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Reading outside the library: how has the Internet affected reading in China

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Abstract

There are already more than 20.83 million host computers and 59.10 million Internet users in China. Most of them get access to the Internet at home, office or school, and few at the library. Their needs for e-books or science and education are among what they inquired mostly through the Internet. It has been predicated that a lot of reading is done outside the library. How the Internet has been used to encourage reading in China? This paper looks at three noticeable ways starting from the news online, digital journals and e-books, of which the printed editions are the main categories of traditional publications. It is also pointed out here that what would improve reading further, and how traditional publishing and libraries have been affected.

1. Introduction

Reading is an important means to obtain information for humankind, it is also a vital way to promote and develop national culture. The inventions of paper and printing technology in ancient China have improved the reading ways and ability tremendously, speeding up the progress of humankind's literate culture. As the main varieties of traditional publications, the newspapers, journals and books have been developing with the need of reading mutually.

Although radio and TV have ever influenced reading to a different extent, printed publications and reading still occupy a dominant position, because listening and watching are distinct from reading. However, the emergence and rapid development of the Internet as a new medium are showing enormous impacts on our reading now.

The development and application of the Internet in China is remarkable. According to the latest statistics from the China Internet Network Information Center (CNNIC, www.cnnic.net), there are already more than 20.83 million host computers and 59.10 million Internet users by the end of December in 2002.

1. Where the users got online (Multiple choices)?

Home	Office	School	Cafe	Public library	Other
62.6%	42.5%	20.2%	19.4%	0.6%	Less

2. What information users inquired (Multiple choices)?

News	Computer	Entertainment	E-books	Science and education	Other
78.0%	53.4 %	44.6%	32.6%	30.1%	Less

From the two groups of data above, it implies that quite some reading has been done outside the library. How the Internet has been used to encourage reading in China? Starting from the news online, digital journals and e-books, of which the printed editions are the main categories of traditional publications, we can see substantial changes.

2. How the Internet has encouraged reading?

2.1 News online is wonderful by clicks

News online is free, users could read Guangzhou Daily in the USA or read the New York Times in Guangzhou city without limits of charge, regions or politics. Many young netizens prefer the net editions to printed editions of newspapers, because they could read the news online before their work or during their work-break. Net editions are also particularly welcome abroad, for example, about two thirds of the visitors to www.chinadaily.com.cn are from abroad.

News online is abundant and updated. There are about 2000 printed newspapers in China, 15% of them, that is, about 300 newspapers have net editions. The earliest web site of newspaper in China is www.people.com.cn, which was set up in Jan 1,1997. It is the Internet platform of the People Daily, one of the 10 top newspapers in the world evaluated by the UNESCO. Everyday there are about 3000 pieces of news added which would be classified into 15 fields and more than one hundred topics. Furthermore, there are many portal sites providing a great quantity of news. For example, www.sina.com, the largest Chinese web site in the world, has nearly 5000 pieces of news everyday. News is updated just in time 24-hours each day.

News online is searchable. News on TV, radio or newspaper is very hard to retrieve, but it is very easy to find on the Internet. With the powerful search engines such as www.sohu.com, you may search related news on hundreds of websites. In the net editions of newspapers, news are usually arranged by dates or columns, you can also view related reports that published days, months or even years ago with the search engine inside the website. It is very convenient for users to seek background materials for study or research.

News online is interactive. You won't feel lonely and passive reading news online, because you may take part in the interactive activities. You could send news exciting to your friends, and you could also participate in the forum or write opinions on BBS. On many famous websites, there would be online investigations about hot topics or great events, you may simply submit an answer or view the results. It is quite a free way to exchange opinions or share your feeling with others online, as the famous saying: "*nobody knows you are a dog there*".

Of course, apart from news, there is a wide variety of other free information online. Nevertheless, according to the latest statistics by CNNIC, 82.1% of the users in China is under the age of 35, whereas 78% of the information they inquired is news, so it is quite obvious that the Internet has encouraged news reading among young people the most.

The marvelous Internet meets the hustle and bustle work or colorful life of modern people, but things have other sides. *Internet Quick Meal* is a new cultural phenomenon in Internet times. Surfing on thousands of websites, users usually feel impatient, they like simple information with pictures, short and funny sentences or paragraphs, they read with only eyes but they put little effort on thinking or imagination. Hypertext links make it easy for users to go astray from their original intentions, wasting much of their time.

2.2. Digital journals help scientists soundly on their desktop

Journals are the main information sources for scientific research. According to the UNESCO, 70% of the science information could be obtained from journals, which make up the main part of collection in whichever academic library all over the world.

