Seeking Truth From Facts
从事实中探求真理

Studies in Community Informatics
社群信息学研究

Edited by
Kate WILLIAMS 凯特·威廉姆斯
Abdul ALKALIMAT 阿布杜·阿克利马
HAN Shenglong 韩圣龙
YAN Hui 闫慧

Community Informatics Summer School 2011
Sponsored by the Graduate School
and organized by
the Department of Information Management
Peking University

2011 年度社群信息学暑期学校
北京大学研究生院主办
北京大学信息管理系承办
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Additional participants not pictured: WANG Sufang 王素芳, LI Ping 李萍
Organizer’s Preface

HAN SHENGLONG 韩圣龙
Associate Professor, Peking University, hanshenglong@sina.com

I was introduced to Kate Williams at the Community Informatics research Lab by Hui Yan in fall 2008. I was then a visiting scholar at UIUC, sponsored by the Freeman Foundation. That was my first date with community informatics (CI).

In November 2010, Kate and her husband, Abdul Alkalimat, led their CI team to Beijing to attend COINFO’10 and an information science forum held by the Department of Information Management at Peking University (PKU). I took part in both events, so I had the opportunity to communicate with the CI researchers from the US and learn more about CI.

CI was a new field in China. There was very little related research other than what Dr. Yan had done in his PhD dissertation, and CI did not exist in any curricula in any universities by then. The idea of holding a CI summer school came to my mind. During their stay in Beijing, I brought up this idea to Kate and Abdul and invited them to come again and teach during the next summer. I was so glad that they took the invitation without any hesitation. Then, all that left for me to do was to find enough money for this.

This idea was strongly supported by the executive group of the department of information management. I started writing proposals in December 2010. There were several directions at first, but none of them turned out to be feasible. On January 6, 2011, Professor Zhou, the associate dean of our department, mailed me about a project of the Ministry of Education, concerning the innovative education of graduate students. He suggested that I try this project. I submitted the application form immediately, and then came spring festival and winter break in China.

After months of waiting, on April 19 I got the approval notification from the graduate school. My email flew to UIUC at once to tell Kate and Abdul the good news! I set up a website for the CI Summer School and put an ad out on the internet in no time. May and June are graduation season for China’s universities, so I was a little afraid that there might not be enough students. Actually, I worried too much. We got 39 students’ applications by the deadline, which was June 10. Thirty-five students registered on July 3, and 2 more registered later, so we finally recruited 37 students, who came from 18 institutions all over China.

After all the efforts we made together, the summer school successfully concluded on July 27. This volume is the outcome of the students’ excellent field studies, and also a good reference and demonstration for community informatics in China.

BTW, since the fund from the Ministry of Education is limited, the 2011 CI summer school at Peking University is fully funded by the graduate school of Peking University.

Han Shenglong
August 1, 2011
@Changchunyuan, PKU
Guest Lecturer’s Preface

YAN Hui 闫慧
Assistant Professor, Nankai University, hyanpku@gmail.com

What you’re going to read here is the very first collection of students’ research projects about community informatics phenomena in Mainland China, from the 2011 Community Informatics Summer School at Peking University (CISS@PKU). CISS@PKU is supported by the Ministry of Education and the PKU Graduate School, led and operated by Professor Han Shenglong, one of the associate professors in the PKU Department of Information Management, and taught by Professor Abdul Alkalimat, Kate Williams and me. It’s my great pleasure to serve as pipeline for collaborations in community informatics research, teaching, and practice between P. R. China and the United States.

In November 2006, during his Information Services course, after my presentation of research on community information services, Professor Chen Jianlong suggested that I read more materials on community informatics research abroad. That’s the first time I learned that community informatics is an emerging field, closely related to my interests.

When China Scholarship Council (CSC) under the Ministry of Education announced its funding plan for scholars to visit world-class universities and fields at the end of 2007, I got touch with Abdul and then Kate via the GSLIS website and email without any hesitation. Although I had no acquaintance with CI in other countries, and didn’t know that there were some scholars at UIUC interested in China for a long time, Kate invited me to become a visiting student in their Community Informatics Research Lab only a couple of hours after my inquiry email. My friends and colleagues always say that this was a miracle among applications for studying opportunities overseas, I never crossed any two of my fingers before that surprising invitation.

With the joint supervision of Prof Kate Williams, Abdul Alkalimat and Lai Maosheng, I finished my doctoral dissertation on digital inequality in Chinese communities, which is regarded as the very first community informatics research in Mainland China and the first achievement from the collaboration between PKU and UIUC on CI. Fortunately, more actions on CI collaboration were taken after a few months. I organized the CI Lab @ UIUC’s first (although not perfect) China trip in November 2010, my course about Internet and Community Informatics was first offered during the academic year 2010-2011 at Nankai University, and finally the main event: 2011CISS@PKU was totally successful this summer. We’re hitting the road.

Better late than never. Marked by 2011CISS@PKU, community informatics begins to take root in the Chinese context. Thirty-seven more seeds are being planted here and furthermore the nine public computing sites field study reports are absolutely the first fruits. Please taste and spread.

Truly I hope community informatics can make a great difference toward a harmonious and equal information society in China.
Introduction

Abdul ALKALIMAT 阿布杜・阿克利马
Professor, University of Illinois at Urbana-Champaign, mcworter@illinois.edu

Kate WILLIAMS 凯特·威廉姆斯
Assistant Professor, University of Illinois at Urbana-Champaign, katewill@illinois.edu

Introduction

We introduce this volume with great pleasure and respect for the research work that it contains. As faculty from the University of Illinois in Champaign-Urbana (US) we came to China to teach graduate students and faculty researchers about the new field of community informatics. This has been an exciting experience, a sharing in which we learned certainly as much as we were able to teach. This volume documents our experience in the first 2011 Community Informatics Summer School at Peking University.

Towards an information society with Chinese characteristics

Our goal for this summer school was to advance community informatics as a strategic intervention in Chinese society aimed at narrowing the digital divide. This goal is consistent with the overall dual identity of community informatics combining theory and practice, research and policy. One of the great challenges was to speak about the US experience without imposing the experience of one country, the US, on another, China. We had to practice turning the field into a global project — theory and research methods on a general universal level, with our operational measures and empirical findings taking into account two different political cultures and historical circumstances at the county specific level. In this sense we embraced the notion of building the information society with Chinese characteristics. Every country is moving toward becoming an information society, just as every country has moved toward industrialization, but each according to a path defined by the specific material conditions that it faces. A scientific paradigm dictates this to be so. (See our Four Communications‖ in the appendix)

Our Chinese colleagues

As scholar-activists we could not have come to China nor been effective without the close collaboration of Chinese colleagues, and support from a major Chinese institution. We were invited by colleagues in the Department of Information Management at Peking University, officially funded by the Graduate College of Peking University, and supported by the Ministry of Education in China.

Our relationship with Peking University began when Yan Hui spent a year at the University of Illinois (2008-2009) as a visiting doctoral student in our Community Informatics Lab at the Graduate School of Library and Information Science. He was completing his PhD work under the supervision of Prof. Lai Maosheng, and while with us initiated a Skype connection between research groups in our two institutions. After Yan Hui returned to China to finish his PhD degree at Peking University and join the
faculty at Nankai University. Our collaboration included a research publication\(^1\) and efforts to facilitate a trip to China.

Our initial visit to China was in November, 2010 to the COINFO conference in Beijing based on connections set up by Prof Yan Hui and Prof Lai Maosheng. We brought a delegation of nine people to this conference and also participated in a joint conference at Peking University (Department of Information Management) organized by Prof. Chen Jianlong and exploratory discussions between Peking University and our group at the University of Illinois (Graduate School of Library and Information Science, Community Informatics Research Lab). During this initial visit we agreed that a summer school would be a high priority if support could be gotten. Prof. Han Shenglong of PKU took the lead and prepared the necessary proposals that were subsequently approved and a budget allocated for the summer school by the Graduate College of Peking University.

**Our students**

Funding enabled the summer school to be free, including some support for students accepted from outside of Beijing. The emphasis was to recruit students from Western Provinces as this reflects the great digital divide in China, the great industrially developed urbanized eastern provinces as compared to the rural agricultural ethnic minority areas of the provinces in the west. We ended up having an enrollment of 37 students from 18 different institutions, universities and libraries as well as the Chinese Academy of Science. Students were studying for the Masters and PhD degrees, along with one faculty, several librarians, and one outstanding undergraduate.

**Our course**

Our course was structured around a set of readings assigned for each class session being held on a Monday-Tuesday-Wednesday schedule over four weeks from 9am to noon. The readings are listed in the syllabus contained in the appendix. We combined lectures with mini discussions among the students. There were four assignments, three announced in the syllabus and one that emerged in the class.

1. Information on how each students first became a user of digital technology
2. Teams of students went into 6 different situations of pubic computing to measure up and down speeds to the Internet as a form of measuring one kind of digital divide
3. Teams of students choose nine different public computing sites and did a case study of their public computing experience
4. Each student carried out one or two evaluation exercises to sum up their experience in the course.

**The social origins of netizenship**

The overwhelming tendency among the students was that their schools introduced them to digital tools. Others were introduced by family members: at home, in a parent’s workplace, or in a cybercafé. Netizenship, participation in online life, is a definite and

\(^1\) Kate Williams and Hui Yan. Toward global measurement of the information society: a U.S.-China comparison of national government surveys. First Monday 14 (10), October 2009.
explicit identity in China; it is not so explicit in the US. But the origins of netizenship among various populations in both countries merits further study.

**Getting them into the field to test up and down speeds**

One of the similarities with the US is the near universal trend to have download speeds much higher than upload speeds. We also had the finding that on campus speeds were higher than off, but the campus library was faster than the dorms, and not all dorms were equal.

**Our nine research teams**

As indicated in the table of contents we had nine research teams doing case studies. This covered neighborhood public computing centers (libraries), cyber cafes, national libraries, and campus libraries. This reflected a division of labor of public computing, centers that served different “publics.”

**Student evaluations**

Students provided mid-way and final evaluations which fine tuned the class and are certainly a guide to future plans.

**Our future plans**

This book and the archive of all our work is the basis for summation, analysis, and sharing. The summer school is part of a process that must continue. We need community informatics to become a global movement to overcome the digital divide in every country, every community, every neighborhood where people are having a difficult time getting online, getting the information they need, and in providing information that in sum we all need if the world is to progress and become a desirable place for all of us to live in and prosper.
I. Public Libraries

An-Zhen Street Community Library team, L to R: LI Tingting, YU Biyang, ZHANG Yanan, ZHOU Wenjie

Da-Xing District Library team: FENG Siying, WANG Jing, PENG Jinfang. Not pictured: TENG Xia

Civilians Mobile Library team: GAO Jin, CAO Haixia, YUAN Xu, XU Zhenzhen, XIAO Chan
1. Factors Influencing Cyberpower in An-zhen Community Library

YU Biyang 俞碧飏
Master’s student, Nankai University, yby3541@gmail.com

ZHANG Yanan 张雅男
Master’s student, Tianjin Polytechnic University, zhangnanmiao@gmail.com

LI Tingting 李婷婷
Master’s student, Tianjin Polytechnic University, apfelsine.lee@hotmail.com

ZHOU Wenjie 周文杰
PhD student, Nankai University, wj_lp@sina.com

Acknowledgements

It is our great honor to take part in the Community Informatics course in 2011 PKU CI summer school. We really appreciate the host, the information management department of Peking University, for their thoughtful arrangement of the program. Particularly, we would like to express appreciation to Professor Han Shenglong, he is not only a wonderful host of the course but also a considerate friends of our research group.

We are lucky to join Professor Abudl Alkulimat and Kate Williams’ training program. They gave us so many excellent lectures and we all got a lot of valuable information about Community Informatics. And with great thanks to our guest professor of CI Yan Hui, who gave us two wonderful and meaningful courses. We all confirmed that the knowledge that we acquired from present training program will play a very important role in our future study.

Also, we would like to appreciate to librarians of An-zhen community library in Chaoyang distract of Beijing. Especially thanks for Li Weirong, who was the librarian of the library, attribute the success to her wonderful work; we make our empirical study smoothly.

All of our classmates shared their wonderful ideas about the CI course and research project with us and we got inspiration from their discussion and presentation. For this research, we are in a much bigger research group and all our classmates are involved. Thus, we are not only learning from our teachers but also from our peers, therefore, thanks for all of our mates.

1 Introduction

As the mission of Community Informatics, our research focuses on the community library where inequality problems of access to and use of ICTs will be solved. What about how the library looks? Is it attractive to nearby residents? How about access to ICTs there? What factors impact on the library and ICTs? All those different questions
can be integrated into one research concern: Influence factors of cyber power in An-zhen Community Library.

Our research group was organized by 4 students of library science, one is a PhD student, and the other three are master students. By learning about theories of public library in the textbook, and concepts of community informatics, digital divide, cyberpower and other things during the CI class, we fused these theories with practice, witnessing the spirit of public library in ACL.

1.1 An-zhen Community Library (ACL) as a Public Computing Center

During assignment1 in our CI class, we were asked to test the net-speed of six different public computing centers. Among six locations that we found, ACL has bright geographic community characters which thoroughly open to the public. Besides, the e-reading lab inside the library with 12 computers is exactly the public computing center in this community with less wired/wireless locations and none net bar. Therefore, we made ACL as our case study site for observing the phenomenon of digital divide and searching some rules among social capital, policies, historical factors, cyberpower et al.

1.2 The D-7 Method

The D7 method (Alkulimat and Williams) is used in this report from questions raised to solved, from data collecting to analyzing, and things like that. The method named D7 because it includes 7 concepts that each begin with the letter D to accomplish the research process. They are: definition of the problem, data collection, digitization, discovery, design, dissemination and difference. Material formulation will be presented in the coming report.

2 Definition of the Problem

Many researchers focus on the cyberpower in community and fruitful productions have emerged. For the purpose of designing our empirical study and carrying out an efficient case study, we explored the research literature as follow:

2.1 Literature Review

(1) Digital Divide

Without using computers or Internet, cyberpower will not exist. Therefore, actual use of Internet is a must-to-get cyberpower. That is, to find out factors that influence cyber power, we should know factors that make actual use possible. And researchers have answered us in digital divide definitions.

Clement and Shade (2001) clarifies network, devices, software, service/access provision, content/services, literacy/social facilitation and governance as the measurements of digital divide. While Dimaggio and Hargittai (2001) stand in the view of patrons (not equipments), clarified access, skills, purpose of use, autonomy of use and social support as aspects of digital divide. Van Dijk (2006) agrees with Dimaggio and Hargittai, defining the digital divide as a succession of types of access: motivational access, material access, skills access and usage access. Usage access is the final stage and ultimate goal of the process of technological appropriation in the shape of particular application.
(2) Cyberpower.

Jordan (1999) advances the concept of cyberpower and identifies 3 interrelated regions of it, ‘the individual, the social and the imaginary’. Alkalimat and Williams use 3 definitions of these types of cyberpower:

- Individual: gaining skills and connections for oneself
- Social: gaining skills and connections for a group
- Imaginary or ideological: gaining skills and making connections in order to advance the imaginary: a vision, a movement, an ideological purpose.

Due to the coming information age, researchers from various fields conducted a number of studies. Among these studies, many researchers focus on the difference institutes such as community technology center or school et al. But the community libraries, which was considered as a traditional public information service center, and factors related which may affect the cyberpower in the community library remain black in the present research.

(3) Social Capital of Public Library.

Hillenbrand (2005) conducted an empirical study and found: although most users perceive the traditional role of the library, new roles have developed and are developing. The Community Library contributes significantly to the social capital of the community it serves.

Ferguson (2006) found that the opportunities for community libraries to contribute to the development of social capital are considered in the context of the growth of their numbers and activities in Australia and New Zealand. Because of their role as the voice of the community about public libraries they should be aiming to become integral to library strategic planning and essential to their future.

Bridgland and White (2004) examined an organizational approach to information literacy at the University of Melbourne involving information specialists who bridge information management, teaching, and technology. It discusses the circumstances leading to this approach, the benefits and challenges of the information specialists’ mandate, the importance of social capital, and issues related to sustainability.

Hillenbrand (2005) suggested the notion that public libraries have a social impact is an old one, and several studies to demonstrate this exist. These studies are reviewed in the context that social inclusion and community building have emerged as a central theme in government policy. However, the literature on the role of public libraries in building social capital remains sparse, it is clear that the community, governing bodies and academics are largely unaware of their existing and potential contribution to social capital. The onus is on public libraries, and their associations, to educate, promote and advocate this role to members of the community and beyond.

(4) ICT and Digital Literacy Relate to Public Library.

Based on the concept of the informatics moment, Williams (2011) examines the informatics moment in people’s everyday lives as they sought help at a branch public library. Four types of literacy were involved: basic literacy (reading and writing); computer literacy (use of a mouse, buying a computer), library literacy (navigating online catalogs and databases), and domain literacy (most commonly and urgently, looking for work in a world where practically all job postings and applications are online). Social
capital is also associated with many of these informatics moments: people seek help from those with enough skills who are close at hand, approachable, and familiar, and they collaborate with others in their networks to do so. Understanding the informatics moment could accelerate people's (and society's) anxious transition to an inclusive digital age.

Edward K. Owusu-Ansah suggested that despite information literacy’s significant presence in discussions in academic libraries and academe, librarians continue to debate the definition of the concept. This article seeks a shift from exploring definitions to designing solutions by demonstrating that the concept has been adequately delineated in the many existing writings on the topic.

Obviously, cyberpower, social capital, digital literacy of public libraries and digital divide become hot topics for researchers in LIS and many valuable findings are revealed by researchers from this area. We are also aim to find some ties between community library and local residents in Beijing.

2.2 Research Questions

As mentioned above, actual use is a must for cyberpower to be realized. However, actual use of Internet in An-zhen is so terrible that we cannot collect enough successful samples to find out what kind of cyberpower the library has brought to patrons. Therefore, we cannot measure cyberpower directly as the dependent variable in this case. We have to step back to measure actual use instead, and see its influence factors. After usage problem solved, further research is needed to study cyberpower directly. Although actual use has become the main research concern, some other potential advantages the community or library has to build up cyberpower in the future will also be clarified.

2.3 History of An-zhen Community Library

During the 11th 5-year development plan of China, in order to join the Cultural Sharing Project charged by the Cultural Department of China, also to benefit people who live nearby and meet their information and library needs effectively, in 2004, the An-zhen Community Office planned to built a modern library in the community, which will not only own lots of printed materials but also be equipped with computers. On August 2005, the ACL was built up. Media like Beijing Daily, Sinanews and Sohunews have reported it, which made the library well known to the public.

The community office carried out a survey for selecting the library’s collection according to the character, population structure and location of the community. This led to a collection of about 10,000 volumes of books and more than 100 types of magazines and newspapers, meeting the various needs of residents. Particularly, there was an e-reading lab composed by 12 desktop computers, and patrons were able to surf the internet. From then on, ACL has actually assumed as a public computing center. On May 2006, a branch of ACL was built in the Center Park of West Bridge, which turned out to have brought big convenience to the residents in opposite district.

2.4 Environment outside and inside the ACL

The An-zhen Community Library is located in the Anhua Li Community, northwest of the Anhua Bridge, which divides the community into two parts with each 3 small communities. As we can see in figure 1, mainly public cultural service centers dot in the community, including the schools, libraries, theatre and sites don’t be able to be shown in the map. Table 1 describes the main public cultural service centers in Anhua Li Community.
Table 1. Main Public Cultural Service Centers in Anhua Li Community.

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<th>Category</th>
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<td>School</td>
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<td>Beijing Qiushi Middle School, Anhua Li No.1 Elementary School, Beijing Chaoyang Anhua School, Beijing Qiushi Vocational School An-zhen Campus, Beijing Beilei Art School</td>
</tr>
<tr>
<td>Library</td>
<td>3</td>
<td>An-zhen Community Library and its branch, Chaoyang Children Library, Center Park of West Bridge</td>
</tr>
<tr>
<td>Theatre</td>
<td>1</td>
<td>China Puppet Theatre, Center Park of West Bridge</td>
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<tr>
<td>Park</td>
<td>1</td>
<td>Ministry of Transport Organ Old-age University, China Puppet Theatre</td>
</tr>
<tr>
<td>University</td>
<td>1</td>
<td>Beijing Qiushi Training Center, Beijing English Level Exam Training Site</td>
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<tr>
<td>Training Center</td>
<td>2</td>
<td>Beijing Qiushi Training Center, Beijing English Level Exam Training Site</td>
</tr>
<tr>
<td>Kindergarten</td>
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<td>Beijing Chaoyang Anhua Li No.2 Kindergarten</td>
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<tr>
<td>Total</td>
<td>14</td>
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Figure 1. Surroundings outside the An-zhen Community Library.

And the ACL is about 120m², including 5 tables (1 for librarians and the others for patrons) and 40 chairs, 16 shelves (8 for books, 2 for magazines and 6 for newspapers), 13 computers (1 for librarians and 12 for patrons in e-reading lab), and posters, notices, rules and things like that on the wall. Just as figure 2 shows.
3 Research Process and Methods

3.1 Objectives and Methods

The research is designed to find out influence factors of cyberpower in ACL. Considering the particularity of the case, we have to put actual use as our dependent variable temporally. Here, the computer usage time, frequency and application are used to measure actual use. Our independent variables involve demographical categories, social capital (both of the residents and patrons), material access (devices, software, broadband and policy support), motivational access and environments (history and basic condition of both the library and the community).

Different methods and instruments will be used here: survey will be applied for data collection of actual use, demographical categories, social capital and motivational access, and self-designed questionnaire is the main instrument; field observation will be applied for data collection of material access and environments mainly, lists of observation tasks have been prepared; interviews, relevant first-hand reports collected from librarians and websites are applied for social capital, material access and environments.

Our instruments include a self-designed questionnaire and a checking sheet. The questionnaire is divided into 3 parts: demographical categories, social capital of residents and actual use of the Internet. The checking sheet is used for investigators; it’s divided into 5 parts: data about the community (including population, history and other public computing centers), data about the library (history, maps, reports and social capital for the library), data about the devices (software, hardware, application, resources, broad
band, funding and management), data about the policy (policies about the library, the Information Center and its influence), and data about the patrons (proportion of patrons in each investigation, and interviews with patrons). All these data above is collected through observation or interviews.

### 3.2 Field Plan and Schedule

Plan has been conducted basically according to our formal schedule, and schedule was made as table 2 shows:

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<th>Date</th>
<th>Subject</th>
<th>Detail</th>
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<td>July 11</td>
<td>Preparation</td>
<td>a) Related literature search By Zhang &amp; Li</td>
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<td>b) Outline plan By Zhou</td>
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<td></td>
<td></td>
<td>c) Questionnaire design By Yu</td>
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<td>July 12</td>
<td>Site-visit</td>
<td>a) Contact the director of the community library</td>
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<td>b) Acknowledge of its background</td>
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<tr>
<td></td>
<td></td>
<td>c) Brief observation of the library, including its surroundings and other state of affairs</td>
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<td>July 13</td>
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<td>Outline plan modification</td>
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<td>July 17</td>
<td></td>
<td>Visit II Survey / Interview</td>
</tr>
<tr>
<td>July 18</td>
<td></td>
<td>Data analysis</td>
</tr>
<tr>
<td>July 19</td>
<td></td>
<td>Visit III Survey / Interview</td>
</tr>
<tr>
<td>July 20-21</td>
<td></td>
<td>Group discussion II &amp; Report draft</td>
</tr>
<tr>
<td>July 22</td>
<td></td>
<td>Visit IV &amp; Group discussion III Feedback getting</td>
</tr>
<tr>
<td>July 23-24</td>
<td></td>
<td>Report embellishment</td>
</tr>
<tr>
<td>July 25-26</td>
<td></td>
<td>Final report</td>
</tr>
</tbody>
</table>

**Table 2. Schedule of assignment2.**

### 3.3 Stories

During our field work, there are certain interesting things and people. Here we give a couple of them.

One case we interested in best is that an 85-year-old patron who looks like a farmer was able to communicate with our foreign professors fluently and even without the help of a translator. That is unbelievable, as we do think that the older man is unable to speak English. Finally, from the communication of professors and the patron, we knew that he learned English in his university at about 1930s! However, he’s a man without basic knowledge and skills of computer, and refused to learn about this seems-new-thing.

Another interesting story we encountered is that a patron looks like about 50 years old was not complaint about the slow net speed of ACL, which is very different from common people’s attitude towards the same thing. What’s more, actually, he did approve of the ACL’s computing facilities. And from his perspective, he thought that the function of a community library’s computer facilities is to convenient people in getting some
information online, such as read some news and so on, high net-speed of computer is unnecessary. And this opinion really amazed us.

4 Digitization

We have 60 effective samples of residents or patrons in the survey, 14 interviews with librarians (2), patrons (11), resident (1) and officer (1) in local community committee, experience records by investigators of computers in Information Center, published or unpublished papers and news about the library, pictures about the library or activities the library has held, and registering records about the Internet patrons in all. Quantitative analysis in SPSS is applied in the survey.

5 Discovery

This part is departed into two parts: What has ACL has done to improve cyberpower and what advantages ACL has to improve cyberpower in the future. The research question of the first part is the influence factors of actual use of Internet in ACL; and research question of the second can be described as possibilities for ACL to improve cyberpower if actual use is the reality.

5.1 Factors that Influence Actual Use of Computers in ACL

Before analyzing influence factors, we will clarify the dependent variable first: AUC of ACL. Then we’d like to put our factors into three levels as Van Dijk has defined for digital divide: material access, motivational access and skill access. Here, material access comprises not only individual’s physical access (gender, education, etc.) and conditional access (such as income); but also devices, software, service/access provision, content/services, and policies ACL offers to Internet patrons. Motivational access refers wish to be connected to the Internet in ACL. Skill access here refers to computer literacy.

5.1.1 Actual Use of Computers (AUC)

We have 3 resources to measure AUC: questionnaires, interviews and enrollment records of Internet patrons in the latest 3 years. Relevant analysis includes frequency of AUC, when they are used, attitudes to them and who are the frequent users.

5.1.1.1 Frequency and Length of AUC

(1) Evidence from survey. As shown in table 3, when asked about frequency of Internet use in ACL, only 80% samples answered us and 7 have AUC in ACL; moreover, only 5 of those 7 have told us their AUC length: less than 1 hour. The disappointing evidence indicates that AUC in ACL is terrible.

<table>
<thead>
<tr>
<th>Length</th>
<th>Frequencies of AUC in ACL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;1 hour</td>
</tr>
<tr>
<td>n</td>
<td>5</td>
</tr>
<tr>
<td>%</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Table 3. Length and Frequency of AUC in ACL.

(2) Evidence from enrollment records. We took a picture on the enrollment records of AUC (they only have the hardcopy), copied them into an excel sheet and
coded data in every possible way to do analysis. Then we got AUC patrons in the latest 3 years as shown in table 4. ACL have only 176 records of AUC in all, and some records came from the same patron, so there are only 80 patrons in all in the latest 3 years. The data is also disappointing because it indicates that there are 0.21 patrons per day to use computers, although there are 12 computers in ACL!

We can also find out some positive evidence that rate of AUC is increasing in 2011: It’s doubled than the average. At least, we can hope for a better future.

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid N</td>
<td>80</td>
<td>25</td>
<td>33</td>
<td>44</td>
</tr>
<tr>
<td>N</td>
<td>176</td>
<td>66</td>
<td>44</td>
<td>66</td>
</tr>
<tr>
<td>Open days</td>
<td>798</td>
<td>314</td>
<td>313</td>
<td>171b</td>
</tr>
<tr>
<td>N/day</td>
<td>0.22</td>
<td>0.21</td>
<td>0.14</td>
<td>0.39</td>
</tr>
<tr>
<td>Hours/day</td>
<td>Missing</td>
<td>Missing</td>
<td>Missing</td>
<td>0.40</td>
</tr>
</tbody>
</table>

*b* N represents number of records that AUC happened, but patrons who has used computers several times are accounted for only once in Valid N.

*b* Open days calculated from open days of ACL, 2011’s open days is less because time when we did research is July, almost middle of a year.

*c* Data is missing because librarians changed their recording form in 2011, patrons are asked to report when they got on-line and off-line only in 2011.

**Table 4. Numbers of AUC Records and Patrons in ACL.**

Frequency data collected from the enrollment records is similar to survey. As table 5 shows, more than half of the patrons only come for Internet only once. 2009 has the most frequent patrons while 2011 has the most once coming patrons. Why frequent patrons chose to give up AUC in 2010? The librarian told us that devices in 2009 ran better, but without updating, computers became slower and slower. But what happened in 2011 to make it better? It is regretting that we have no time to do further research to find it out.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>80</td>
<td>24</td>
<td>30</td>
<td>42</td>
</tr>
<tr>
<td>once</td>
<td>49</td>
<td>11</td>
<td>25</td>
<td>31</td>
</tr>
<tr>
<td>twice</td>
<td>17</td>
<td>7</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>3 times</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>More than 3 times</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Table 5. Frequency of AUC.**

Length of AUC from enrollment records is more convincible than length in the survey because survey data is random while data in table 6 cover the real totality (of 2011). Although similar to survey, most patrons used computer for less than or equal to 1 hour, there are ones using longer. And most of the second group used not less than but equal to 1 hour. However, we have to admit that length of AUC is also disappointing.
<table>
<thead>
<tr>
<th></th>
<th>≤ half hour</th>
<th>≤ 1 hour</th>
<th>≤ 1.5 hours</th>
<th>≤ 2 hours</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>6</td>
<td>48</td>
<td>6</td>
<td>5</td>
<td>65</td>
</tr>
<tr>
<td>%</td>
<td>9.2</td>
<td>73.8</td>
<td>9.2</td>
<td>7.7</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 6. Length of AUC.

5.1.1.2 When is the AUC Time?
Having AUC date, time and patron’s name, it’s possible to find out what’s the relatively popular month, day or time of AUC. As showed in figure 3, first half of year or day is more popular, especially from May to July or 9:00 to 10:30, but there seems no significant difference among days in a week. However, Monday isn’t the open day but also can attract a couple of patrons. The librarian gave her explanations that Monday will be used for some particular activities and computers are used for that. We think that such phenomenon indicates that active welcoming for couple days seems more effective than passive waiting for all day!
Figure 3. When the AUC time is.
5.1.1.3 Attitudes toward AUC in ACL

In the survey, we have such questions as what you do in AUC and satisfaction of AUC. According to frequency analysis in table 7, we have some confusing data: although we only have 7 who have AUC, we have more than 7 to record that he is or not satisfied about ACL’s Internet service. So we recoded the data and tried to find out what AUC patrons thought. In table 8, 3 patrons showed satisfaction and 4 put AUC in job/learning related concerns; 4 consider AUC have achieved their goals.

<table>
<thead>
<tr>
<th>Goal Achievement</th>
<th>Satisfaction</th>
<th>What to do</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Completely</td>
<td>Almost</td>
</tr>
<tr>
<td>n</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>%</td>
<td>10.0</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>Job/learning related</td>
<td>No purpose</td>
</tr>
<tr>
<td></td>
<td>Satisfied</td>
<td>Not satisfied</td>
</tr>
</tbody>
</table>

Table 7. Overall attitudes towards AUC.

<table>
<thead>
<tr>
<th>What to do</th>
<th>Satisfaction</th>
<th>What to do</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Job/learning related</td>
<td>No purpose</td>
</tr>
<tr>
<td>N</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>%</td>
<td>50.0</td>
<td>25.0</td>
</tr>
<tr>
<td></td>
<td>Satisfied</td>
<td>Not satisfied</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Completely</td>
</tr>
<tr>
<td></td>
<td>60.0</td>
<td>40.0</td>
</tr>
</tbody>
</table>

Table 8. Patrons’ attitudes towards AUC.

5.1.2 Material Access

As mentioned above, this part will be divided into two parts: individual physical or conditional access, and devices or service access ACL offers to patrons. Resources come from survey, checking sheets, interviews, papers and policies about AUC. When doing quantitative analysis of questionnaires, frequency of AUC serves as the direct dependant variable.

5.1.2.1 Material Access for Individuals

Material Access (MA) for individuals refers to mainly physical and conditional access. In our survey, we have measured relevant demographical categories: gender, age, educational background, profession and income. After Chi-tests, we disappointedly found no significant contingency coefficient showed between demography and dependent variables.

However, evidence from librarian Li proved that AUC patrons are mostly non-locals and young.

Although Chi-tests showed nothing (such a small sample of 7 is the main cause), we can figure out some kinds of tendencies when coding patrons of AUC only. As shown in table 9, AUC patrons in our survey are mostly elder females with higher education, relatively higher income and better job (with higher social status).
<table>
<thead>
<tr>
<th>Gender</th>
<th>Educational Background</th>
<th>Type of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>%</td>
<td>28.6</td>
<td>71.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monthly Income (RMB)</th>
<th>Age</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>1601-2400</td>
<td>40-60</td>
<td>Manager</td>
</tr>
<tr>
<td>2401-3200</td>
<td>&gt;60</td>
<td>P &amp; T</td>
</tr>
<tr>
<td>≥4000</td>
<td>1</td>
<td>Service</td>
</tr>
<tr>
<td>28.6</td>
<td>42.9</td>
<td>Others</td>
</tr>
<tr>
<td>28.6</td>
<td>57.1</td>
<td></td>
</tr>
<tr>
<td>14.3</td>
<td>14.3</td>
<td></td>
</tr>
<tr>
<td>14.3</td>
<td>14.3</td>
<td></td>
</tr>
</tbody>
</table>

Table 9. Demography of AUC patrons.

5.1.2.2 Material Access offered by ACL

Aggregated evidence from survey, interviews and self-experience has proved that the following factors are causes of terrible AUC:

**1) Devices and Broadband.** There are 13 computers, 1 for librarian, 1 for sharing project use and others for patrons. Not-for-patron computers have been updated this July, with a dual core and 3.2GHz processor, 2G memory. While patron computers are brought in in 2005 and have never been updated, they are still with 1.6GHz processor and 256M memory. Also in the survey, about 7 out of 60 samples pointed out the disappointing software.

When it comes to the net speed, it’s too slow as table 10 shows. Similar evidence is so strong in the survey: 33 out of 60 respond that speed here is too slow. The only 2 interviewed AUC patrons both reported the slow speed. But what’s interesting is that not all complain about slow speed. One interviewee enjoys the silence slow speed has brought to him.

I’d rather prefer the low net-speed here, it has no influence on my purpose to read online; while the high net-speed will surely attract more people here to use the computers, and some of them may play online games, that’s beyond my expectation.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Wired/Wireless</th>
<th>Desktop/Laptop</th>
<th>Download Speed</th>
<th>Upload Speed</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 12</td>
<td>14:40</td>
<td>Wireless</td>
<td>Laptop</td>
<td>163</td>
<td>636</td>
<td>Kbps</td>
</tr>
<tr>
<td></td>
<td>10:26</td>
<td>Wired</td>
<td>Desktop</td>
<td>83</td>
<td>125</td>
<td>Kbps</td>
</tr>
<tr>
<td>July 17</td>
<td>10:30</td>
<td>Wired</td>
<td>Desktop</td>
<td>51</td>
<td>132</td>
<td>Kbps</td>
</tr>
<tr>
<td></td>
<td>10:32</td>
<td>Wired</td>
<td>Desktop</td>
<td>69</td>
<td>132</td>
<td>Kbps</td>
</tr>
</tbody>
</table>

Table 10. Speed of Internet in ACL.

In order to get the first-hand data, our investigators also experience both the speed of the computer and Internet. We chose some prepared tasks and recorded time that parts of task took. Table 11 explains how data shows. Of 17 tasks, slow speed of both computers and Internet is the main feelings of AUC.
<table>
<thead>
<tr>
<th>Task</th>
<th>Time/Feelings</th>
<th>Task</th>
<th>Time/Feelings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Power on</td>
<td>56s</td>
<td>10. create documents: both</td>
<td>So-so</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Word &amp; Excel</td>
<td></td>
</tr>
<tr>
<td>2. Launch QQ</td>
<td>Fast</td>
<td>11. search engine, both</td>
<td>Slow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Google &amp; Baidu</td>
<td></td>
</tr>
<tr>
<td>3. Open a web-page</td>
<td>Slow</td>
<td>12. send &amp; receive an e-mail</td>
<td>Slow</td>
</tr>
<tr>
<td>4. read and upload</td>
<td>Slow</td>
<td>13. send &amp; receive text</td>
<td>Fast</td>
</tr>
<tr>
<td><a href="http://www.librarysalon.com">www.librarysalon.com</a></td>
<td></td>
<td>message</td>
<td></td>
</tr>
<tr>
<td>5. listen to music</td>
<td>So-so</td>
<td>14. browse the web on the</td>
<td>Fast</td>
</tr>
<tr>
<td><a href="http://douban.fm/">http://douban.fm/</a></td>
<td></td>
<td>cellphone</td>
<td></td>
</tr>
<tr>
<td>6. watch a video</td>
<td>So-so</td>
<td>15. post a micro-blog via the</td>
<td>Fast</td>
</tr>
<tr>
<td><a href="http://www.youku.com">www.youku.com</a></td>
<td></td>
<td>cellphone</td>
<td></td>
</tr>
<tr>
<td>7. post a micro-blog</td>
<td>took almost 5-10</td>
<td>16. use wireless to connect</td>
<td>Slow</td>
</tr>
<tr>
<td></td>
<td>minutes to reply a</td>
<td>with the Internet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>comment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. download a document</td>
<td>A bit slow</td>
<td>17. net-speed test</td>
<td>Slow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(<a href="http://speedmatters.org">http://speedmatters.org</a>)</td>
<td></td>
</tr>
<tr>
<td>9. download paper from a</td>
<td>A bit slow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>database</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 11. Tasks and time / Feelings of net-speed.

(2) Management. For librarians in ACL, management of computers is quite a tough problem which involves 2 aspects: manage AUC patrons and maintain the computers.

Librarian Li told us that although they knew that libraries have responsibilities to attract more Internet patrons, they don’t want computers are frequently used. Because the software is scarce, patrons have to download some temporarily. However, without anti-virus software, it’s very dangerous to do so. Moreover, librarians have few computers maintain knowledge and there’re no full-time or part-time technical maintenance staffs. In this case, lots of forbidden rules such as no downloading have been posted but seldom work, which in turn makes the computer worse.

For there’s no technologic librarian or maintenance staff, librarians have to hire volunteers to do so. However, it’s not sustainable. Although volunteers from the near technical school have done well before, one stealth scandal broke their cooperation. And volunteers of the nearest colleges occasionally came, which cannot solve the maintenance problem. In these stories, we also find out that ACL plays a passive role in cooperation. It always waits someone come and give a hand, never goes out and ask for help. That is, students in school nearby might call on ACL one day for volunteering issues, ACL agrees and cooperation is temporarily built. But if students say nothing or decide to end the relations, they can also do it easily.

All in all, without knowledge of computers, technical staffs and active asking for help, conditions of computers in ACL have become worse and worse, but with forbidden rules increasing for the same time.

(3) Governance. Funding of computers mainly comes from An-zhen Community Office. Although officers there completely knew what happened to computers in ACL, funding is used for more exigent issues. They told the librarians that they have to wait for updating and revision money. Moreover, officers don’t want such poor conditions be reported in public.
ACL gets guidance, training or other help most from Chaoyang District Library. However, ACL librarians reported that they are never trained for computer literacy or maintenance knowledge.

