases of various subjects are one of the main features in the city's community library movement and have influenced many public libraries all over the country.

**Table 4. The Websites of Community Libraries of Shanghai**

Library	Domain Name	Main Contents	Volume (g)	Visitor (Yearly)	Staff
Huangpu District Lib.	<a href="http://www.shhpl.com">http://www.shhpl.com</a>	Book Reviews; Film/Drama Reviews	3	54750	3
No.2 Huangpu District Lib.	<a href="http://www.nsinf.online.sh.cn/">http://www.nsinf.online.sh.cn/</a>	Book reviews; Travel; Health	1.50	32850	4
Hongkou District/ Quyang Libraries	<a href="http://www.hql.online.sh.cn/">http://www.hql.online.sh.cn/</a>	Book and Film Reviews; VOD; Local Culture	27	231775	6
Jing'an District Lib.	<a href="http://www.jinganlib.net/">http://www.jinganlib.net/</a>	Book Reviews; Local Writers	0.1	5110	2
Zabei District Lib.	<a href="http://www.zbllib.online.sh.cn">www.zbllib.online.sh.cn</a>	Tea Culture	2	51100	1
Changning District Lib.	<a href="http://www.cnqlib.com.cn/">http://www.cnqlib.com.cn/</a>	Local Cultural Information	0.05	7300	2
Yangpu District Lib.	<a href="http://www.yplib.online.sh.cn">www.yplib.online.sh.cn</a>	Environment	0.60	38690	3
Putuo District Lib.	<a href="http://ptlib.online.sh.cn">http://ptlib.online.sh.cn</a>	Local Culture; Law	0.5	149650	3
Baoshan District Lib.	<a href="http://www.bslib.online.sh.cn/">http://www.bslib.online.sh.cn/</a>	Yangtze River Folklore	30	20075	4
Minhang District Lib.	<a href="http://www.mhlib.online.sh.cn">http://www.mhlib.online.sh.cn</a>	Book Reviews; Local Culture	0.20	9855	2
Pudong New Area Central Lib.	<a href="http://www.pdlib.com">http://www.pdlib.com</a>	Local History and Culture	0.05	12410	3
Chuansha District Lib.	<a href="http://www.lingkong.com">www.lingkong.com</a>	Book Reviews; Health; Local Culture	0.24	26645	1
Nanhui District Lib.	<a href="http://www.library.sh.cn/nanhui">www.library.sh.cn/nanhui</a>	Agriculture; Local Culture	0.05		8
Qingpu District Lib.	<a href="http://www.qplib.sohu.com">www.qplib.sohu.com</a>	Travel; Aquaculture	0.02		2
Total			65.31	640210	44

### **3.5 The community libraries are providing the most appropriate means for training the special social groups in information skills.**

The Zabei District Library sends their staff members to the homes of the handicapped to teach them to use computers and electronic information. In 1996 the Library helped a School for the Deaf-and-Dumb to use electronic information and it was highly praised on the local newspaper *Jiafang Daily* (30 August 1996). To assist the local employment education, the Pudong New Area Central Library organized a computer class for the 50 lay-off workers in the evenings between 30th May and 11th July 2001. The Minhang District Library opened computer classes for old people with the cooperation of the District's Senior Citizen College and for women with the District Women's Union in 2002, teaching basic information skills including searching and e-mailing.

### **4. Problems**

The local community libraries in Shanghai have spontaneously shown their ardor in improving the citizens' information ability and more efforts have been made on the hardware facilities in the past years. But we have not seen any clear statement or well designed program on information literacy in these libraries.

Although the number of computers in the community libraries is growing rapidly, compared with Internet Cafes, it is significantly small. Internet cafes have become an ever more frequent sight on street corners of the city. There were about 1200 registered Internet Cafes in Shanghai in mid-2001 and over half were reported not up to par (Hu, 2001), 30 times more than that in the public libraries. According to the ninth CNNIC survey on main access locations (results of multiple choices), Internet use at home is 61.3%, office 45.7%, school 19.7%, Internet Cafe 15.4% and others 0.7% (Ninth, 2002b). Home and office are the major locations of Internet access. We do not know what the percentage of use at library is at present but it is definitely not more than 0.7%. Therefore, community librarians should market the library services to attract more people, especially the potential users to come to the libraries for information needs.

### **5. Conclusion**

Although in recent years the information environment has been greatly improved in many developed and developing countries, there is no indication that the digital divide is decreasing. Libraries are central to digital divide solutions. The example of electronic services at the community libraries in Shanghai shows that librarians are sharing the responsibility with other social and educational workers to work actively for the citizens' information literacy. As a vital new force, librarians will play a more eminent role in turning the digital divide to the digital opportunity with their knowledge, skills and professional spirit.

### **References**

- American Library Association (1989) Presidential Committee on Information Literacy (released on January 10, 1989). <http://www.ala.org/acrl/nili/ilit1st.html>, accessed on 18 April 2002.
- Arrison, Sonia (2002) What digital divide? <http://news.com.com/2010-1078-858537.html>, accessed on 18 April 2002.
- Carvin, Andy (2002) Digital divide still very real. <http://news.com.com/2010-1078-872138.html>, accessed on 18 April 2002.
- China (2001) urges on bridging the digital divide. *Sci-Tech Daily*, 30 October 2001.
- Digital (2002a) Divide, <http://www.ala.org/oitp/digitaldivide/>, accessed on 18 April 2002.
- Digital (2002b) Divide Basics Fact Sheet. <http://www.digitaldividenetwork.org/content/stories/index.cfm?key=168>, accessed on 18 April 2002.
- Hu, Yonglong (2001) Internet Cafes Survey in Shanghai. *Wenhui Daily*, 17 September 2001:9.
- Jin, Xiaoming (2002) Report on Electronic Services of Community Libraries of Shanghai. Shanghai: Shanghai Society for Library Science, 2002.
- Long, Yongtu (2002) Strengthening the cooperation among the South and decreasing the digital divide.

<http://www.cicete.org/chinese/south/2.htm>, accessed on 18 April 2002.

A Nation (2002) Online: How Americans Are Expanding Their Use of the Internet  
<http://www.ntia.doc.gov/ntiahome/dn/index.html>, accessed on 13 April, 2002.

The Ninth (2002a) CNNIC survey. <http://www.cnnic.net.cn/develst/2002-1/info.shtml>, accessed on 13 April, 2002.

The Ninth (2002b) CNNIC survey. <http://www.cnnic.net.cn/develst/2002-1/4.shtml#>, accessed on 18 April 2002.

Report (1994) on the first evaluation result on public libraries in Shanghai. In: Facing the challenge: Overview of the Public Libraries in Shanghai. Shanghai: Shanghai Society for Library Science, 1994, 205-214.

Report (1999) on the first evaluation result on public libraries in Shanghai. In: Public Libraries at the Cross of the Century. Shanghai: Shanghai Society for Library Science, 1999, 227.

Shanghai (2002) Information Action Plan 2000-2002.

<http://www.shanghai.gov.cn/gb/shanghai/gazette/node412/node416/userobject26ai108.html>, accessed on 18 April 2002.

Zhong, Xiubin and Ren, Jianmin (2001) How to across the digital divide? People's Daily, 24<sup>th</sup> February 2001.