Researchers used to go to the library many times for material. But now, they need not go to the library in person. The Internet has been used together with large databases, making it convenient to search and download academic articles at home or office. The once tough job of retrieving material for the preparation of a research is now just a click away, they may get their project started from the desktop, and accelerated with more reading during the process.

In China, there are about 8700 public journals published now, most of them are included into the three largest digital journal databases respectively launched by CNKI, VIP and WANFANG DATA. For example, the China Academic Journal (CAJ) by CNKI provides a collection of 6,600 periodicals in full-text, there are already 6 million full-text articles, 700,000 full-text articles would be added annually, its update frequency is daily via the Internet.

Domestic large databases online provide various and flexible service for users under different conditions, usually in the following ways:

- a. Mirror websites for universities or institutions, the data is installed on local website, and it is free for any users who access with IP within a local area network.
- b. Subject databases for special schools or institutions, the data is on the central website. It is paid for the subject chosen, no matter how frequently you visit or how much you download, the more you download, the more reasonable it is.
- c. Reading cards for individuals or groups, users access the database with the account and password on the card, charge only for the articles they download, for example, fifty cents per page.

More and more foreign large full-text databases of digital journals are introduced these years, such as the Elsevier, Kluwer, Springer or Web of Science. They provide services by mirror website or account through large information platforms like Dialog. In China, the digital journal is after the printed edition, but it is opposite in foreign databases, you can view digital journals published online a month or more ahead of current date.

In most large libraries, 10-20% of the budget is set aside for databases of digital journals now. Libraries in universities of 211 Project are generally sufficient in budgets, and they are the main buyers of the foreign databases with high prices, so that their faculty members are the most beneficiaries of digital journals for their teaching and research.

From a scientist's view, Internet reading is good for serious people and good for science. The Internet is rich in a wide variety of information, it is not easy for everyone to refrain from reading unsound materials, but the purpose of professionals to get online is usually managed just to search and download the articles they need, so the Internet help their work soundly. The Internet is becoming an indispensable and prior way for searching materials.

2.3. Thousands of e-books just cost 100 RMB each year

In China, there are about 10,000 new books from 600 publishing houses each year recently. You could see shelves of books only in libraries or bookstores before, but now, you can read four hundred thousand books staying at home whenever you like, it just costs 100 RMB for each year.

Large Digital libraries have been built up in recent years in China, such as www.d-library.com.cn, www.ssreader.com or www.21dmedia.com, these digital projects have the following common features:

- a. To unite libraries to enrich the digital resources with strong technical supports;
- b. To ally with publishing houses or authors to deal with the copyright reasonably and legally;
- c. To have their own reader or viewer;
- d. To promote their reading cards in various commercial ways.

We can illustrate the above-mentioned features with the case of www.ssreader.com.

It is built by the Peiking Superstar Limited in alliance with Guangdong Provincial Library and other libraries. The digital holding is abundant, it has already 400 thousand online books in wide fields of arts, humanities, social science, natural science and engineering science, about 600 new works are digitized and added everyday at present.

Authors are paid royalty according to the downloading frequency of the books, or any authors who sign an authorization agreement would get a reading card available for 10 years. The newest books in recent two years would just provide a free view of the first 17 pages, and users could buy the printed books from the publishing houses with reading cards.

The Superstar Reader has powerful functions. Registering with a reading card, you can read, download or print any pages of the books you are interested in, you can also make note or mark directly instead of writing in hand, you can even make a CD for the book. Of course, anyone may surf the digital library, view the first 17 page of most books without a reading card, this encourages a lot of users to have trials.

The reading cards are becoming quite popular. With a reasonable price of 100 RMB for domestic users and 20 US dollars for foreign users each year, the reading cards are very convenient to buy in many ways:

- a. Free delivery in the pointed cities;
- b. Order by mail;
- c. Order by mobile phone;
- d. Order online;
- e. Retail network over the country;
- f. Special contacts for users abroad.

Here are some of the advertising languages from which we can see many advantages of the digital library:

"Never worry about the book you need was borrowed by others!"

"Are you going to study abroad? No need to carry boxes of books with you!"

"To write a project in urgent need? The library is open 24 hours a day!"

3. What would improve reading still further?

Speed of the Internet

On September 20, 1987, China's first e-mail titled "Crossing the Great Wall to join the world" was sent at a speed of 300bps, making the beginning of the use of the Internet by Chinese. After 16 years' development, there are already ten Internet companies with a bandwidth of 9380M totally connecting abroad, providing reliable and smooth access all over the world.