(4) Policies. As mentioned above, librarians have no choice but to post kinds of forbidden rules in Information Center. Rules of forbid for AUC are the most in ACL compared to books, newspapers and magazines usage.

Policies include (a) forbid to use any device without librarians’ permission; (b) forbid to surfer the website with unhealthy information, and no games; (c) patrons should use the computer separated; (d) librarians’ arrangement should be obeyed, and patrons cannot exchange the computers without librarians’ permission; (e) forbid to change or delete procedures in the computers; (f) forbid to smoke and make noise in the lab, forbid to download without librarians’ permission; (g) patrons who disobey the rules will be advised to leave; in terrible cases, patrons will be punished by the law.

Moreover, although AUC has been free of charge since 2008, few residents know about the policy. The librarian said that she was more afraid that if free policy noticed, higher pressure will be put on the poor computers, and no one can solve the incoming problems.

5.1.3 Motivational Access

We have to clarify different levels of motivations before talking about motivational access of AUC: no need of AUC at all, motivation of AUC in other places rather than ACL, motivation of AUC in ACL if some conditions are satisfied, motivation of AUC in ACL. Evidence showed that all these 4 kinds exist.

Strong evidence of no need of AUC comes from interviews. We have 3 interviewees out of 7 said that they were too old to use computers. Watching the screen is bad for their eyes. 11 out of 60 samples said that they don’t use Internet because they seldom surf it. And most patrons interviewed said that reading newspaper or books is better than surfing the Internet in ACL.

In the survey, nearly half of people (25 out of 60) don’t go to An-zhen because they prefer computers at home, there’s no need to go outside. The same opinion was held by our youngest interviewee. But in the words of the librarian, people choose home rather than library because speed at home is more considerable.

Thanks to Abdul’s question, we could find out another group of motivation: 2 interviewees agreed to attend AUC if there’s a computer training class in ALC. That is, if there are additional benefits, some will be attracted to become AUC users in ALC.

5.1.4 Skill Access

In this part, computer literacy is our main concern. We have found that some responds in the survey show that the reason for not getting on-line in ACL is he or she knows nothing about computer literacy. If ACL holds relevant training class, they would like to come and become AUC patrons in the future.

Evidence from survey indicates that computer illiteracy (5 out of 60) is one of the reasons that forbid AUC. Those 5 all hope that there are some guiders or training class in ACL.
5.1.5 Social Capital

It’s very interesting to find out that the only potential significant independent variable is part of the social capital residents have in the survey. Chi-test is applied here to measure the relation between calls given and AUC. As figure 4 (Chi-test sig.=0.06, contingency coefficient=0.372) shows, more contacts with friends seems reduce the possibility to become AUC patron.

![Bar Chart]

**Figure 4.** Relations between contact with friends and the possibility to become AUC patron.

5.2 Possibilities ACL has to Improve Cyberpower

Although evidence showed above is somewhat disappointing, we still have strong hope for the future because ACL has well done in many aspects and An-zhen Community is also a wonderful soil for cyberpower building. If top-down (funding for updating and everyday revision) problem has been solved, other factors will improve cyberpower dramatically.

As mentioned in the literature review, cyberpower has three levels of forms: individual gaining skills, social skills to connect groups, skills to advance imagine. So our analysis will also consider these levels.
5.2.1 Community Environments

5.2.1.1 Basic Information of An-zhen Community

(1) Populations. An-zhen Community has a total population of 70 thousand, with 1/10 non-local, 2/5 seniors (older than 60) and 24 ethnicities. Such structure indicates that there possibly should be digital divide to bridge.

(2) Maps of An-zhen Community. 23 schools including 2 colleges, 4 high schools, 7 primary schools and 10 kindergartens lie here, which means powerful social capital ACL will have. As the librarian said, kindergartens prefer ACL best to let children have first sight of knowledge, primary and middle school students prefer ACL to finish task of public service practice, while high school and college students often choose ACL as a volunteering site. Therefore, ACL has wonderful resources to publicize AUC and have volunteers for computer problems.

6 hospitals nearby can also attract more patrons for ACL because in China, you often have a long queue to wait. Why don’t just kill time in ACL? Thus, potential patrons for ACL are marvelous. 1 press and 2 newspaper offices can be used as the powerful instruments for advertisements of any cyber power improvement activities.

The most important thing is that ACL lies next door to the An-zhen Government Office, which has advantages and disadvantages: ACL can point out difficulties to their officer easily. Abundant opportunities have given to ACL to ask for benefits at any time. However, it’s also easy for officers to see that donations and volunteering work ACL has got and hesitate to give additional funding to ACL.

(3) Community activities and newspaper of An-zhen Community. An-zhen Community has relatively strong bond among residents, they organize abundant activities each year, cooperating with all types of public cultural centers. And residents in the community take part in these activities with active attitude and upsurge passion.

The community itself owns a newspaper called An-zhen Timely News, which is published on Wednesday each week and distributed to residents for free on some public locations. This kind of newspaper let residents know the newly policies and information of aspects of the community.

5.2.1.2 Social Capital among residents

An-zhen is a typical community with old people and non-local people of large rate, residents there mostly have a long living period in the community, and social capital among residents shows us a strong tie. The social capital aspects were considered in our questionnaire, and outcomes show in table 12.
Living years in An-zhen Community

<table>
<thead>
<tr>
<th>Years</th>
<th>&lt; 1 years</th>
<th>1-3 years</th>
<th>3-5 years</th>
<th>&gt; 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>45</td>
</tr>
<tr>
<td>%</td>
<td>14.3</td>
<td>3.6</td>
<td>1.8</td>
<td>80.4</td>
</tr>
</tbody>
</table>

Others do if they have a chance

<table>
<thead>
<tr>
<th>Take advantages</th>
<th>Treat equally</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>32</td>
</tr>
</tbody>
</table>

Num of neighbors you say HELLO to

<table>
<thead>
<tr>
<th>So many</th>
<th>Many</th>
<th>So-so</th>
<th>A few</th>
<th>Very few</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>11</td>
<td>16</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>%</td>
<td>19.3</td>
<td>28.1</td>
<td>35.1</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Num of neighbors you pay a visit to

<table>
<thead>
<tr>
<th>So many</th>
<th>Many</th>
<th>So-so</th>
<th>A few</th>
<th>Very few</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>3</td>
<td>5</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td>%</td>
<td>5.5</td>
<td>9.1</td>
<td>41.8</td>
<td>16.4</td>
</tr>
</tbody>
</table>

Num of close friends in An-zhen

<table>
<thead>
<tr>
<th>None</th>
<th>A few (&lt;5)</th>
<th>Many (5-10)</th>
<th>So many (&gt;10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>14</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>%</td>
<td>31.8</td>
<td>50.0</td>
<td>6.8</td>
</tr>
</tbody>
</table>

Num of ordinary friends in An-zhen

<table>
<thead>
<tr>
<th>None</th>
<th>A few (&lt;5)</th>
<th>Many (5-10)</th>
<th>So many (&gt;10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>13.6</td>
<td>27.3</td>
<td>9.1</td>
</tr>
<tr>
<td>%</td>
<td>33.8</td>
<td>53.6</td>
<td>13.6</td>
</tr>
</tbody>
</table>

Clubs Attending

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>24</td>
</tr>
<tr>
<td>%</td>
<td>44.4</td>
</tr>
</tbody>
</table>

Calls given to friends in the last 2 weeks

<table>
<thead>
<tr>
<th>&lt;3 times</th>
<th>3-6 times</th>
<th>7-10 times</th>
<th>&gt;10 times</th>
<th>Family member</th>
<th>Friend</th>
<th>Job related</th>
<th>Life related</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>14</td>
<td>23</td>
<td>5</td>
<td>14</td>
<td>37</td>
<td>35</td>
<td>16</td>
</tr>
<tr>
<td>%</td>
<td>25.0</td>
<td>41.1</td>
<td>8.9</td>
<td>25.0</td>
<td>38.5</td>
<td>36.5</td>
<td>16.7</td>
</tr>
</tbody>
</table>

People that given a call frequently

<table>
<thead>
<tr>
<th>Never</th>
<th>&lt;3 times</th>
<th>≥3 times</th>
<th>Yes</th>
<th>No</th>
<th>Hard to say</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>16</td>
<td>23</td>
<td>8</td>
<td>40</td>
<td>7</td>
<td>42</td>
<td>11</td>
</tr>
<tr>
<td>%</td>
<td>34.0</td>
<td>48.9</td>
<td>17.0</td>
<td>66.7</td>
<td>11.7</td>
<td>79.2</td>
<td>20.8</td>
</tr>
</tbody>
</table>

Playing outside with None-family member

<table>
<thead>
<tr>
<th>Never</th>
<th>&lt;3 times</th>
<th>≥3 times</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>16</td>
<td>23</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>%</td>
<td>34.0</td>
<td>48.9</td>
<td>17.0</td>
<td>66.7</td>
</tr>
</tbody>
</table>

Borrow from neighbors

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>40</td>
</tr>
<tr>
<td>%</td>
<td>66.7</td>
</tr>
</tbody>
</table>

Ask for taking when outside

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>42</td>
</tr>
<tr>
<td>%</td>
<td>79.2</td>
</tr>
</tbody>
</table>

Table 12. Social capital among residents in An-zhen Community.

5.2.2 Potential cyberpower of An-zhen Community Library

(1) Policy and fund support. Attribute to policy and economy factors, ACL is expected to have a great opportunity to improve its cyberpower among local community. According to the 11th 5-year cultural development plan of China, in the near future, Chinese government will promote the utility of digital and website technology in the public cultural area, develop the digital broadcast and TV platform, digital movie perform web system, online library, online museum, online theatre and remote direction system of public cultural activities.

Aim to improve the situation of digital infrastructure, the Cultural Ministry of China carry out a huge program, which is named cultural information resource sharing project, and great deal of fund has been arranged to support the development of digital infrastructure in community level. It said, every district should conduct a survey on their situation of cultural resource, the state of computer connection and the current of cultural facilities. And then a work plan of each district made based on the survey result should be done which after the approval of the project team it should be taken into action immediately.
Obviously, Chinese government has paid a great attention on the digital differentiate among society. As the cultural center of local community, community library will play more important role in this process.

(2) Supporting from legal and library profession. As the capital city of China, public library system in Beijing is well developed and legal support is available. According to the library rules of Beijing, library should equipped by computer and internet facilities, devices of micro-video and photocopy, document and information usage/ protect facilities which will help a lot in completing the development of net system so that meet patrons need in a high level.

Besides, an information literature training program, which focuses on the improvement of seniors’ computer literacy, has performed by ACL. By the support of student volunteers from the Qiushi professional college, ACL raised the computer lessons from December 13rd, 2005, to 2007, ACL has hold five lectures. Concerning about enable the senior people to use computer, the librarians of ACL printed the bilingual (Chinese and English) card and try to help seniors learn how to use the keyboard. The library has designed a teach schedules which covers 5 lessons each time. Most of the “senior students” have acquired the basis computer skills including type the Chinese character into computer, surfing the internet, search daily information and so on. A senior student said

With the knowledge I have learned from the computer lessons, I have send an e-mail to my son aboard successfully. How wonderful computer is!

6 Report findings to An-zhen community Library

In our case study, we have conducted an interview study, a questionnaire study, and finally complete a research report. So there are many valuable findings we could give feedback to the ACL which we think might make some contribute to its further development, especially to its cyberpower aspect. Also, as we have mentioned above, librarians of ACL are all hospitality and give a big support to our research, we decided to not only send the feedback by e-mail but also to go to the library again talking with the librarians about our research.

There are mainly three aspects of the feedback, including complains or problems about the current state of the library we found from our interview, the digital user record of the Internet patrons and a copy of our final report. The problems result from the interview may help a lot in improving its service, and the digital user record can give a clearly knowledge about the libraries’ daily service which may let them know much about their patrons. Then after talking about our report with the librarians, we assume that the librarians of ACL will be aware of the importance of cyberpower and realize the significant role the library plays in bridge of the digital divide in the community, and then they may take some action to make contribution to the development of public computing center in a new age.

7 Difference

“Every research makes a difference to the world” said Abdul Alkalimat. And the differences made by our research can be sub-classified as three parts: the difference to the world, to the research community as well as to our individual research members.

First of all, through the whole process of Community Informatics study, which covers both theory lectures and practice studies, we have got a considerable knowledge of
CI, learned more about the digital divide and understood that a community can really bridge themselves digital divide. Therefore, by disseminating our research to the public, more and more people will be aware of the significant role the community or themselves played in bridging the digital gap, which might bring a big change to the world.

Besides, as the case study site of our research, the An-zhen Community may make certain changes. On one hand, after reporting our findings to the librarians of ACL, the librarians will be able to act as an educator to convey the information on CI to the patrons. They can either to tell a story about an old patron using library’s computer to send an e-mail successfully to the public, or to make some reports (annual report or article) including the cyberpower of library. Whatever path it is, their will be a change happened in the community which makes increasing number of people know about the cyberpower during their daily lives. On the other hand, as the report about the ACL wrote by us has been published on e-Beijing, a kind of government websites, there might be more attentions on the library getting from the local residents and others, which help a lot in getting the public know more about the cyberpower among the community.

And for the members of the research team, everyone has got their true gold. Wenjie Zhou has acquired a deeper understanding on social capital, Biyang Yu, who is interested in empirical study has learnt some new data analysis methods and tools from this research, Tingting Li has not only successfully practiced a field work but also got many leading edge knowledge of library science, and Yanan Zhang thinks that the most valuable thing for her is that she got the knowledge of how to make a social science research, especially the D-7 method! What’s more, the most important thing for all of the members is that they have obtained the concept of Community Informatics and the cyberpower. They do believe that they’ll be a deliver of CI to the public in China.

Bibliography


Kate Williams and Joan C. Durrance (2010), ‘Community Informatics’, *Encyclopedia of Library and Information Sciences*, 2010


**Webliography**


**Appendices**

Article of the librarian of ACL

Pictures of ACL(both the inside environment and media reports)

Questionnaire

Check sheet for investigators

A report about the ACL written by our research team
浅析社区图书馆特色建设与协调发展

（李维荣，北京市朝阳区安贞街道社区图书馆 100012）

摘 要 本文作者为安贞街道社区图书馆管理员。通过近2年的工作，感受到社区图书馆要办出特色，才能越办越好。

关键词 社区图书馆 特色建设 协调发展

自2005年8月安贞社区图书馆成立开馆，笔作者为图书管理员在近2年的工作中对图书馆特色建设与协调发展有些感性认识，为把社区图书馆办得更好特书此文与同人探讨。

“文化部”十一规划中要求各省市要在2010年实现每个社区和行政村都有一个图书馆。社区图书馆是公共图书馆发展的趋势，社区图书馆是社会文化的的重要组成部分。

社区图书馆与公共图书馆是有区别的。他开在社区，服务周边的居民，是社区文化的重要组成部分，在丰富居民业余文化生活，提高人民总体文化素质等方面都已成为不可缺少的部分。社区图书馆为居民提供必要的文化信息服务。提高居民的精神生活水平起着一定的作用。

安贞街道共有六个社区，常住人口65721人，流动人口6900余人，原来附近没有图书馆。居民看书要到很远的地方。随着居民物质生活水平的提高，对精神生活的要求也增大，建立一个社区图书馆的重要性也凸显出来了。

2004年底安贞街办事处开始筹建社区现代化有特色的图书馆，以满足地区居民日益增长的精神文化需求。办个离家近、环境好、新书、报、杂志多的社区图书馆留住居民读书的时光是我们办馆的宗旨。

一、“以人为本”的服务宗旨是社区图书馆特色建设的基础

图书馆是社会文明发展的产物，公共图书馆是社会发展程度的标志之一，社区图书馆则是我国全面建设小康社会的基础工程之一，也是街道办事处落实北京市承诺为市民办好60件实事的具体工作之一。安贞街道办事处自筹建社区图书馆时就坚持‘以人为本’的宗旨决心把安贞社区图书馆办成让社区居民喜爱满意的有特色的图书馆。

1、特色之一：优美的环境，现代化设备，全新场馆迎读者

安贞社区图书馆在2004年底开始筹建时，街道办事处就将一处年收入20万元的饭馆翻建为社区办图书馆。这一决定为社区图书馆的发展打下了基础。这也是安贞办事处创办现代化社区图书馆的第一步，正是在此基础上安贞社区图书馆一步一层楼得持续发展。2005年8月安贞社区图书馆正式开馆，面积120平方米。装修现代化，设备现代化，管理手段现代化的社区图书馆让社区的居民感到政府说到、做到。真的是为民做好事做实事。
我们安贞街道社区图书馆坐落在安华西里的一条小街内，窗外是一小片翠绿的竹林，无障碍通道给老人和残疾人提供了方便。走进图书馆看到的是生机盎然的绿色花卉，恰似打击乐叮 当声的两个音乐流水的盆景陈列在两端，墙上挂着八位中外历史文化名人肖像，透过文化的气息。音乐电字钟和有日期、天气预报告知牌提醒着人们新的一天开始了。墙上“书是人类进步的阶梯”九个大字，告诫读者“读万卷书，行万里路”在科技发展的今天已不是什么难事。在这样的环境里读书使读者时时身在幽静清雅的庭院，忘却了临街的喧闹的市井。

安贞社区图书馆共设阅览区、借阅区。电子阅览区三部分。阅览区有四个透明玻璃阅览桌，设 36 个阅览席位，摆放 12 个两面书刊陈列柜，6 个不锈钢报架。共有报刊 150 余种，图书百本供读者阅览。书库设 7 个图书陈列架共有新购图书 1 万余册均按国图大法分类。电子阅览区有 12 台电脑供读者上网查询资料，或查找各类信息，馆内设有中央空调，灯光照明柔和适度，每天开馆时读者走进后都会在电字办公桌前受到两位图书管理员的迎接。我们和首图联网，实行一卡通的借阅。安贞街道图书馆真是一个正规的超小型现代图书馆。”

2. 以人为本的温馨服务

在现有硬件基础上朝阳区图书馆和办事处提出以人为本的温馨服务要求。社区图书馆服务的对象主要是城市老龄人口，青少年和外来务工人员等群体，这些群体的年龄文化程度、阅读要求有较大的差异，但是对以人为本的温馨服务需求是一致的。

图书馆配备了饮水机和一次性纸杯，免费为阅读者提供饮用水，可是在工作中渐渐发现老年人习惯使用暖水瓶泡茶水，于是我们又添加了暖水瓶。添置了放大镜、老花镜、笔和纸，满足读者阅读、摘录的需求。针对有的读者的特殊需要我们也尽量满足，如查找资料介绍有关的书刊，当有一位准妈妈想看有关的书，我们给她推荐了几本书，她感到非常有益，半年后她抱着出满月的孩子来表示感谢时，我们和他们母子笑在一起，都感到生活的温馨。“贴近读者，服务读者”的宗旨就是这样，让每一位到图书馆来的读者都得到最满意的服务。阅览的读者来了，图书管理员给他们最诚挚的微笑；借阅的读者来了，图书管理员以最快的速度给办理借阅手续；查找资料的读者来了，图书管理员耐心的帮忙查找材料。通过我们的微笑和努力工作，使读者得到了满意的、热情周到的服务。

3. 设置意见簿促进社区图书馆服务质量上新水平

开馆初始，根据本地区的特色、人口结构、所处位置、安贞街道办事处做了居民读书兴趣调查，根据调查结果共购置图书 1 万余册。订购杂志、报纸 100 余种。随着时间推移听到读者的各种意见和反映我们又做了新的调查。根据调查结果针对各类读者的意见和建议，并针对设置意见簿提的意见和建议制定改进措施，专门增订了《环球时报》，《益寿文摘》，《老年文摘》，《中国老年报》，《纵横》，《人物》，《百年潮》，《瑞丽》等杂志，做到了老、中、青都有喜爱的书刊杂志看。图书馆阅读人数也日益增加，阅读人数由原来平均 20 多人增
加到了 70 多人次。2007 年根据读者的反应对报刊杂志大体上又作了调整，增订了大字版参考消息，基本上满足了不同年龄段，不同文化程度群体的需求。

4、营造和谐的志愿者活动

为了给社区图书馆更大的发展空间。自 2005 年 8 月开馆，我们积极创新机制，在图书馆营造和谐的环境氛围，由北京求实职业学校的共青团员组成了志愿者定期来协助工作，他们打扫卫生、整理书报，负责图书馆的网络维护、担任电脑班的授课，他们总是随叫随到，有时路过这里他们就进来问是否有需要服务的事。当他们毕业时，又主动找了三名低年级的“接班人”。此外“志愿者服务”活动也得到了社区居民的积极响应。许多人纷纷前来报名。他们中有的人帮助整理图书，有的人帮忙修理花木，有的人给图书馆捐赠书籍杂志和报纸。为社区图书馆的建设奉献爱心。以此表达他们对社区图书馆的关心和爱护。

5、社区图书馆的捐书角

安贞社区图书馆开馆后，社区居民经常来问能否捐书。经上级批准后，我们开办了“居民捐书角”活动。办建处主任孙明明主动把自家的 150 本各种书籍捐给图书馆。其他居民闻讯后纷纷前来捐书。接到捐书后我们整理登记并询问是否同意以后将书捐出到区图书馆或学校。目前“居民捐书角”的图书已有 500 余册。其中有文学，科普，历史，政治，杂志等多种多样书籍。在登记造册后，设专柜陈列。有些书籍目前已市面上已断档。有的读者在这里找到买不到、也借不到的书籍后感慨的说：“这真是一个好举措，真可以说是资源共享”。在 2006 年，我们把其中适合学生的 130 册书捐给了打工子弟小学。近来要捐书的居民仍不断前来咨询如何捐书。通过这个活动我们感到社区图书馆是居民的。居民参与社区图书馆建设。是社区图书馆发展的必要趋势。在此基础上我们又办了科普图书角和人口计生育图书角，满足各类读者的需求。

6、组织活动，发挥社区图书馆服务功能。

前来社区图书馆阅读报纸杂志的老年人居多。借阅书籍和在电子阅览区的是年轻人的天地。在信息化时代电脑的使用是最基本的工具，老人们看到年轻人在电脑面前的情景时，常流露出渴望学习目光，跟上时代的步伐，使用电脑是第一步。许多老年人提出了想学电脑。但我们也没办过班，读者有需求我们就该满足。根据老人的文化水平我们自己定了教学方案，印了汉英对比表，使老人能尽快学会使用键盘。社区图书馆请求实学校的志愿者授课，利用中午馆内休息时间为老年人开办了义务电脑学习班。从零开始通过 5 次学习，使他们学会打字，上网阅览，查找资料等基本电脑常识。毕业的学生有 30 多名了。有位老先生在学习后高兴地说：“有你们的帮助，我给国外的儿子发了第一封 E-MAIL，这电脑好神奇啊。”自 2005 年 12 月第一次老年电脑培训班开课，至今共办了 3 期，现在仍有老年人陆续报名。社区图书馆有 12 台电脑，以 12 人为一班。够开班的人数就开办新的学班。这一活动我们将长期坚持下去。
为弘扬中国传统文化，普及国学经典，提高大众文化素质，倡导终身学习生活方式，努力创办学习性社会、学习型城区。朝阳区图书馆在我社区图书馆开办了文化大讲堂分讲堂活动。在社区大力支持下，每周一次。至今已举办了二十七讲。文化大讲堂活动聘请多位专家、教授授课。内容丰富，采用多媒体教学手段，根据参加活动居民的文化程度、年龄，由浅入深的讲述。使参加活动的居民赞不绝口。每到周六许多居民都前来占座。因为后来的人就只能在临时的加座上旁听了。

我们还开展了征文活动，看看我们的读者征文

赞社区图书馆

小小图书馆，社区把家安。
其貌也不扬，位置居委边。
竹影掩映里，春羽裁细尖。
虽无画栋梁，屋小天地宽。
椅桌都大方，空调去寒暑。
虽少四库书，实新任栋选。
老少还夹中，来此都充电。
青少上网来，四海都通连。
图书九大架，报杂翻不完。
可以避浮躁，炎黄春秋鉴。
各类日報好，读书去俗烦。
读者视如宾，实赖二馆员。
进出有应答，备水润喉甘。
拾得洁有序，整理无时闲。
立馆时不长，已有名声传。
愿它长留存，培成小乐园。
社区添和谐，乐而作此赞

读者：王继平
为迎接奥运会的到来，我们还开办了市民学英语 300 句。使老人们学会了简单的用语。健康讲座我们也常办，读者都积极踊跃参加，老人们为生活在这个社区而高兴，社区图书馆使他们的生活过的充实。老有所乐。老有所为

“博览群书，以笔会友”我们为读者搭建一个交流的平台，让读者把读到的好书、好报。好的读书经验，和感想写出来，让更多的人去看、去读、去体会，把健生、养身和生活中的小窍门写出来，传授给大家，让更多的人去分享，去实践，把您身边发生的事情的看法和观点写出来，传递给大家共欣赏、相与析。提高自我，共建和谐。

我们把读者的投稿定期更换、让读者在着有个交流。不局限在只是看看报，。

很多老读者都成为了朋友，我们的以笔会友还使两位 40 年没见面的老师在此相见。因为他们都是我们读者，看到名字时等呆相见。他们感谢图书馆

二 与时俱进。求真务实是协调发展原则

一、2004 年底安贞街办事处开始筹建社区图书馆时就决心要把安贞社区图书馆办成现代化有特色的图书馆，以满足安贞地区居民日益增长的精神文化需求。让居民享受离家近，环境好，图书馆临街又非喧闹地段的便利文化场所。

近两年的实践表明。居民对社区图书馆的需求是强烈的，这从办卡的数量就可以看出。我们从开馆自今共办卡 400 多个，每天还陆续有读者前来办证。并在 2006 年 5 月在安贞西里开了个分馆满足读者的读书需求。

二、图书馆管理人员固定，自筹备到至今。我们就两个管理员，先期到朝阳图书馆学习，一切都从头干起。对日后的工积定了好的基础。

三、安贞社区图书馆和安华西里居委会为连体建筑，除正门外有两个后门与居委会相通，使得治安和消防安全有保障。同时，居委会的会议室为文化讲堂提供了活动场所。开水卫生间可无偿使用。

四、朝阳图书馆关怀安贞社区图书馆的成长发展。在业务方面给予了大力支持，每三月轮换 200 本新书。让读者能看到更多的好书新书。

通过这些可以看出我们社区图书馆正在健康发展，这样的结果说明。安贞街道办事处和朝阳图书馆遵循 17 大与时俱进，求真务实的精神。在建设社区图书馆的筹建发展中始终是实事求是。为居民办实事。不搞花架子。让社区居民到到实惠，如增订报纸，杂志，打印机。扫描机等都需要新的资金投入。

同时。社区图书馆是社区居民的图书馆，社区居民也积极提建议，捐书，并积极参与社区图书馆的各种活动，表达他们对社区图书馆健康发展的关注，街道办事处。朝阳图书馆和社区居民三力合一必将使安贞街道图书馆更加协调的发展。
但我们不得不看到。安贞街道社区图书馆的场地已无扩大的可能。藏书的扩大已无空间摆放，阅览室无法满足更多居民的阅览。现在可以说是“已满为患”。新书的更新也是问题。

这些只有靠政府的扶持。各界的广泛支持，也依赖公共图书馆提供的管理和支持，我们坚信也有信心把我们的社区图书馆越办越好的。使它成为居民的知识《加油站》。

2007 年 5 月

李维荣，北京市朝阳区安贞街道社区图书馆管理员，联系电话：64265140
邮箱：cysqtsg@yahoo.com.cn
Pictures of ACL (both the inside environment and media reports)
"阅读与文明同行" 安贞地区“图书漂流活动”启动

日期：2011-04-21 來源：安贞街道办事处【字体：大 中 小】【颜色：黑色 红色 灰色】【打印页面】【关闭页面】

4月21日在第16个世界读书日来临之际，安贞街道启动了“阅读与文明同行”图书漂流活动。

安贞社区图书馆共有图书1.3万余册，拥有600余种，每年接待读者2万余人次，是北京市第一批漂流点的社区图书馆，为了充分发挥社区图书馆的资源优势，本着“让书走向社会，让图书走向居民”的原则，提高居民的阅读率，安贞图书馆精选出500册图书，分别到安贞社区内的六个居民点，主要包括小说、历史、文化、建筑、法律等畅销书籍，还包括适合青少年阅读的各类红色经典图书。

安贞街道图书室新增500册图书

为满足广大社区居民的读书需求，在地区营造“全民阅读”的良好氛围，近日，安贞街道在朝阳区图书馆的支持下，配发了500册新图书，其中有《山楂树之恋》、《潜伏》、《杜拉拉升职记2》等热门书籍，书目涉及人物、历史、旅游、健康、美食、编织等。

目前，新图书已全部上架，安贞街道图书馆欢迎广大读者前来借阅，并将为广大读者提供热情周到的服务。
Questionnaire

Questionnaire NO _____ Research Group NO

Survey

My Dear Friend:

Thank you for your attending!

Our research is going to understand the Internet use in your community. You have to answer some related questions below and your answer will be kept as secret. So just fill in the blanks or tick the proper option number according to your real conditions. Do not miss any questions.

Your honesty and cooperation are highly respected!

PKU CI Program

1. Gender: (1) male (2) female

2. Age:

3. Education degree (students choose the present degree):
   (1) less than primary school (2) middle school
   (3) high school (vocational school included) (4) junior college
   (5) undergraduate (6) master and higher degree

4. Profession (Seniors choose your job before retiring, one who has more than one job choose the main one):
   (1) Government officer higher than department level
   (2) Manager
   (3) Soldier
(4) Clerk in government or white collar in company
(5) Professionals and Technical (e.g. researchers, professors, doctors, editors, lawyers, journalists, accountants et al)
(6) Service industry related (e.g. servants, salesperson, consultants et al)
(7) Workers
(8) Private entrepreneur
(9) Self-employed household
(10) Unemployed
(11) Students
(12) Others (please clarify your job)

5. Your monthly income (RMB):
   (1) less than 800  (2) 801——1600  (3) 1601——2400
   (4) 2401——3200  (5) 3201——4000  (6) more than 4000

6. How many neighbors will you say hello to?
   (1) So Many  (2) Many  (3) So-so  (4) A few  (5) Very few

7. How many neighbors will you visit?
   (1) So Many  (2) Many  (3) So-so  (4) A few  (5) Very few

8. There are_____ close friends living in your community.

9. There are_____ ordinary friends living in your community.

10. Have you ever affiliate some clubs in the community?
    (1) Yes  (2) No

11. Generally speaking, which kind of people will you give a call to frequently?
    (1) Family members  (2) Friends  (3) Person related to your job
    (4) Servants or government junior officers  (5) Others (Please clarify the kind)

12. How many calls have you given to your friends in the last two weeks?
13. You have been outside drinking or playing____times with non-family members in the last two weeks.

14. If there is a chance, other people surrounding you will:

   (1) take advantage of you illegally  (2) treat you equally

15. When you need sth, can you borrow it from your neighbors successfully?

   (1) yes  (2) no

16. When you go outside one day, can you ask your neighbors to get the milks, or newspapers that ordered or letters for you?

   (1) yes  (2) no

17. How often do you go to Anzhen Community Library?

   (1) more than once a week  (2) more than once a month

   (3) less than once half a year  (4) never been there (If you choose (4), survey is finished!)

18. How often do you use the Internet service in Anzhen Community Library?

   (1) more than once a week  (2) more than once a month  (3) less than once half a year

   (4) never been there (If you choose (4), just finish Q19, else please jump to Q20)

19. Why don’t you prefer the Internet service in the library? (Multi-choice)

   (1) seldom surf the Internet  (2) prefer home to the library

   (3) the service is disappointing in your imagination

   (4) Others (Please clarify your reasons)__________  (Survey finished! Thank you!)

20. How long have you been on-line in the library generally?

   (1) less than 1 hour  (2) 1 to 2 hours  (3) 2 to 3 hours  (4) more than 4 hours

21. Generally, why do you use the Internet service? (multi-choice)
（1）looking for some learning materials  （2）surfing without specific purposes  （3）for relax (e.g. games or movies)  （4）contact with others  （5）using some databases in the digital library  （6）other purposes（Please tell us your specific purpose）

22. Generally speaking, can you achieve your goals by using the Internet service in the library?
（1）yes, completely  （2）yes, almost  （3）yes, partly  （4）no  （5）I don’t know

23. Are you satisfied with the line there?
（1）yes  （survey is finished, thank you!）  （2）no

24. Why are you not satisfied? （multi-choice）
（1）speed is too slow  （2）software disappointing（e.g. no flash to watch videos!）  （3）hardware disappointing  （4）many webs unavailable  （5）unreasonable fee  （6）bad-attitude-librarians  （7）other reasons（please tell us）

Survey is finished, thank you for your attending!
Check sheet for investigators

Site_____ Group__

**Checking Sheet**

There are 5 parts below for you to accomplish. The 5th (patron part) can be used for as many times as your research needs. After filling each blank, please point out how you collect the data (by interview or related reports; and put the interview materials or related original data as appendix if possible)

**Part One: the Community**

1. Population of the community _____; Percentage of outsiders (without Beijing registered residence) ______, seniors____, poor
2. Number of public information centers: net-bar____, library____, school____, commercial place___, other places (please point out its name
3. When is the community founded____, name of its governing institution
4. How often does the community carry out activities for citizens: _____times per year
5. Other things investigator concerns about:

**Part Two: the Library**

1. When is it founded____. There are__ people working there, including ___librarians. There are___ volume books, ___ types of magazines, ___ types of newspapers. Its annual funding is____; allocation of funds (proportion of each part: computers____ books____ newspapers and magazines____ activities____)
2. Draw a picture of the library’s location; Draw a picture showing the distribution of its functioning parts or anything posted.
3. Lib’s governing institution____, funds source____, books source
4. Lib’s open time____, context of its service
5. How often does the lib carry out activities: _____Times/year, they are (original data needed)

6. Annual reports of the lib (original data needed)
7. Draw pictures about lib’s social network and social capital
8. Do mass media report the lib or related service: Yes/no, they are (original data needed)

9. Other things investigator concerns about:

**Part Three: Computers**
1. There are ___ computers in the lib, and ___ to be fixed. The main problems of the broken computers include ____________________________. Are there professional librarians in the information center? Yes/no.

2. Basic equipment: brand ____, CPU ____, VGA Card ____, Main Board ____, Memory ____, other problems of hardware

3. Software: enough/not enough, the missing ones

4. Speed of web (measure by speedmatters) : upload ____, download ____ , time

5. Applications on the table ______, homepage ________, webs in favorites ________, e-lib resources _____________, homepage about the lib: there is/isn’t, its website

6. Source of information center ____________ ; Are there someone responsible for computer maintenance and repair: yes/no, they are

If there aren’t, are there used to have such person: yes/no, they are

Reason for them to leave/ reason for no one to fix

7. For librarians, what are their concerns about the information center? Have they encountered some problems when offering service?

8. When did the computers come to the lib ______; What’s the impact do computers bring to the lib or community?

9. ___ Times have the computers been updated; what have they been updated

10. Choose a specific task to experience on-line: Your name ____ , what do you experience: ________________; Records of your experience

11. Other things investigator concerns about:

Part Four: Policy

1. National policies available in the lib, especially librarians mostly concern. Please point out whether the policy is posted or reported by librarians

2. Policies for all Beijing libs that available in the lib, especially librarians mostly concern. Please point out whether the policy is posted or reported by librarians

3. Policies that are only available in the lib, especially librarians mostly concern. Please point out whether the policy is posted or reported by librarians

4. Are the on-line services: Free/not free; Are there some other policies to limit the patrons to use computers? (e.g. Age limitations, rules about what is permitted or forbidden, et al)
5. Impact of policies above. What policy has the biggest impact? Give details.

6. Other things investigator concerns about:

Part Five: Patrons

1. _____(e.g. 1\textsuperscript{st}, 2\textsuperscript{nd}) Investigation, time(from when to when)______, investigator______, questionnaire NO for patrons ______, questionnaire NO for residents

2. Time____, number of patrons: male__female____, seniors older than 50: male__female____, middle aged between 20 and 50: male__female____, adolescents younger than 20: male__female____, children younger than 12: boy__girl____; Reasons for such proportion from librarians

3. Time____, number of patrons reading newspapers (please point out their age and sex): ______, number of patrons reading magazines (please point out their age and sex): ______, number of patrons borrowing or return books (please point out their age and sex): ______; Reasons for such proportion from librarians

5. Other investigator’s concern:

4. 1\textsuperscript{st} Interviewee: sex__age__profession__his/her questionnaire NO___he/she is a patron/resident
Abstracts about the interview

5. 2\textsuperscript{nd} Interviewee: sex__age__profession__his/her questionnaire NO___he/she is a patron/resident
Abstracts about the interview

6. 3\textsuperscript{rd} Interviewee: sex__age__profession__his/her questionnaire NO___he/she is a patron/resident
Abstracts about the interview

7. 4\textsuperscript{th} Interviewee: sex__age__profession__his/her questionnaire NO___he/she is a patron/resident
Abstracts about the interview
Relevant policies

The 11th year cultural development plan of China

《国家“十一五”时期文化发展规划纲要》

我国将以6项举措创新公共文化服务方式

新华网北京9月13日电（记者周玮、吴晶）13日发布的《国家“十一五”时期文化发展规划纲要》指出，我国将以6项举措拓宽公共文化服务领域，创新服务方式，提高服务质量。

一是建立健全公共文化设施服务公示制度，公开服务时间、内容和程序，在窗口接待、场所引导、资料提供以及内容讲解等方面，创造良好的服务环境，增强吸引力。

二是完善国有博物馆、美术馆等公共文化设施对未成年人等免费或者优惠开放制度，有条件的爱国主义教育基地的公共文化设施可向社会免费开放。

三是实行定点服务与流动服务相结合，鼓励具备条件的城市图书馆采用通借通还等现代服务方式，推动公共文化服务向社区和农村延伸。

四是采用政府购买、补贴等方式，向基层、低收入和特殊群体提供免费文化服务。

五是促进数字和网络技术在公共文化服务领域的应用，建设数字广播电视信息平台、数字电影放映网络系统、网上图书馆、网上博物馆、网上剧场和群众文化活动远程指导网络。

六是支持民办公益性文化机构的发展，鼓励民间开办博物馆、图书馆等，积极引导社会力量提供公共文化服务。

十一五时期关系群众切身利益的公共文化设施建设优先建设

新华网北京9月13日电（记者周玮、吴晶）“十一五”期间，我国将完善公共文化设施网络布局，以大型公共文化设施为骨干，以社区和乡镇基层文化设施为基础，优先安排关系人民群众切身文化利益的设施建设。

13日发布的《国家“十一五”时期文化发展规划纲要》指出，未来五年，我国将建设一批代表国家文化形象的重大文化设施，如国家大剧院工程、国家博物馆改扩建工程、国家图书馆二期暨国家数字图书馆建设工程等；大力推进文化信息资源共享工程、广播影视数字化工程、国家重大出版工程等重要文化工程项目建设；加大对重要社科机构、体现民族特色和国家水准的艺术院团及重点出版单位的扶持力度。

“十一五”期间，我国将完善大中城市公共文化设施，加强图书馆、博物馆和文化馆（中心）建设；在巩固县县有图书馆、文化馆的基础上，基本实现乡镇有综合文化站，行政村有文化活动室；加强各级广播电视无线发射转播台（站）的维护，更新设备，保障正常运行；在中西部及其他老少边穷地区广人稀的地区配备流动文化服务车，建设流动服务网络
《全国文化信息资源共享工程实施方案》

“共享工程”是采用现代信息技术，对文化信息资源进行数字化加工和整合，通过网络最大限度地为社会公众享用的文化工程。它开辟了一个不受地域、时空限制的崭新的文化传播渠道……

各级文化部门要对“共享工程”给予高度重视并积极组织实施；各级财政部门应积极支持和配合，共同推进工程的顺利开展。为加强领导和协调，文化部、财政部共同组建了全国文化信息资源共享工程领导小组，各地也应成立相应的领导机构。……

要利用现有的网络和软硬件环境，整合现有的文化艺术资源来实现共建共享，不搞重复建设

“……省级分中心试点单位要求具备一定的条件，即：馆域网主干通讯能力不低于 100 兆；对外网络接口不低于 2 兆；馆域网工作站总数不少于 60 台；配置专用服务器的硬盘容量不少于 500 千兆；配有专职技术人员与资源加工人员；设备条件可支持 30 个以上基层中心的建设。各地应尽快开展对本地文化资源状况、计算机网络连接状况、文化设施状况等方面的调查研究，在此基础上，制定出本地区的试点工作方案，报全国文化信息资源共享工程领导小组批准后实施……”

“四、把实施“共享工程”与加强基层文化建设、促进图书馆事业发展紧密结合起来。实施“共享工程”要依托现有的文化设施网点，以各级公共图书馆为实施主体。因此，它与基层文化设施网点建设、图书馆网络化、数字化建设紧密相关，互为促进。各地要把“共享工程”的实施纳入文化事业建设整体规划，在设备、人员、资金等方面统筹考虑，给予保障。各级公共图书馆要加强文献信息资源建设和自动化、网络化建设，加强对专业技术人员的培养，为实施“共享工程”打好基础。”

**The library rules of Beijing**

《北京市图书馆条例》

“……第二十七条 图书馆应当逐步配置计算机与网络设备，视听、缩微、复制设备，文献信息资源利用和保护等设备，完善信息网络系统建设，满足读者需要。”

“……第三十六条 图书馆应当积极采用以计算机和网络为基础的自动化管理技术，有步骤地实现馆藏文献信息资源的数字化，不断拓展虚拟馆藏资源。图书馆的数字化、网络化、自动化建设必须遵循统一的技术标准。”
A report about the ACL written by our research team

It has been published earlier in Beijin gweb site (www.bjwmb.gov.cn)

A English Version

“I had been imagining secretly that the heaven should be like a library”
- Jorge Luis Borges (Argentina National Library curator, writer)

“What we saw today in Anzhen may be just an ordinary scene of everyday work, but it reminds us so much of Chicago Public Library. And both Anzhen Library and Chicago Public Library have aroused the spirit of public libraries!”