1. CHINANET, www.chinatelecom.com.cn,
2. CSTNET, www.cstnet.net.cn,
3. CERNET, www.edu.cn,
4. UNINET, www.chinaunicom.com.cn,
5. CNCNET, www.cnc.net.cn,
6. CMNET, www.chinamobile.com,
7. CIETNET, www.ciet.net,
8. CGWNET, www.cgw.net.cn,
9. CSNET, www.chinasat.com.cn,
10. CHINAGBN, www.gb.com.cn

The speed of the Internet has been raised remarkably now, 70% of users surfing at home get online with modems at a speed of 20-30kbps, and users of ADSL could reach a speed of 2-3mbps. Dedicated line in office could have a higher speed, especially within CERNET. Higher speed of the Internet would encourage more reading through the Internet.

Charge for access

According to the latest data of the CNNIC, for the users surfing at home, most families cost less than 100 RMB(□) each month, occupying only about 1% of their income.

Under □50	□51□100	□101□200	□201□300	□301□400	401□500□	Above□500
39.5%	30.6%	21.9%	4.4%	1.5%	0.9%	1.2%

If you get online with a modem for one hour, it charges about 1.2 RMB for dialing and another 1.2 RMB for the Internet. If you get online by ADSL, it charges about 120 RMB each month no matter how long you surf online. With the ripe application of the Internet to community and family, the cost is getting less, surfing at home would become a common part of daily life just like watching TV.

LCD Monitors

Monitor, the most important output ware of a computer, is the face we often face. The monitors we use most now are CRT(Cathode Ray Tube Display), its glimmer and high radiation let many users feel eyes-tired easily, especially old users who have got used to paper reading. Another variety of monitors, LCD(Liquid Crystal Display), have many advantages such as small bulk, low power cost, low radiation, no twinkle, and ease the eyes-tiredness. With the price dropping, it is becoming more popular in office or at home. Sitting in front of a high-quality LCD screen, you would feel more comfortable and read longer.

Portable e-books

Why MP3 is so popular? It is because people could download their favorite songs online and enjoy with portable players wherever or whenever. The e-books we mentioned above are based on PC, but few people like to read a lengthy book in front of the computer, so e-books in portable readers would get e-books more popular. Portable e-books have similar appearance with the printed ones, you can page up or page down in a rustle, make note or mark with a special pen, listen to the book or even smell the *printing ink*. As a result, portable e-book readers would return electronic reading a beauty.

You may have heard about the Rocket book or Soft book in America. We have developed tens of portable readers in China, such as a palmtop book, which could hold 40,000 digital books. They are seizing more market with lower prices and technical improvement. According to the foresight of publishing houses, e-books in 2020 would occupy half of the whole books market.

Compatible readers:

When we access a database like the Web of Science, we could read the full-text just with Internet Explorer directly, or sometimes with Acrobat Reader for the non-text content. But in domestic databases, they have their own readers respectively, such as CAJViewer, VIPViewer, or SSReader. These readers have been upgraded constantly, reaching a 3M or 4M in storage. They are not compatible, that may protect the copyright in their own ways, but users would feel trouble to download and update so many readers. If these readers were standardized to be compatible, users would be pleased.

4. How traditional publishing has been influenced?

Most people have already got used to paper reading, they would prefer printed one to electronic one if both were in hands, because they feel uncomfortable and slow in thinking facing the dazzling screen. Try reading an e-book for longer than an hour, headaches and eyestrain are the best results. If what you would read was more than two pages, what would you do? Print it!

However, if what you want is not in hand, the Internet is a excellent tool to search what you need, you can search the entire web with dozens of search or metasearch engines, you can also search inside special websites or databases online. "*Search for a needle in a haystack.*" *Used to* mean it is difficult to search materials, but now it is used to praise the magic power of the Internet. People like buying paper-based books over the Internet, instead of reading them on the web.

As to the present situation in China, the reading model on paper is still in a dominant position. The Internet is used to search information more than reading online. Therefore, printed publications have been affected by the availability of electronic materials differently. Generally speaking, there has been less effect on popular publications, but more effect on academic publications.

3.1 Popular publications have been influenced slightly.

For popular publications, including newspapers, magazines or books, the quantity issued keeps the same basically. For example, Guangzhou Daily, the largest newspaper in south China, keeps an issue of 1200,000

copies in 2003, although there is mass of users visiting its net edition on www.dayoo.com everyday.

Reading on print for pastime is a beautiful thing, you can read in sofa, in bed, in the balcony, on boat, on train or on plane, you can share pieces of the newspapers with others, you can read whenever you are free, taking advantage of small amount of free time. It is convenient, carefree, or unrestrained, and no need of special knowledge or skills. But reading online damages the beauty, because it has many limits such as computer, power, or the speed of the network.