- Abdul Alkalimat and Kate Williams (professors of 2011 PKU CI Summer School, Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign)

This July, as Peking University community informatics summer school students, we were wandering along the streets in Beijing looking for research sites—agencies that might have impact on the community's cultural services. When we saw Anzhen Community Library, frankly speaking, we did not have high expectations -- this small library among tall buildings is so inconspicuous. However, there is a quiet and elegant temperament in this little library, attracting us to step inside.

Li Weirong, one of the Anzhen community librarians, is a typical Beijing-style person of warmhearted and generous character. When we walked into this small space accented by comfortable and elegant elements, she was busy dealing with books the patrons were borrowing and describing the condition of the library to a journalist from
Red Sunset, a well known CCTV spot on outstanding stories about older people. Hearing a bit about our purpose, Ms Li asked us to wait a minute so that she could speak with us. As we waited, our curiosity spurred us to interview patrons as they left the library. "Do you often come to this library?" we asked a middle school girl. "Of course! usually once a week." "I come here every day for 1-2 hours to read," a middle aged man told us. "So is the library valuable to this community?" one of our group members asked. The confused expression on his face indicated without a doubt that we had asked a crazy question. White-haired people were focussed on reading in the reading room. Youth walked along the shelves searching for knowledge. And Anzhen government officer Wang further acknowledged the library and its librarians. "I’ve worked in the local office about 2 or 3 years. I knew the library but had never been here until about two weeks ago. I happened to pass by and saw the librarian handing the books to the patron with such respect that I was really touched. I then became a frequent visitor here and I come to read whenever I can spare the time."

As students of library science, the deeper conversation with Ms Li made us feel increasing excitement and pride. We are excited not only because the National Library, one of the world’s best libraries, is here in Beijing; but also because on this street corner a group of librarians are at their posts delivering humanity’s cultural record to countless ordinary people. We are proud that we saw a small piece of this pure land of infinity from the readers’ point of view in the community library. The spirit of the public library that we learned from textbooks immediately came to life before our eyes.

Ms Li told us that the library provides services to the majority of residents in the community and they organize all kinds of activities. So we were excited when Abdul and Kate, the instructors in our CI summer school, and school organizer and PKU faculty member Han Shenglong decided to attend a library poetry event. At the scene of the activity, students from America and China all listened intently to poetry teacher Tang Ping, a writer with the Beijing Opera. Before we left, Abdul and Kate expressed thanks to Mr. Tang and the community members present and we hastily translated.

As we left Anzhen Library, we could not help thinking of the “open to all and free” policy adopted in January by China’s museums, libraries and archives. According to Ms Li, there are about 43 libraries serving the community in Chaoyang District just like Anzhen Library. That suggests there are hundreds of community libraries in the city of Beijing, and thousands nationwide. A huge network of public cultural services is taking shape.

As researchers, we made Anzhen Library a case to analyze and reveal the general characteristics of community and the principles of cultural service. But as future professional librarians, we saw the pinnacle of our training right there in Anzhen Library. What might seem like the periphery of China’s public library system is in fact the front line.

Written by: Zhou Wenjie (2011 PKU CI Summer School student, PhD student at Nankai University Business School)

Group Members:
Li Tingting (2011 PKU CI Summer School students, master’s degree graduates in library science from Tianjin Polytechnic University)
Zhang Yanan (2011 PKU CI Summer School students, master’s degree graduates in library science from Tianjin Polytechnic University)
Yu Biyang (2011 PKU CI Summer School student, master’s degree graduate in library science from Nankai University Business School)
2. A Survey of the Interaction between the Public Computing Center and its Patrons: The Electronic Reading Room in the Da-xing District Public Library

FENG Siying 冯思颖
Master’s student, Peking University, Yieryier1@sina.com

PENG Jinfang 彭金芳
Master’s student, Peking University, ipenny1223@gmail.com

WANG Jing 王婧
Master’s student, Peking University, shirleynju@126.com

TENG Xia 滕霞
PhD student, Jilin University, jizhu-teng@163.com

Acknowledgements
This report can’t be accomplished without help from our dear teachers and classmates.

First, we want to give our highly gratitude for Professor Han Shenglong. Without him, we don’t even have the chance to learn specifically about Community informatics and to meet our classmates and teachers. When we are stuck into confusion, it is he who helps us make our thoughts clearer.

We give our respect sincerely to Professor Kate Williams, Professor Abdul Alkalimat and Professor Yan Hui. They bring us to the research and trigger the main question in this report. Every speech and story they give to us are so valuable on which we construct our report. We learn the D7 method from them, which makes our research more scientifically and sufficiently. When we analyze the data and ponder over the findings, we always recall what they teach us in class.

This report is done gradually in the help of our classmates. We communicate with each other in class and out of class. Sharing and distinguishing different sites and ideas, we find some problems in common then we exchange our opinions. The collision in thoughts gives us sparks that are vital to our investigation.

Our practical research is carried out in the Electronic Reading Room of Da-xing District Library through interviews, questionnaires and Ethnographies. We want to make a special acknowledgement to Sun Haibo, deputy curator of Da-xing District Library, who gives us permission to conduct our research in the library and Zhang Ping, employee and teacher of training courses, who let us do voluntary service there and let us record the first-hand data of patrons using computers every day. Besides, the director of the “Information Sharing Project” and the employee accepting our interview are also in our thankful list. We get the directly characteristic of users and their interaction with the PCC
with the collaboration of the patrons. Actually, we can’t do the research so smoothly if they rejected to fulfilling our questionnaires or answering our questions.

1 Introduction

In this assignment, we carry out a case study of the Electronic Reading Room (ERR) in Public library of Da-xing district. This library is located at the West Street of Huangcun, Da-xing District, which is a far suburb of Beijing.

By doing this, we want to get a quick look at the general state of community informatics in China and a deep look at how the computing site operates and services the users. Moreover, we help the site as far as we can as a volunteer for 40 hours. We help them solve problems they meet when they use computers and teach the old how to use QQ in the training course. As a promising researcher and worker of the community informatics, we want to contribute what we have learned to the development of Chinese community practice.

![The location of Da-xing District Library](image)
Our team
Our team are called group 4, which consists of 4 people (3 bachelors and a PHD), that is, Peng Jinfang, Wang Jing, Feng Siying and Teng Xia. We split the tasks into several parts and everyone takes charge of some. We get together to share the information and materials we get and discuss next steps about four times.

Site option
In order to accomplish our assignment scientifically and sufficiently, we take consideration of these aspects:

Representative. There are several types of community informatics, some serve nationally, such as the National Library and the Science and Technology Library and CASHL, others serve certain groups of people on the basis of character or location. The latter are the major and basic informational communities, which are more directly accessible for citizens. Da-xing District Library is a typical example of them. There are 6 libraries in Da-xing District and Da-xing District Library is the largest one. 3 of them belong to the academic. The other 2 are the subordinations of the Da-xing District Library. Conducting our research, we can grasp the general developing level of libraries in urban areas. Besides, it opens a window for us to know how to serve people in certain group to narrow the digital divide better.

Pre-research. One of our members is a native of Da-xing District. She has used the library for several years, thus she experiences the changes and development of Electronic Reading Room in it. In fact, we already select this site as a sample in our speed testing assignment. We can take advantage of this to make our research more fluently, whether in getting the permission to do voluntary services or carrying into specific investigations, such as interviewing and contributing the questionnaires. In our class, Professor Yan Hui said he could hardly get the trust of the interviewees and go into their heart when he conducted his research. Fortunately, we overcome this problem to some extent by letting them know we are also a user of the library just like them.

Methodology
We use 7D method to do the whole research. This is definition, data collection, digitization, discovery, design, dissemination and difference.
<table>
<thead>
<tr>
<th>Definition</th>
<th>Defining the problem, summing up the relevant literature, and formulating the research question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data collection</td>
<td>Operationalizing the variables, collecting data regarding the variables</td>
</tr>
<tr>
<td>Digitization</td>
<td>Reorganizing the born digital data and Inputting, scanning the others in a useful way and letting them visible to everyone in the team</td>
</tr>
<tr>
<td>Discovery</td>
<td>Analyzing the data to answer the research question and to convey the findings to various audiences</td>
</tr>
<tr>
<td>Design</td>
<td>Laying out the data and the analysis in text, tables and figures</td>
</tr>
<tr>
<td>Dissemination</td>
<td>Sharing the findings to the site and other relative sites as widely and effectively as possible</td>
</tr>
<tr>
<td>Difference</td>
<td>Thinking about the differences brought to the world, the research community and ourselves</td>
</tr>
</tbody>
</table>

**D7 method**

We conduct our investigation via observation, participation, interview, and questionnaires.

Before we went there, we browse its official website and get familiar with them. Meanwhile, data source from website of Da-xing District are collected to know the population and the surroundings of it.

We visited the site 6 times and collected our data in 3 ways: ethnographies, interviews, and questionnaires. During our 40 hours spending at the site, we carried out 3-day-long ethnographic observations, interview 2 managers, 2 employees and 3 patrons, and collect 50 questionnaires.

**Ethnographies**

Three of us did the ethnographic observations from Friday to Sunday and noted down:

- Time of day?
- How many patrons are there?
- What are the patrons trying to do?
- Did they ask librarians for help?
- How long did they spend?

**Interview**

When we did our interviews, we select 3 types of people, these who regulate the Electronic Reading Room, these working in it and the users.
<table>
<thead>
<tr>
<th>Type</th>
<th>Person</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>manager</td>
<td>deputy curator</td>
<td>History, key development, stuff, policy and fund of the Electronic Reading Room.</td>
</tr>
<tr>
<td></td>
<td>director of the</td>
<td>How does the library help the counties subordinating to Da-xing District get digital devices and instructions of using them.</td>
</tr>
<tr>
<td></td>
<td>“Information Share</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project”</td>
<td></td>
</tr>
<tr>
<td>employee</td>
<td>librarian</td>
<td>1. The hardware and software and regulations of the Electronic Reading Room</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Specific information about patrons</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. training course</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. voluntary work</td>
</tr>
<tr>
<td>teacher of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>course for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the old</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patron</td>
<td>3 patrons</td>
<td>The basic information, behaviors and attitude of the Electronic Reading Room</td>
</tr>
</tbody>
</table>

**The content of our 3 interviews**

*Questionnaire*

We collected 50 questionnaires from the patrons considering of the gender, age of them. The design of questionnaire including 3 parts, that is, the basic information, behaviors and attitude of the Electronic Reading Room. (See appendix)

When we contributed the survey questionnaires, users were happy to fulfill them. But when we tried to interview, some of them said no to us, others acted very negatively to our questions.

**2 Background and purpose**

Our study focuses on status quo of public computing service in local community—the Electronic Reading Room in Da-xing District library—and relationships between the service provider and service user. There are two entities in this problem: public computing center (PCC) is identified as the service provider and patrons in ERR is identified as service user. The interaction is a bridge, binding how PCC provide service and how users react. We suppose feedback and reaction in this interaction have an impact on cyber power, and we can find a way to make cyber power stronger to benefit both sides.

Da-xing District located in the south of Beijing which is prosperous in both industry and agriculture field. In industry field, Da-xing District has a “one industry development area and six industry parks” plan. The industry development area is Yizhuang economic technical development area, which owns many companies and factories that bring lots of income to Da-xing district. The six industry parks include medicine, mass media, cars, manufacturing for army and producer services. Cars industry
is the main factor that causes the increase of economy in the last half year of 2011. In agriculture field, the area for agriculture has reaches 100 thousands acres. Watermelon, grapes and mulberry are famous local products in Da-xing District. Some festivals about these fruits are held every year the these kinds of fruis are ripe.

Totally, we can get some comparative data about the GDP of 18 districts (now 16 after the combination of district) in Beijing in 2009. The GDP of Da-xing District ranks three in the all suburbs in Beijing, which is about 235 hundred millions, and it's even higher than some urban areas. However, the GDP for per individual of Da-xing District is somehow less, but it's increasing stably every year.

Da-xing District has a history of 2400 years and the area of it is 1,031 square kilometers, concluding 14 towns and 526 administrative. According to the census in 2010, the total population of it is 1.4 million of which 0.6 million non-native population.

Da-xing District Library was established 1950s, which is built by the Cultural Committee of Da-xing District as well as the Capital Library. It located at the Huangcun West Street of Da-xing District when it was set up, then it was moved to the West Street of Huangcun, Da-xing District on July, 2006. After that, the former one is abandoned.

![Physical location of the new Da-xing District Library](image-url)
Outlook of the new Da-xing District Library

The Electronic Reading Room exists both in the old and the new building. It is a part of the Internet Center, combined with the Multi-media Reading Room. The ERR also take charge of the “Information Share Project”---a computing popularization project for counties and villages under the administration of the district. In this research, we design an overhead data project and try to get more details of the site from these 4 aspects: capital and funding; staffs and facilities; policy; characteristic service.
Outlook of the Electronic Reading Room
Location of the Electronic Reading Room
Research model

As shown is figure1, we propose a model to explain and solve our research problem. User is identified from several aspects, such as gender, age, occupation, educational level, monthly income, home address, which shows basic information of patrons and their social status. PCC includes properties such as capital, staffs, facilities, policy and services. Through questionnaire, interview and observation, we can identify users’ behavior, evaluation and suggestion, as well as how PCC react and find approaches to promote their service ability.

Interaction makes us balance and reconsider the strength and weakness during public computing service, so we can put forward ways to strengthen cyberpower, in order to satisfy user’s diversified needs and fulfill PCC’s functionality. By doing this, we can contribute to the emergence and development of community informatics in China.

Reference

The fact that China is only at the forming state of the network society leads us select this question. Da-xing District library is in the urban area of China. The income level, information literacy and conscience of its patrons are more developed than rural areas. However, the growth of it is not so optimistic compared to the developed countries like America and Netherlands. Under this circumstance, we can do a lot to catch up with more developed communities and help less developed communities.

The classes held by Professor Kate Williams, Professor Abdul Alkalimat and Doctor Yan Hui and theses written by them trigger us to think about the question, such as the Social capital and cyberpower in the African-American community---a case study of a community technology centre in the dual city, and the story told by Kate about lives of the Dutch gave us an great impulse to conduct this research.

3 Course of our study

In our study, data are collected through questionnaires, interviews, observation, and literature retrieval. From these data we have, we digitize and recode the data into several groups, representing certain variable of our research model, and analyze the relationships within and among variables. For example, the independent variable of patrons is shown from aspects like age, gender, occupation etc, which we can get from our questionnaire.

Work plan/schedule

Our work plan and schedule includes several parts, as shown in table1.
### Time Table of our Research Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Task</th>
</tr>
</thead>
</table>
| 7/11       | ✓ The first group discussion  
             |   ◆ Make the time table and make sure that everyone knows what she shall do.  
             |   ✓ Contact with Da-xing District Library and get permission to visit the library and do the research in it. |
| 7/12-7/13  | ✓ Browse the website of Da-xing District Library and get the related information of the assignment.  
             |   ✓ The second group discussion  
             |   ◆ Fulfill the design of questionnaire and interview  
             |   ◆ Visit Da-xing District Library for 2 times and do the following things: Interview some managers/employees/users; Let users do our questionnaire; Get permission to do as volunteers and help the site as we can. |
| 7/14-15    | ✓ Visit the library again and do the following things:  
             |   ◆ let users do our questionnaire  
             |   ◆ use its computers(test the speed of Internet/get the related information of the computers and the software)  
             |   ◆ do volunteer work |
| 7/16-7/17  | ✓ Visit the library again and do the following things  
             |   ◆ let users do our questionnaire  
             |   ◆ use its computers(test the speed of Internet/get the related information of the computers and the software)  
             |   ◆ do volunteer work |
| 7/18-7/20  | ✓ Send our raw report to the library and get the feedback suggestions  
             |   ✓ Do volunteer work |
| 7/21-7/25  | ✓ Finish our report |

Table 3.1 Timetable of our research schedule

**Interesting stories**

**Story 1.** When we did our research in the library, we encountered an old couple who came to participate the training class for the elders. The couple was so kind to us, for their son also graduated from Peking University. They said their son had been to America 5 years and they were just retired, so they came here to study computer so that they can send an E-mail to their son or chat with him. The husband of this couple was so active that his study always in front of the teacher’s contents. When teacher taught how to apply an E-mail, he tried to send E-mail to his son. When teacher taught how to download QQ software, he just began to apply QQ number with a name “retired man” and ask me how to chat with friends. Several days after our interview, when I logged on my QQ Garden (a game in which you can plant and sell flowers virtually), I amazingly found that the “retired man” also came to this fashion game. What an advanced “retired man” he is!

**Story 2.** We did volunteer labor in the computing center for several hours, during which we collected our data, distributed our questionnaires and helped people to use the computer. In these hours, we helped them lots of things such as how to download MP3 music, how to use MS Word. However, what surprised me was that when I asked a girl to
finish our questionnaire, she just saw from the questionnaire that we are postgraduates of Peking University and asked several questions about the entry examination of postgraduate. Then we chatted a lot with our own experience and offered some suggestions to her. It was so amazing that doing volunteer labor in computing center can not only solve computer problems, sometimes also can be an adviser of other fields.

**Story 3.** We chatted with the trainer of the training for elder people, who is also the administrator of this computing center. His expertise is information management, which is similar to us, and has worked in this library for ten years. When we said we wanted to have a look at some data and records, he provided all the resources he can find generously such as the statistical data of everyday users and the feedback of the training for elder people. We asked him if he was boring to teach the same contents and always do the same job, he said it’s not boring but a kind of fulfillment. The trainee also told us that their teacher is kind and patient in their eyes and they all respect him.

**Story 4.** We met a boy who seems to be a guest worker in Beijing in our research. We prepared a interview to him, but his answers a somehow confused us. When we asked him why did he come to this computing center, he just said he came here because he love China. That answer indeed confused us, for there are no relationship between using public computing center and loving our country. However, when I looked the computer screen which he used, we just understood why he said that. It's because there were someone saying some bad words to China and Chinese culture, he just felt angry and wanted to something back. Thus we learned that he may not explain his thought or ideas better for some reasons such as experiences or education level, but we belived that he has a passionate heart and he was, is and will still be a patriots.

**4 Data Digitization**

We have two kinds of data in this research, one was born digital, the other not. The born digital data includes:

a. The internet speed in several occasions (such as weekend and workday, morning and afternoon)

b. The tape of our interview (2 managers of Da-xing District Library, 2 employees of the public computing center and 3 patrons in the center)

c. Some pictures (the picture inside and outside the library, how we train the elder people to use computer and some about our interview)

d. The introduction and comments of this library from websites

The data not born digital includes:

a. The data of the 50 questionnaires

b. The data of users who come to use this computing center everyday from last November to this July

c. The notes we have taken during the interview

The data in a & b is digitized with metadata by MS Excel and SPSS, the data in c is digitized by MS Word. When aggregating our data, we use the following ways:

a. We applied an E-mail in [www.sina.com.cn](http://www.sina.com.cn) and each member in our group knows the ID and password.
b. We send our data into the E-mail in order that it can be seen by each member in our team.

c. We browse all data and choose the useful to sort out and analyze, thus contribute to the solving of our research questions.

d. We also applied a discussion group in QQ so that we can deliver some data which is not in the E-mail instantly, thus we can solve our problems faster.

5 Data analyses and findings

Questionnaires, interviews, pre-online searching, and field study are carried out to collect data for our research. We recode data using excel, spss as analytical tools to reflect variables from various aspects and how they impact each other, as shown in table 5.1, table 5.2, chart 5.1 and chart 5.2. According to our research model, there are four parts in this process.
Table 5.1 Statistics of 50 questionnaires

<table>
<thead>
<tr>
<th>Demographic information of patrons</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender: Male/Female</td>
<td>26/24</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16~25</td>
<td>50%</td>
<td>Student 36%</td>
</tr>
<tr>
<td>26~35</td>
<td>30%</td>
<td>Production/Sales Personnel 10%</td>
</tr>
<tr>
<td>36~45</td>
<td>8%</td>
<td>Technicist/Developer 16%</td>
</tr>
<tr>
<td>46~55</td>
<td>4%</td>
<td>Manager 6%</td>
</tr>
<tr>
<td>56~65</td>
<td>4%</td>
<td>Teacher/Researcher 6%</td>
</tr>
<tr>
<td>65~73</td>
<td>2%</td>
<td>Other 26%</td>
</tr>
<tr>
<td>Missing</td>
<td>2%</td>
<td>retired 4%</td>
</tr>
<tr>
<td>Average age</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Monthly income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>32%</td>
<td>Middle school 4%</td>
</tr>
<tr>
<td>&lt;2000rmb</td>
<td>22%</td>
<td>High school 36%</td>
</tr>
<tr>
<td>2000~5000rmb</td>
<td>38%</td>
<td>Bachelor degree 54%</td>
</tr>
<tr>
<td>&gt;5000rmb</td>
<td>8%</td>
<td>Graduate Degree or above 6%</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Da-xing district, Beijing</td>
<td>54%</td>
<td></td>
</tr>
<tr>
<td>Other districts in Beijing</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Other provinces</td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td>Usage information of patrons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often did you come?</td>
<td></td>
<td>How long did you stay per time?</td>
</tr>
<tr>
<td>Frequently</td>
<td>18%</td>
<td>&lt;1 h 16%</td>
</tr>
<tr>
<td>Often</td>
<td>26%</td>
<td>1~3 h 64%</td>
</tr>
<tr>
<td>Occasionally</td>
<td>44%</td>
<td>4~6 h 14%</td>
</tr>
<tr>
<td>Seldom</td>
<td>12%</td>
<td>&gt;6 h 6%</td>
</tr>
<tr>
<td>On which day did you usually come?</td>
<td></td>
<td>Which pattern did you choose?</td>
</tr>
<tr>
<td>weekday</td>
<td>38%</td>
<td>alone 78%</td>
</tr>
<tr>
<td>weekend</td>
<td>54%</td>
<td>With companion 22%</td>
</tr>
<tr>
<td>everyday</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Reason for coming (multiple)</td>
<td></td>
<td>Percent of Responses</td>
</tr>
<tr>
<td>No computer at home</td>
<td>5.7%</td>
<td>6.0%</td>
</tr>
<tr>
<td>No access to the internet</td>
<td>17.0%</td>
<td>18.0%</td>
</tr>
<tr>
<td>Free</td>
<td>24.5%</td>
<td>26.0%</td>
</tr>
<tr>
<td>Purpose for coming (multiple)</td>
<td>Percent of Responses</td>
<td>Percent of Cases</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>entertainment</td>
<td>18.6%</td>
<td>26.0%</td>
</tr>
<tr>
<td>Get information</td>
<td>48.6%</td>
<td>68.0%</td>
</tr>
<tr>
<td>Improve skills</td>
<td>7.1%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Fulfill tasks</td>
<td>21.4%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Other</td>
<td>4.3%</td>
<td>6.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>140%</strong></td>
</tr>
</tbody>
</table>

### Evaluation/suggestions of patrons

<table>
<thead>
<tr>
<th>Suggestion (multiple)</th>
<th>Percent of Responses</th>
<th>Percent of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service attitude</td>
<td>3.6%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Environment</td>
<td>8.9%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Facilities</td>
<td>53.6%</td>
<td>60.0%</td>
</tr>
<tr>
<td>Opening time</td>
<td>14.3%</td>
<td>16.0%</td>
</tr>
<tr>
<td>Other</td>
<td>19.6%</td>
<td>22.0%</td>
</tr>
<tr>
<td>none</td>
<td>8.9%</td>
<td>10.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>112%</strong></td>
</tr>
</tbody>
</table>

### Crosstable of time-stay * frequency per time

<table>
<thead>
<tr>
<th>time_stay</th>
<th>count</th>
<th>frequency</th>
<th>occasionally</th>
<th>seldom</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1h</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25.0%</td>
<td>0%</td>
<td>37.5%</td>
<td>37.5%</td>
</tr>
<tr>
<td>1-3h</td>
<td>3</td>
<td>10</td>
<td>16</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.4%</td>
<td>31.3%</td>
<td>50.0%</td>
<td>9.4%</td>
</tr>
<tr>
<td>4-6h</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25.0%</td>
<td>37.5%</td>
<td>37.5%</td>
<td>0%</td>
</tr>
<tr>
<td>&gt;6h</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100.0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9</td>
<td>13</td>
<td>22</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18.0%</td>
<td>26.0%</td>
<td>44.0%</td>
<td>12.0%</td>
</tr>
</tbody>
</table>

Table 5.2 Crosstable of time-stay * frequency per time
User demographics
As the first part in table 5.1 indicates, there’s not much difference in gender, while the age distribution is quite intensive. Patrons are mostly younger, 70% of whom under 30. This is amazing that 20 years age span (16~35) contributes nearly 80% of all patrons, which indicates that young people are more interested in and benefited from ERR in Da-xing community. Occupation, educational level and monthly income are closed related to age structure of patrons. Therefore students with no income occupy about 1/3, excluding those graduates who are still looking for jobs (occupation: other) though the Internet. The monthly income indicates that people with low salary (below 5000rmb) come to ERR more, which occupies 92% of all patrons. This explains why community infomatics concentrating more on helping the poor or disabled to live better. Besides, patrons come from various careers, covering from production, sales, and technical personnel to managers, researchers, as well as elderly people who had retired. They also come from wide regions, most of whom are local or live near to Da-xing district, 64%. Owing to population structures of Beijing, with lots of outsiders, those from other provinces also benefit from local community center.

PCC introduction

Capital and funding
Every year Da-xing District Library gets 1 million from the government of Beijing, and 200,000 from government of Da-xing District. The library has more than 2 million digital resources. The government of Beijing contributes 940,000 to its construction of digital resource every year. The money is mainly used for keeping the sustainability of the digital resource.

Staffs and facilities
Only 2 people work in ERR. They work in turn and don’t have holidays. If they want to recruit new librarians, they need to inform the Personnel Division of Da-xing District. The applicants are required to have a Bachelor Degree, with a background in computer science, library and information science is better. However, the background is not strictly demanded, they have the option to decide what kind of person they need. For example, this year 2011, they need some employees majoring in journalism & communication.

There are 100 computers in ERR. Half of them are for ordinary users, the others are for training courses and also can be used by users when ERR is too crowded. All computers are connected to the Internet, equipped with Microsoft Office, IE browser and other common software. Users can download then install software they need and next time they use the very computer, they will enjoy their individual settings. Meanwhile, the managers of ERR purpose some useful databases, not only CNKI, which is always used by students and some people who already worked and need to write theses, but also databases mainly for the agriculture and the government. There are experts who maintain computers randomly. They updated about 50 computers in 2010.

Policy
The ERR is opening from 9am to 7pm on weekdays. On weekends, it opens on 9am, while closes on 6pm.

A reader card is not necessary for someone who wants to go into ERR. All he or she needs to do is to write down his/her name and ID number on the register book. The
policy whether charging users or not is not always the same. In fact, it goes through 3 periods.

Before March, 2011: User who wants to surf the internet have to pay 2 CNY per hour.

From March, 2011 to April, 2011: It is the pre-free period. They charge users 2 CNY per hour if they are online longer than 2 hours. But within 2 hours, it is free.

After April, 2011: You can use the computers and the internet as long as you will without paying money to the library.

**Characteristic service**

**Training.** There are training courses for both the elderly and children. These for children are held in summer and winter holiday. The number is limited in 10 each time. The librarians in ERR teach them how to do flash. There are 2 training courses per month for the elderly above 45. Each course lasts 5 days and the number is limited in 20.

**Information sharing project.** This service is carried out from three aspects:

1. The technicians of the ERR doing what they can to maintain the equipment of towns and villages subordinating to Da-xing District. They provide door service for both guidance and maintenance of the technology as soon as they get the phone call.

2. Training for managers who serve the towns and villages. Every year, these managers will be called up to get focus training. The technicians also go to these places every year to bring them the newest technology and help. For example, they held a training course for all managers from the towns and villages on August, 2010. To test if they had understood and absorbed what they learned, a knowledge contest was even held to do this.

3. They advocate the “Information Sharing Project” via different ways, which raises the publicity and popularity in the mass. They go directly and personally to the towns and villages to let people there know there is a project exactly for them. Consequently, the project is shot and broadcasted by the TV of Da-xing District.

**Interactions between patrons and PCC**

Based on the public computing service Da-xing library provided, patrons take an active part in attending training courses and using electronic reading room. PCC also react to feedbacks of users and try to improve.

**Patrons’ behavior, evaluation and suggestion**

**User behavior in electronic reading room.** User behavior include why, when, how and what for questions when they are using ERR, which reflect patrons’ using experience and preferences.

The second part of Table 5.1 indicates that, 44% of patrons come to ERR often, 44% come occasionally, and the left 12% are just passers-by. Most patrons use ERR 1~3 hours per time, occupying 64%, and 20% of patrons spend more than 4 hours. Patrons who come often tend to stay longer than passers-by (see table 5.2), which indicates user viscosity of ERR. This explains an interesting phenomenon that during our 6 visits, some familiar faces show up often. Besides, more than half prefer to coming on weekend, and 4 in 50 think every day is fine, who are retired or students on summer vacation. 78%
patrons come alone, while the left who come with companion are usually elderly couples or young lovers.

With rapid development of IT and widely spread of computers, we wonder why people come to ERR and what they use it for. The following statistics answered these questions. Nearly 23% of patrons come to ERR because they have to, which means they didn’t have computers nor access to the internet, another 61% because the good facility (26.4%), quiet environment (3.8%), close to home (5.7%) and free of charge policy(24.5%) at ERR attracted them. Of course, random choices such as coming to ERR when visiting relatives nearby make some of them passers-by. Also, co-occurrences among these reasons are common, especially between free and good facility, which contributes 54% of cases.

The main purpose of using ERR is getting information, with 48.6% of responses and 68% of cases, then comes to fulfilling tasks from work/school and entertainment, with 30% and 26% of responses. Among the 15 patrons who choose fulfilling task, 10 of them choose getting information simultaneously, which implies that computers play an important role in getting what we need in our daily life.

Features of patrons—— further study
Further analyses are carried out concerning demographic information and user behavior to learn more about patrons’ characteristics.

In chart5.1 and chart5.2, we divided patrons into 3 age groups. Group1 (age 16~22) includes 15 patrons, 14 are students and 12 have no income. Comparing with the other 2 groups, the “free” and “entertainment” factor is more obvious. This phenomenon corresponds with their age features of young, active and without income. Group3 (age 31~73) cover a wide age range, including 15 patrons, various in occupation (no students), income etc. With relatively less financial concerns and work requirements, “Good facility” and “Get information” aspects are more remarkable. Their self-condition is better while not good enough, so even most of them have access to ICT, they seek higher quality usage. Group2 (age 23~30) with largest number of patrons consider more on improving skills and fulfilling tasks, which probably because they are students with higher degree and heavier study burden, or new staffs who are working hard to get promotion.
User behavior in training courses

In our observation of trainees, we have some interesting findings. Most of the patrons attending the training course are elderly people more than 45. They learn relatively slow and know little about the emerging information technology. However, they have great passion for this training and take it seriously, most of them with full attendance and taking notes in class. There are also some problems, such as afraid of asking questions when practicing and few communications among trainees. This is probably owing to the characteristics of the elderly, shy and conservative.
User evaluation and suggestion

User's feedback is an important part to evaluate how the work of public computing center is going on, and which aspects should be put more efforts in the future.

In our survey, most patrons think highly of the service provide by PCC. Part 3 in Table 1 shows an inspiring and meaning result. More than 90% patrons consider the ERR adequate or satisfactory. Besides, trainees attending the course said the training was a great success; librarians are patient, responsible and glad to offer help.

Of course, there's something to improve according to patrons’ suggestion and requirements. From the statistics of questionnaires, 60% of patrons hope facilities can be improved, 16% suggest longer opening time, other include environment in ERR, service attitudes of librarians, security issues etc. Trainees are expecting for further learning, including basic software such as qq, ms office etc.

Feedbacks and solutions of PCC

Librarians are 100% satisfied with their service, and indeed they had done a good job in both training and working as an ERR administrator. They know better and communicate a lot with patrons, and they also reflect some issues about elderly trainees, such as their shyness and lack of in-groups communication.

ERR are also finding ways to improve. They have suggestion box in ERR and training feedback forms for patrons, as well as a public email address for complains and advices. Quick answers and effective solutions to patrons’ feedback are important in better service. Here’s an example of policy transform which make a big difference.

There are 3 periods of charging policy which are demonstrated before. We get the original number of patrons who go to ERR of every period. On November, 2010, users who want to surf the internet have to pay 2 CNY per hour. March of 2011 is the pre-free month on which users are charged 2 CNY per hour if they are online longer than 2 hours. But within 2 hours, the service is free. Users can use the computers and the internet as long as you will without paying money to the library since April.

![Chart 5.3 The number of patrons in different periods](chart)

This change brings directly benefits to the ERR. As we can discover from chart5.3, the average number of users coming to the ERR every month is increasing dramatically from 18 to 61, which means free policy attracts much more people. The total number of users on November, 2010 is 556 and the number rise up to 1568 on June, 2011.
There is an interesting tendency of the variance of patrons going to the ERR every day. The variance declines as a whole, however, it climbs to the top on March, 2011. This is probably owing to patrons’ strong reaction to the change of policy, which reminds PCC to act properly and concern about potential results of changes.

The distinction between weekdays and weekend is so obvious that can’t be overlooked particularly before March, 2011. We take one week from each month randomly as samples and analyze their distribution in attendance number every day.

As chart 5.4 shows, we can see an evident increase from March, 2011, number of patrons jump from average 22 per day to 35. It is when ERR began to provide free service to the public which reflects public’ active response to ERR policy. In sample of June and July, attendance becomes more stable and the gap between weekdays and weekends become narrower, comparing to that of March to May. It’s probably because students are on summer vocation, they have no limits of coming to ERR.

Chart 5.4 Distribution of patrons’ attendance in 6 sample weeks

**Impact on cyberpower, and in turn**

In the analyses above, we discussed the property of user and PCC, then deep into how they interact in receiving and providing public computing service, which constitute two important parts of cyber power. And in turn, based on feedbacks and reactions in their interaction, stronger cyber power can bring benefits to both sides.

Moreover, in order to make this site more distinguished and create a more harmonious cultural atmosphere in Beijing or even in China, we put forward some advices from two aspects as follows:
**Patron’s perspective**

Statistics from our questionnaires show that the factor which gets least users’ satisfaction is facilities of ERR, which mainly includes computer configuration, the number of computers, the internet speed of this library, maintenance of the broken-down computers and also the surrounding infrastructure inside and outside the library. However, we know that to perfect it must need several rounds’ negotiation and operation of funds. Besides, our team also thinks a canteen may be necessary, without which we must go to a supermarket nearby if we want some water or snacks.

From interviews of trainees, a more specific plan about training class need to be drafted and implemented to satisfy users’ further needs. As far as we know, there are not lots of libraries like Da-xing District Library to open this kind of training. We just think the class can be more diverse and cater to more special community so that the digital divide becomes narrower and narrower. In terms of the elder people training, some intensive class can be considered to meet their need, which is what also the employee of this library also hopes. In the same time, the employees may also accept some kind of training so that they can be more professional and versatile. To be brief, both the library and our team think that the class can be shaped a brand.

There should be more propaganda for the computing center and training class to make more people know and accept this service. It’s not only praise to this library, but also encouragement to all libraries in Beijing. As institutions which function as popularize culture and reduce digital divide, all libraries should not just consider how to improve itself, but also think of the improvement of their companion in this district, city or to some extent, a country. Only in this way can a harmonious society form and the biggest difference appears.

**PCC’s perspective**

The library need to devote more in the “Sharing Project”, which is one of the most important ways to narrow digital divide. Now this project has only 4 members, and it’s not enough to supervise more than 500 villages in their job performing. Even in the villages’ reading room, the employees are not funded by government so that they have no enough encouragement to work harder. All above may affect the performing of “Sharing Project”.

Just as mentioned above, with the change of the library’s policy (not free, free but time limited, free and no time limited), people who come to use this computing center is zooming. So it’s better for the library and public computing center to consider some emergency measures to sustain the stability of this site. For example, the internet speed need to be perfected, broken devises should be repaired faster and that computers without assorted chairs or the chairs are broken should be paid attention to. Thus, the users’ satisfaction can improve.

**6 Diffusion of our findings**

We will translate our report to Chinese and mail it to Da-xing District Library, with the hope of getting feedback. Meanwhile, copies of the Chinese editions are going to be sent to E-Beijing and libraries of the rest 15 districts in Beijing.

But we meet a harsh problem. The manager of Da-xing District Library regards the state of its service and interaction is the privacy of the library. He doesn’t want us to
reveal their disadvantages to the public. So we need future communication with him to report our finding not only to the site we visited, but also to other organizations.

7 Differences we find and we hope

Differences from what we have read

In our research, there are mainly two points that are different from literatures we have read and study.

Firstly, the boundary of the computer usage between urban and suburban areas is not so obvious as we have read. As a outskirts of Beijing, Da-xing District Library indeed have done a excellent job in popularize information of both traditional and modern, and it even has some distinguished features which urban libraries don’t have. In towns and villages of Da-xing District, “Sharing Project” also brings lots of books and digital tools to spread knowledge and information.

This phenomenon may account for two reasons.

For one thing, Beijing is engaging in rebuilding its urban landscape pattern, so that many native Peking men move to suburbs to begin a new life. Thus, a population flows appeared and original population structure break down. Da-xing District has become a area including both the natives and the outsiders. With the change of population structure, some relevant influences, such as lifestyle of people, the level of population and function of cultural institution, will inevitably come, thus the boundary between urban and suburban is vague.

For another, it may attribute to time although it’s not that vital. Some literature we have read may the result of last year or earlier, so that’s not accurate to the conditions now. For example, in Hui Yan’s Ph. degree thesis, he mentioned that the towns and villages in Fangshan District (a suburb in Beijing, just like Da-xing District) didn’t have access to some digital tools in 2009, however, in Da-xing District, “Sharing Project” has brought some benefits to the farmers these years. So, the condition in rural areas may become better and better as time goes. We think both cases of Hui Yan’s and ours are particular, we should make a deeply discovery.

Secondly, in our research, we find that the elder people are not willing to make new social capital. Before our interview, we might consider that the old people are always lonely, for their children are not living with them or even live in foreign country, and to escape loneliness, they want to make some friends of same age to talk. However, the result is a little amazing us that they would rather talk to the teacher and us than classmates sitting beside them.

In our volunteer labor, namely the informatics moments, we taught them how to use QQ and asked them to add friends besides them. They were somehow unwilling. A grandma even whispered to us “Those people are just strangers to me and I don’t want to chat with them.” Thus, the new social capital that should have formed and promote the forming of information age disappeared. Maybe these grandparents have their own way of life, and after their retirement, they don’t think social capital is important to them any longer.

Differences we may make to literature

This research enriches both theoretical and practical field of community informatics in China. Now CI is not a very popular concept in China and we just take it into the Library,
to explain what it is and what it focus on, and then let the employees in the library tell us something about it. Thus, we conclude the present situation of CI in China and the points that we China should improve and perfect on the basis of American literature and condition.

In our future study, some further researches based on this, such as the comparison of public computing center in several places in China may be get a intensive discovery.

**Differences to us**

**Siying Feng:** This research does bring me lots of differences. Firstly, I learn D-7 method and practice it. That’s a challenge, for I didn’t learn any research methods at all in my university and there is no specification for me to observe when doing research. Now I have the specification, and I can do research more professional.

Secondly, I have learned Da-xing District Library deeply. I have lived in Da-xing District for several years and I often go to the library, but I don’t know its diverse activities such as training class, sharing project and some policies. Through talking with the managers and employees, I also have relocation on my attitude to librarian and my own way in future.

Finally, doing volunteer labor is really a significant job. When doing this, I tried to overcome my shyness and be costumed to the rejection. Also, sometimes as a consultant or a teacher, I also make skills and information widespread to others, thus make the world beside us different.

**Peng Jinfang:** It is an amazing journey. For me, the most significant thing is that it changes my impression on library. Though having studied library science for 4 years, I’m still doubt the possible role libraries can play in the information society. In fact, during our study in the community informatics this summer, I’m always thinking about what libraries can do when encountering with some particular conditions. The investigation solves my puzzlement to some extent. When I stood in front the old, teaching them how to download and install software and how to chat with their families via QQ, I suddenly understand the value of the library and librarian. It is a matter of moral. I listened to my teachers telling us there is a digital divide and there exists a group called the digital poor. But I haven’t directly got in touch with it ever like most people around me. This research does provide me a key to go into their hearts, letting me know about their urgent needs in changing their status and in improving their skills to fit the society better. I realize that I can do something to help them.

**Wang Jing:** I enjoy the process of doing research with my group members. In this process, we had fierce discussion, with troubles and confusions all the way. While in the end, I think we fulfill our assignment excellently. To learn is one thing while to practice is another. Through this research, I make a better understanding of d7 method and how to put it into practice. In field study of Da-xing District library, I know more about the status quo of CI in China, and surprised by the good service local community library provided. Comparing with the situation in my hometown, I think Da-xing District library set a good and typical example for the development of public computing in other rural areas. In information age, digital library is an inevitable tendency, which needs us who majored in LIS to put more effort into this career. The librarians make a deep impression on me that common people and ordinary work can also make a difference, especially for the poor and disabled. For me, it’s a chance to do volunteer work and help others in need, narrowing digital divide, and make more people benefit from this information age.
Bibliography


Kate Williams. Navigating the informatics moment: A preliminary research report on the CyberNavigators program at the Chicago Public Library.


Webliography


Appendices

Questionnaire
Outline of interviews
Photos
Maps
Record of interviews
Raw data
**Questionnaire**

User survey of electronic reading room

In Library of Da-xing Distric, Beijing

*Dear users of library electronic reading room,*

*We are graduates from the Department of Information Management, Peking University conducting a survey concerning “Impact of Public computing facilities”. We select the electronic reading room in library of Da-xing District as a model case to understand your opinions about public library carrying out this computing service. Please help us complete the questionnaire. Thank you for your support and cooperation!*

1. What’s your gender?
   A. Male       B. Female

2. How old are you?

3. What’s your occupation?
   A. Student   B. Production/Sales Personnel  C. Technicist/Developer  D. Manager
   E. Teacher/Researcher  F. Others

4. How much is your monthly income?
   A. No income   B. Less than 2000rmb  C. 2000~5000rmb  D. More than 5000rmb

5. What’s your education?
   A. Primary School   B. Middle School   C. High school(including junior college)
   D. Bachelor Degree  E. Graduate Degree and above

6. Where are you from?
   A. Da-xing District, Beijing   B. other districts of Beijing  C. other provinces

7. How often do you use the electronic reading room?
   A. Frequently (more than 3 times a week)  B. Often (1~2 times a week)
   C. Occasionally (it depends)  D. Rarely (just passing by)

8. How long do you stay when you come to the electronic reading room?
   A. less than 1 hour  B. 1~3 hours  C.4~6 hours  D. more than 6 hours
9. On which day do you often come to the electronic reading room?
   A. work day (from Monday to Friday)   B. weekend (Saturday & Sunday)
   C. Every day is fine

10. Which pattern do you choose when you come to the Digital Reading Room?
    A. Alone            B. With companion

11. Why do you come to the library to use the electronic reading room?
    A. no computer at home
       B. there is a computer but no access to the Internet at home
       C. free here     D. the hardware and software are good
       E. others________________

12. What do you use the electronic reading room for?
    A. For entertainment (such as chatting on QQ/listening to music/watching video)
       B. To get information (such as reading news/using digital resource)
       C. To improve skills (such as taking part in training course)
       D. To fulfill your study or work task
       E. Others______________

13. What do you think of the electronic reading room?
    A. pretty satisfaction   B. general satisfaction
       C. need further improvement

14. Which part of the electronic reading room do you think should be improved?
    A. service attitude      B. environment     C. the equipment (hardware/software)
       D. the opening time     E. others________
Outline of interviews

What is in below is our interview questions to managers and employees in the public computing center. It’s divided into six parts, including context, the structure of employees, resources, services, policies and other relative questions.

历史背景
1. 大兴区图书馆是在什么时候建立的？谁来建立和管理的？（政府？）
2. 大兴区图书馆在发展中的几个关键时刻？（何时产生了什么样的变革？例如开设电子阅览室，政府信息公开，借阅方式变革等等）

员工构成
1. 员工大概可以分为几种类型？（管理者、图书馆员等等）图书馆各部门如何划分？
2. 员工的专业都包括哪些？
3. 员工的学历水平如何？（从哪些大学毕业，本科 or 专科 or 其它）管理层成员是否曾经有一些其它的工作背景？
4. 是否接受学生在电子阅览室做义工？

资源构成
1. 图书馆主要包括哪些软硬件？（包括计算机：多少台可以上网多少台不可以上网、图书文献资源、借还书信息系、阅览桌椅等及其数量）
2. 图书馆大概分为几个部分？它们的位置在哪儿？（例如有几个阅览室，分别为什么类型，专业、通俗 or 儿童 or 地方）
3. 图书期刊的数量规模是多少？
4. 在图书馆的建设和购置资源过程中，有没有考虑过特殊群体的需要而提供一些特别的服务？例如儿童、老人、残疾人等等。
5. 在信息资源共享方面采取了什么样的措施或者方法？（馆际互借、政府信息公开等）

用户服务
1. 图书馆用什么来吸引读者？（网站建设情况？更新频率？是否会开设一些讲座、活动、培训、书友会等来供读者参与？具体描述之。）这些活动是否会收费？
2. 主要提供什么服务？（借阅、阅览、自习、资料查阅等等）是否提供查新服务？
3. 是否了解公共阅览室、电子阅览室的使用群体主要是哪些人？他们主要使用图书馆来做什么？一周的人流量大概有多少？一天中什么时间的人流量最多？（早上、中午、晚上）

4. 图书馆在互联网方面的建设占图书馆整体建设的多大比例？

政策支持
1. 政府一直致力于提高居民的物质文化需要与个人素质，那么政府在图书馆，特别是郊区的图书馆的建设方面是否有政策上的指导？具体表现在哪些方面？在电子阅览室成立之前，有哪些指导政策？电子阅览室成立之后，又有哪些政策？

2. 目前社会强调一种可持续发展，那么是什么资源或者机制可以使图书馆的建设继续持续和发展下去呢？（例如物质条件、技术、资金、志愿者、机构、培训、制度、动力机制例如前景与目标、政策法律、使用户受益等等）政府每年会对大兴区图书馆拨款多少？

其它
1. 作为一个郊区的图书馆，大兴区图书馆相对于其他的市区图书馆或者国家图书馆等，最大的区别是什么？大兴区图书馆采取了什么样的措施来应对这种差别？

2. 您认为图书馆作为一个文化机构，是否起到了它应起的作用？大兴区图书馆目前在哪些方面做的出色，在哪些方面还需要提高和改进？

注：下划线——可以对员工进行访问的问题  无下划线——对管理层访问的
Photos

Picture 1 neighborhood of the library (Theater, shopping mall)
Picture 2 public presentation of Da-xing District Library

Picture 3 front door of the library
Picture 4 a reading room in the library
Picture 5 Electronic reading room in the library
Picture 6 Poster of “sharing project”
Picture 7 Feedback forms of training (registration & feedback)

Picture 8 Interview with one of the librarian
Picture 9 With patrons in electronic reading room
Picture 10 Registration book
Our team members are teaching the elderly how to use QQ.

Our team members are helping a patron in ERR.
Maps

map1 Baidu maps
map2 local neighborhood
Map3  sitemap inside the site
Records of interviews

With the curator (Haibo Sun)

1. Q: What is the percentage of digital resources construction in all constructions of the library?
   A: About 50%, it consists of buying databases, improving the public computing center and visual-audio room. Now the visual-audio room has 30 computers, and the public computing center has 110 computers. In the reading room for children, there is another 24 computers. We have 2 millions digital books and journals.

2. Q: How much does this library set apart funds to the public computing center every year?
   A: There is no funds special to the public computing center. The funds for Daxing District library digitalization every year is 940,000 yuan. The funds of paper-books and journals from municipal government are more than 1 million. Daxing District also contributes 200,000 yuan to it.

3. Q: How does the 940,000 yuan allocate?
   A: Buying database, renovating digital devices, and some to villages which participate the “national project for the sharing of cultural information and resources”. The money is not too much.

4. Q: Do the databases buy yourselves?
   A: Yes, referring to our needs, we buy it ourselves.

5. Q: How many databases we have bought?
   A: More than 10. Including agriculture databases, CNKI(for research and academy), some government gazettes and reference books. We buy it according to our needs. Each database is about 100 to 200 thousands.

6. Q: How much is the salary of the public computing room?
   A: It’s different, referring to many factors.

7. Q: How many staffs in the library now?
   A: 50.

8. Q: Do you consider the background or expertise of the staff?
   A: It depends on government. We just give some advices that which expertise we want.

9. Q: Are there any policies about the construction of digital resources?
   A: No.

10. Q: Are there any annual reports of this library?
    A: No. We just have a meeting at the end of every year and conclude the working status of this year. Here we have a book in which are some articles written by our staff, you can see it.

11. Q: Do you have some wishes about the construction of the library in future?
A: Developing the digital library. Now fewer people go to the library to borrow books. They just read digital books in their office, or download some books in their MP4 or other devices to carry when they are on business.

12. Q: When did this library establish?
   A: The new one established in 2006.

13. Q: When did the website of this library establish?

14. Q: Can the digital library use at home?
   A: It can use at home. There is no authority. You just need to live in Daxing District and you can use it. It provide full text.

15. Q: Are there any trainings to the employee in the public computing center?
   A: Yes, but the training is taken by the Capital Library.

16. Q: As a suburban library, are there any differences from the urban libraries?
   A: No. The operation mode of them are all the same.

With the employees:

Q: When was the electronic reading room opened?
A: There was an electronic reading room in the past Daxing District Library. The new one was set up on July 2006 and the old had been discarded.

Q: Why did you built up the Electronic reading room?
A: Render services to people.

Q: How many computers are there?
A: More than 100 computers.

Q: Are the computers connected to the Internet?
A: Yes

Q: Have you ever updated the computers?
A: Yeah. Because many people come here to use the Internet, we need to update and maintain the computers randomly.

Q: Is there any computers that can’t be used?
A: yes

Q: Talk something about the software on the computer?
A: We install some that are widely used. But users can choose what they need and install to the computer. We will save the individual settings so that they can still use them next time.

Q: Do the users always seek for help from you?
A: Not so often. They can help themselves when using computers in general.

Q: What’s your opening time?
A: From 9am to 7pm
Q: How many employees working in the electronic reading room?
A: Only 2. We work in turn and don’t have holidays.
Q: Who take charge of the electronic reading room?
A: There is a director who takes charge of not only us, but also the Internet Center and the Multimedia Room.
Q: How can people use the electronic reading room?
A: We are free here. People don’t need to have a reading card or pay money. All they have to do is register their names and ID numbers on this book.
Q: Can we do voluntary service here?
A: Some people come here to do voluntary service too. But you should get the permission of the curator.
Q: Is there any training course here?
A: yeah. We open training courses both for the old and children. As for the children, the training courses are held in summer and winter holiday. The number of them is limited in 10. There are 2 training courses per month for the old who are older than 45. Each course lasts 5 days and the number is limited in 20.
Q: What is the content of the training course?
A: We teach children how to do flash. We post notice outside the door.
Q: Have you ever taken the training about the course you teach?
A: Not yet. But we already know how to operate it.
Q: When did you start the training course?
A: Last year.
Q: Is there any service for the disadvantaged group?
A: There is a reading room only for the disabled. But it is not be used so often.
Q: Except for posting notice in the library, is there any other ways to inform people?
A: None
Q: Does the number of the users change in different times?
A: Because it is holiday, so the change between weekend and weekday is not so obvious. But in other times, there exists some differences.
Q: Does the user cluster in one period of age?
A: People under 16 are not permitted to enter the electronic room. The uses are mostly young people that are 20s or 30s.

With the manager (Wang Dong, About the use of the visual-audio room)
1. Q: Are these CDs here free?
   A: Yes.
2. Q: What do you consider when you buy the CDs?
   A: Just buy what we don’t have every one or two month.
3. Q: How many CDs there are?
   A: About 5000.
4. Q: Can the users download them on the web?
   A: No. You can just come here and use it here. The internet speed in the home is not very good for downloading.
5. Q: How do you search for the CDs? Are there any catalogs in the computer?
   A: Those packs on the shelves are just empty. There is only a number on each of them. The CDs are here (a cupboard beside the employee). You just need to remember the number on the empty pack and you can find it here.
6. Q: Can we borrow them home?
   A: No, for it’s difficult to manage. You know, the new movie are hot, everyone want to borrow it. Thus we can’t control the time or something others.
7. Q: Are these CDs original?
   A: Yes. All of them are original.
8. Q: How about the language of these CDs? Chinese or English?
   A: Both. Those foreign CDs have both languages.

With the manager (Wang Dong, about the use of public computing center)
1. Q: When did the library establish? I mean, the old one.
2. Q: Was the library established by the government?
   A: Yes.
3. Q: What is the superior department of this library?
   A: Daxing District Council of Culture.
4. Q: I’ve heard that there was an old library, why you discarded the old one?
   A: The area of the old library is too small. As people’s needs are raising, it’s responsible for us to build a new library with larger area and more resources.
5. Q: Do the library support government information publicity?
   A: Yes. Everyone who has needs can come there, search for government information through our computer and internet.
6. Q: We have known that book lending is free now. Do you know something about past?
   A: I came here at 2006. As far as I know, book lending is free all the time. Only the reader card costs 10 yuan for production in the past, now this 10 yuan is canceled. Now we only charge some deposit.
7. Q: Are there any requirements to whom wants to work here?
   A: We recruit workers through the bureau of personnel every year.
8. Q: We can see there are two workers in the public computing center. What education background do they have?
   A: College degree is must. Then there are some considerations in the expertise, such as computer science, library science or information management. Totally it depends on our needs.
9. Q: How many departments are there?
   A: Eight. Saying in order: reading room for children is in the fourth floor, comprehensive reading room is in the third floor, the second floor is for borrowing books, and the first floor are computing center, visual-audio center. These are for readers. There are some departments for our internal work, such as office, acquisition department and co-ordination department.
10. Q: What is the co-ordination department for?
    A: You now, there are 14 towns and more than 500 villages belongs to Daxing District. It uses for providing services for them. Every village has a reading room construct by us.
11. Q: Are there public computing center in the towns and villages?
    A: Yes. We have an important project called “Sharing Project”, which provide a LCD TV in each village, in order to receive the program we prepared for them, especially the farmer. The programs include some cultural, technological and agricultural knowledge. The manager in each village will broadcast these programs at regular intervals.
12. Q: When did the “Sharing Project” begin?
    A: In 2003. The technical support and equipment maintenance are our duty. The government provide funds.
13. Q: How many books there are in this library?
    A: About 300 thousands, including several types, as it’s a comprehensive library.
14. Q: Do you have a system for borrowing book?
    A: Yes. It’s developed by Capital Library. Every public library uses this system in Beijing.
15. Q: Are there any change to this public computing center?
    A: The biggest change may be in this March, it’s free. In the past, the users should pay for the center 2 yuan per hour.
16. Q: After it’s free, what happened?
    A: More people come.
17. Q: What’s your computers’ configuration?
    A: I can’t remember it clearly. But it can meet most of users’ needs.
18. Q: Are there any databases?
    A: Yes. Such as CNKI, agricultural databases and so on.
19. Q: Are those databases well used?
A: Yes, especially CNKI. Some students use it, and some workers who want to write paper also use it.

20. Q: Do you take some measures to adjust the devotion of the databases?
   A: As far as I know, we adjust it through the use rate of users every year.

21. Q: I have seen that there is a slope in your library. Is it designed for the handicapped?
   A: Yes.

22. Q: Are the users in the weekend more than the workdays?
   A: Yes. You can see the statistical data in the management window. Everyone who use the Internet should have a registration.

23. Q: When is the peak time of this center?
   A: Afternoon.

24. Q: Have you noticed that what your users do here?
   A: Reading up the literature, chatting, entertaining and so on.

25. Q: Are there any policies from the government to enhance the management to the computing center?
   A: There are some regulations on the wall, I don’t know if it is what you want.

26. Q: How about the devices’ renovating?
   A: You can see, the computers for training were all bought last year. It’s new. But those for use were bought in 2006.

27. Q: Why you buy a new batch of computers?
   A: It just because, for example, we bought 100 computers, after several years’ use, there are only 60 can be ran well, so we buy 40 new computers.

28. Q: Are those computers for training open to users?
   A: If the computers for use is not enough, the training part is also open.

29. Q: Which factor sustains the running of this library in your opinion?
   A: We just rely on financial allocation. There is no profit here.

30. Q: What specials in Daxing District library?
   A: On the one hand, the hardware facilities in our library are good, because our library was new established. And perhaps the slope for handicapped is special.

31. Q: Do some people who don’t live in Daxing District come here?
   A: Yes, a lot. In our training for the elder, people from Haidian, Chaoyang and Shijingshan District all come here to study.

32. Q: How do those people know the training?
   A: We published news in the Legal Evening News several days ago. Our websites also publish it.

33. Q: Are there other propaganda?
   A: Yes. When we hold an activity, we will invite newspapers and TV station to report.
34. Q: How many activities are there every year?
   A: About 100. The “Sharing Project” activities in this year have been held for 30 times. And our visual-audio room will make a program every month aiming at one theme. For example, in order to commemorate the 90th anniversary of CPC, we made a program that assembles movies reflecting Chinese revolution, and recommend these movies to audience. The public computing center has activities every month, such as the training for the elder and for children. And, there are also some speech contests and quiz show.

35. Q: How you notice others to join these contests? Just by putting up notice?
   A: We have some channels. Putting up notice is indeed a channel, but it’s not enough. Sometimes we contact with the local communities, towns and villages to inform them about these activities.

36. Q: Have you helped corporations to train?
   A: No. But we help the army to build their reading room.

37. Q: Is the teacher for training a employee in this computing center?
   A: Yes. Our training is held 2 times per month. Each training class has 20 elder people participating and lasts 5 days, from Monday to Friday.

38. Q: Are the contents for training same?
   A: Yes.

39. Q: Do you have a plan about the training? Is this plan distributed from the government?
   A: We have a plan, but we formulate it ourselves. For example, it’s our computing center that decides which class should we set up and what contents we should teach.

40. Q: Have you taken some investigation to learn that what are the folks’ needs in Daxing District?
   A: We have a complaint box in the door. Everyone can raise their suggestion and send it into the box. The office is obliged to deal with it. All the suggestions will be sent to the manager of library.

41. Q: Are there any training for children in summer holidays?
   A: Yes, we hold it every holiday. We are aiming at enhancing children’s ability to operate computers. The contents include cartoon and website design which they are interested in.

42. Q: What do you think of the improving of Daxing Library?
   A: To be larger. That’s the infrastructure. In terms of service, enhancing services in rural area is vital. Some villages have poor conditions and the reading room is not too broad, thus limit the number of books and people’s information acquisition. And the reading rooms’ administrators in the towns and villages are not paid by government, for they just belong to village committees, rather than library. Few people think that one can do a job well without any salary.

43. Q: How many people are responsible for the “Sharing Project”?
   A: About 4 or 5 in our library. It’s not very much. Every year we have examination to the villages’ reading rooms, each place should be examined by ourselves twice.
44. Q: What does the examination include?
   A: Firstly, maintenances of hardware and devices. Secondly, see if the service is put in place. Finally, check the level of the administrators.

45. Q: You have just 4 workers in “Sharing Project”, I just wonder how you run it with this few people.
   A: In the 14 towns belonging to Daxing District, we have an institution called “cultural center”. It’s in charge of all the activities in this town. We just connect them when there are no technical problems. But if there are technical problems, we do it ourselves.

46. Q: Are there any training in the towns or villages?
   A: As far as I know, no.

47. Q: Do you have plan to launch the training there? People living there may not always go to the library here for training.
   A: We don’t have a plan now. Now the traffic is convenient. Every towns and villages have bus and they can reach here easily.
**Raw data**

The data below is the original data about user number who came to the public computing center from October in 2010 to this July.

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室内空气较差
3. A Case Study of the Civilian Mobile Library

Cao Haixia 曹海霞
PhD student, Peking University, caohaixiazi@126.com

Gao Jin 高巾
Master’s student, Peking University, gaoj121326@pku.edu.cn

Xiao Chan 肖婵
Librarian, Capital Normal University, xiaochan3630101@163.com

Xu Zhenzhen 徐珍珍
Master’s student, Sichuang University, xuzz@calis.edu.cn

Yuan Xu 袁旭
Master’s student, Institute of Scientific and Technical Information of China, libraryyx@163.com

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1 Introduction
This assignment let us carry out a case study of a public computing site in a community. It aims at investigating the digitization as well as the digital divide of the community. And try to figure out the factors that influence the community’s cyberpower and find solutions or give suggestion in order to improve the situation.

Our research team is composed of 5 members (their names have been listed above). Four of us are majoring in library science; one majored in information science and has worked in a library for one year. Such combination gave our team a wider perspective and both theoretical and practical knowledge.

We selected this site out of three reasons: a. People there need help. The community which the Civilian Mobile Library locates is an old Beijing Hutong. Most of
the residents there are low-income people and have little chance to access to computer, not to mention computer literacy; b. The idea of building the library is helping people bridging the knowledge divide. Then why cannot it also be a place helping people bridging the digital divide? c. The library itself has problem. There are no computers and trainers for giving people training class. How can we solve this problem? We will give our suggestion in the report.

2 Defining the research problem

Introducing the Civilian Mobile Library

Civilian Mobile Library, or CML for short, was set up February 25, 2009 by Dawei Xu, who is a famous scheme expert, called the chivalrous swordsman among the “Mighty Three Schemes” in China advertisement domain; the winner of gold prize in China the First Ten Scheme-case Competition; one of the Beijing “Nation-study Four Brains”.

CML donates excellent books to people all over the world according to “internet library” and “entity library”, to increase human’s literacy cultivation and life quality. It reflects the mind of “public good, for free”. Mr. Xu is a typical example of “reading changes life”. He has been implementing the publicity of “reading changes life” for many years, paying for all the cost alone, which includes the purchase and post of books, house-rent, actions, employees and etc, rejects donation from any organization, person on any form.

CML reflects the features of “civilian” and “mobile”, spreads the mind of “reading excellent books, being excellent people”, donates excellent books to people for keeping, and also donates the latest best books to universities, communities, schools built through Project Hope, mountainous districts, destitute districts, old revolution districts, villages and all kinds of workers…so to raise the fervor of “reading everyone, spreading (books) everyone, donating (books) everyone, loving (books) everyone”; to make human’s intelligence and thought flow all over the world; to make human’s love and striving spirit spread all corners of the land; to stimulate people to read: to make contribution for our compatible society.

CML has been popular among college students and people who like reading, well supported by kinds of figures in China. The former vice-minister of China Culture Division made the name: Civilian Mobile Library.

CML welcomes all people, organizations joining our mobile library activities. Let’s promote the watchword “reading changes you, you change the world” together.

There are some important stages to CML. The programs “50 books going into communities” “book corner for hoping” “book for female” “poor families scholarly” were started. On 12-27-2010, the program “Scholarly community” was started in Andingmen Street Dongcheng District Beijing. Nine branches of CML with 1,300 books were set up on World Book Day(4-23-2011) in Andingmen Street. Today the CML has 3,000 books and one computer.

2 www.minjianliudongtushuguan.com
The location of CML. The red point in the map represents CML. It lies south of subway station of Lama Temple, about 10 minutes’ walk.

These signs help you find CML.
CML from the outside.

Inside the CML.
CML’s computer.

The research team at work in the library.
The research question

Our research question includes two aspects. On one hand, how does CML play an important role in information and knowledge dissemination in communities; On the other, how does CML help people access knowledge and enhance information ability. To solve these two questions, we need to utilize ICT. By using methods of ICT, we process message to realize our mission. Particular questions to answer also include:

1. Do the workers here need a help for computer literacy?
2. What kind of computer literacy do they need the most (office software, communication tools, searching the Internet for a job, kids’ education, family health…)?
3. Are they willing to join a training program during their spare time?
4. How does CML help people access knowledge and enhance information ability? What else can CML do to bridge the digital divide here?
5. How to solve the biggest problem——no computers?

Relevant literature

The literature that connects to this question is the newspaper for Civilian Mobile Library, whose editor is Dawei Xu. The content includes the ideas they publicize, the news about programs they hold (for example, they donate books to communities) and feelings from volunteers and readers. It claims it is “the precursory newspaper of civilian community”. To 7-23-2011, it will have its fourth publication.

3 D2 About our research tools and data collection

Our research tools are camera, MP3 (has a function of sound recording), pens and paper. We had interviews to librarians and readers. Due to jobs of books and information organization, we made plans to participate in the activities and assist CML to govern documents as volunteers. The preliminary appointed time is 1st August and 1st October this year. This is our succinct field work plan.

Every time we visited CML, we met and interviewed librarians and readers. For the first, we interviewed an old librarian and recorded the conversation by MP3. The second time, we interviewed a young librarian and ten readers. During the visiting, we had photographed the comments visitors and readers left, who come from so many countries.

Interesting stories from the field

To tell interesting stories, nearly everyone visiting CML is. The visitors can be divided into two groups. One is tourists, a large amount of whom had visited Lama Temple, Confucian Temple and Imperial College. Full of curiosity, they sought and entered CML. Then they are moved by the deed every visitor can take 1 book away every 15 days with their name signed. The only requirement is you would send the book to another man who is in need of it, if possible, to 5-10 men, then the book is mobile, and the its value has fully exerted.

The other is natives, who live in the community. They often go to library to read. During our visiting, we met a couple of sisters reading, about 10 years old. Give an example we had interviewed. An old lady, 67, though eye sight is bad, she insists on coming.
4 D3 Digitization

As we mentioned before, we use camera, MP3, pens and paper as our research tools. The pictures we took in CML by our camera, the voice files recorded by MP3 during our interview were born digital, and the film we took by our camera was born digital. Meanwhile the interview records, the questionnaires were not digital. So we use WORD to digital our interview records, use Excel to digital the questionnaires.

Also, we collected some reports, articles, publications about/of the CML, some were born digital, like PDFs, web pages, etc, others are printings or handwriting, so we took photos of these materials to digitalize them.

5 D4 Data Analysis

We think the type of users, education, age, computer experience, way to get information can affect patron's attitude to ICT. So we interviewed patrons in CML, surveyed patrons there using the questionnaire, try to find some patterns.

This is the construction of patrons in CML. About 70% are tourist, and 30% are native.

From our data, we found 70% of the users are tourist, not native. This is mainly because CML locates near Lama Temple where a lot of travelers there, most of they follow the sign to CML. CML is opened not very long, and is not well known by the patrons outside the neighborhood, so the native users are few now. But we believe more and more native users will come to CML as more and more people get to know CML.

Meanwhile, we found that about 50% of the patrons are between 20 and 40 years old, they are the major users of the CML.
This is the age distribution of patrons in CML. About 50% are between 20 and 40.

This is the computer literacy of patrons in CML.

And our data shows that patron younger than 20 learn computer for the first time by their family, on the other hand, most of other people are taught in school.
This is the way patrons in CML first learn using computer.

In addition, 42% patrons use computer for entertainment, only 5% use computer for searching information.

This is what patrons in CML using computer for.
When we look deep into how these patrons get information or knowledge, we found that it differs between ages. Most of the youth get information from internet, and seniors get information from traditional media, like reading books, printing newspapers, magazines, listening broadcast or watching television programs. Youth are mainly born in an information age, they get used to live online, get information, connect friends, have fun, etc. On the other hand, seniors are get used to read and communicate offline, it’s hard for them to change their habits. Although some of them know how to use computer, they prefer to communicate in real world where they think is safer. On the other hand, some of them have trouble in using computer or even do not know how to use computer, they need someone can help. And it is interesting that teenagers get information from traditional media more than internet. It is meanly because their parents believe internet and computer are not good for their children, so they encourage their children to read more books instead of surfing the internet.

We analyses the computer literacy of patrons. Our data shows that 70% of the patrons between 20 and 40 believe they are master users, and all of the patron younger than 20 and between 40 and 60 believe they are basic users. For about 50% of the patrons are between 20 and 40 years old, most of them are master users, so master users take up 60%.

This is the major information channel distribution of patrons in CML.

CML provides a reading room for patrons to read books, there are chairs and desks, it has setted up a wireless network there too. So patrons can bring their laptops there to deal with their own work. We asked patrons if they have digital device that can connect internet with wifi, then we got our data. It shows that most youth have these devices, like laptop, Tablet(as iPad), smartphone with wifi, etc. And seniors do not have such stuffs.
This is the Wi-Fi devices ownership of patrons in CML.

We asked patrons about their attitude to ICT training in CML. We get positive ones as well as negative ones. Most of the youth believe it is not necessary to have further training. Others who hold negative attitude said they don’t want to learn such things for they don’t live online. Some senior said he would attend some kind of ICT training if the time and place fits. All the teenagers want to take such training because they want to learn advanced computer and internet topics, not just startup or shutdown the computer.

This is the patrons’ attitude towards ICT training in CML.
As we see, young patrons, with high education, are likely to use ICT a lot, they know how to use computer, how to surf the Internet, their major channel to get information is Internet, in other words, they are netizens, they are digital rich. So they think it is no need to take any further training about how to using computer or surfing the Internet. They already know how to do, and can solve computer problems by themselves or through their social capital. Also we found that most of them have laptop or smartphone or other devices which can connect to wireless network. They can take their devices to CML to surf the Internet.

On the other hand, most of other patrons do not have such devices, but their willing to take ICT training is strong, according to our data. We think it is necessary for CML to provide public computing and train the patrons who are willing to learn. We believe that if CML provides computers to patrons for free, and teaches patrons who have trouble in using computer or even have no idea about computer, the gaps between them would be narrowed.

7 D7 Conclusion
Comparing with other mobile libraries or public libraries in China, there are some differences existing. This mobile library was founded by an entrepreneur Mr. XU for local native citizens reading books in a total open area as non-profit organization. CML is the first and special library in China. The differences are:

1. CML’s pattern is different from other mobile libraries and public libraries. In some communities, they cooperate with local libraries to build mobile libraries. So books are from this mobile library to the other library. The books’ proprietary rights belong to the local libraries not the readers. But in CML, books’ origins are from the entrepreneur and donate from other organizations. If reader takes one book away from CML, this book would not return. This book may be expected to be sent other reader. In another way, the library is a local places but with books ‘flow, there is a virtual library around citizens.

2. Books’ purchase and catalogue is different from others. In public libraries, there is a system for purchase and catalogue in order to manage these books and supply a certain books for readers. But in CML, there is on system of purchase and catalogue. Because the most readers are tourist from all over the world, so it’s difficult to make sure what readers most need. The librarians of CML just catalog the books with category on bookshelves.

3. Access to ICT is different from others. In other community libraries, public libraries, they offer a space for readers to access to ICT and get knowledge from the internet. Sometimes, they also hold a course of ICT for nearby citizens. However, in CML, although there is wireless network and a desktop computer, most of readers don’t choose this place to have an access to ICT. They just pay attentions on books. And the train of ICT never is held.

By contrast, there are some same points in all libraries. First of all, these libraries supply resources of knowledge to persons. Second, these libraries built a lot of platforms for readers’ reading freely. Third, these libraries also provide access to ICT so that promote citizens’ technology skills and wide their horizon by computers.

Although CML is a special library, it has some strengths and weaknesses compared to public libraries.
The strengths are:

1. The readers are various. According to survey, it is easy to find out that coming to CML, the readers’ ages are widest. There are old person, at the same time, also are young person here. So CML’s service could reach all level of people in society.

2. Mobility performs well. With the data of readers, most readers are tourists. So from books’ mobility, it performs well. Because that with books’ mobility, the knowledge of books could be spread to different levels of the society. In addition to that, these readers who are different ages, so mobility performs on different ages.

3. Space of access to ICT. Although the space of CML is smaller than other libraries, the environment suits for readers to have experiences of ICT here. A small quadrangle dwelling seems as an information common space to get on line and get knowledge from others persons who are from native also from foreign area.

However there also are many problem and weakness in CML:

1. Books here are not changed to digital data and management also has no digitizing. CML just was founded one year ago, so some digital devices do not fit. Also CML is shot of the librarians to do digital things. So in the future, CML call some volunteers to help them accomplish CML’s digitizing.

2. ICT is too small to use. This problem would be solved in future, because the manager said they have a plan to build other CML in different local places, meanwhile they could build a larger ICT space for readers to use.

3. It is necessary to build a mechanism to keep mobility of CML sustainably and play an important role in education of citizens. Now there is no a mechanism here to ensure whether books are flowing. CML just provide a access to supply books for citizens not deeply have functions on training and educations.

Finally, CML has a long way to develop in its’ pattern, books purchase, catalogue especial ICT. Even though CML has not much digital devices to offer readers to use, CML could be a bridge between readers and ICT. CML supplies certain space and wireless access to the internet, readers bring here with their own computers and volunteers would help some readers how to use computer and to find out what they want online. After solving the problems, In the future, CML would be a new model of community library where people get knowledge and information in a free, speedy, technological way.

Bibliography


Appendices

Questionnaire
Major information channels
Face-to-face interviews
Questionnaire process
Photos
Videos
**Questionnaire for CML (Civilian Mobile Library)**

Dear readers,

We are Community Informatics Research team members. Our research aims to survey the utilization of ICT in this Civilian Mobile Library and how to get information in daily life. We promise you data will be completely kept confidential and only used to research analysis. The survey will cost you only 5 minutes. Please give us some help for it. Thank you!

**Personal Information**

**Gender:**
- □ Female □ Male

**Type**
- □ Native □ Touris

**Age:**
- □ Below 19 □ 20-29 □ 30-39 □ 40-49 □ 50-59 □ More than 60

**Education Background:**
- □ Primary School and Below □ Middle school □ High School □ College
- □ Graduate School

**Occupation:**
- □ Student □ Lawyer □ Urban Worker □ Government Officer
- □ Corporation Manager □ Corporation Clerk
- □self-employed households □ Rural Migrant Worker
- □ Unemployed/ Laid off □ Retiree □ Others

1. **How do you know and come to CML?** (one-choice)
- □ The sign to CML □ friends □ Live nearby □ Newspaper
- □ Others (Please Note: _____)

2. **What basic information literacy you have?** (Multichoice)
- □ Reading □ Writing □ Phone □ Computer
- □ Internet □ Others (Please note: _)

3. **What’s the main information channels for your getting knowledge?** (Multichoice)
- □ Books □ Magazines □ Broadcast □ Television
- □ Internet □ Others (Please note: _)

4. **If you have time, do you want to library for getting information?** (one-choice)
- □ Yes □ No
5. How long do you use the computer?
Please Note: ______________________ years

6. What you use the computer to do?
☐ Study  ☐ Work  ☐ Entertainment  ☐ Others (Please Note: _____)

7. What software do you used?
☐ Office  ☐ Web Browser  ☐ Photoshop  ☐ AutoCAD  ☐ QQ  ☐ MSN
☐ Professional Software  ☐ Others (Please Note: _____)

8. If CML has ICT training, do you want to participate?
☐ positive participate  ☐ no need to participate  ☐ rely on spare time
☐ Others (Please note: ___).