On the other hand, the Internet has been used to promote the printed publications. For example, free news online is a strategy for the newspapers to promote their products and extend influence all over the world. Most popular magazines just put their content table free online, you must buy a print one for the attractive articles. Hundreds of bookshops online increase the sale of print books quite a lot. The traditional media and Internet promote each other in this way which is called *win-win*.

3.2 Academic Journals have been influenced certainly.

As stated above, digital journals help scientists soundly on their desktop, academic journals online are more and more welcome by users now, and the issues of printed copies have been declined certainly, for example dropped by about 10%, but not terribly for reasons as follows:

- a. Journals online are not so convenient to read, limited by computer, network or other factors.
- b. Journals online are regarded unstable for storage, personal subscribers still prefer printed ones.
- c. The royalty from the database is less than the print subscription rate, so that some prestige journals are not willing to be included in a database from the economic point of view.
- d. Putting a journal online would increase its cited rate, extend its influence and get more subscriptions.
- e. Journals are subscribed generally by libraries, in which there are still lots of traditional readers, and they usually keep both print editions and digital ones for domestic journals, which are of low price and high use rate.

Surely we have several thousand years of reading print in our bloodstream and that's not likely to change in a short future, but the electronic publications have their genuine advantages such as easy to search, large storage, quick distribution and low cost. Furthermore, a new generation of teenagers or youngsters has grown up with computer and Internet, they have got into the habit of reading on screen. We could not predict that electronic publications would be a substitute for print in distant future, but we can recognize the trend that more and more academic or specialized publications of small issue would turn out to be available online.

5. How libraries have been affected?

The marvelous Internet has created a globally virtual world, more and more activities in physical world have been moved online, such as research, business, education, shopping, mail or chat. People could read news, journals or books online, and they could also search information they need easily. Internet was ever called "*a large encyclopedia*" or "*a library without wall*" for its abundant information. It was even regarded as the substitute for a library. What's a library's destiny?

Like many other librarians, I was ever panicky about our survival in the digital tide when I got in touch with Internet in 1996 for the first time, because I had little knowledge, no skills, and the conditions were so poor at that time. However, we realized that we would serve users not only coming to the traditional library, but also in the cyberspace. From that time on, we began to innovate our ideas, build websites to serve users outside the library. Since the first website www.libnet.sh.cn was set up in 1997, most libraries have built their websites now. How we take advantage of the Internet to serve users outside the library? Besides the common practice such as *About the Library*, *Readers Guide*, *OPAC*, *Databases*, *Navigation* at our websites, I would like to recommend some model services as follows:

- a. Answer questions online, mainly help users to find materials or information they need by professional librarians. For example, there is a floating icon saying: 'Have you find the books you need? We can help you!' at www.ssreader.com. As long as you click it and input your question, you would get the answer within 24 hours on the BBS or by email. Hundreds of users click it everyday.
- b. Subjects Information exploitation. The Internet is like a vast uncataloged library, none of a single search engine could retrieve all related information over the entire web. As librarians, we can search

- for users on special subjects. For example, www.stlib.gd.cn collects rich information on high-tech fields such as biology, electronic technology, new materials and environmental protection.
- c. Digitize our local characteristic document, let users all over the world could share our glorious and magnificent historic cultural heritage of thousands of years in China just at their desks. For example, Chinese New Year Picture, Rare Ancient Books and Family Tree at <http://www.library.sh.cn>, Internet Dunhuang Project, Inscriptions on Bones or Tortoise Shell at www.nlc.gov.cn, Sunzhongshan at www.zslib.com.cn, Chaoshan Recipes at www.chaofood.com, and the window for Ancient Books at www.szlib.com. These literatures in traditional libraries are not open for everybody for the purpose of storage, but the digital ones are free globally.

Library is an icon of our cultural intellect, totem to the totality of knowledge, it has been brought into the magical cyberspace in successful ways. In China, you can see both traditional libraries and digital libraries here are prosperous. Many libraries have new buildings with modern facilities and graceful environment, readers in groups enjoy not only the books or multimedia materials, but also the comfortable atmosphere, relax and take it as a leisure center here. At the same time, a larger number of users outside the library would visit their websites for information. Traditional library and digital library are going very well with each other.

The Internet has been developing at an astonishing pace in China in recent years. There are 59.10 million netizens at the end of 2002, compared with the 33.70 million at the end of 2001, it has increased by 48%, compared with the whole population of 1300 million, it just constitutes about 4.5%. Therefore we can predict an optimistic future of reading in the cyberspace.

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