9. What devices which can connect with WIFI do you have in CML?
☐ Ipad  ☐ Smartphone  ☐ Laptop  ☐ Itouch  ☐ Iphone
☐ Others (Please Note: __)

-----The End! Thank you! ^.^-----
**Major information channels**

### major information channel

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![Bar chart showing major information channel usage across age groups.](chart.png)
**Face-to-face interviews**

**Interview 1**

Interviewee: librarian of Civilian Mobile Library, female, bachelor degree, 23, didn't take library science training, 10 years' computer using experience, know how to use computer and some softwares like office and photoshop, owns a smartphone and ipad, seldom visits other libraries

Interview Content:

1. There are about 30 times of visit per day, including the inhabitants of the neighbors, as well as many tourists from all over the world, and most of the visitors are tourists.

2. The librarian is responsible for daily circulation affairs, and the content maintenance of the library's website. The web server of the library's website is in Hongkang, so the build, the design and the maintenance of the website is relied on a professional company, and the librarian is responsible for updating and maintaining the content.

3. Currently, the whole activities are not digitalized. They don't have a digital catalog of all the books they have, their loan records are not digitalized too. It is difficult for patrons to find what they need quickly and efficiently online and offline. It is difficult to track and analyze the operation of the library. They lack an efficient library integrated systems, which is cheap and simple to use, they lack the knowledge of library science, they lack enough people to record all the books in time especially with such a high circulation speed.

Observed:

A patron came there for books about Buddhism. He found one copy, but needed more. The librarian failed to give helpful suggestions. Instead, we helped him to retrieval the OPAC of the national library, and Amazon websites and offered more channels to get what he want.

**Interview 2**

Interviewee: patron, female, bachelor degree, 67, retired, has computer using experience

Interview Content:

She visits Civilian Mobile Library every other day after she moved to the neighborhoods. She has a computer at home, but seldom uses it. It is because she is not familiar with the keyboard and can not read the characters on the screen with her poor eyesight. She knows how to surf the net, how to use the browser, but she doesn't like it and seldom to. For she believes that most things in the Internet are artificial, she prefers face-to-face communication. Her children tried to help her to use the Internet, but she didn't want to learn. The major channel for her to get information is through the traditional media, like books, magazines, broadcast, television, etc. And she has no desire to learn more about ICT.

**Interview 3**

Interviewee: patron, male, master degree, over 50, professor, major in philosophy, over 10 years' computer using experience

Interview Content:
It is his first visit to Civilian Mobile Library, he passed by and noticed the library. He has a computer at home, can connect to the internet. He uses his computer to receive and send emails, but seldom surfs the net to read news or do other tasks. His major channel to get information is through reading books as well as from his friends. He used to go to libraries to borrow books, but currently prefers to buy books instead. He said he would attend some kind of training about ICT if the time and place fits.

**Interview 4**

Interviewee: patron, male, bachelor degree, about 20, student, major in civil engineering, nearly 10 years' computer using experience

Interview Content:

It is his first visit to Civilian Mobile Library; he passed by and noticed the library. He spends a lot of time surfing the net to study and have fun. His major channel to get information is through surfing the net. He often visits the library of his school. He thought there is no need for him to take any training of ICT.

**Interview 5**

Interviewee: patron, female, bachelor degree, about 24, white collar, major in architecture, over 10 years' computer using experience

Interview Content:

She works nearby, and it was her third visit to Civilian Mobile Library. She uses computer a lot during her work, and spends her off-hour surfing the net to study and have fun. She seldom visits other libraries, for she thought it's more convenient to buy books than to borrow. Her parents can use computer too, they like play on-line games. When they have problems with computer, they would like to ask their friends for help rather than her.
II. Commercial Sites

Starbucks Coffee team, L to R: ZHANG Yuanrui, WANG Sufang, HE Yingfang, LI Ping

Dang-ze Cybercafé team: SU Long, ZHANG Xiaohua, WANG Rihua, MING Fei
4. What Roles Does Starbucks Coffee Play as a Public Computing Site in China?

WANG Sufang 王素芳
Assistant professor, Zhejiang University, sfwang2005@zju.edu.cn

HE Yingfang 何颖芳
PhD student, Nankai University, kekegu1118@163.com

LI Ping 李萍
Undergraduate student, Nankai University, and graduate student, SUNY-Albany (Fall 2011), leeping130@mail.nankai.edu.cn

ZHANG Yuanrui 张原瑞
Master’s student, North-West University; zyr@nwu.edu.cn

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Thanks every customer in Starbucks Coffee who filled in our questionnaires. Without their information, we could not finish the research.

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A special thanks to our Chinese instructor HAN Shenglong in Peking University. Dr Han do a long-time preparation for this summer school and took good care of us.

Thanks to the guest lecturer YAN Hui from Nankai University, he set a good example for us with his research on digital inequality.

Thanks to all the classmates in this summer school for ideas, materials and passion they shared with us.

1 Introduction
As the rapid development of the computer technology and the internet spreading among people, a new conception called digital divide has been proposed. “The digital divide refers to the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access information and communications technologies (ICT's) and to their use of the Internet for a wide variety of activities. It includes the imbalance both in physical access to technology and the resources and skills needed to effectively participate as a digital
citizen.” Consequently, the key problem is how to bridge this gap and researches have been performed to seek the solutions. Public computing is one of the solutions to this problem.

What’s public computing? According to Professor Kate William and Abdul Alkalimat, all the settings for using ICT apart from home or work could be called public computing. They think public computing is located in four kinds of sites: governmental sites (schools and libraries), community (schools and churches), commercial (schools and apartment complexes), and universities. Kate Williams further investigated the public computing site across the United States. She estimated that there are between 85,000 and 144,000 public computing sites across the country, these including but not limited to: Public libraries; Internet cafés; telecenters (community technology centers); copy shops; day care centers; community centers; Laundromats; hospitals; apartment complexes; museums; and, government offices.

In China, according to the Internet Development Statistics Report 2011, published by CNNIC each year, there is a large digital divide between different communities, like low-income and high income, the young and the old, just as other countries. There are some kinds of community organizations with ICT and relevant services who possibly could contribute to solve this problem. Such organization includes public library, especially thousands of public electronic reading rooms set up by National Cultural Resources Sharing Program funded by Chinese Ministry of Culture from 2010 to the future in the countryside; community service centers, such as 400 Shang Eastern Community Information Centers set up by Shanghai government in local community which not only have computers and Internet access, but also have digital resources and special computer training class for senior, rural migrant worker; Commercial sites, such as Cyber Café, Starbucks coffee, KFC, other Cafe; and other public places where people could use computer or Internet, such as airport waiting room. However, we knew very little about them for computing services. Who are their users, what computer or Internet services they supply, how they operated, whether or not they could help Chinese people with ICT access and use and help to shrink the digital divide. All these questions need an answer.

As a research team in Community Informatics Summer School, we chose Starbucks Coffee, this commercial site as our case study. The main reason for this choice is that Starbucks seems very visible and popular among people in big cities in China. It is some kinds of a public space for people who want to relax, chat, stay alone and use computer. We wondered whether it could be a special computing site compared with the traditional ones.

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6 来源 http://www.cnnic.cn/dtygg/dtgg/201101/P020110119328960192287.pdf
7 Note: according to statistics on Chinese Librarianship, there are about 72150 computer terminals in electronic reading room of our county and upper level libraries till 2009. Chinese librarianship Yearbook. 2011.
8 文化部办公厅关于印发《公共电子阅览室建设试点工作方案》的通知[EB/OL]. [2011-7-26]. http://huodong.ndcnc.gov.cn/yuelanshi/file/6587531690e1e8529e516c538551734e8c537053d1300a516c51717535b50960589e585a45e1a1bbbe80d507895de545c665b6848300878640917e5.doc/
Our research team is composed by Dr WANG Sufang, HE Yingfang, LI Ping and ZHANG Yuanrui. We are individually in charge of some tasks (see appendix 1). We will use D7 method\(^\text{10}\) taught by Abdul Alkalimat and Kate Williams to structure our research.

2 Starbucks Coffee’s history and current development in China

2.1 History and Current Development in China

The Starbucks coffee company was founded in 1971, and was the world's leading special coffee retailer, roasters and brand owners. The company had set up more than 13000 coffee shop houses with more than 145000 employees in 39 countries in the North America, Latin America, Europe, the Middle East and the Pacific coast.

China is the most important, and potentially the largest, market for Starbucks outside North America. Since the opening of the 1st Starbucks store in Taiwan in March 1998, Mainland China in Beijing in January 1999, there have been near 500 stores in China, including Mainland China, Taiwan, Hong Kong and Macau. There are now over 230 stores in the Mainland, among them 74 are located in Beijing, distributing among 9 districts, as shown in table 2 and Figure 1.

Starbucks is fully respectful of the long history of Chinese tradition and culture and integrate the Starbucks experience with local customs as a responsible Chinese enterprise citizen. In September 2005, Starbucks sets up a 5 Million US dollars nationwide China Education Project to help improve education in the comparatively underdeveloped western and central areas.

<table>
<thead>
<tr>
<th>Locations</th>
<th>Number</th>
<th>Location Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haidian District</td>
<td>9</td>
<td>Almost all Starbucks coffee located near or in Shopping mall,</td>
</tr>
<tr>
<td>Chongwen District</td>
<td>2</td>
<td>Department Stores, hotel, Office Buildings, and luxury residential Where usually there are many crowds</td>
</tr>
<tr>
<td>Xicheng District</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Dongcheng District</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Chaoyang District</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Changping District</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fengtai District</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Shunyi District</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Xuanwu District</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>74</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 Starbucks Coffee Locations in Beijing as of July 2011. Source: [http://www.starbucks.cn/store/store-list.html](http://www.starbucks.cn/store/store-list.html)

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2.2 Mission

The Starbucks Company aims to establish Starbucks Coffee as the Premier Purveyor of the Finest Coffee in the World by maintaining the following guiding principles:

- Provide a great work environment and treat each other with respect and dignity
- Embrace diversity as an essential component in the way we do business
- Apply the highest standards of excellence to the purchasing, roasting and fresh delivery of our coffee
- Develop enthusiastically satisfied customers all of the time
- Contribute positively to our communities and our environment
- Recognize that profitability is essential to our future success

For a long time, the company has been dedicated to provide customers with the finest coffee and services, create a unique "Starbuck experience", making Starbucks coffee houses the warm and comfortable “third life space” for people all over the world outside their workplace and habitation.

2.3 Internet services development

Starbucks supplied wireless network in 1200 chain stores in North America and Europe in 2002. At the beginning, the Starbucks supplied conditionally free network service—free for the first two hours, $3.99 each hour after that. This service is competitive in the first several years, but as time goes on, the wireless network service became popular among other cafés. In order to get more customers, the Starbucks began to supply free wireless network service from 2008 on.
They put network service into Chinese market in 2003. At first years the network service is limited in the stores only in several stores, like Beijing, Tianjin and Shanghai. In 2008, the Starbucks cooperated with AT&T, and began to supply free network service in some stores. In 2010, Starbucks and China Mobile jointly launch free wireless internet access service. Customers who have PC can search wireless signal of CMCC-STARBUCKS. When getting connected with the Internet, the page will pop up a Portal. When the customer put its name on it, and click the button for passwords, then the user name and passwords will send to your mobile phone as a text message. When you login with the user name and password successfully, you will come to the Starbucks home page.

Figure 1 WLAN service process of Starbucks Coffee

3 Research questions and assumptions

Based on the above geographic and other information, we found that almost all Starbuck coffee are located in busy section and nearby the Shopping mall, supermarket like Carrefour China, Department Stores like Juntai Department Store in Xidan district and New World Department Store in Chongwen District, hotel, Office Buildings, luxury residential and subway station where usually are crowded with people. It seems that it’s market-driven and much closer to rich people as a commercial organization.

As for computing, people need to bring their own PC in and usually you will buy a cup of coffee which usually cost 10 to 40 Yuan. There also seems some culture or psychological distance if we took Coffee consuming as a kind of fashion thing in China into consideration.

Considering poor people who often lived in poor areas and could not afford a computers and other fashion expenditure, we want to deeply address on the following questions:
1. Is Starbucks an appropriate ‘public’ computing site? Which social group Starbucks Coffee supply computing service for? As a public space and commercial organization, What role does it play in public computing? Why?

2. As one of public computing sites, could Starbucks Coffee help shrink or even widen the digital divide in China? Why?

4 Research Methodology

4.1 5W Theoretical Framework for

The public computing is one of the most important concepts in this research. Generally speaking, any public computing site could be clearly explained by this framework. 5W theoretical framework was used to structure the data collection and analysis.

In detail, 5W means that who (who is involved, who is the public coming into the site, who give help in this site for computing), where (where the site located, in the low-income or high-income community), what (what the public used computer and internet for, what the staff do to help the public with computer and internet using), how (how the public and staff or employees use computers and Internet), why (why the public and staff behave like this or that, why they come here to use computer and Internet, why the site supply free or charged computing services).

4.2 Data Collection

Three data collection techniques were used: observation, informal interview and questionnaire survey. We used these three methods to triangulate our data and finding (as figure 2 indicated). Background and historical data on Starbucks Coffee and its Internet services were obtained through published documents (research articles, mass media report, information on its website and annual report about its development) as well as informal interview with the employees in Starbucks Coffee.

![Figure 2 Triangulating three methods](image)

According to the above location information of Starbucks Coffee in Beijing, nearly all of them were located in or nearby shopping mall, super market, office tower, and luxury residential. Therefore, it is possibly not very important what sample site we choose for case study. So we randomly chose three sites, one located in Chongwenmen District, the other two in Haidian District. We paid visits to all of them, observed the behavior of customers and employees and internal and external and outside environment of the Café and taking some notes. We visited the Chongwenmen Starbucks twice, one on July 11, 2011 for pilot study, another on July 19, 2011 mainly for customer survey by questionnaire. The detailed information and stories about three case studies are as table 2 indicated.
<table>
<thead>
<tr>
<th>Case Study</th>
<th>Name and Address</th>
<th>Time period of our survey</th>
<th>Research Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 1</td>
<td>Chongwenmen Starbucks</td>
<td>3-5pm July 11, 2011</td>
<td>Observation; informal Interview(Customer and Employee); Customer Survey by Questionnaire</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7-10pm July 19, 2011</td>
<td></td>
</tr>
<tr>
<td>Site 2</td>
<td>Dinghao Starbucks</td>
<td>6-7pm, July 18, 2011</td>
<td>Observation; Customer Survey; informal Interview(customer)</td>
</tr>
<tr>
<td>Site 3</td>
<td>Carrefour China Starbucks</td>
<td>7-9pm, July 18, 2011</td>
<td>Observation; Customer Survey</td>
</tr>
</tbody>
</table>

Table 2 Three Case studies on Starbucks Coffee in China

The most focused data collection occurred in our case study by surveying customers in Starbucks Coffee. We designed two questionnaires on customers’ computer and internet use in Starbucks Coffee. One is in Chinese, the other in English for foreigners. The demographic information are included in the questionnaire which are mostly borrowed from 2011 CNNIC survey on Chinese Netizens so as to do some comparative study with it. We delivered 58 questionnaires altogether in all three case study sites and got them all back. Based on validity and reliability analysis, all of them are valid ones. The respond rate is 100%.

4.3 Three Case studies and stories happened

4.3.1 Case study one Chongwenmen Starbucks Coffee

Our First Visit, 1:30-5:00 pm in 11 July. We paid our first visit to Chongwenmen Starbucks coffee on July 11, 2011. We did some observations here from 1:30 to 5 pm on its environment and flows and behaviors of customers. We also did some informal interview on some employees there.

The internal and external environment. Chongwenmen Starbucks is located in the first floor of New World Department store, a relatively prosperous lot which the entrance of the Chongwenmen subway station is not far from. It is next to the Haagen Dazs and RBT, the beverage stores for the consumption of Petty groups.

There are two floors in this store. Customers can grab some newspapers and fashion magazines from the corner of the stairs, reading under the sound of European and American classical music. Comfortable, enjoyable, cozy, these are the very words to describe the social gathering place, the combination of global fashion and local culture that Starbucks has created.

Observations on Customers. We found considerably large amount of people (more than one third of customers) came to Chongwenen Starbucks for computer use or Internet access. They use their own computers. On the wall of the store, there was some Internet access guidance. However, when the observation were conducted, a customer in Chongwenen Starbucks store asked a waiter how to use her laptop to access the Starbucks network, and the waiter patiently showed the way and then leave after making sure she can connect it successfully.

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According to our observations, people using computer or Internet would usually spend more time (at least one hour) in the store than those who dropped in to have a chat or refresh themselves, most of them left the store in less than an hour.

Besides computing behaviors, most of people (about 70%) are coming for relax or dating with friends.

<table>
<thead>
<tr>
<th>Patron behavior</th>
<th>Number</th>
<th>Stay period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using computer</td>
<td>36</td>
<td>More than half hour</td>
</tr>
<tr>
<td>Relax (like reading newspapers)</td>
<td>9</td>
<td>Half hour of less</td>
</tr>
<tr>
<td>Chat</td>
<td>59</td>
<td>Half hour of less</td>
</tr>
<tr>
<td>Total</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Default</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 What people do in Starbuck Coffee from observation in Chongwen Starbucks from 1:30 to 5 pm. July 11, 2011

Informal interview with employees. Most of the staff refused our interview requirement with the excuse that it was not the appropriate time or they just didn’t have any time to answer our questions.

The only one who accepted our interview was a newer cleaner who began to work here less than half a month ago, therefore barely knew little about the store. But we still got some useful information by talking with him. He told us that most of the customers here are about 30 or more years old with middle and even higher living standard. He also said there were as many as Chinese people and foreigners among the customers, and there are more foreigners in the morning and evening. We also got to know that people came here mainly for chatting, Internet access and drinking coffee. There are more customers on weekend. The rush hour in week day is in 1-2 at noon and 4-5 in the afternoon. The store could sell 300-500 cups of coffee everyday.

Our Second Visit, 7:00-9:30 pm 19 July, 2011. We paid our second visit to the Chongwenmen Starbucks on the evening in July 19, 2011, we did questionnaires towards 30 customers. The details for the customers will be showed later. And what we want to address here is the observation results from it.

The flow rate is obviously smaller than that in the first time. It is probably because the different time we paid two visit. The international customers are not as much as what the employee stated as well. But there are still some customers from Germany, Canada, and Hongkong. It seems that Starbucks Coffee has some loyal customers all over the world.

Most interestingly, we accidently met a business man who is very interested in our research data and even wanted to buy the data. Our team leader rejected it resolutely for what we promised to keep confidential of subject information, but two team members are excited about it for the value it may have in reality not just in research. This business man told us he had begun to consume coffee in the Starbucks since 1999. According to
his observation and opinion, Starbucks allowed every one to come into their store, but in reality, persons who dare to come were usually with higher income. Actually, the market strategy of Starbucks is mainly focused on young and middle and upper class. He also told us why two Starbucks stores located nearby RENMIN University of China were closed in Haidian District. He said it is mainly because too many college students came there. Starbucks is very popular among college students, but they have no income, and always consume little but stay very long in the store so that affected its sales. When asked why there are 35 stores in Chaoyang district but only 9 in Haidian Strict which were full of higher income computer and technical professionals and researches with higher education background, he said it was because Chaoyang District are more commercial-focused, there were many business man there.

Last but not least, we accidently found that all the electronic plugs supplied ago are sealed. People could not use electronic plugs there so they may not stay longer for computer use. It seems that Starbucks is not as supportive as it advocated to internet access as a public computing site.

4.3.2 Case study 2 Dinghao Starbucks Coffee, Haidian District
We visited this site from 6:30-7:30 pm on July 19.

The internal and external environment. The HaiDian DingHao Starbucks lies in the southwest corner of first floor in the DingHao Electronics Mall with an unidentifiable Logo. Only a few people get into the store in spite of the relatively large storefront and the short distance from it to the cafes and fast food restaurants in its opposite.

Informal Interview on Employees and Customers. The manager, a nearly 25-year old young lady, rudely refused to be interviewed with reasons that she was very busy. She even did not allow us to do the survey on other employees and customers inside the Coffee. She told us the Head quarter of Starbucks monitor what they are doing every minute by camera. So we decided to wait outside the door and do the survey nearby. Fortunately, four customers kindly agreed to fill out the questionnaires for us. Among them one is a former student in Peking University; the other two are from Hong Kong.

We then interviewed the two customers from Hong Kong. They said they knew little about computing service in mainland and they are apparently surprised at free access to the Internet here. They told us people could only use Internet for 20 minutes everyday without charge in Starbucks of Hong Kong, so they seldom used the Internet in this site.

Our second interviewee, the former PKU student, never used the Internet in Starbucks though she frequently came to Starbucks and knew she can use it. The reason why she did not use it was that she was not sure whether she needed a specific account or a pay password.

Obviously, Starbucks needed to give more instructions of the Internet access to customers to improve their service.

4.3.3 Case study3 Starbucks Coffee nearby Carrefour China, Haidian District
We visited this site from 7:30-9:30 pm on July 19.

The internal and external environment. The Starbucks café lies in the Carrefour Supermarket has a large space. Compared to the store in Chongwenmen, it is more private. There is even some isolated space for lovers. Outside the store, there are
several other café, dinning canteen, and clothes stores. And it is close the subway line 5. But currently the entry for subway line 5 is closed.

There were few customers there when we visited. The space here is much spatial, and the internal environment is very quiet. Later there are some foreigners coming, but all of them bought take-away coffee and left.

Because of the experience in Dinghao store, we did not ask the employees for permission. We did questionnaire survey towards about 17 persons. The details for them will be showed below. When doing survey, we informally interviewed two Japanese customers and they told us that they have to pay for the Internet service of Starbucks in Japan, so they assumed that the Starbucks (as a global enterprise) in China would also charge the customers for their Internet access.

5 Survey Data Analysis and Findings

5.1 Who involved in Starbucks Coffee computing?

Who are the users of computing is one of most important perspectives to examine the public computing site and its role in helping overcome digital divide among different communities.

According to our survey, as chart 1 shown, most of customers (approximately 86.2 percent) came from mainland. Nearly 13.8 percent are from Taiwan, Hongkong and abroad, like Japan, American and Germany. Based on this and the observation, it could be estimated that Starbucks partly met some foreigners’ need.

There is not much difference in gender among customers of Starbucks Coffee, as chart 2 indicated. But from the observation results in Chongwenmen Starbucks case study, female is slightly more than male customers.

Chart 1: Customer’s nationality structure in Starbucks Coffee
Chart 2: Customers’ gender structure in Starbucks Coffee

As chart 3 shown, most of the customers (86.44%) are younger person, aged from 20-39. 6.78 percent are teenagers. Only less than 6 percent are middle aged people. Compared with CNNIC 2011 report, such groups are the main components of Chinese netizens. Most of them have better computer literacy and awareness.

Chart 3: Customers’ age structure in Starbucks Coffee

The most important aspect about public computing users is probably the social structure people belong to. One’s position in the social order is determined by class-based factors such as income, occupation, family background, educational attainment, geographical place of residence and life history. Based on information shown in Chart 4, Chart 5 and Chart 6, we could conclude that most of the customers involved in Starbucks Coffee are belong to middle class and upper class in China.

As Chart 4 shown, there are more than 27 percent of customers whose monthly income over 8000 Yuan, Nearly 40 percent over 5000 Yuan, and nearly 19 percent have 3000-5000 monthly income. Compared with average annual income of people in Beijing (as shown in table 5), nearly 59 percent of the customers in Starbucks belong to middle-income and higher income group. Another 30 percent with no income all are students

from university or high school. Only about 5 percent of people have middle low or low-income.

Chart 4 Customers’ Income structure in Starbucks Coffee

As Chart 5 shown, more than 91% percent of the customers have higher education background which partly made them found a decent and white collar occupation as indicated in Chart 6.

Chart 5 Customers’ education structure in Starbucks Coffee
According to chart 6, university students are obviously the main customers for computer and Internet access (about 34 percent of the total sample), followed by business man, like corporation clerk, business owner and self-employed, and persons in government organizations. Surprisingly, there are some unemployed people here, but very few.
<table>
<thead>
<tr>
<th>Item</th>
<th>Total</th>
<th>Low Income 20%</th>
<th>Medium-Low Income 20%</th>
<th>Medium Income 20%</th>
<th>Medium-High Income 20%</th>
<th>High Income 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Gross Income</td>
<td>30674</td>
<td>14111</td>
<td>21931</td>
<td>27375</td>
<td>34809</td>
<td>57456</td>
</tr>
<tr>
<td>Annual Disposable Income Per Capita</td>
<td>26738</td>
<td>11729</td>
<td>18501</td>
<td>23475</td>
<td>30476</td>
<td>50816</td>
</tr>
<tr>
<td>Emolument</td>
<td>20537</td>
<td>10006</td>
<td>16094</td>
<td>18797</td>
<td>24020</td>
<td>38015</td>
</tr>
</tbody>
</table>


In conclusion, we could tell the main features of customers in Starbucks Coffee: young, higher-educated, and middle and higher incomed. The survey results are as similar as our observation and proved our assumption. Customers enjoy the computing service mainly are:

1. Young people, most aged 20-39; some are teenagers from school; the others are students from college and university or white collars from government agency and other company.
2. Middle class and upper class.
3. Partly meet the foreigners’ need.

5.2 What did people come to Starbucks for?

As the chart 7 shown, people going to Starbucks are mainly for drinking coffee, chatting with friends and business talking. Only six people said they are mainly for computing in Starbucks. This result is much different from our observation in Chongwenmen Starbucks Case study. In our case study, more than 30 percent of customers are using computer there.

Considering the different time period (observation was done from 1:30 to 4:30 in the afternoon; survey done in the evening, from 6:30 to 10 pm) when we do our observation and survey in Chongwenmen Starbucks, this results maybe easily understandable.

But we did not know whether it is the problem of different time period or people have other computing site to use, or people did not have intention or need to use, so that they did not choose Starbucks as their first choice?
5.3 What other computer and Internet access sources do customers have?

Customers who came to Starbucks for computing usually had other computer or Internet access choice. The questionnaires of survey showed that 77.59% of people would choose use computer and Internet access at home, 39.66% would use it in the office, 24.14% prefer at school or university (which is frequently used network access point), 15.52% of people would prefer in library which is slightly less than those who choose at school or in university, 8.62% would use other Internet access such as KFC or airport, and 6.90% of people would go to a net bar which accounted as another option. In addition, there are 1.72% of people used Internet accesses in Starbucks exclusively, according to the questionnaires.
5.4 What did customers use computer and Internet in Starbucks Coffee for?

As indicated in chart 9, browsing news and website, dealing with E-mail and Social networking were the first three computing behavior for customers coming in Starbucks Coffee. Studying and doing research enjoying music and movies, and dealing with work were another three major computing behaviors in Starbucks which accounted for 20.69%, 15.52%, and 13.79% respectively. Fewer people did online shopping and playing computer games here.

Chart 9 Customers’ computing behavior in Starbucks Coffee

5.5 How did the customers connect into the Internet?

The Internet users in Starbucks used various digital tools to access Internet, among which the mobile (56.90%) including smart phone like iTouch was mostly used, laptop (44.83%) was the second choice, and the Internet Tablet PC such as IPAD (22.41%) was also popular. It seemed that people came here had higher computer awareness and could afford to such new digital tools.
5.6 How often do they come to Starbucks Coffee and use its Internet service?

25.86% of people came to Starbucks once a week. More than one third of customers came here less than four times per month. More than 38 percent customers went to Starbucks once half a year or less. Only 1.72% frequently chose to compute here.

Chart 10 Frequency of computing in Starbucks Coffee

5.7 Why did they come to Starbucks coffee to use its internet services?

Why and why not people came to Starbucks, this commercial coffee for computing. Chart 11 showed that more people(37.93%) usually were dropped in there, for example on business, travelling, or on the way to work or home. 27.59% were for its good environment. Only 18.97% went there for proximity, which, according to the data, was not a compelling reason.
5.8 What aspects are they unsatisfied with Starbucks Coffee and its internet services?

About the dissatisfactions and complaints: 31.03% of its users had problems with the noisy environment in Starbucks; 29.31% of them raised the issue of the slow network speed causing dropped lines and other troublesome conditions; 22.41% asked for a strengthened smoking ban in the store, and 10.34% worried about the Internet security, most unusually, 1.72% mentioned that there isn’t enough power outlets in the store.

![Chart 11 Worries for computing in Starbucks](image)

It can be seen from the data in section 5.3 that 98.28% of people had other places to use the Internet besides Starbucks, which indicated that these users had a variety of public network access points and Starbucks was not the only one option. The statistics in section 5.4 showed that although people came to Starbucks with various purposes, most of them were able to meet their needs by using the Internet spontaneously. For instance, work people came to Starbucks to deal with e-mails or other job stuff, and students came to Starbucks to study or do research through the access to Internet. The investigation from 5.5 pointed out that Starbucks didn’t provide network access equipment, and the customers had to bring their own Internet devices, so more than half of people in Starbucks shops used mobile, itouch or other tools, instead of computer.

In conclusion, we could conclude that According to the three parts of the statistical analysis above, it can be said that the group of people who came to Starbucks to use the network was the middle class social group with high computer and information literacy, and they can used Internet at will as the main body of Internet users in China.
6 Discussion

6.1 The public nature of the commercial organization as a computing site

6.1.1 The limited social group the commercial site focused on weaken its public computing nature

The term “public” is ambiguous. We could understand it from more than one perspective. For example, public is the opposite of private, like home and workplace is the opposite of a public space or a public sphere. The definition of public computing Kate Williams introduced is based on this aspect. However, public also could mean a general group of people. So, what do we mean by public computing when we talk about a place like Starbucks Coffee? From the section 5.1 analysis of Starbucks customers, we know that as a public computing site, Starbucks Coffee focuses mainly on certain social groups or some part of the public, that is, 1) young and 2) middle and upper class.

6.1.2 Whether or not they have real intention for public welfare affect its public computing nature

Another reason why we questioned the public nature of a commercial site as a public computing site is that even for the middle class, we saw that few people go to this site mainly for computing. Based on the observation, information interview and survey information, Starbucks Coffee’s profit-driven nature, profit driven intent to supply Internet access services may be what leads to this phenomenon. We saw that internet service is only an added service. As a commercial organization, it is profit driven. Better service made more profit.

When talking to why supply wireless Internet service, Vice president of MEIDA Café, LI Fuqiang told us, ‘LAN construction in our store is for advancing services. Nowadays, more and more younger people and business man prefer connecting to Internet, we hope we could give them such a comfortable, bright, and kind environment with music and Internet access. We hope more people could come to our store, and everyone coming here feel as comfortable as in his home as well, that is what we called ‘Starbucks Experience’”13 (From mass media interview)

Although Starbucks Coffee supplied Internet access service on the surface, as a commercial organization it seems not its real intention. Four customers we informally interviewed, two from Hong Kong, the other two from Japan and Mainland, all expressed they did not know Starbucks Coffee had free Internet connection. When we observed in Chongwenmen Store, we found the former good electronic plugs were sealed. One customer who said he was very familiar with Starbucks operation told us this maybe for preventing customers, especially students using the computer in the store for a longer time so as to make more people consume Coffee and food. Some customers we surveyed mentioned they hoped Starbucks to supply any or enough electronic plugs as well.

All this information seems to tell us that as a commercial site, they did not have enough intention and promotion to be a public computing site. The contradiction between profit-driven and public welfare seemed to weaken its public computing nature.

6.2 Roles commercial site playing as a ‘public’ computing

We knew that the focused customer, middle class people came to Starbucks even they had other computer and Internet access site, like home, office, and school or university library from our survey. From the high percentage of drop-in customers, people coming for receiving or sending working E-mail, students coming to find a place finish his homework or research, we could probably presume that, as a “public computing” site, the commercial site mainly met the emergent need of such group. There should be some social organization to meet such urgent need when such people are on business, travelling and in other urgent condition.

6.3 Need to redefine public computing with digital divide

As we all know, digital divide is the divide on computer, especially Internet access between different communities, region, and countries. Clement and Shade (2001) clarifies network, devices, software, service/access provision, content/services, literacy/social facilitation and governance as the measurements of digital divide. While Dimaggio and Hargittai (2001) stand in the view of patrons (not equipments), clarified access, skills, purpose of use, autonomy of use and social support as aspects of digital divide. Van Dijk (2006) agrees with Dimaggio and Hargittai, see it as succession of types of access: motivational access, material access, skills access and usage access. Usage access is the final stage and ultimate goal of the process of technological appropriation in the shape of particular application.

Public computing was raised to solve such digital divide problem. Therefore, it should make the digital or information poor had a place to access and use computers and Internet, to get help to advance their computer literacy. Starbucks as a commercial site did not have any computers for people including the poor to use and they usually did not give any formal help or training on computer and Internet access and use. Though it claimed they did not exclude any people entering the store, but people who did not have enough money for a cup of coffee were still marginalized. So even though we could not assert it widened the digital divide, we could partly conclude they did not help shrinking the divide between the rich and the poor in China setting based on its focused customers, services, and policy intention.

Therefore, it seems it is necessary that we redefined the public computing from two levels. One, in the general sense, public computing could be defined according to Kate Williams (2003) as any sites apart from home and work (the private); Another, in the special sense, public computing should be defined according to whether or not help the information poor fallen into digital divide. There must be three preconditions for such public computing site: first, they should focus on the poor or underserved people community; secondly, they should be equipped with computers and Internet access for public use; thirdly, they should give computer training free or with very little fee. Most important is that they possibly have to become leaning center with resources to help people with computer access and literacy.

7 Conclusions and Suggestions

We could draw the following conclusion from two perspectives: one from community organization and another from the public it served to sum up the pattern, nature and role Starbucks Coffee, this commercial organization, showed as a public computing site.
Customers using Starbucks Coffee for Internet access are usually young people with middle or high income and higher education. Most of them are students and business man. They had higher computer and information literacy and clear need for computer and Internet use. They usually had other Internet access sources, like home, office, library and other public space, so Starbucks coffee may not their first choice to Internet access unless in urgent condition, like they could not find other places to get work Email and finish their homework or study.

Kate Williams hypothesized that the four kinds of public computing fit three patterns in relationship to the social environment. Among them Community sites are located close to the opposite ends of the social spectrum, the rich and poor having community sites but not the middle strata. Commercial and university sites are located according to market demand, closer to upper income and students.14 Our research proved that the Commercial site like Starbucks Coffee, indeed are usually closer to upper income and student. But our research further indicated that commercial public computing sites are also located close to the middle strata and partly meet their need.

As a commercial site, the profit-driven nature limited its “public” nature as a computing site. They mainly met some urgent needs on Internet access for a much smaller and rich social section. Without computer, help and training course, and resources that people could rely on, commercial computing site could not take more role on reaching out to the disadvantaged people so as to shrink the digital divide.

If we really took public computing as one of most important solution to digital divide, we should redefine public computing in a special sense beside the general one. Any community organization wanting to take responsibility for narrowing the digital divide should turn into a learning center to advance the opportunity, literacy and ability to access computers and Internet so as to make a difference in poor people’s everyday lives.

As to Starbucks, they could put true and real effort to improve its Internet services, public awareness and focused customer group structure, such as making more people, especially workers, know about their free Internet service, advancing the Internet speed, supplying enough electrical outlets and so on.

8. Limitation and future study

There are some limitations in our study; we will make an improvement in future. First, the formal and official interviewing data of the manager and employer have not been collected for the uncooperative attitude of the store manager, and thus the structural and institutional case study lacked specific targeted samples.

Secondly, since the whole and complete result can not be deduced from the questionnaire data we have collected up to now, the design of the questionnaire need to be further revised.

Finally, amount of depth interview with Starbucks users and management side need to be conducted in our follow-up study, as well as the large-scale survey with the revised questionnaire.

Bibliography


http://www.starbucks.cn/store/store-list.html


中国互联网络信息中心 (CNNIC). 中国互联网络发展状况统计报告 2011[EB/OL][Access 2011-7-26].
http://www.cnnic.cn/dtygg/dtgg/201101/P020110119328960192287.pdf

图书馆年鉴编写组. 中国图书馆年鉴 2010. 国家图书馆出版社，2011。

文化部办公厅关于印发《公共电子阅览室建设试点工作方案》的通知[EB/OL]. [2011-7-26].http://huodong.ndcnc.gov.cn/yuelanshi/file/6587531690e8529e516c538551734e8e537053d1300a516c517175355b50960589c85ba45efa8bbe8bd570b95de54f5c65b96848300b7684901a77e5.doc/


Appendices

1. Task allocation among team members
2. Research instrument: patron questionnaire in Chinese
3. Research instrument: patron questionnaire in English
4. Starbuck locations lists in Beijing (in English and Chinese)
5. All data and metadata we collect by questionnaire survey and observation (please see the excel file)
6. Transcript of our information interview with one of the employees in Chongwenmen Starbucks Coffee
7. Some materials about price of coffee and food in Starbucks Coffee
8. Pictures taken in the three case study (please see the video file)
## Appendix 1 Task Allocation Among Team Members

<table>
<thead>
<tr>
<th>Role</th>
<th>Member in charge</th>
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<tbody>
<tr>
<td>Research question formulation; Research instrument(questionnaire) design; Data collection and analysis (questionnaire and some informal interview with customers); Report design and writing report proof-reading</td>
<td>WANG Sufang</td>
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<tr>
<td>Literature review; Data collection(questionnaire); part of report writing (case study 2 and 3 story and some data analysis) proof reading</td>
<td>HE Yingfang</td>
</tr>
<tr>
<td>Literature review; Questionnaire revision; Data collection(questionnaire); Case study 1 observation and recording and Case study 3 story writing in report; Picture taking;</td>
<td>LI ping</td>
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<tr>
<td>data input and digitalization; metadata production; Some data collection ; Part of case study 1 story writing in report acknowledgement writing</td>
<td>ZHANG Yuanrui</td>
</tr>
</tbody>
</table>
星巴克顾客网络使用情况调研

尊敬的星巴克用户您好！

我们是北京大学社群信息学暑期学校研究团队，希望对社会人群使用新技术情况进行调研。调研数据仅用于研究分析，承诺对外保密。调研将仅花费您5分钟时间。诚挚的恳求您给予调研协助。谢谢！

个人信息部分:
性别： □男 □女
国籍：中国（□大陆 □台湾 □香港 □澳门）国外（请说明：_____）
年龄： □19岁以下 □20－29岁 □30－39岁 □40－49岁 □50－59岁 □60岁及以上
月收入（元）： □无收入 □500以下 □501－1000 □1001－1500 □1501－2000 □2001－3000 □3001－5000 □5001－8000 □8000以上
教育背景： □小学及以下 □初中 □高中 □大学（大专、本科） □研究生
职业： □学生 □党政机关事业单位工作者 □企业/公司管理者
□企业/公司一般职员 □专业技术人员 □个体户/自由职业者
□产业、服务业工人 □农村外出务工人员 □农林牧渔劳动者
□退休人员 □无业/下岗/失业 □其他
居住区域： □海淀区 □西城区 □东城区 □崇文区 □丰台区 □朝阳区 □其他

1. 请问您平常来星巴克主要是为了做什么？（可多选）
□喝咖啡 □与朋友约会 □洽谈工作 □上网 □看书学习 □其他（请说明：___）

2. 请问您从什么途径获知星巴克可以无线上网的？（单选）
□朋友或家人 □星巴克网站 □大众媒体报道 □其他（请说明：___）

3. 除了星巴克，您经常上网的其他地址是？（可多选）
□家里 □学校 □单位 □图书馆 □网吧
□其他公共场所（请补充：___） □无其他可上网地点

4. 请问您在星巴克上网主要做什么？（可多选）
□收发电子邮件 □浏览新闻及其他网页 □学习和做研究 □工作 □打游戏
□听歌、看电影 □网上购物 □使用社交网络 □其他（请说明：___）
5. 请问您来星巴克上网的频率是？
□每天都来  □每周都来  □每月四次以下  □半年至少一次  □每年至少一次

6. 请问您选择星巴克上网的原因是？
□距离近  □环境好  □顺路  □其他（请说明： ）

7. 请问您在星巴克一般用什么工具上网？（可多选）
□笔记本  □手机  □平板电脑（如 IPAD 等）  □其他（请说明： ）

8. 请问您在星巴克上网不满意的问题有？（可多选）
□上网安全问题  □网速  □环境嘈杂  □其他（请补充： ） ——请转背面

9. 您最喜欢星巴克的哪一点？

10. 您觉得星巴克未来最需要在哪些方面做出改进？

——问卷到此结束，谢谢您的配合！
Questionnaire for Starbucks Patrons

Dear Starbucks Patrons,

We are Community Informatics Research team members. Our research aims to understand how communities use ICT in information society in their everyday life. We promise you data will be completely kept confidential and only used in research analysis. The survey will take only 5 minutes. Thank you for your help!

**Demographic Information**

Gender:

- □ Female  □ Male

Nationality

Of what country are you a citizen?

What is your ethnicity?

Age:

- □ Below 19  □ 20-29  □ 30-39  □ 40-49  □ 50-59  □ More than 60

Monthly Income (Yuan):

- □ No income  □ Less than 500  □ 501-1000  □ 1001-1500  □ 1501-2000
- □ 2001-3000  □ 3001-5000  □ 5001-8000  □ More than 8000

Education Background:

- □ Primary School and Below  □ Middle school  □ High School  □ College  □ Graduate School

Occupation:

- □ Student  □ Public servant  □ Business owner  □ Professionals  □ Corporation Clerk
- □ self-employed  □ Industrial and service workers  □ Agriculture and Water Conservancy worker
- □ Rural Migrant Worker  □ Unemployed/ Laid off  □ Retiree  □ Others

Living District:

- □ Haidian  □ Xicheng  □ Dongcheng  □ Chongwen  □ Fengtai  □ Chaoyang  □ Others

1. What do you come Starbuck Coffee for? (Check all that apply)

- □ Drink Coffee  □ Date with friends  □ Business talking  □ Internet Access  □ Learning and Reading  □ Others (Please Note: 

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2. How do you know you could have Internet connection in Starbucks? (please choose best answer)
   □ Friends or Family □ Starbucks website □ Mass Media □ Others(Please note:__)
   (Please turn back to continue)

3. Besides Starbucks, what places could you often have Internet Connection? (Check all that apply)
   □ Home □ School □ Office □ Library □ Cyber Café □ Others (Please note:__)
   □ No other choices except Starbucks

4. What you often do by using Internet of Starbucks? (Check all that apply)
   □ E-mail □ Work □ Shopping □ Browse news and websites □ Study or do research
   □ Computer games □ Music and Films □ Social Networking
   □ Others(Please Note:__)

5. How often do you use the Internet in Starbucks?
   □ Once a day □ Once a week □ Less than four times a Month □ At least once half a Year □ At least once a year

6. Why do you choose Starbucks as your computing site?
   □ Proximity □ Nice Environment □ Drop in □ Others(Please Note:__)

7. Which tool do you use for Internet Access in Starbucks?
   □ Private Computer □ Mobile Phone □ Tablet PC □ Other choices(Please Note:______________)

8. In which aspect are you not satisfied about the internet access in Starbucks?
   □ Internet Safety □ Network Speed □ Noisy Environment
   □ not enough electrical plugs □ Others(Please note:__).

9. What do you like best about Starbucks?

10. What one thing would you improve about Starbucks?

    -----The End! Thank you! ^.^-----
## Appendix 4: All Starbucks Coffee in Beijing

<table>
<thead>
<tr>
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<th>City/District</th>
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来源：http://www.starbucks.cn/store/store-list.html
Appendix 6 Transcript of an information interview with an employee in Chongwenmen Starbucks Coffee

Q: could you please tell us how long you work here?
A: more than ten days

Q: are you full-employed or part-time?
A: part time, I worked 8 hours every day.

Q: what qualification do person need to work here? do they required education qualification and work experience?
A: you have to had done some relevant work. High school above.

Q: when was this store open?
A: Er… I don’t know

Q: could you please tell us whether the manager are in the store?
A: I don’t know, you had to go downstairs to ask.

Q: Based on your observation, what’s the age structure of customers here?
A: middle and upper living level, 30 or more years old.

Q: are there more foreigners or Chinese?
A: half to half.

Q: But why we now see more Chinese?
A: because there is fewer Chinese, more foreigners. It depends on time period.

Q: when there are more foreigners?
A: In the evening and in the morning.

Q: there are more foreigners in the morning and evening, but more Chinese in the daytime, is it right? On your observation, what they mainly came here for?
A: chat, Internet access, and drinking coffee.
Q: we saw a sign, said” pay attention to our community”, could you please tell us what they had ever done about that?
A: Er⋯, I don’t know that, because I came her not very long.

Q: do they have any equipment for the internet connection? Like computer room?
A: in our behind, there is a computer room.

Q: apart from free internet connection, do they have any other services?
A: I don’t know what you mean.

Q: for example, activities on holiday?
A: activities? Yes, there are some.

Q: In your opinion, why Starbucks could attract so many loyal customers, what you are most confident in it?
A: Coffee smell and services.

Q: how many people are there in a day?
A: I’m not sure. They can sold 300-500 cups of coffee everyday.

Q: what is the rush hour here during a day?
A: there are more people on weekends. On week day, 1-2 pm at noon and 4-5 pm in the afternoon.

Transcript by LIPING, TRANSLATE BY Wang sufang

Appendix 7 Price of coffee and food in Starbucks
星巴克咖啡种类：

一、星冰乐咖啡系列
- 冰摩卡（超大）¥34 冰摩卡（大）¥31 冰摩卡（中）¥28
- 冰摩铁（超大）¥31 冰摩铁（大）¥28 冰摩铁（中）¥25
- 冰美式咖啡（超大）¥27 冰美式咖啡（大）¥24 冰美式咖啡（中）¥21
- 冰香草拿铁（超大）¥36 冰香草拿铁（大）¥33 冰香草拿铁（中）¥30
- 冰焦糖玛奇朵（超大）¥35 冰焦糖玛奇朵（大）¥32 冰焦糖玛奇朵（中）¥29

二、星冰乐无糖咖啡系列
- 焦糖星冰乐（超大）¥34 焦糖星冰乐（大）¥31 焦糖星冰乐（中）¥28
- 巧克力星冰乐（超大）¥32 巧克力星冰乐（大）¥29 巧克力星冰乐（中）¥26
- 抹茶星冰乐（超大）¥36 抹茶星冰乐（大）¥33 抹茶星冰乐（中）¥30
- 香草星冰乐（超大）¥32 香草星冰乐（大）¥29 香草星冰乐（中）¥26
- 焦糖咖啡星冰乐（超大）¥34 焦糖咖啡星冰乐（大）¥31 焦糖咖啡星冰乐（中）¥28
- 咖啡星冰乐（超大）¥31 咖啡星冰乐（大）¥28 咖啡星冰乐（中）¥25
- 芒果茶星冰乐（超大）¥34 芒果茶星冰乐（大）¥31 芒果茶星冰乐（中）¥28

摩卡咖啡星冰乐（超大）¥34 摩卡咖啡星冰乐（大）¥31 摩卡咖啡星冰乐（中）¥28
- 摩卡咖啡星冰乐（超大）¥34 摩卡咖啡星冰乐（大）¥31 摩卡咖啡星冰乐（中）¥28

三、冰饮系列
- 美式咖啡（超大）¥27 美式咖啡（大）¥24 美式咖啡（中）¥21
- 卡布奇诺（超大）¥31 卡布奇诺（大）¥28 卡布奇诺（中）¥25
- 香草拿铁（超大）¥36 香草拿铁（大）¥33 香草拿铁（中）¥30
- 摩卡（超大）¥34 摩卡（大）¥31 摩卡（中）¥28
- 拿铁（超大）¥31 拿铁（大）¥28 拿铁（中）¥25
- 焦糖玛奇朵（超大）¥35 焦糖玛奇朵（大）¥32 焦糖玛奇朵（中）¥29

四、糕点面包系列
- 凯撒鸡肉卷¥28 吞拿鱼三明治¥19 烤鸡三明治¥19 巧克力松饼¥12
- 蓝莓麦芬¥12 焦糖布丁面包¥12 法式牛角面包¥12 圣诞小鹿蛋糕¥16
- 蓝莓芝士蛋糕¥22 荷桃舒芙蕾蛋糕¥18 纽约芝士蛋糕¥22 经典巧克力蛋糕¥24

浓缩咖啡
- 中杯价格：22.00 元 小杯价格：17.00 元
- 这是咖啡的灵魂，是咖啡精华最集中的体现。星巴克浓缩咖啡口味醇厚，有宛若焦糖的奇妙妙味。

拿铁咖啡
- 大杯价格：26.00 元 中杯价格：23.00 元 小杯价格：19.00 元
- 这是星巴克引以为豪的经典。这款传统经典——浓郁的浓缩意式咖啡和奶泡相融合，使其上覆盖一层细腻的奶油泡，品赏这种咖啡时，你可以佐以糖浆（根据自己的口味，选择香草等）。制作出风味绝伦的饮品。

卡布奇诺
- 大杯价格：26.00 元 中杯价格：23.00 元 小杯价格：19.00 元
- 这款咖啡沿袭传统法，由技艺纯熟的咖啡师在手工制作的热奶中，再在浓缩咖啡之上制作而成。

摩卡咖啡
- 大杯价格：29.00 元 中杯价格：26.00 元 小杯价格：23.00 元
- 这款咖啡由醇香的摩卡巧克力糖浆、浓缩咖啡与蒸奶相溶，好似打奶油，状如白云漂浮其上，寒冷的日子里，忧伤的时光中，任何人都无法抵挡它的诱惑。
美式咖啡
大杯价格：23.00 元 中杯价格：19.00 元 小杯价格：16.00 元
尽管名为美式咖啡，但此款饮品却是一种地道的欧式咖啡制作方法：即将热水和浓缩咖啡的巧妙调合。

焦糖玛奇朵
大杯价格：30.00 元 中杯价格：27.00 元 小杯价格：24.00 元
这是星巴克的独创饮品，在蒸奶中加入浓缩咖啡和香草糖浆，然后覆盖上一层风格独具的焦糖花纹，口味香甜，象黄油般顺滑，风味醇厚。

当日咖啡：中杯 10 元左右

当日咖啡：中杯 10 元左右

摩卡：中杯 26 元

Breakfast
麦芬（巧克力、蓝莓、香草、蔓越莓） 7-8 元
丹麦面包 5-8 元

Lunch
蔬菜汤 8 元
法式三明治（吞拿鱼、熏鸡） 15 元
三明治（吞拿鱼、土豆、橙汁） 10-12 元
沙拉（土豆、吞拿鱼、橙汁） 15-19 元
餐盒（叉烧、黑椒牛肉） 19 元

Tea time 芝士条、面包卷 6 元 小饼干 6-8 元
提拉米苏 10 元水杯、6 元维也纳黑森林蛋糕 8 元芝士蛋糕 10 元 蓝莓芝士蛋糕 12 元

资料来源：http://wenku.baidu.com/view/50dbbb03a6c30c2259019ecf.html
5. A Business Analysis of Dangze Cybercafé and the Online Behavior of its Netizens

Fei Ming 明飞
Masters student, University of Science and Technology of China, mingfei@mail.ustc.edu.cn

Long Su 苏龙
Undergraduate student, Nanjing Political College, s_long@yeah.net

Rihua Wang 王日花
Librarian, China Media University, Huihui3469@sina.com

Xiaohua Zhang 张晓华
Masters student, Peking University, shuiyangqingjie@hotmail.com

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Thanks to our classmates, especially to Group 2, which was always walking a step faster than us. Thank you my dear teachers: Abdul Alkalimat, Kate Williams, Hui Yan and Shenglong Han. Without you, we could never involve us so much in the latest progress of community informatics. The methods of D7 are quite useful that it makes our research go straight down along this way which has lead so many people to success.

We also want to say that it is an honour to have an opportunity to attend Community Informatics Summer School at Peking University. Thanks to the Peking University, can we have a chance to each other.

1 Introduction
In this research, our group collect some data about Dangze cybercafé, where everyone could enter for Internet, our goal is to explore what role did it play in the information era and what could be done to narrow the digital divide. We also focus on what kind of cyber power is being created and how long will it survive.

Our team is consist of four outstanding researchers, Fei Ming is a graduate student from University of Science and Technology of China, who is good at data analysis. Long su has graduated from Nankai University, his major was English literature and he is mainly in charge of writting this report. Rihua Wang is now working in Communication University of China (CUC), her precious experience of a librarian provide our group the most solid basic. Xiaohua Zhang is studying informatics, so she is the one who drive the direction.

Cybercafé, is a leading provider of Internet access services in public places. In China, the rise in cybercafé came around 1998. For those who were without computers or
Internet access, cybercafé has provided people with an economic and convenient opportunity to search the Internet. It allows the majority of ordinary people to have access to outside world and it made a great contribution for narrowing the digital divide in the past 10 years. It is a basic human right to feel freely obtaining information.

Cybercafé provides Internet service to the community nearby, taking earning more profit as an initial purpose. The amount of public library is far less enough to meet all the needs when cybercafé was born in the poor digital society. The enlightened people begin to realize the cyber power in china. The officers of the government feel anxious about this. Net bar is often under scathing supervision. At the same time, the structure of tradition social capital has changed deeply.

D-7 method is quite useful for research, which is a serial of action including Definition, Data collection, Digitization, Discovery, Design, Dissemination and Difference. All the sections must be done step by step, in order to find out the truth. Let's go to our journey for cybercafé.

2 Cybercafé and Cyberpower

2.1 where is Dangze

Dangze cybercafé was established at the beginning of 21st century, when we began to notice that there was a way to collect information called Internet. At that time, having Internet access through telephone line can be so expensive that we would rather choose cybercafé to have fun with Internet. Internet appeared in China first for entertainment.

The Location of Dangze cybercafé

Dangze locates on the place once was called "street of cybercafé", but only one cybercafé survived after so many years. This place is named Haidian road, and Dangze is at the other side of South Gate of Peking University. Zhongguancun Community, which is famous for its high technology industry and advanced universities, is filled with a variety of people.
The internal environment of Dangze cybercafé

"A Census of Public Computing in Toledo, Ohio" written by Kate Willians and Abdul Alkalimat called up my interest on a research of cybercafé, because cybercafé used to be the main site for network services.

"Cyberpower" told me that Internet access and public computing should not only be a way of entertainment, but also a supporter of our daily lives. As the Internet moving forward in its own speed, digital inequality began to show out. Some people have personal computer and high-speed Internet at home, but some could only afford cybercafé.

We'd like to investigate what did Dangze contribute to the digitization of that street, and what kind of cyberpower was created. Who was using cybercafé as there resources of information? Will they use it in the future? And one more thing, will Dangze always there as a Internet service provider or becoming something else?

2.2 Government dilemma

The enlightened people begin to realize the cyberpower in china. The officers of the government feel anxious about this, so cybercafé is often under scathing supervision. At the same time, the structure of tradition social capital has changed deeply. Over 100,000 unlicensed cybercafés were shut down over the past five years during a crackdown on Internet pornography and violence. Local authorities had raised the entry threshold for Internetcafes and stepped up monitoring of entertainment venues, especially cybercafés and video game halls, to protect children.

Here is a question, "Why does Google in china have so many difficulties? "The chart below may explain the situation. Cyber power have two aspects of impact, positive and negative. What Google want to do is to avoid monitoring which includes cause monitoring and effect monitoring. I think the cause monitoring could easily concentrate on the online behavior of people in cybercafés while effect monitoring focus on the influence from cyber events of many kinds. Clearly, real and virtual world have a interaction with each other.
The interaction of real world and virtual world

3 How we did it

If anyone using Internet could be called a netizen, the people in Dangze cybercafé could certainly counted in. Citizens have their rights and duties, so do netizens. We are doing this research to see what do netizens do on the Internet. And what is more important, what kind of cyber power is created when they operating computers.

When we come to the process of site selections, Dangze caught our sight for the first time. In fact, we were arguing about the choices of sites. Some agreed to do it in a library, but there have been many groups doing theirs on different kinds of libraries, so we finally decided to conduct our research in a cybercafé. Although we all know that collecting data in a cybercafé is a tough task, we insist on doing it. Libraries have a limitation of administration from upper agency, while cybercafé can make its decision on the desire all of the manager. It is easier to make some change for a cybercafé, and it is a best choice to investigate from the nearest place.

On July 11 we had our first discussion on the choice of subject, as many groups had their works on different kinds of libraries, we chose a cybercafé. In China, most people will use cybercafé rather than libraries to obtain information from network, as there is not always community library nearby providing Internet access. We came to Dangze the next day for the first time, we took some photos for our presentation and ask a few question to the staff. On July 13 we did a telephone interview to Mr. Wang, who is the manager of Dangze, and he gave us some useful information about Dangze. On July 16 and July 18, we were going to Dangze as customers to test the speed of access and services provided. And also, we did our observation on other people in the cybercafé. Then we had a second discussion on July 20, on which we gathered our data collected in the cybercafé.
It was really surprising us that we found there was a middle aged couple using computer in the cybercafé. People of their age were supposed not to have enough motivation to go to a cybercafé, the couple did raise our curiosities. We had a really short conversation with them, during which they told us that they were coming with a group of tourists to Beijing. They can type with index fingers, but this could not stop them from their desire for knowledge.

4 Put data into computer and share it on the Internet

Some data was born digital, while some was not. So that we need to transfer all the data into one format, then we can make any analysis. As people in the cybercafé are paying for their time on the Internet, it is impossible to have them fill in some questionnaire or accept our interview. So we collected our data mostly by observation.

We came to Dangze in 9:00, 14:00 and 20:00, which representing the different periods of a day. One team member collected the number who came to Dangze in one hour after we have been there, ask about their age, working condition, education level and so on. Two other team members do the observation on the on-line behaviours. Each time the observation last for about an hour. All the observation data was written on a notebook.

Then we put our records together and input the numbers into a excel file for further analysis. We covered the name of netizens and the staff in order to protect their privacy. We also established a QQ discussion group, so that we can have on-line debate about our research and share the data to every member.

5 Realities and Truth

5.1 The operating conditions of the cybercafé

In the past few years, China’s cybercafé has formed a complete industrial chain, which includes cybercafé operators, online game operators, value-added service providers and Internet users and also includes telecommunication operators, systems integrators, hardware providers supplying computer hardware, servers, and Storage devices, and software providers supplying application software, management software, operating systems and many games update software.
The business conditions of the field of cybercafé are becoming increasingly worse. There are many reasons. Here is a list of the main reasons and their ratio below.

5.1.1 The impact factor of external

The external factors are as follows:
1. Policy that is not conducive to the development of cybercafé.
2. Increased competition in the field of whole internet industry.
3. Widespread use of the private computer and network.
4. Lack and loss of good practitioners.
5. Heavy taxes and cost.
6. The low proportion of value-added services.
7. Others.
5.1.2 The impact factor of internal
The internal factors are as follows:
1. The smooth speed of network.
2. Clean and comfortable online environment.
3. High-quality hardware and rich software.
4. Exquisite and unique decoration.
5. Complete and comprehensive service.
7. Reasonable price.
8. Others

![Internal factors and their percentage](image)

5.2 A comparison to China cybercafé industry

5.2.1 Business Analysis of Dangze
The business analysis of Dangze seems not optimistic, when we consider about that a huge solid investment of computers, servers and other basic equipments has been paid. It will spend no less than 58 months to get all the money back. The chart below give us an example of the financial situation in one month.

5.2.2 Staff construction of Dangze
The employee of Dangze cybercafé mainly includes 3 maintenance member of the network, 1 manager of the technique, 2 clerk, and 1 chief manager. Their ages range from 18 to 28, while the educational background of them are mainly in high school level. Operating the cybercafé proved to be very hard. Taking clerk as an example; they work for more than 16 hours a day, and have no regular holiday. In this case, only the young people can adapt to this kind of working load. As employees in the cybercafé have lower educational background, their salaries are below the average level.
Income (month)  
main income \[3 \times 0.9 \times 300 \times 12 \text{hours} \times 30 \text{days} = 174960\]  90%  
Other revenue \[20000\]  10%  
total: \[194960\]

Expend (month)  
rent \[-30000\]  28%  
Water and electricity \[-40000\]  37%  
Tax \[-20000\]  19%  
labour cost \[-10000\]  9%  
Internet \[-3600\]  3%  
Other \[-4000\]  4%  
total: \[-107600\]

Total Income: \[87360\]

Financial situation of Dangze cybercafé

5.2.3 The quantity, scale and region distribute of Chinese cybercafé

Chinese cybercafés, in thousands, shown in grey bar; annual rate of growth shown in yellow line. Data from Chinese Ministry of Culture.
The distribution of the spatial area of cybercafé in China (unit: /m²)

The distribution of the quantity of computers in cybercafé in China (unit: set)
5.3 The makeup of netizen and online behavior

5.3.1 The make up of netizen in cybercafé

In China, many female Internet users do not like to go to cybercafé, because they think the environment is poor, especially security environment. At one time, cybercafé means pornography, violence. In recent years, with the increase in female gamers, improvement of the social environment, and even some set of the female special zone, the proportion of female Internet users increased year by year. As an operator of cybercafé, may wish to consider how to attract female users to Internet consumption, which can be a good way to improve the operating conditions.

Internet users from the age of the survey results, mainly 19-28 years old, are the Internet's largest consumer groups. This part of the Internet users are students, young people who had just entered into the society, like the freedom in Internet, drink in playing games, prefer unfettered Internet environment.
From the viewpoint of job occupation, Freelance, grassroots workers, private owners, white-collar, these four groups accounted for nearly 80% of Internet customers’ ratio. Because now the Government has fully implemented the policy of Internet real-name system, and Local administrative bodies limits Minor to go to cybercafé, the students are no longer the major consumer groups. The online behavior of these four categories of users will be more diverse, games, chat, watching movies, followed by the news, information downloads, e-mail and so on.

The job occupation of cybercafé netizen

See the level of education, low education and high degree of Internet users is very small. People, with primary education or low, most of who do not understand computers and the Internet, naturally not connected to Internet consumption. people ,with high degree or above, who are busy, have no time go to Internet cafes, then, will be less consumption. Therefore, the Internet consumer population is mainly from middle school to college-level education. The proportion of high school or college education accounted for the majority.

Level of education

5.3.2 The character of Chinese online behavior
Entertainment is the main purpose of internet consumption to the Internet users. Playing games, chatting with friends, watching movies or listening to music; these applications
account for over 70%, among which game players even reaching 54.9%. As for the downloading resources, reading the news to find information, study and research, send and receive e-mail users; Analysis of these Internet users accounting for about 20 percent, the vast majority of whose families have no computer or no access to broadband. The ratio is really not low. Imagine, now more and more private computers and home broadband have come into the daily life of residents, the chances of them to the cybercafé will be reduced year by year.

**Online behavior of netizen**

A few years ago, the competition among several cybercafé in one community, mainly focus on the hardware and price, but now both of them is no longer a primary consideration. Now Internet users begin to call for higher internet speed with which people can live a good time in their community. Improving the environment of cybercafé, will certainly be a advantage, but no need to have a huge invest on the cost of decoration. The cybercafé should solve the problem of cleanliness, air quality at first.

Cybercafé provides Internet service to the customers for profit. Operating performance, good or bad, is a reflection of the satisfaction in the local community. Although each Internet bar boss have been working to improve the level, but still a certain gap to the The demands of local citizens. To create an outstanding performance of Internet bar, the operators should listen to the views of customers, for the operations improvement.

**6 Went back to Dangze**

After we have finished our data analysis, we decided to make a phone call to the chief manager of Dangze cybercafé. In this letter, we explained the meaning of our research and showed our data to him.

He was very curious about the structure of his customers, so that he can adjust his marketing plan for more profits. And he agreed to cooperate with the Zhongguancun community if the community have any program to practice in the cybercafé.

**7 who will read this report**

We will try to push our report onto Portal Sites in order to have more people known about their rights of obtaining information from Internet. There are a lot of people could
not enjoy the convenience of Internet, and the digital divide is becoming larger as the Internet itself develops in a fast speed.

Managers of cybercafés should read this report, and they can realize that providing Internet services to digital poor like migrant workers and senior citizens could earn their place a good reputation. On helping the digital poor, a larger market of Internet is developed at the same time.

Policy makers should also read this report. They can notice that the need for Internet is an urging question. The investment on Internet infrastructure will support all the respects of the society for better development. Everyone have their rights to use the Internet anywhere anytime, but there is a long before we make it available to everyone.

Community agencies need to read this report as well. Most communities in china does not have enough budgets for computers and high speed Internet. So that they could try to work with the cybercafés near or in their communities. Cultivating more residents becoming netizen will reduce the pressure of community agencies and these netizen could solve their problems with the help of Internet and computer.

8 Cybercafé, to be or not to be?

The existence of cybercafé has been more than 10 years, its contribution to the digitization of communities could never be forgotten, but we should also seek for a way of change. Cybercafé will not be satisfied to be merely a site of entertainment, it will become the information center of community. For example, Dangze could cooperate with the Zhongguancun commnity in the means of offering place for senior citizens to have computer classes, and help the unemployed people in community apply for jobs online.

The government official should make more policies to make sure everyone could have their right to obtain information. Building more cybercafés helps lighten the pressure of public libraries and narrows the digital divide between digital rich and digital poor. With budgets, there will have a lot cybercafés providing Internet access in a lower cost and faster speed.

On doing this research, we have found out there are a lot of work remain in the area of Community Informatics. Faster Internet access with lower cost turns a lot of thing into realities, and we should not always put our eyes on the national stage. The people at the bottom of society need more help and a basic guarantee for the equal right of obtain Information.

In the near future, we can except for the wireless city, in which we can have high speed Internet everywhere. We can imagine that cybercafé be there as convenient as a public toilets, people do not feel uncomfort to use a public toilet, so there must be no shame asking for free Internet.

Bibliography


**Webliography**


III. National Libraries

National Library team, L to R: LI Ran, YU Jie, WU Jiao, YI Zhengyu

6. Information Commons for the Common in the Information Age: The National Library of China

LI Ran 李然
Undergraduate student, Peking University, meltedsky@126.com

WU Jiao 武娇
Masters student, Peking University, wuwujiaojiao@126.com

YI Zhengyu 易征宇
Masters student, Peking University, pkuyzy@163.com

YU Jie 于洁
Masters student, Peking University, pku15@163.com

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Thanks Department of Information Management of Peking University and Professor HAN Shenglong for giving us letter of introduction to help us access to the research site smoothly;

Thanks Mr. Chen, Mr. Li, Mrs.? and other staffs of Information Commons(IC) for providing information we want and accepting our interview;

Thanks users in IC for filling our questionnaires and accepting our interview;

Thanks Dr.YAN Hui for giving us wonderful lectures;

Thanks our classmates for sharing their group experiences with us;

Finally, thanks Department of Information Management of Peking University and Professor Han Shenglong again for providing the precious opportunity to us to attend the community informatics class.

1 Introduction
The introduction of our research comes below.

Description of the assignment
This is a study of how a public computing facility helps people cross over the digital divide and what kind of cyber power is created. We chose Information Commons of National Library as investigation site to carry out the research.
**Introduction of the research team**

There are four members of our research team. They will be introduced below one by one in alphabetical order by pinyin family name with a photo attached.

**Li Ran 李然**

Li Ran is a lovely girl from Kunming city, Yunnan province, southwest China. She is an undergraduate of PKU and will be a senior in the coming fall. Thus she is the younger sister of our team. Her major is information management and information system.

![Li Ran](image)

**Wu Jiao 武娇**

Wu Jiao is a quiet girl from Xi’an city, Shannxi province, northwest China. She will be a master student of PKU in the coming fall. Her major is library science.

![Wu Jiao](image)

**Yi Zhengyu 易征宇**

Yi Zhengyu is a handsome boy from Xiangtan city, Hunan province, middle-south China. He is the only boy in our team and the eldest brother. He will be a master student of PKU in the coming fall. His major is information science.

![Yi Zhengyu](image)

**Yu Jie 于洁**

Yu Jie is an outgoing girl from Weihai city, Shandong province, east coast of China. She will be a master student of PKU in the coming fall. Her major is information science.

![Yu Jie](image)

**How we selected the site**

Each member of the group has been to National Library many times. We know basic information about IC and think it’s an appropriate site to do research.

National Library is a public library. People have access into it with an identity card. There are numbers of people coming to the library, who are at different ages, coming from different job field, having different income, and so on. Distributing questionnaires and interviewing are relatively easier to do in large numbers of people with diversity.

National Library locates not far from PKU. Traffic is convenient between the two places, making the cost of research lower.
Method

We employ D7 method to represent the report. The research problem is defined and relevant literature are collected and reviewed by the group. Questions have been precisely formulated on the base of literature review. Then we operationalize the question into several measurable variables and make a questionnaire and an interview outline. Data and information are collected through survey and interviews at the site. Then all data are digitalized and re-organized in a spreadsheet for further analysis. By Microsoft Excel, the research group analyzes the pattern in which shows the digital divide and reflect the cyber power users gain from the site. Research results are to be transcribed into different kinds of media and conveyed to the class, the site and other audience who are interested in community informatics or the National Library. Video, PowerPoint document and hardcopies are the forms under consideration. What is of greater significance, we hope our result will raise introspection and further thinking on the mission and development of the National Library, also on the reality of digital inequality in the site.

2 The site, the research questions, and the literature

The history of the site

Information Commons(IC) is widely known as an electronic reading room. In fact, it is developed from a traditional electronic reading room which was established by National library in 1995 and opened to the public in the same year. The old electronic reading room locates in the old building of the library, also called the southern area of the library.

There were about 60 Lenovo computers owned by electronic reading room in the initial stage. In 2008, these 60 old computers were replaced by new Founder computers with windows XP operation system. The old equipments were donated to remote area in the west part of China.

During 1995-2008, electronic reading room was working on collecting and cataloguing electronic resources, and then representing them to users. Besides, it burned CD for these electronic resources. On the basis of refining the work, Digital Resource and Service Department was set up.15

As the new building of National library completed, which is also called the northern area of the library, the electronic reading room moved into the northern area. On September 9th 2008, the name of Information Commons(IC) came into the world and opened to public till now. IC has a total area of 1049 square meters with 188 computers available.

IC is divided into 3 parts: the north is intended for researchers using computer; the middle part is the Internet-surfing area, where any user can use computers; the south part is planned as media area, where users can refer to multi-medium. Now, the south area has been lent to other department to use. It plans to be back in 2014 after completing the transformation of the old building. But now the two parts are similarly used. Users can choose any place he likes to use computers.16

An important change occurred on March 2, 2011. Before that day, users came to IC using computers need to pay fees. The rule is that only the first one hour is free for

15 Most information of the first three paragraphs is from the interview to Mr. Chen.

16 These information is mostly from the introduction materials IC offered to us.
usage, after that you need to pay 3 Yuan for another one-hour usage. Now it is all free to use computers inside IC.  

IC plan to divide the whole space into seven different zones for different use in two or three years. From the north to the south, they are E-Learning Community, E-Research Community, and Special Service Area for the blind, disabled and old, National Resource Sharing Experiencing Area, E-Commerce Community, and media center. Computers in each area are loaded with different software, for example, computers in E-Learning Community have foreign language learning software and computers in E-Research Community have specific database like Chemical Abstract and Beilstein.

Social context of IC

Location and photos of outside and inside
National Library’s address is National Library of China, #33 Zhongguancun Nandajie, HaiDian District, Beijing, China. Its location can be seen in picture 1 captured from Google map. Picture 2 shows the outside and inside surroundings of National Library. IC is located on the fourth floor of the northern area of National Library, seen from picture 3. And Picture 4 shows the outside and inside surroundings of IC.

Picture 1 map of National Library

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17 This paragraph comes from interview to Mr. Li.
18 The same with No.2
Picture 2 National Library
Picture 3 layout of the fourth floor
Neighborhood communities
There are many universities and research institutions not far away from National Library. They are Central University for Nationalities, China Population Association, Chinese Academy of Agricultural Science, Beijing Institute of Technology, People’s University of China, Peking University, Tsinghua University listed on distance. Besides, there are some residential areas around the library.

Organizations and social activities
IC is leaded by Digital Resource & Service Department, which has 7 staff groups. They are Digital Resources Acquisitions Section, Digital Resources Integration Section, Documents Digitization Section, Digital Resources Services Section, Website Management Section, Copyright Management Section and National Digital Library of China Promotion Section. IC is the working place of Digital Resources Services Section, which has 16 staffs.

IC has social connections with other organizations outside National Library. A typical example is that its cooperation with China Disabled People Union (CDPU). IC irregularly invites the disabled and the staffs of CDPU to a visit and helps the disabled use computer. IC and CDPU work together to build China Disabled Digital Library and China Blind Digital Library.

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20 Cite from the website of National Library, http://www.nlc.gov.cn/service/gygt_jgsz.htm
Research questions

We raised two research questions before doing our research. The first question is: how does IC help people cross over the digital divide? The second is: what kind of cyber power is being created by IC?

Literature

Williams, Kate and Joan C. Durrance summed up the field of community informatics, by studying the interaction between transformation and continuity, between information technology and local community, is building up a picture of how the social, historical places we live in are evolving as we move from the industrial age to the digital inequalities.

There are three definitions of types of cyber power presented by Williams, Kate. & Alkalimat Abdul in Social Capital and Cyber power in the African American Community: individual, social and imaginary or ideological power.

Williams, Kate and Alkalimat Abdul put forward "D-7method", which is chosen as our research method, in their paper named a Census of Public Computing in Toledo, Ohio.

Professor YAN Hui has raised Community Informatics is an emerging field worth paying attention in China. His research on digital inequality in Communities and Information Institution in his Ph.D Dissertation provides enlightening thoughts and methods.

Wang Yang & Liu Kangning put forward National Library of China should offer digital resource service based on users' demand through investigation and analysis in 2006. And Fan Bingsi and Hu Xiaoqing believed that digital information service of National Library has greatly advanced in 2009.

3 Data collection

Variables operationalized and research tools

During the operationalization part, we want to define people into specific classes showing features most related to their behaviors with internet. Gender, age, occupation and education are four features chosen. ACCESS and RESOURCE are of greatest significance deciding what data to collect. In the first survey, the focus is on behaviors online in IC. IC’s role in crossing digital divide can be described by its utility and resources (What patrons do in IC and what kinds of services you want to get from IC), visiting frequency, and their efforts in improving mass literacy (What difficulty patrons meet and the training systems IC have). The second survey paid more concern on the internet access rather than the use of digital resources. Patrons are asked about their other accesses to internet (site and frequency other than IC and speed comparison). Meanwhile, contentedness to resources is also evaluated. Then the resources patrons get really make a difference in their actual lives, what is already defined as cyber power. The measure and description of cyber power are mainly studied by observation and interview. What people do and how these things make sense actually.

The research tools we used are questionnaire and interview. We designed questionnaires to distribute to users in IC. The first one is about what people use computers to do in IC (referring to appendix 1). After the first survey, we find digital resources, the initial concentration of the research, is not the main reason for patrons to
come to IC. Disappointed, we decide to add another survey so that more useful behavior pattern can be observed and examined. The second one is about the difference between people using computers inside and outside IC (referring to appendix 2). People interviewed are three staffs and one user. (We took pictures and videos when interviewing Mr. Chen when interviewing a senior couple)

**Work plan and schedule**

Our original plan is listed below.

1. Before visiting the site, gain some information about the site from PKU library and on the Internet. Before and after every visit to the site, group discussion is a need.

2. First visit: get their permission to the research, obtain some information by interviewing the staff here, be familiar with the environment of IC, take some pictures in and out of IC, and use the computer here in person.

3. After first visit, make the information we got in order and clear, meanwhile, design the questionnaire. Plan to distribute 40 copies.

4. Second visit: plan to participate as volunteers in their work to help people use computers.

5. Third visit: distribute the questionnaires, interview a senior librarian and meet the leader of the department if possible.

6. Make statistics of the questionnaire and work on data analysis.

7. Fourth visit: show the report to the staffs who is interviewed and others who are interested in our research to get some feedback.

But our plan has some changes as the research moving on. We distributed 40 questionnaires at the first survey. After analyzing the data, we find that we need to ask users some more questions to go deep into the research, so we designed the second questionnaire, distributed 40 copies as well. So the total number of the questionnaires is 80. We also find that during the third visit, it was difficult to get in touch the leader of the department. They are too busy to spare no time accepting our interview. So we decided to give it up. Because of the second questionnaire, the fourth visit of the original plan turns into the fifth time to IC to carry out our work.

**Interesting stories**

Here are two stories we want to share. The first one is about two senior users we encountered in the IC. They were friendly to fill questionnaires and accept our interview. We learned that they were couple and both more than sixty years old. However, to our surprise, they are familiar with computer and Internet.

We are senior engineers of one scientific research institution, who were employed again. We usually come to IC to find updated papers on quality management of electronics by searching the database named 'emerald', which is a foreign database……IC really gives so much support to our research ,because it's easy and convenient to get needed information .We think the service of here (IC) is pretty good.……But I've never participated any lectures held by IC.
When it came to some computer skills, the female senior confidently told us that it was about 1993 when she first got online. And there was no problem for her to find essential information online.

The second one is about our group members helping a driver who had no idea about the Internet. He loved Teresa Teng’s songs so that he wanted to download some from the Internet to his cell phone. We showed him how to enter http://mp3.baidu.com and search Teresa Teng's songs, then chose MP3 format. With almost twenty songs he loves in cell phone, he said "Thank you so much" to us. It took us about one hour but it’s a pretty good experience, we indeed helped a senior cross over the digital divide.

4 Digitization of the data

Videos of interviews and pictures taken at the National Library are born digital. Information gathered in the videos was taken down exactly, described and generalized to answer our questions, and stored as Word document. Lack of the permission to take a video, we only kept notes about the interview of the reference librarian, which is also compiled into Word document. Besides, we were fortunate to get some data in Excel document from the Patron Statistic System of the National Library. It contains the number of people access to the internet and their

Before the first visit, we searched paper-based materials in the University’s library and found the Yearbooks of Chinese Libraries. Histories, events recorded in the yearbooks were transcribed and typed into word document, which helped a lot with the development of IC. During the first visit, camera shooting was refused and all the handwritten information was digitalized as soon as the interviewers returned. Data collected through questionnaires in the following two visits have to be digitalized too. By the software Microsoft Office Excel, data were arranged in a matrix where the first horizontal line is the number of the questions; the first vertical line shows the number of questionnaires and in the matrix cell are the answers.

Data aggregation spreadsheet has been designed before data’s digitization. Every answer to a question is coded into A, B, C or D. Background information, such as gender and age, is also coded according to rules. For example, “A” of the gender choice stands for “male”, and “B” stands for “female”. The matrix is the most important analysis material. And all the rules are recorded as metadata in the sheet of the same Excel document attached to the report.

5 Data analysis

Description of the dependent variables

According to our observation and interview, there are two types of users in the IC. Having checked the question 2 (which kind of sites do you usually accessing to the Internet excepting here?) and question 6 (What's the primary reason of you coming here?) in questionnaire II, 3 groups of people were identified. In question 2, there are 6 options including Home/Work places/Education institutions/Cyber café/cannot access to the Internet/ Others. Nobody chooses ‘Others’. As users were divided into 3 groups cited in diagram 1 below, their options in question 6 are quite different. Question 6 asks the users to give out their primary reason of coming to IC; a notable difference emerged on the option B, digital resources. The group represented by blue block showed below has the lowest digital resources choosing rate, and the green group has the highest, red group is in the middle.
So it’s convenient to divide the users visiting the IC into 2 groups, the first group want access to digital resources including databases and the other group does not, but we still don’t know other characters of these two groups, which need to be studied further.

**Relationship between independent and dependent variables**

Concern the answers of Question 6 in Questionnaire II “What's the primary reason for you to come here?” with 4 choices below: Free Internet/The Digital Resources/Good Environment/Others. The results show that nobody choose ‘Others’, and we think that ‘Free Internet’ and ‘Good environment’ are the same type of answers comparing with the choice ‘The Digital Resources’, excepting that, some people hesitated when they trying to tick the ‘Free Internet’, and then chose ‘Good environment’ as their final answer, so ‘Free Internet’ and ‘Good Environment’ are counted together. The relationship between the answers to this question and character occupation and education background of users who had answered it was listed in diagram 3 and 4.
In diagram 3 above, it is obvious that, workers and researchers come to IC with quite different reasons, the former are for free computer use and Internet, while the latter are in need of many digital resources including some databases hard to access to at other places; the ratio of other occupations, mostly students and company staff, choosing digital resources is in the middle of workers and researchers.

When referring to the education background, it seems that the willingness people of with ‘Masters and above’ degree is quite similar to researchers, and ‘Under junior college’ and ‘Bachelor’ are similar and lie in the inter-space of ‘Workers’ and ‘Students + Company staff’ in the former chart.

Question 4 of Questionnaire I confirms former conclusion. It is a multiple option question concerning the services provided by the IC users interested in. The two diagrams below show the choosing ratio of the option “Database Accessing” among users of different education background and occupation.
It seems that the higher education background is, the more database accessing service option is chosen, researchers also stand on the top of Databases accessing rate, the people who did not unveiled their occupations are at the bottom.

There are several other questions listed in both questionnaires can conduct the characters of these two groups. The former group can be named ISG short for Information Searching Group, representing people coming for databases access in order to search useful information. The latter group named Web Accessing Group (WAG) contains people coming for entertainment or online communication.

This conclusion verified our hypothesis we made mentioned in Section Design. These two groups of people are quite different in education background and occupations, maybe a little different in age and genders, but we cannot conduct out a convincible verdict about it. Maybe that’s because senior citizens coming here usually have a good education background and they belong to a higher social class than other seniors who don’t come. Another reason is that the potential independent variable: age, cannot explain the behaviors of the users coming here like occupation and education background do.

A thematic model was built in which patrons’ social characteristic (our independent variables including occupation and education background) deeply identify which group he/she belongs to. Then different groups decide the users, behaviors and other phenomenon we’ve found in IC. This model can be described by diagram 6 showed below.
Diagram 6 relationship between independent and dependent variables

**Findings to answer the research questions**

We have two research questions to answer. The first question is: how does IC help people cross over the digital divide? The second is: what kind of cyber power is being created by IC?

**Digital divide**

There are four levels of digital divides existing according to our data, observation and interview. We will explain what are they and how IC helps to bridge over them.

1. Digital Divide exists in whether people can access to the Internet or not and IC provides an opportunity to be online. We define the users who chose "Basically don't get online in other places expecting IC " and "get online in Cybercafé" in the questionnaire as the people who cannot or have less chances to access to the Internet. Then we compared their frequency of coming to IC.

![Diagram 7 the frequency of coming to IC](image-url)
As diagram 8 indicates, 66.70% people come to IC frequently, 33.30% come occasionally. No one came to IC at the first time in our sample. It turns out that IC provides an environment such as computers, the Internet, comfortable place, etc. to people who desire to access to the Internet but don't have these materials, which shows IC bridges digital divide at one level.

(2) Digital Divide exists in Internet Speed and IC provides a high-speed access to internet. The speed accessing to internet can also reflect the digital divide people are facing. It seems that IC provides a high-speed access to internet. We tested the upload and download speed when in the Information Common and compared with the speed on campus at almost the same time of a day with wired connection. We found that the speed in IC is much higher than that on campus. Speed results are listed below.

<table>
<thead>
<tr>
<th>Place</th>
<th>Test Time</th>
<th>Upload Speed</th>
<th>Download Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Information Common</td>
<td>2011-7-16</td>
<td>571kbps</td>
<td>624kbps</td>
</tr>
<tr>
<td>On campus</td>
<td>2011-7-24</td>
<td>446kbps</td>
<td>142kbps</td>
</tr>
</tbody>
</table>

Diagram 9 comparison of Internet speed in IC and on campus

Diagram 8 shows that 82.5% users think the Internet speed can meet their demand in IC. So it turns out that IC provides a high-speed access to internet and the users are pretty satisfied.

Diagram 10 what users think of Internet speed in IC

(3) Digital Divide exists in databases' access permission and IC provides free access to databases. According to diagram 9 below, 37.5% of users coming to IC mainly because the database. As is known, free database service is one of the main services IC provides that can help users find information they need, especially for those doing research or writing dissertations. According to our interview with the old couple, the old

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21 Test tool: [http://www.speedtest.cn](http://www.speedtest.cn) 2011-7-24
woman said, she paid 6 Yuan for an article download from database in other place, but in IC it is all free, and she is very satisfied. Besides, IC also provides database training for users to help users overcome difficulties in usage.

**Diagram 11** the primary reason for users coming to IC

As is shown in diagram 10 below, 90% of the users think that the databases IC has can meet their demands. We can conclude from the above discussion that IC plays a good role in bridging over digital divide of database access.

**Diagram 12** Answers’ distribution of the question “Whether the databases here could meet your demands or not?”
(4) Digital Divide exists in physical condition and IC provides a chance for the disabled to access to the Internet. As we have mentioned, IC has some social connections with other organizations in the social context part before. A typical example is that IC has cooperation with China Disabled People Union (CDPU). IC and CDPU work together to build China Disabled Digital Library and China Blind Digital Library. There are three computers especially for the disabled in IC, which are equipped with speech software which can read words on web pages out for the blind people, as picture 5 showed.

![Picture 5 computer special for the disabled](image)

In our interview, librarian Mr. Li told us there was a senior who was an albino coming to IC every day. We interviewed the person and found out that he browsed the website and searched some information in IC. It turns out IC provides a chance for the disabled to access to Internet.

**Cyberpower**

The second question is what kind of cyber power is created by IC. We've learned that there are three types of cyber power from class and readings: individual, social, and ideological. Each will be discussed in detail as below.

The definition of **individual cyberpower** is gaining skills and connection for oneself. Diagram 11 shows 40% users usually search needed information in IC, 37% users usually browse websites in IC, 7% users usually chat online in IC, 3% users usually edit their documents in IC, and 13% users do other stuff.
IC offers computers and Internet service. Users could type, write resumes, etc. Also, they could get connection in virtual communities. As we observed, there was a user sending E-mail to her American relatives.

The definition of **social cyberpower** is gaining skills and connection for a group. Database service IC provides creates cyber power to benefit users. According to diagram 12 below, majority of the users mainly searching information and browsing websites on computers, want database access. As is known, database service is one of the main services of IC that provides convenience to users to gain useful information they need, especially for those doing research or writing dissertations. Database training held by IC also improves skills of using database.

**Diagram 13 what do users usually do in IC?**

**Diagram 14 service wanted by users who are searching information and browsing websites**
For users who are mainly browsing websites, access to multimedia is the top demand. The multimedia service IC provides is for both learning and entertainment. Among people who are mainly searching information in IC, multimedia is also a main demand. We can infer that multimedia service creates cyber power that not only helps this users group with study, but also mainly offers entertainment and relax time to them.

**Other findings**

We find that digital resources IC provides are not fully used by users. According to the statistics data of the questionnaire I, most people come to IC to use computers for searching information (29 of 40 persons) and browsing websites (27 of 40 persons). As is shown in the diagram 1 below, among users having these two activities on computers, more than half of them meet the difficulty lacking information about what digital resources the library has. The two percentages are very close. This phenomenon implies many users who have information demands don’t know what digital resources are available, let alone make best use of it.

![Diagram 15](image)

**Diagram 15 differences of difficulties between users doing different things on computers**

**6 Dissemination**

We plan to report to the site through three different ways. We made a video recording our research process and main conclusion we’ve drawn. Then we will connect the National Library and ask if we can play the video near the Information Common. Perhaps a silent version of the video may in need and subtitle should be added. As assistance, copies of the research result in brief can also be placed at the document shelf under permission. And the PowerPoint document we show to the class will be transformed into a flash video and also be played in the Information Common.
Let the research make a difference

According to our findings, some digital resources IC provides are not fully used by people. We hope that IC and National Library figure ways out to solve this problem. Try more ways to attract people in. Maybe they can stop purchasing these resources that few patrons use, or they can take measures to make digital resources known to more and more people.

We employ theories from the literatures to instruct the research. In turn, the research practice deepens our understanding of these theories. During the research, we find that Chinese public computing has its own characteristics. Literatures reflecting the reality of China’s community informatics should be created to promote the development of community informatics.

Here are the differences the research brought about to each member of the group:

Words on paper are always superficial, only practice brings about profound interpretation and valuable thoughts.—Li Ran

I will carry the message that CI is a good thing, and take action to narrow the digital divide in my daily life though my power is so little.—WU Jiao

I get some basic skills of doing social science research.—YI Zhengyu

This research to IC of National Library gives me a chance to put what I learned in class and documents into practice. I feel clearly that sometimes theory is formalist, but I can use theory flexibly in research actions. Practice is really a good way to learn knowledge and make what you have learned keep in mind.—YU Jie

Bibliography


Webliography

Appendices
User survey
User survey 2
Interview outline for IC Staff
Interview outline for Patrons
**User survey**

**National Library of China User Survey   I**

**Of a Community Informatics Research Program**

Instruction:
This questionnaire is designed for a research program; your personal data will be preserved properly so that you need not to worry about your privacy. Please Tick on the proper options, thank you for your cooperation and support.

**Section I: about you 您的基本情况:**

1. **Gender:**  
   A. male  B. female  
   性别:  
   A 男  B 女

2. **Age Range:**  
   A. under 18   B. 18-39   C. 40-60   D. above 60  
   年龄:  
   A 18岁以下   B 18-39   C 40-60   D 60岁以上

3. **Education Background:**  
   A. High school or less  B. Junior college  C. Bachelor  D. Master or above  
   文化程度:  
   A 中学  B 大专  C 本科  D 硕士及以上

4. **Professions:**  
   A. Company staff  B. students  C. researchers  
   D. workers  E. Civil Service  F. Others  
   职业:  
   A 学生  B 工人  C 公务员  
   D 科研人员  E 公司职工  F 其他

**Section II Questions 请回答以下问题**

1. **Do you usually coming here?**  
   A. Frequently  B. Occasionally  C. First time  
   您是否经常使用“数字共享空间”？  
   A 经常  B 偶尔  C 第一次

2. **What do you usually do here? (Multiple choice)**  
   A. Searching information  B. Browsing websites  C. Chatting  
   D. Editing documents  E. Playing games  F. Others____________  
   您在“数字共享空间”一般进行哪些活动?（多选）  
   A 查找资料  B 浏览信息  C 聊天  
   D 编辑文档  E 游戏  F 其它

3. **What troubles you've met here? (Multiple choice)**  
   A. Fail to find required information  
   B. Don't know what digital resources the library has  
   C. Internet unskilled  D. No difficulties  E. Others__________
您在使用“数字共享空间”时，感到困难的是（多选）？
A 无法查到所需信息       B 不清楚图书馆有哪些电子资源       C 上网不熟练       D 没有困难       E 其它

4. What kind of services do you want to access to? (Multiple choice)
A. Internet training       B. Databases access
C. Viewing Multimedia       D. Hand-held e-book reading

您愿意使用“数字共享空间”的哪些服务？（多选）
A 网络技术培训       B 数据库访问       C 获取多媒体资源       D 电子图书手持阅读

Please provide your Precious advices for the development of Information Commons.
请您为国家图书馆“数字共享空间”的发展提些宝贵的意见、建议
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

The end. Thank you for your cooperation! 问卷到此结束，谢谢您的配合！
**User Survey 2**

National Library of China User Survey Ⅱ

Of a Community Informatics Research Program

Instruction:
This questionnaire is designed for a research program; your personal data will be preserved properly so that you need not to worry about your privacy. Please Tick on the proper options, thank you for your cooperation and support.

**Section I: about you 您的基本情况:**

1. **Gender:** A. male   B. female
   性别:  A 男   B 女

2. **Age Range:** A. under 18   B. 18-39   C. 40-60   D. above 60
   年龄:  A 18 岁以下   B 18-39   C 40-60   D 60 岁以上

3. **Education Background:** A. High school or less   B. Junior college
   C. Bachelor   D. Master or above
   文化程度:  A 中学   B 大专   C 本科   D 硕士及以上

4. **Professions:** A. Company staff   B. students   C. researchers
   D. workers   E. Civil Service   F. Others
   职业:  A 学生   B 工人   C 公务员
   D 研究人员   E 公司职工   F 其他

**Section II Questions 请回答以下问题**

1. **Do you usually coming here?**
   A. Frequently   B. Occasionally   C. First time
   您是否经常使用“数字共享空间”?
   A 经常   B 偶尔   C 第一次

2. **Which sites do you usually accessing to the Internet excepting here? (Multiple choice)**
   A. Home   B. Work places   C. Educational institutions
   D. Cyber café   E. Others   F. Basically not online
   除了“数字共享空间”外，您还在什么地方上网？（多选）
   A 家中   B 工作单位   C 学校   D 网吧   E 其它   F 除这里以外基本不上网

3. **Do you usually accessing to the Internet excepting here?**
   A. Frequently   B. Occasionally   C. Basically Not
   您在其他地方上网的频率是?
   A 经常   B 偶尔   C 基本不上
4. How do you think of the Internet accessing speed here?  
A. Too slow  B. Its OK  C. Very fast  D. Cannot judge it  
与其他上网地点相比，您觉得“数字共享空间”的网速：  
A 非常慢  B 一般  C 非常快  D 无法判断

5. Whether the databases here could meet your demands or not?  
A. Fully meet the demands  B. Basically meet the demands  
C. Not so useful  D. Not familiar with them  
数据库等国图的数据资源能否满足您的需要？  
A 全部满足  B 基本满足  C 没有找到太多的有用信息  D 无法判断

6. What’s the primary reason of you coming here?  
A. Free Internet  B. The Databases  
C. Good environment  D. Others____________ 
数字共享空间”最吸引您的是？  
A 免费上网  B 数据库等数字资源  C 良好的环境  D 其他

The end .Thank you for your cooperation！ 问卷到此结束，谢谢您的配合！
Interview outline for IC Staff

1. Please introduce to us some basic information about IC, such as establish time, development stage, size, number of computers, activities, future plan, etc.
2. What digital resources does IC have?
3. How many people come here per day or per week?
4. Is there a fee? Why?
5. What’s the main service IC provides? Ask more details about the database service.
6. What’s the special service IC provides?
7. Is there any training to help people who cannot use computer to learn it?
8. Do users often come to you for help? If so, which question they ask is the most?
Interview Outline for Patrons

1. Basic information- gender, age, occupation, frequency etc...
2. What do you usually do online?
3. What database do you use and for what?
4. Do you have difficulties getting online?
5. Who comes with you or is there someone have helped you with internet?
6. Are you satisfied with the services provided by Information Commons?
7. A Case Study of the National Science Library

Yang Xuejing 杨学婧
Master’s student, Peking University, yangyang_1@sina.com

Yang Zhenduo 杨振铎
Master’s student, Peking University, yzd111@126.com

Yao Weixin 姚伟欣
Graduate student, Graduate University of Chinese Academy of Science, yaoweixin0727@163.com

Han Hongli 韩红利
Librarian, Tianjin Foreign Studies University, hanhonglikuaile@163.com

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Second, we want to pay special thanks for Mr Han. It is you that brought us, from different parts of our country, together to participate in this feast for the mind. We, students of this class, all know that you have contributed a lot for us. Thank you again for your hospitality and we do enjoy the course very much.

Also, we want to thank the staff of the Chinese Academy of Sciences library. Thank you for your friendliness and tolerance to let us conduct our research. Great thanks will surely be delivered to patrons in the library. Thank you for your patience and cooperation. Without your support, we wouldn’t have completed our data collection successfully.

Last but not least, we want to thank each member of our group, especially our leader Weixin Yao and our lovely lady Xuejing Yang. They really have sacrificed a lot for our group. Thank you so much for your excellent and meticulous work.

Thank all those who have shown guidance and help in the process of our investigation. A heart of gratitude will come along with the rest of our lives.

Introduction

This is a case study of how a public computing site helps people cross over the digital divide. And during this process what kind of cyber power is being created. In the information age, access to information communication technology (ICT) is becoming an important indicator whether or not one is suffering from digital divide. In our research, we chose National Science Library of China to study its efforts to bridge digital divide.
Study site

We chose National Science Library to be our study site for the following reasons.

First, it is a public library. So it will be easier for us to interview the library at anytime. We can collect any information we want through our own observation to ensure that we get first-hand data.

Second, there is an Information Commons & Learning Commons (IC & LC) department in the library. IC & LC provides computer access, training and lecture services, seminars and as many as 169 databases access. We consider IC & LC as a public computing site which makes efforts to give its users best services.

Third, National Science Library is a research library mainly for researchers in sciences. We are interested in how a research library operating and serving patrons.

Fourth, it is convenient for us to visit National Science Library geographically speaking.

Background

The National Science Library, Chinese Academy of Sciences (NSLC) is the public library service system of CAS as well as the National Library of Sciences in Chinese National Science and Technology Libraries (NSTL) system. Under a Board Trustees appointed by CAS, NSLC consists of a Main Library (based in Beijing, formerly the Library of CAS) and three branch libraries, respectively Lanzhou Branch Library (formerly Lanzhou Library of CAS), Chengdu Branch Library (formerly Chengdu Library of CAS), and Wuhan Branch Library (formerly Wuhan Library of CAS). NSLC also co-operates, together with selected CAS research institutes, a number of special branch libraries whom will provide specialized information resources and services.

NSLC functions as the key library nationally for collecting information resources and providing information services in natural sciences, inter-disciplinary fields, and high tech fields, for the researchers and students of CAS and for the researchers around the country. It also conducts services such as information analysis, digital library system development, scientific publication (with its 14 journals), and promotion of sciences. It also operates the Archives of CAS.

NSLC has a staff of over 470, building areas of more than 80,000m2, and a collection of about 11.5 million items. In recent years it has acquired or developed more than 30 databases, covering over 5000 foreign STM full text journals, 11000 Chinese full text journals, 80,000 foreign theses and dissertations, 180,000 e-books, and an increasing number of full text proceedings and reference books, all accessible from 89 CAS institutes over 24 cities across China. NSLC provides an interlibrary loan system connecting every CAS institute, and connecting to NSTL and major academic libraries, delivering documents within two working days from a pool of more than 20,000 foreign journals. In addition, NSLC developed many innovative services and tools, such as cross-database search, integrated journal browsing, online reference, subject portals, remote and mobile authentication, and Science China system that incorporates abstracts, citations, and full text of key Chinese scientific literature.

NSLC is actively participating and leading national efforts to build a powerful National Scientific Information Infrastructure. As the key member of NSTL, it serves as the national reserve library for natural sciences and high tech literature, offers interlibrary load services to the nation’s researchers and libraries, organizes promotion and
dissemination activities for the public, initiates strategic planning and system
development projects for NSTL, and collaborates with major domestic and foreign
libraries for resources sharing and research collaboration. It is also active in the
professional scene, with its director as a member of the Governing Board of the
International Federation of library Associations and Institutes (IFLA), five staff members
elected as IFLA section standing committee members, eleven staff members elected as
members of Expert Working Groups of the Professional Committee of China Society of
Library Sciences, and the Library as the hosting institute for the China Society of Special
Libraries. It also cooperates closely with international library community to strengthen its
services and research, including eIFL in Europe, MPG Libraries in Germany, Stanford
University Library in USA, JST in Japan and KISTI in Korean.

As the only one in the country, NSLC is credited to grant doctor and master
degrees in library science and information science, with a yearly enrollment about 50.
The library also hosts senior visiting scholars and organizes vocational training and
continuing education programs.

NSLC, aiming at developing a world first-class information service ability and
leadership in library development in the country, strives to strengthen its resources,
 improve its systems, and innovate its services, to best suit its users.

a) The history of National Science of library consists of several stages

In order to be clear at a glance, we put the information into a table. Here it is:

<table>
<thead>
<tr>
<th>The history of National Science of library</th>
</tr>
</thead>
<tbody>
<tr>
<td>April,1950 \nCAS\textsuperscript{22} establishes the Division of Book Management for Scientific Information</td>
</tr>
<tr>
<td>February,1951 \nFormal naming, “Library of Chinese Academy of Sciences”(LCAS)</td>
</tr>
<tr>
<td>September, 1957 \nThe Member of the First National Central Library Committee, approved by \n57\textsuperscript{th} Session of the State Council</td>
</tr>
<tr>
<td>November, 1985 \nRenaming to”Documentation and Information Center”with continued use of the name LCAS</td>
</tr>
<tr>
<td>June, 2000 \nLCAS Participates in the CAS knowledge Innovation Project</td>
</tr>
<tr>
<td>December, 2001 \nLCAS initiates the Chinese Science Digital Library(CSDL) Project</td>
</tr>
<tr>
<td>June, 2002 \nLCAS ‘s new building facilities become operational</td>
</tr>
<tr>
<td>March, 2006 \nNational Science Library, Chinese Academy of Sciences</td>
</tr>
</tbody>
</table>

Table 1: The History of National Science of Library

\textsuperscript{22} Chinese Academy of Science is commonly abbreviated to CAS
b) **Social context**

1) National Library of Sciences is the north fourth ring road haidian district no. 33. It is in the area of Chinese Silicon Valley. The following picture is made by Google, so we can learn some social context from that. It is near the Zhongguancun, and there are more than 10 universities.

![Map 1: Social context of the National Science Library](image)

2) In order to carry out our investigation we chose the “information commons & learning commons” (IC&LC) of the library as our site. Here is another picture made by our group member. It shows the layout of the site clearly.
Map 2: Inside layout of IC&LC
c) Research Questions

1. Our main aim is to understand the patrons of this library, including the age, professions, income, and something detailed information on operating the computer for getting the expected information.

2. We will investigate the policy of the library, like wireless net access, fees for the outside users. Then, we will try to find whether it is reasonable. Should the library encourage public users?

3. Try to find some related information among the different variables.

d) Literature we have read

We must have a preliminary understanding of National Academy of Science, so we scan some information displayed in the library, and some important and exact information from the official website.

Data Collection

We collected data at the setting of IC&LC in National Science Library by our group members. We went there on both weekdays and weekends. Data collection included visits to the site, distributing questionnaires, interviewing patrons and staffs, and the use of digital devices.

We created a questionnaire for the users who use IC & LC to complete. The questionnaire consists of 11 questions about using experience. Our questions include how many times the interviewee comes to IC & LC per week, difficulties the interviewee encounters when using ICT, how the interviewee thinks about the net speed there, and so on. Our starting point of setting these questions was that digital divide is more or less related to that variable. We interviewed those users who were pleased to fulfill our questionnaire and share their stories with us. We also took pictures to explain the social context and environment around IC&LC. E-maps are also used to show the location of the library. An inside map of IC&LC was drawn using the tool of Microsoft Visio 2003.

Before starting our research, we made a schedule to follow in order to direct a meaningful field study. Our basic consideration was that all kinds of time points should be when we conduct interviews. What’s more, there must be differences in the number of patrons and the online speed. With these ideas in mind, we finally chose six time points. Friday morning (7-15) and Tuesday afternoon (7-19) were chosen as the representative of weekday, Monday night (7-18) and Tuesday night (7-19) as the representative of night, Sunday morning and afternoon (7-17) as the representative of weekend. Each time we came to the site, we recorded patrons’ number every thirty minutes. When we were at the site, we took every chance to interview friendly patrons who were glad to share their experience here. All this were written down and we also felt it was a pity that all the interviewees didn’t want to take a picture with us. Another work we should do during our every visit was to test the download and upload speed in IC & LC.

We interviewed a senior patron aged seventy. He used to be a professor in the Institute of Chemistry in Chinese Academy of Sciences. When talking about the fee for users who were not the workers or students in Chinese Academy of Sciences, the old man said:
In my opinion, it is appropriate to charge for the outside users. For our library is mainly to serve researchers at Chinese Academy of Sciences and the library is mainly funded by Chinese Academy of Sciences. We researchers need a relatively quiet and simple environment to retrieve resources and do research. It is a way to control the amount of users. Library of Academy of Sciences should not involve too many people.

During our visits, we have found that most users in IC & LC are male. We could hardly find a female sometimes. It is a strange phenomenon. We have some assumptions about this. Generally speaking, there are always more men than women majoring in sciences. Men often get better ability of logical mind which is extremely important in science research. For most of the users are coming from Chinese Academy of Sciences, we think that there are more male workers and students than female in Chinese Academy of Sciences. Another assumption is that male users are more skilled at and accustomed to using computers.

**Description of our data**

Our data can be described in our aspects:

a. Some pictures, history information, and policies are born digital.

b. We distributed 50 questionnaires, and got 48 valid. The following data are not born digital: Basic information about age, profession, education, income, whether or not come from the CAS; Additional information like: the frequency come to library, difficulties ever met; the solution preferred, whether or not join trainings, necessary to establish Cyber Navigator, whether it is reasonable to charge 4 Yuan/hour for the outside users, how the net speed here is, satisfaction with the layout and the wireless access, and some other expectations. We chose Microsoft Excel to digitalize our questionnaires. One questionnaire is transformed to one record in that table. In addition, we also used the Microsoft Visio for our handwriting map.

c. We divided the questionnaires task for three parts, and made agree with the specified table format, then every one put the data into the Excel table with the same fields.

d. In order to make this clear, we made the metadata into a table:
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Source</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>an unique number for a questionnaire</td>
<td>from the part 1 of the questionnaire</td>
<td>1-48</td>
</tr>
<tr>
<td>Age</td>
<td>the age of the interviewee</td>
<td>from the part 2 of the questionnaire</td>
<td>lower than 150</td>
</tr>
<tr>
<td>Profession</td>
<td>the profession of the interviewee</td>
<td>from the part 3 of the questionnaire</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>the education of the interviewee</td>
<td>from the part 4 of the questionnaire</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>the income of the interviewee</td>
<td>from the part 5 of the questionnaire</td>
<td></td>
</tr>
<tr>
<td>1*yes</td>
<td>whether the interviewee come from Chinese Academy of Science</td>
<td>from the 1st question of the part 2 of the questionnaire</td>
<td>1 represents yes; 0 represents no</td>
</tr>
<tr>
<td>2-time</td>
<td>the times of the interviewee</td>
<td>from the 2nd question of the part 2 of the questionnaire</td>
<td>&gt;=0</td>
</tr>
<tr>
<td>3*1</td>
<td>the interviewee do not know how to operate a computer</td>
<td>from the 3rd question of the part 2 of the questionnaire</td>
<td>1 represents yes; 0 represents no</td>
</tr>
<tr>
<td>3*2</td>
<td>the interviewee can not use the common software</td>
<td>from the 3rd question of the part 2 of the questionnaire</td>
<td>1 represents yes; 0 represents no</td>
</tr>
<tr>
<td>3*3</td>
<td>the interviewee don’t know how to retrieval the database</td>
<td>from the 3rd question of the part 2 of the questionnaire</td>
<td>1 represents yes; 0 represents no</td>
</tr>
<tr>
<td>3*4</td>
<td>the interviewee can not get the service information timely</td>
<td>from the 3rd question of the part 2 of the questionnaire</td>
<td>1 represents yes; 0 represents no</td>
</tr>
<tr>
<td>3*5</td>
<td>the interviewee can get what he want readily</td>
<td>from the 3rd question of the part 2 of the questionnaire</td>
<td>1 represents yes; 0 represents no</td>
</tr>
<tr>
<td>4*1</td>
<td>Facing the difficulty, the interviewee will ask staff for help</td>
<td>from the 4th question of the part 2 of the questionnaire</td>
<td>1 represents yes; 0 represents no</td>
</tr>
<tr>
<td>4*2</td>
<td>Facing the difficulty, the interviewee will ask somebody seated nearby</td>
<td>from the 4th question of the part 2 of the questionnaire</td>
<td>1 represents yes; 0 represents no</td>
</tr>
<tr>
<td>4*3</td>
<td>Facing the difficulty, the</td>
<td>from the 4th question of</td>
<td>1 represents yes; 0 represents no</td>
</tr>
</tbody>
</table>
| Interviewee will choose to solve it by himself | the part 2 of the questionnaire | represents no
|------------------------------------------------|-------------------------------|-----------------------------|
| 4*4 Facing the difficulty, the interviewee will give up his actions | from the 4th question of the part 2 of the questionnaire | 1 represents yes; 0 represents no
| 5-yes The interviewee will ever take part in training courses | from the 5th question of the part 2 of the questionnaire | 1 represents yes; 0 represents no
| 6 Yes Does it necessary to set Cyber Navigator? | from the 6th question of the part 2 of the questionnaire | 1-5 represents a different degree
| 7-yes Does it appropriate to charge 4 yuan/hour for the outside users using the computer there | from the 7th question of the part 2 of the questionnaire | 1 represents yes; 0 represents no
| 8-net speed How do you think of the net speed here? | from the 8th question of the part 2 of the questionnaire | 1-5 represents a different degree
| 9-layout Does the layout of there is proper? | from the 9th question of the part 2 of the questionnaire | 1-5 represents a different degree
| 10-wireless access Does it necessary to cover the wireless net in the IC&LC | from the 10th question of the part 2 of the questionnaire | 1-5 represents a different degree
| 11*S suggestion | from the 11th question of the part 2 of the questionnaire | 1-5 represents a different degree

Table 2: Metadata About Questionnaires
Analysis and Findings

a) USERS

**Diagram 1: Users’ Distribution**

We can conclude from the chart above that, among the patrons in the site, 79% are members of the Chinese Academy of Sciences and the rest are users from outside the library. So, most of the patrons are skilled with computer technology.

**Diagram 2: Age Distribution**
From the age distribution chart above, it is evident that the 21-30 year-space covers the biggest part and the 31-40 year-space comes to the second place. The year-spaces 41-50 and above 50 covers the least part. We can know that young users use more IC&LC than the elder patrons. And from our data we know that the average age among these people are 27.83. Maybe that this is because many users are masters of CAS.

Diagram 3: Number Distribution According to Education

Now we can know that the users’ education is over bachelor. So we know that the literacy of the users is better. Also we know that diploma represents much, but we think it reflects some.

In conclusion, we find that most of the users come from CAS, which directly lead to that the diploma is higher, and that age focus on 20-30. Another interesting we have observed, but not reflected in the questionnaires, is that most of the users are male. As far as we are concerned, it maybe because that the CAS includes Science and engineering course, and there is more boys than girls. It may also dues to that boys may be more skilled and interested in computers. In addition, we also think that sitting before a computer long is quite labor, boys gain the advantages over girls.

b) SERVICES:

(1) As we all know, the main thing we consider is net speed when surf the Internet. Through interviewing and experiencing in person, we found that the net speed is really good. Here is the net speed gotten by our group.
Diagram 4: Net Speed at Different Times in IC&LC

(2) In order to measure the users’ satisfaction, we set five grades for the interviewee to choose: 1 (very bad), 2 (bad), 3 (average), 4 (good), 5 (very good).

<table>
<thead>
<tr>
<th>The satisfaction of netspeed</th>
<th>numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>grade</td>
<td></td>
</tr>
<tr>
<td>1 (very bad)</td>
<td>0</td>
</tr>
<tr>
<td>2 (bad)</td>
<td>1</td>
</tr>
<tr>
<td>3 (average)</td>
<td>9</td>
</tr>
<tr>
<td>4 (good)</td>
<td>28</td>
</tr>
<tr>
<td>5 (very good)</td>
<td>10</td>
</tr>
</tbody>
</table>

Postscript: average grade is 3.97916667

Table 3: Satisfaction of Net Speed

Through the Average grade, we know that the users are quite satisfied with the netspeed.

(2) Similarly, we also set 5 grades to measure the interviewees’ necessity for wireless access.

<table>
<thead>
<tr>
<th>Necessity of allowing wireless access</th>
<th>numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>grade</td>
<td></td>
</tr>
<tr>
<td>1 (quite unnecessary)</td>
<td>4</td>
</tr>
<tr>
<td>2 (unnecessary)</td>
<td>2</td>
</tr>
<tr>
<td>3 (average)</td>
<td>8</td>
</tr>
</tbody>
</table>
Table 4: Necessity of Allowing Wireless Access

From the table, we also find that the average grade is over 3, so most users want here have wireless net cover. However, there are 4 people here think it is quite unnecessary. Their opinion reflects a attitude that CAS should be peaceful environment.

(3) Also, we use the same method to get the satisfactory degree of Layout. For short, we find that the average grade is 3.895833. So we may know that the Layout is suit for the interviewee.

Further thinking

This part will demonstrate our research questions. We want to deeply analyze the question that whether or not should the IC&LC of National Science Library open to the whole public. During our field study, we have already known that the IC&LC is fully public. Or we can call it semi-public. That means social users can go to IC&LC, but they must pay for their access to ICTs and databases resources. In order to explain our question, we must first analyze the current conditions and its causes of IC&LC. We have conducted a brainstorm on the causes of current conditions the IC&LC confronts.

We can see from the fishbone diagram on the next page that the main cause of current conditions is the development policy of the National Science Library. So we come to a discussion of whether the library policy should encourage social users to come to the library and share the resources there. In our research team, there are different viewpoints. See table 5.

Table 5: Whether the Policy Should Encourage Social Users or Not?
So we come to the question that why the current policy doesn’t encourage public users. We arrived at a conclusion that it is not so necessary for the National Science Library to be totally public. There are some reasons given by our team. First, truly valued resources cannot be shared or free of charge. To some extent, the valued resources are property and profit can be made by using them. Thus, the resources are private property of the owner. Another reason is that sharing is based on mutual construction. Only the resources are co-constructed can it be shared. Thirdly, even the IC & LC of National Science Library is not free for the whole public, the scientists there who get access of the resources are serving the society. The society benefits and our public benefits indirectly. By the way, we also hold the idea that only relatively closed system can operate well. Theory does not always go with practice very well.
Diagram 5: Fishbone of Causes of Current Conditions
IV. University Libraries

China Agricultural University Library team, L to R: ZHU Qingsong, WANG Jianghua, ZHOU Liying, WANG Haiyan

Peking University Library team: CHEN Qiuting, ZHAO Kang, LI Li, ZHANG Lili
8. A Case Study of the China Agricultural University Library

WANG Haiyan 王海燕
PhD student, National Science Library Chinese Academy of Sciences, wanghaiyan@mail.las.ac.cn

WANG Jianghua 汪江桦
PhD student, National Science Library Chinese Academy of Sciences, wangjianghua@mail.las.ac.cn

Zhou Liying 周丽英
Master’s student, China Agricultural University Library, zhouly@cau.edu.cn

ZHU Qingsong 祝清松
Master’s student, Institute of Scientific and Technical Information of China, zhuqingsong@gmail.com

Acknowledgements
We have learned some useful knowledge of community informatics that we did not know before from the summer school. We think the course will be very helpful for our future study, research and work. So we want to thank everyone who has helped us.

Thanks to all members of our group 1, we did some work and finished the survey report together. Thanks to the China Agricultural University Library and its related staff, thanks to the librarians who were interviewed and the patrons who helped us do the questionnaire. Thanks to all our summer school classmates, we learned, discussed, and helped each other, it is very happy to be with you guys. Especially thanks to professor Abdul and Kate, they taught us so much knowledge about community informatics which makes us learn about the course and realize the phenomenon of digital divide. Thanks to Teacher Yan Hui who told us much more about community digital inequality of China. Thanks to Professor Han Shenglong who organized the summer school excellently and helped us so much on every aspect. Thanks to our PhD tutor Professor Leng who is a researcher of National Science Library, Chinese Academy of Sciences, he brought the summer school information for us. At last, thanks to the Department of Information Management at Peking University (PKU).

1 Introduction
Our research group has carried out a case study of China Agricultural University Library. We used methods of observation, interview, and questionnaires and so on. We visited the site three times and investigated its wired and wireless network condition including related services. Also we interviewed some workers and librarians of related departments including automation department, technology department and information service department. At the same time, we designed and made the questionnaire for patrons to get
some useful information for our research. At last, we made the conclusion by organizing and analyzed the collecting data. Meanwhile, we gave some suggestions for the library to improve their network infrastructure efficiency given the reality of the library and our research.

After describing our assignment, we will introduce our research team, the reason we select China Agricultural University Library as our research site also review the D7 method briefly.

1.1 Research Team

Our group 1 has four members, our basic information as follows. Everyone plays an important role during our research.

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Gender</th>
<th>Education</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Zhu Qingsong</td>
<td>Male</td>
<td>master</td>
<td>Institute of Scientific and Technical Information of China</td>
</tr>
<tr>
<td>2</td>
<td>Zhou Liying</td>
<td>Female</td>
<td>master</td>
<td>China Agricultural University Library</td>
</tr>
<tr>
<td>3</td>
<td>Wang Jianhua</td>
<td>Female</td>
<td>PhD</td>
<td>National Science Library, Chinese Academy of Sciences</td>
</tr>
<tr>
<td>4</td>
<td>Wang Haiyan</td>
<td>Female</td>
<td>PhD</td>
<td>National Science Library, Chinese Academy of Sciences</td>
</tr>
</tbody>
</table>

Table 1: Research Team Information

1.2 Site Selection

Our research site is China Agricultural University Library (CAUL), the reasons we select it as our research object as follows.

a. CAUL is a not-for-profit organization that provides the network service as a public computing site. The condition is fit for the requirement of assignment 2.

b. CAUL provides some service for the public, for example, open data service (free or charged), reference service, training service and so on.

c. One of our group members is working on the CAUL. It is more convenient for us to do the research including making the questionnaire, interview and data collection and so on.

1.3 D–7 Method

Our research methods are totally based on the research methods in community informatics. The D-7 method includes definition, data collection, digitization, discovery, design, dissemination and difference. At the same time, our research tries hard to follow the four rules including sticky fingers, elephant ears, seeing is believing, doing is knowing.
2 Background and Issues

In this section, first we will briefly introduce the history and social context of CAUL, next we will mainly introduce the research question and last we will show some literatures that led us to select this question.

2.1 History of CAUL

In 1995, the China Agricultural University Library (CAUL) was established which consists of two parts, East Library (17 Qinghua East Road) and West Library (2 Yuan Mingyuan West Road) occupying 21,665 square meters and hosting more than 2,700 reading seats. The library is affiliated with China Agricultural University (CAU) and funded by CAU and the Ministry of Education.

CAUL is one of most important libraries in agricultural education and research in China. Its major collections include paper documents (more than 1.7 million volumes), electronic journals (more than 20,000), and electronic books (more than 1.48 millions). The collections emphasize agricultural science, biology and agricultural engineering.

There are 113 librarians and staff working in the library, including 40 research librarians and associate research librarians. Among them, 29 librarians are post-graduates. CAUL also functions as National Agricultural Information Center of CALIS (China Academic Library & Information System) and National Foreign Textbook Center in Agriculture. Haidian District Agriculture Library affiliates with the China Agricultural University Library.

User education is one of main functions of CAUL. The library provides different kinds of training courses and workshops to students and faculties every year. CAUL has been active for a number of years in developing international communications and cooperation. CAUL pursues in collection development, personalized information service, and resource sharing.

2.2 Social Context

CAUL consists of two parts, East Library (17 Qinghua East Road) and West Library (2 Yuanmingyuan West Road). Its Google maps are as follows.

Diagram 1: Google Map of West Library and East Library. Red bubble A stands for West Library, B stands for East Library. East Library was Beijing University of Agricultural Engineering Library which came into service in the 1980s, West
Library was Beijing Agricultural University Library which came into service in the 1990s.

Diagram 2: External View of West Library and East Library

Diagram 3: Layout of West Library and East Library

Diagram 4: Electronic Reading Room of West Library and East Library
2.3 Research Question
From our preliminary observation, we found that there are many computers in the electronic reading room, but few patrons are there. On the contrary, there are many patrons in the laptop special area. At the same time, we found that patrons using computers mainly not for academic purpose but entertain themselves by watching movies, chatting or something. So according to this phenomenon, we did the research by observation, interview, and questionnaires to find the causations.

2.4 Related Literatures
The literature we used is listed in the Bibliography and Webliography contained in the Appendices.

3 Plans Formulating
In this section, we will operationalize our variables, describe our field work plan and the schedule, tell a couple of interesting stories about our experience in the field.

3.1 Variables operationalization
According to our group discussion, we will collect data from patrons and librarians. As for patrons, we will use questionnaires. As for librarians, we will have open ended interviews with librarians including librarians of electronic reading room, engineers of technology department, reference librarians. So, in this part we will introduce the variables.

3.1.1 Patrons
As for patrons, we will use the following variables to get information from them. The variables include user identity, education background, gender, age, online frequency, location to get online, frequency of using CAUL’s Internet access service, getting online purpose, quite often encountered problem, getting help from whom, problem resolved proportion, most like type of service, most dislike thing when accessing the Internet in CAUL.

3.1.2 Librarians of Electronic Reading Room
As for librarians of electronic reading room, we will use the following variables to get information from them. The variables include service object, patrons’ number in a week, patrons’ most encountered problem, problem solved style, patrons’ use, cost situation, supporting services, fund source, librarians’ number and background, methods of attracting patrons, upper management department.

3.1.3 Engineers of Technology Department
As for engineers of technology department, we will use the following variables to get information from them. The variables include network hardware environment, software environment, storage space, cyber layout, time, quite often encountered problem, problem happening frequency, engineers’ number and background.

3.1.4 Reference Librarians
As for reference librarians, we will use the following variables to measure them. The variables include training style, training condition or limitation, training content, training frequency, number of attending training, training effect, quite often problem encountered.
3.2 Work plan

We will visit CAUL as often as possible, and communicate with the manager and explain our research. We will interview related staff, for example, librarian of electronic reading room, reference librarian, technology engineer. The contents we want to investigate include CAUL’s digital resource service and its usage, network infrastructure and service, patron composition, needs, preferences, disorders. Also we will make the questionnaire of patrons. At the same time, we will collect data and process it to get some conclusion. According to the preparation, we will write the draft report and send it to interviewees by email and get their feedbacks. Then we will modify our report and finish the final report.

<table>
<thead>
<tr>
<th>No</th>
<th>Date</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7.12</td>
<td>To discuss in group and draw up a plan of assignment 2</td>
</tr>
<tr>
<td>2</td>
<td>7.13</td>
<td>To discuss in group and write a outline of the report of assignment 2</td>
</tr>
<tr>
<td>3</td>
<td>7.13</td>
<td>To communicate with our site contact and show or explain the schedule for our research visits</td>
</tr>
<tr>
<td>4</td>
<td>7.14-7.17</td>
<td>To visit the site and interview the staff work there</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To visit the site and do fact finding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To surf the Internet and collect data about assignment 2</td>
</tr>
<tr>
<td>5</td>
<td>7.18-7.20</td>
<td>To discuss in group and write the draft report</td>
</tr>
<tr>
<td>6</td>
<td>7.21-7.22</td>
<td>To show our contact our draft report and get his or her feedback and suggestions</td>
</tr>
<tr>
<td>7</td>
<td>7.25-7.26</td>
<td>To finish final report and submit the document</td>
</tr>
</tbody>
</table>

Table 2: Work Plan Schedule

3.3 Interesting stories

During our research, we found one thing that surprised us which happened in the electronic reading room. In the beginning, many users were expected, but when we arrived we found there were very few users in the electronic reading room. Users were mainly in the readers’ area and laptop use area. At first we thought the reason was that students were on their holiday, so they couldn’t go to the library. However, when we talked with the library staff, they told us that even under normal circumstances the result was the same. We were surprised and wondered what causes this situation? Maybe this is an issue worthy of our study.

Another story is that we encountered a strange person in the library. When we talked with services staff, this user came up. He looked very proud, head up high and acated rudely when he asked questions. When the staff answered his questions, he looked very irritable with a bad temper; thought the staff was too slow to answer. Moreover, he liked to interrupt and criticize others, as if he knows a lot of, it made us feel uncomfortable. After he left, other people told us that he was a Ph. D. student of an well known academician. This is perhaps the reason for his pride, but what a disgusting person!
4 Data from Questionnaires

In this section, we will describe our data and how we digitized it into one format. And we will create metadata for our data. Details are as follows.

Our research data is mainly from patrons’ questionnaires. We designed the questionnaire and went to the library to ask patrons to help us finish the questionnaire. At last, we totally collected 45 valid questionnaires. Then we used MS Excel to digitize the collected data and made it into one format. The metadata of our data is as follows. And its source is mainly from the patrons and our group member derived it from questionnaires. You can find the raw data and anonymized one from appendices. And you can find the statistical results from part 5 the causation analysis.

<table>
<thead>
<tr>
<th>field</th>
<th>description</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>a unique number for each patron</td>
<td>group1</td>
</tr>
<tr>
<td>user identity</td>
<td>student of CAU, faculty of CAU or others</td>
<td>patron</td>
</tr>
<tr>
<td>education background</td>
<td>patron’s degree level</td>
<td>patron</td>
</tr>
<tr>
<td>gender</td>
<td>male or female</td>
<td>patron</td>
</tr>
<tr>
<td>age</td>
<td>how old the patron is</td>
<td>patron</td>
</tr>
<tr>
<td>online frequency</td>
<td>times of accessing Internet</td>
<td>patron</td>
</tr>
<tr>
<td>location to get online</td>
<td>where the patron getting online</td>
<td>patron</td>
</tr>
<tr>
<td>frequency using CAUL’s Internet</td>
<td>times of accessing Internet in the library</td>
<td>patron</td>
</tr>
<tr>
<td>getting online purpose</td>
<td>what patron getting online for</td>
<td>patron</td>
</tr>
<tr>
<td>quite often encountered problem</td>
<td>what problem patron often meets</td>
<td>patron</td>
</tr>
<tr>
<td>getting help from whom</td>
<td>where the patron finds help</td>
<td>patron</td>
</tr>
<tr>
<td>problem resolved proportion</td>
<td>how the problem was solved</td>
<td>patron</td>
</tr>
<tr>
<td>most like type of service</td>
<td>which service the patron likes better</td>
<td>patron</td>
</tr>
<tr>
<td>most dislike when accessing the Internet in CAUL</td>
<td>worse problem the patron meets</td>
<td>patron</td>
</tr>
</tbody>
</table>

Table 3: Metadata from Questionnaire

5 Causation Analysis

In this section, we will describe the data collected for the dependent variable and independent variable in relation to the dependent variable. And we will explain how we answered the research question based on the data we presented.

5.1 Questionnaire Analysis

Firstly, we will show you the statistical results according to the questionnaires from patrons.
Diagram 5: User Identity

From the diagram 5, we can know that patrons of CAUL are mainly students of CAU, faculty and others only account for 30%. They are mainly undergraduates and males are more than females. And patrons’ ages are mainly from 18 to 30 which match with the first part of diagram 5.

Diagram 6: Online Frequency and Location

Diagram 6 shows the patron’s online frequency and getting online location. The online frequency has no location limitation. From the left of diagram 6, we can know that more than 80% patrons get online at least 3-5 times a week. And from the right one, we can find that patrons get online mainly on the dormitory, classroom, office or laboratory, the proportion accounts for 64.18%. And only 22.39% patrons get online in the library.
Diagram 7: Online Frequency in the Library and Purpose

Diagram 7 shows the patron’s online frequency in the library and getting online purpose. The location is only in the library. From the left of diagram 7, we can find that more than 66% patrons never using library computer and near 30% patrons often using library computer.

So patrons of library include three kinds, one is only using computer, the other one is only using library, the last one is using both computer and library. Our research can only know the later two, the first kind we cannot know because we did not do the questionnaires only to patrons using computers.

From the right part of diagram 7, we can learn that more than 90% patrons get online not for academic purpose. Only 5.19% patrons get online to look up database for searching documents. Of course, we cannot deny that patrons using search engine or email are not for study.

Diagram 8: Problem Encountered Situation

From diagram 8, we can find that most patrons once met information search skill problems and IT problems. Half of them will find help by search engine, and the rest will find help from classmates, friends and librarians. But we can find that finding help from librarians only account for 13.33%, so maybe librarians should find the reasons to change their service. And the problems could mostly be resolved.
Diagram 9: Most Like and Dislike Service

From diagram 9, we know that most patrons like skill training service, and next is technology support, so library can hold skill trainings at regular intervals to help patrons. But the worse configuration of computers in the library and slow connection speed seriously affect the patron’s enthusiasm.

5.2 Interview Analysis

5.2.1 Network environment
CAUL network is a part of CAU campus network which provides two types connectivity to access Internet: wired and wireless. Now CAUL has five servers(E5500), OS is Windows system.

Wired connectivity: 2nd floor of electronic reading district (West Library), 1st floor of electronic reading room (East Library), details are as follows.

<table>
<thead>
<tr>
<th></th>
<th>West Library</th>
<th>East Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Numbers</td>
<td>64</td>
<td>48</td>
</tr>
<tr>
<td>Hardware Config</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Best Configuration)</td>
<td>Tongfang Chaoyue E300</td>
<td>Founder Shangqi 8000</td>
</tr>
<tr>
<td>CPU: P4/3.06GHZ</td>
<td></td>
<td>CPU: P4/2.4GHZ</td>
</tr>
<tr>
<td>Memory: 512MB</td>
<td></td>
<td>Memory: 256MB</td>
</tr>
<tr>
<td>Hard Disk: 80GB</td>
<td></td>
<td>Hard Disk: 40GB</td>
</tr>
<tr>
<td>Manager Numbers</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 4: Hardware Environment

Because the library was built so early (West Library 1990s, East Library 1980s), the preserved sockets are very small that brings the inconvenience to patrons. And the number cannot catch patrons’, so CAUL built new area for patrons who could bring their
own laptop to access Internet by the new power and wired or wireless connectivity. Details are as follows.

<table>
<thead>
<tr>
<th></th>
<th>West Library</th>
<th>East Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socket Number</td>
<td>32</td>
<td>24</td>
</tr>
<tr>
<td>Network Interface Number</td>
<td>32</td>
<td>24</td>
</tr>
</tbody>
</table>

Table 5: Socket & Network Interface Environment

CAUL’s wireless network came into service from 2005. West and East Library totally have 24 wireless network transmitters to ensure the whole library could access Internet by wireless connectivity.

Diagram 10: Network Topological Graph of West & East Library

Because West Library has been maintained only from May 1st 2010, we choose the East Library as our research object.

5.2.2 Wired Electronic Reading Room

Electronic Reading Room lies in 1st floor of East Library which provides multi-media resources reading and accessing Internet service. There are 45 computers and 2 managers, its opening time is from 8:30 am to 11:30 am, 1:30 pm to 5:00 pm, 7:00 pm to 22:00 pm, the fee is 1 yuan/1 hour, but patrons who are not certificated by campus management department can only access campus resources but Internet. Managers do not have computer technology backgrounds, so they can only solve the basic problems for patrons, for example, how to login and exit the charging system, or how to use the main page of library and so on.
From e-reading room librarian interviews we learned that most patrons are students from CAU, although sometimes researchers from related agriculture research institutes come here. In addition, some researchers from agriculture companies also go to the electronic reading room to search documents they need.

Table 6 shows Electronic Reading Room’s three stages of history.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting automation management system, providing bibliographic retrieval computers</td>
<td>connecting Internet, various network resources made patrons feeling good</td>
<td>campus network gateway authentication</td>
<td>campus network connecting to dormitory and full coverage of wireless network</td>
</tr>
<tr>
<td>Patrons Actions</td>
<td>Retrieval bibliographic information</td>
<td>Patrons could freely use in or out campus, so many patrons leading to stand in a line</td>
<td>Patrons out of campus had limitation but there were still many patrons from campus to stand in a line</td>
</tr>
</tbody>
</table>

Table 6: Three Stages of Electronic Reading Room’s History

Now there are few patrons usually except every year freshmen need cd-rom to read the disk of English book. Although library has installed English learning software, chat application and shared English teaching videos and other related resources to attract patrons, this situation has not been solved. Now there are only 20 month-charged patrons using the laptop special area. The reasons includes “Almost everyone has own computer and can access Internet everywhere from wireless style.”, “Computers of library are so old and slow which waste so much time for just starting or shutting down the computer.”, “Computers of Computer & Networking Center are very quick and good.”.

5.2.3 Wireless Reading Area
From observation we found there were 8 patrons using the wireless network of reading area that accounts for 5% of all patrons. From questionnaire we find that they are mainly bachelors and graduates from CAU. They access Internet everyday at dorm, lab or library, and at library more than 30%. Their goals are mainly searching documents, search engine, instant message, browsing news and watching movies. They feel that the library has good environment, quick net speed, and convenient use. The most problem they met is “could not find documents they need”, 80% could be solved and 60% solved by network, 10% by classmates or friends, 10% by reference librarians.

5.2.4 Technology Support
Automation department is responsible for maintaining the network of CAUL. There are 5 engineers in the department. They all have computer technology background. They take
charge of maintaining the software and hardware of network servers, electronic reading room and all staff of library. According to the technology engineer’s introduction, network servers have been updated to satisfy patrons’ needs.

5.2.5 Training service
Reference librarians are responsible for patrons’ training and there are 20 reference librarians whose work including new patrons’ training, special lectures, reservation training and so on. And training includes the use of network devices, network services and tools, usual office software and so on. The frequency of training is about once a week basically, lasting from 1.5-2.5 hours. Also, there is additional time for practice on the computers.

From reference librarians, we know that their training objects are mainly patrons who had problems using the computer or the network. There is no limitation about patrons but teachers and students of CAU are the most. The contents vary according to patrons’ features and have strong practicability. And patrons attending lectures have high praise for the training. But with the universality of Internet, number of patrons decreases year by year. On the beginning, there were at least 50 patrons to accept training but now less than 10 patrons to attend each time.

5.3 Result Analysis
According to our research for the CAUL by observation, interview and questionnaire, we analyze the collected data of patrons. And we have got some useful information above including questionnaire analysis and interview analysis. We also find the independent variables as follows for the research question (dependent variable) we mentioned before.

a. In the CAU, patrons can login the e-library to use the digital resources by valid interfaces everywhere. So the connectivity of digital resources is more convenient and effective. Digital resources of the library can be accessed not only in the library but also in the computer rooms for teaching, classrooms, dormitories and so on. And in these locations, patrons can login, search and download the digital resources.

b. Patron’s realization of using digital resources is strengthening. From our research, we learn about that middle young teachers and students could login the e-library by themselves and get digital resources they need. But the old patrons, they mostly depend on paper resources, and also they often get help from reference librarians to get the digital or paper resources they want.

c. Although the speed of accessing the Internet in the library is very high, the hardware infrastructures are very poor, so patrons do not like to go to the library using the computer.

d. Many patrons’ purpose to go to the library is only for accessing the Internet for fun or to study by themselves.

e. And also different degree levels show different needs, e.g., graduate students and above have high frequency to access the database for search documents. At the same time, undergraduate students have less need, so they mainly do not use the digital resources.

The above independent variables affect the phenomenon we mentioned, and the independent variables also lead to CAUL take actions to change this situation. At the
moment, the phenomenon becomes the independent variable. The actions become the dependent variable. The actions are as follows.

a. Establish the laptop special area. Then patrons can take their own laptop to go to the library for accessing Internet, study and so on. The area has 25 seats and implements monthly fee form. The seats include 20 monthly fee seats and 5 seats preserved for temp patrons. The seats’ utilization ratio is up to 80%-100%. But there are still some questions. For example, patrons usually do their own business including accessing Internet, writing papers and so on, but not often use the digital resources of CAUL.

b. Hold trainings to teach patrons how to use the digital resources and paper resources of CAUL. If training contents are too professional, some patrons will not want to attend. So now according to different patrons’ different needs, CAUL segments the training courses to try to improve the range of attending training.

6 Result Show

In this section, we want to show how we design and disseminate our research.

According our research data and analysis, we form the report to show our findings. We will send this report to related librarians of CAUL by email to tell them what we have done and what we have found. And we hope they can give us some feedbacks and we also want to give some useful measures or suggestions to them to help them make the situation better.

At the same time, we will prepare for PPT to show our research findings to our summer school classmates.

7 Conclusion

In this section, we will three kinds of differences including a difference in the world, a difference in the research community, a difference to each member of our group.

7.1 To the CAUL

According to our research for the CAUL, we make the following suggestions for the CAUL. We hope CAUL can make some change to do better for the public.

a. We hope that CAUL could improve the utilization rate of computers. Computers are so wasteful if they are only used to play games, chat and watch movies.

b. Its computers’ hardware and software should be updated. Then the computers could more fit for patrons’ needs.

c. Campus network management center should provide public accounts for electronic reading room, and then the public out of campus could log in the website to get the collection resources of CAUL.

d. CAUL should make greater efforts to publicize and expand social impact, and attract more people to go to the library.

e. As a public not-for-profit computing site, CAUL should try hard to arrange the computer literacy training for communities.

f. CAUL should carry out more social community activities, for example, public lectures, popular science propaganda and so on.
7.2 To the Literature

a. Due to the limitation of time and energy, we think our research work is still not enough and deep.

b. Our research has made fully field survey, especially the interviews to technology department, service department and training department. This provides useful information for our research.

7.3 To Our Team Member

a. The method of case study or field research is very effective and systematical.

b. Teamwork is more efficient than a number of individuals working singly.

c. Through surveys and other means to analyse questions objectively, “No investigation, no right to speak”.

d. Community Informatics is very useful for China to solve the problem of digital divide especially the rural.

Bibliography


Webliography


Appendices

Questionnaire in Chinese
Questionnaire in English
Maps and more photos
Raw data
Statistical results
Questionnaire in Chinese

1、用户身份 □本校学生 □本校教职工 □校外人员
学历 □本科生 □硕士研究生 □博士研究生 □其他
性别 □男 □女
年龄________

2、上网频率
□每天 1 次及以上 □每周 3-5 次 □每周 1 次
□每月 1 次及以下 □从来没上过网

3、经常在什么地方上网
□宿舍 □实验室/办公室 □教室 □图书馆
□家 □网吧 □其他_________

4、到图书馆上网的频率
□每天 1 次及以上 □每周 3-5 次 □每周 1 次
□每月 1 次及以下 □从来没去过

5、上网的目的
□查馆购数据库 □搜索引擎 □收发邮件 □即时通讯
□浏览新闻 □看电影 □玩游戏 □其他_________

6、上网经常遇到的问题
□计算机技术问题 □检索技巧 □其他问题_________

7、上网碰到问题找谁帮忙
□图书馆员 □同学或朋友 □搜索引擎 □其他途径_________

8、问题的解决比例
□90%及以上 □60-90% □30-60% □30%以下

9、希望图书馆提供哪方面的帮助
□技术支持 □技能培训 □其他_________

10、在图书馆上网时你觉得最不喜欢的是什么？
□低配置计算机 □网速太慢 □在线资源太少
□服务太差 □其他_________
Questionnaire in English

1. User Identity
   - Student of CAU
   - Faculty of CAU
   - Others

2. Education background
   - Undergraduate
   - Master
   - Ph.D.
   - Others

3. Gender
   - Male
   - Female

4. Age

5. Online frequency
   - More than once a day
   - 3-5 times a week
   - Once a week
   - Less than once a month
   - Never

6. Location to get online (more options)
   - CAU dormitory
   - CAU classroom
   - CAU office/laboratory
   - CAU library
   - Home
   - Cybercafé
   - Other
   - Place

7. Frequency of your usage of CAU library’s Internet Access Service
   - More than once a day
   - 3-5 times a week
   - Once a week
   - Less than once a month
   - Never

8. Your purpose to get online (more options)
   - Look up database
   - Search engine
   - Email
   - IM
   - News
   - Movie
   - Game
   - Other

9. What kind of problem you encountered quite often
   - IT problem
   - Information search skill
   - Other

10. Who did you ask for help when you had problems?
    - Librarian
    - Classmates/friends
    - Search engine
    - Other

11. What proportion your problem have been resolved?
    - More than 90%
    - 60-90%
    - 30-60%
    - Less than 30%

12. What kind of service you most like to obtain from CAU library?
    - Technology support
    - Skill training
    - Other

13. What is you most dislike when you access to Internet in CAU library?
    - Weak computers
    - Slow connection speed
    - Insufficient online resources
    - Bad service
    - Other
Maps & More Photos

Position of East Library

Position of West Library
Reading Room of West Library and East Library

Training and Reference
### Raw Data and Anonymized Data

#### Part of the Raw Data

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most dislike CAUL’s net service

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9. The Capacity and Policy of the Peking University Library as a Public Computing Site

ZHAO Kang 赵康
PhD student, Peking University, zhaokangzk@gmail.com

ZHANG Lili 张丽丽
PhD student, Peking University, zhll@cnic.cn

CHEN Qiuting 陈秋婷
Masters student, Sun Yat-sen University, chenqiuting@yahoo.com.cn

LI Li 李丽
Masters student, Peking University as of fall 2011, pigelca@163.com

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We are also extremely grateful to those who participated in our study: those who did our questionnaires, the Library staff, the interviewees and those whom we borrowed the Library cards from.

Last but not least, we would like to thank Department of Information Management at Peking University (PKU) and the Community Informatics Research Lab at the Graduate School of Library and Information Science at the University of Illinois (UIUC), which provided us a chance to learn Community Informatics and gather together in this summer school.

1 Introduction

There are four members in our group who aim to find the gap between the public computing facilities that the PKU Library provides and the ability of the patrons to use them as well as to make a difference in the patrons’ capability to use them. All of the four of us have dedicated much to the study: we have held several rounds of group discussion online as well as face to face, we have collected all kinds of data, we also have visited the PKU Library several times. At the first round of group discussion, we once decided to study whether it is community lost, community saved or community liberated in the
Library when regarding its patrons as a community. As the discussion went on, it occurred to us that it was somehow much more important for us to help the patrons to improve their ability to take advantage of the computing facilities of PKU Library to meet their needs in the digital era. So our goal was born: to study and to find ways to help the patrons of PKU Library to make full use of the computing facilities that they can get access to.

Our group consists of four young and energetic ladies who are: ZHAO Kang, a PHD student of PKU, majoring in Information Management; ZHUANG Lili, a PHD student entering in PKU this September, also majoring in Information Management; CHEN Qiuting, a graduate student to be of Sun Yat-sen University this September, majoring in Library Science; and LI Li, a graduate student this September of PKU, formerly majoring in English but now will major in Information Management. During the research Zhao Kang played the leading role and the rest of our three were her soldiers. She deployed the outline of the research and specified all kinds of details. Zhang Lili, Chen Qiuting and Li Li mainly collected the questionnaires online and in the Library, analyzed data and so on. All of us took part in both designing the questionnaire and writing this report.

The past several decades have witnessed a drastic development of the internet, more and more people are likely to stay at home surfing on the internet instead of going to library reading books. Does library give way to the internet? Do we lose the ability to make good use of the services that the Library provides? And the most important is that can library survive in the tide of digitalization? With all the questions in our mind, we made our decision to do research on library. So the next problem is which library should be our target. Because of two of our four are still at work, so it is luxury for us to travel the whole city form one side to another, we just do not have enough time. So we choose PKU Library, it is on the campus so we can do the field research after class and save a lot of time. As already mentioned above, two of us have been and still are students of PKU, so we can get in touch with our friends and teachers to make sure if they know anyone who work in the Library. The last reason we chose PKU Library as our target is that we really want to make a difference by helping the patrons.

During the research, we employed and followed D-7 method: 1) Definition; 2) Data collection; 3) Digitization; 4) Discovery; 5) Design; 6) Dissemination; 7) Difference. What’s more, we grab everything about our subject, listen and record everything people say, as well as use camera whenever possible. And we do hope this strict study method can help us better finish our research and finally get some useful feedbacks or suggestions.

2 Background and Purpose

To gain an insight of the history of PKU Library, we combine both field study and general on-line research in carrying out the research of this assignment. We also include the knowledge learnt from Community Informatics summer school in the course of our study.

Overview of Peking University Library

Peking University Library is one of the leading research libraries in China, combining a long and distinguished history with a vibrant mission of service to the University and the nation. Whether people are on campus or connecting with us from a distance they can make full use of the services, collections, and resources which can be found in PKU.
Library. Patrons will find scholarly materials from ancient rare books to cutting-edge scientific journals online, or to our special collections of Oriental Studies, AV materials, and rubbings to support every learning endeavor. Besides, patrons can also find equipment and facilities to meet their various needs. Take time to enjoy films and music in the multi-function room surf on the network, savor the quiet of reading rooms, or collaborate with teammates in the group study rooms. Along with outstanding collections and resources, PKU Library offers first-rate assistance and service. Contacting librarians in person, by mobile phone, or through IM tools online are available. In a word, PKU Library is a site of public computing.

History of PKU Library
In 1902, the Book Depository Building of the Imperial University of Peking was established, as one of the earliest modern libraries in China. After the Revolution of 1911, it was renamed to Peking University Library.

For the past hundred years the Library has undergone various phases of its development, including the difficult years after its founding, the period of the New Culture Movement marked by a lively concurrence of thoughts and ideas, the tough ordeals during the days of the Southwest Associated Universities, and the fast developing stage made possible by the policy of opening to the world.

The Library’s collection has been expanding, its facilities ever in the process of being improved, and its acquisitions of new equipment and technology always being up to date. All this has made the Library an age-old yet modern Chinese library with magnitude in every aspect, winning an international reputation as one of the most important and best managed libraries in the country.

Phases of Development of Library Buildings
A library's building bears directly on its collections and reader service. Spacious library rooms and modernized facilities always remain one of the material conditions for a good library. For the past hundred years the Library has seen its site change more than once, marking a journey from scarcity to amplitude, from narrow spaces to magnitude, and from tradition to modernization.
It was not until 1902 when the Imperial University of Peking was restored that its book collection building was able to find its site at the Harem in Jia He Princess's Mansion at Ma Shen Temple inside the Gate of Earthly Peace.
Under the directorship of Li Dazhao, the Library moved to the first floor of the Red Building at Shatan, Beijing from August 1918 to September 1931, together with two affiliated libraries.
September 1935 saw the completion of the new library building and its opening to readership. The Library building in its Song Gong phase was completed at Song Gong Mansion, to the north of the Red Building with a space of 6604 square meters. Today the building is used by the Qiushi Magazine.
National Southwest Associated Universities Library at Kunming, Yunnan, was completed in 1939.
Yenching University Library was completed in 1926. With the nationwide restructuring of schools and disciplines in 1952, Peking University Library moved to Yenching University Campus, the Library of the latter school incorporated into the former. As the result of this reshuffling, the site of the former Yenching University Library became the new main library of Peking University. After the main library moved to the new building in 1975, this old building was used as reading area and the main stack for back numbers of periodicals from 1975 to 2000. It has become the University Archives ever since.

New Peking University Library (West Building)

The construction of the new building in April 1973 and was completed on December 30, 1974. With an overall area of over 24,000 square meters and 2,400 seats and with a capacity for 3.6 million books, it easily became the largest and best of its kind in the country.
In 1998 when the university was engaged in celebrations of the first centenary of its birth, another new library building rose, thanks to the donation from the Hong Kong industrialist Mr. Li Ka-shing. This new building (now East Building) was connected to the old one, added 26,680 square meters in space, bringing the Library to the top of Asia's university libraries in space at that time. After the reconstruction of the West Building in 2005, the built-up area increased to as large as 53,000 square meters in total.

**Public Access Computers**

There are several types of public access computers in the library.

**1) OPAC Search Terminals.** 54 Terminals are equipped with Web browsers to search PKU’s OPAC, check library account, renew and place Holds, etc.

**2) Computers for Search E-Resources.** Library workstations, databases, and Internet connections are provided to support the curriculum and research activities of PKU students, staff and faculty. Most are located on the first floor in the Sunny Lobby, and some are on the other 3 floors of the Library. All of computers are for research and coursework, therefore, the Library reserves the right to ask users to release any computer that is being used to play a game or access personal e-mail, or is being used inappropriately.

**3) Public Computers in Media Centre.** 60 computers are located in located in the media center that can access multimedia resources.
OPAC Search Terminals

Computers for Search E-Resources
4) **Public Computers in the Training Centre.** 60 computers are equipped with Internet connection, and support library workshop and other training sessions.

5) **Study Room for Reservations.** PKU PHD students, faculty and staff have the opportunity to reserve a study room located on 2nd floor, 3rd floor and 4th floor of the Library for college related use. Rooms must be reserved at the corresponding service desk in advance to ensure availability.

**Research Question**

We study the site and formulate the questionnaire mainly based on one of the most important concepts we learnt from the CI Summer School: public computing. Here we pick PKU Library as the public computing site for our research.

Inequality of the resources allocation causes plenty of problems to the society, and one of them concerning information is digital divide, usually focusing on access and use of ICTs. According to Lynette Kvasny (2006), an unequal ability to achieve life chances include, but are not limited to, access to ICTs. She also illustrated that the divide is on of longstanding inequities in access to basic life chances such as education, safety, housing and healthcare. Some basic factors of bridging the digital divide are normally measuring the number of participants processed through technology training programs and the availability of computers with Internet access at schools and other public institutions.

Another related concept is named “Cyberpower”, which is a measure of to what extent individuals, groups or institutions are able to wield power with information and
communication technology or ICTs (Alkalimat and Williams 2001). And what has mentioned above are all related to ICTs and definitely leads us to the question of how to improve people’s access to ICTs, especially free access opportunities.

All the settings for using ICT apart from home or work are called public computing, and the sites of public computing are mainly the places that can provide free access to ICTs. Also, public computing is a major aspect of how space is and will be allocated in society. University libraries are all funded by government and usually only serve the students and stuff. But as an important partner for public computing, what university libraries’ actions are and how they response to the society.

We try to put all the concepts that inspired us into our course of study and clarify the situation in PKU Library based on our raw data. For example, we explore what PKU Library is and will be in the digital divide era, what position PKU Library is and should be. In a word, throughout the whole research, we focus on four questions which lead us to analyze the collected data:

a. Why is PKU Library a public computing site?

b. What are the factors that have an influence on PKU Library being a public computing site?

c. How do patrons use PKU Library?

d. How do the usages of PKU Library affect it being a public computing site?

Moreover, we explore patrons’ activities in the Library and discover to which types of literacy (basic literacy, computer literacy, library literacy or domain literacy) most people have. In addition, we adopt the concept of social capital in the questionnaire to understand the patrons’ behavior pattern when encountering problems when using digital resources, for example, defining social capital by the people whom they commonly seek help from.

3 Data Collection

In this study, data were collected by four ways: document of the Library, observation, questionnaire and interview. We didn’t get many documents from the librarian, so the other three ways are mainly used. Also, we collected some background information of the Library through the Internet.

Methods and Tools

The main variables in this study are including: a) services provided by the Library as a public computing site, b) policy of the Library for public computing, c) how patrons use the Library as a public computing site, d) need of patrons when using computer at the Library.

The first variable was operationalized by whether different kinds of services were provided by the Library, such as surfing online, using database, organizing community activities, etc. The second variable was operationalized by rules, fee, time limit and other factors which have impact on patrons. The former two variables were mainly collected by interview and observation. The latter two variables were operationalized by the questions in the questionnaire, including purpose, frequency, online time, and online tools when patrons use the Library, and what kind of services they need for help. Excel is our tools used to input data of questionnaire and to make analysis.
**Field Work Plan**

We made a field work plan after discussion among group members. Timeline of executing our field work is as follows.

<table>
<thead>
<tr>
<th>Date and time</th>
<th>Place</th>
<th>Activities</th>
<th>Data collected or result</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 11th, 20:00-20:40</td>
<td>QQ</td>
<td>group discussion about our research questions</td>
<td>make clear how our research can combine with the theory of social capital and social network theory</td>
</tr>
<tr>
<td>July 14th, 8:30-10:30</td>
<td>on site</td>
<td>investigate by observation</td>
<td>find out different digital service provided by the Library, take photos</td>
</tr>
<tr>
<td>July 18th, 12:00-12:30</td>
<td>classroom</td>
<td>group discussion about data collection</td>
<td>design the questionnaire, interview outline</td>
</tr>
<tr>
<td>July 19th, 12:00-14:30</td>
<td>classroom</td>
<td>group discussion about questionnaire, research question focused and our next step work</td>
<td>revise the questionnaire, define core question in our research, and allocate research task</td>
</tr>
<tr>
<td>July 19th, 15:00-16:00</td>
<td>on site</td>
<td>investigate by observation, interview and survey</td>
<td>collect questionnaires, make interview, take photos and write down layout of computer service area of library</td>
</tr>
<tr>
<td>July 20th, 12:00-12:30</td>
<td>classroom</td>
<td>group discussion about research report</td>
<td>allocate research task</td>
</tr>
<tr>
<td>July 20th, 14:00-16:00</td>
<td>on site</td>
<td>investigate observation, interview and survey</td>
<td>collect questionnaires, make interview, take photos, and record data about patrons number and using pattern during observation period</td>
</tr>
<tr>
<td>July 21th, 10:00-12:00</td>
<td>on site</td>
<td>investigate observation, interview and survey</td>
<td>collect questionnaires, make interview, take photos , and record data about patrons number and using pattern during observation period</td>
</tr>
<tr>
<td>The following days</td>
<td>separately at home</td>
<td>working on data analysis and report</td>
<td></td>
</tr>
</tbody>
</table>

**Important time of our research process**
Special Experience

There are several interesting stories during our field work, among which two are especially related with our research problem.

First, one of our interviewees, a retired librarian told us that surfing online was his hobby and one of the website he often browsed was Mao Zetong Banner. Also, he told us the history of the first computer manufactured at PKU.

Second, there is a lost property place at the east gate of the Library which shows the lost things on campus. There are different kinds of certificates, wallets, flash discs and watches. They are organized in order as if it were an interesting exhibition.

4 Digitization

During our research, data is derived from both digital format and non-digital one. Digital data is in electronic forms, such as electronic photos and on-line questionnaires. Besides, there are also some paper-based data, i.e. written notes and printed materials.

We came to find that digital data is easily gathered and processed. Therefore, we change all the data into digital format. We made a table of excel and abstracted the key factors of the questionnaires contents to form dimensions so as to digitalize the data. And these dimensions of the table, such as gender, age, network usage experiences and some specific contents are the so-called metadata (also see appendix). Besides, the excel table is easily calculated and digitalization is more suitable for further study.

5 Data Analysis and Findings

We handed out more than 75 questionnaires during different times and locations and have 73 completed. After cleaning the data we got 68 as the basic object of analysis. We got open-ended interviews with 6 people: 3 librarians and 3 users. Two interviews were in-depth. Based on data of questionnaire, interview and observation, our main findings are as follow.

a. The Library has good facilities for digital use, which has positive impact on being a public computing site.

b. The computers at the Library are underused during summer holidays, so during this time vacant digital resources can be made full use of by the wider public.

c. Policies of the Library restrict its users within limited range, which has negative impact on public use of the digital resource at the Library.

Main Users of the Library

Through the questionnaires we collected both inside and outside the Library, we made analysis about the main users of the Library.

The questionnaires were sent out in many locations and they can be clarified into three types. As illustrated above, there’re 38 samples from the web researching area of the Peking University Library and 21 from the traditional collection areas of the Library while we still have 9 extra samples data collected from outside the Library under the circumstances that they had once been the users of the Peking University Library.
On the whole, all of our investigation subjects are users of PKU Library. The questionnaires help us learn the structure of library users. The demographic data are including age, gender, education, specialty, identity and computer experience. The demographic information of the users is summarized in the Table 5-1. Obviously, the principal users of the PKU Library are its students. It can be seen from our data that most of them are 1980s or 1990s, Undergraduates or Postgraduates, with more than 3 years of computer using experience. Very few are born before 1980. During the period of our field work, we didn’t see any elder people using computer at the Library. Also the staff and outside-campus users are much fewer than the PKU students. Thus, main users of PKU Library are young and with good education and computer experience. They have strong skills in exerting cyberpower and potentials to improve their lives through it.
<table>
<thead>
<tr>
<th>Location</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>web of Library</td>
<td>38</td>
</tr>
<tr>
<td>Traditional Library</td>
<td>21</td>
</tr>
<tr>
<td>Out of Library</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>After 90s</td>
<td>21</td>
</tr>
<tr>
<td>After 80s</td>
<td>43</td>
</tr>
<tr>
<td>After 70s</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>30</td>
</tr>
<tr>
<td>Female</td>
<td>38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior and below</td>
<td>1</td>
</tr>
<tr>
<td>Undergraduates</td>
<td>31</td>
</tr>
<tr>
<td>Postgraduates</td>
<td>36</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specialty</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Science</td>
<td>38</td>
</tr>
<tr>
<td>Science and Engineering</td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Identity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PKU students</td>
<td>49</td>
</tr>
<tr>
<td>Other students</td>
<td>5</td>
</tr>
<tr>
<td>PKU staff</td>
<td>2</td>
</tr>
<tr>
<td>Else</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Computer Experience</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=1 year</td>
<td>1</td>
</tr>
<tr>
<td>1-3year</td>
<td>6</td>
</tr>
<tr>
<td>3-9year</td>
<td>27</td>
</tr>
<tr>
<td>&gt;=10year</td>
<td>34</td>
</tr>
</tbody>
</table>

Table 5-1 demographic information of questionnaires

**How Users use the Library**

The data we collected shows that, reading books, using database and doing self-activities are main purposes when users go into the Library (see Fig. 5-2). Some users do use the Internet for either entertainment or special purpose, but not as much as using the Library database. Purposes of outside-campus users are similar with PKU users. The function of PKU Library as a public computing site is marginalized from the perspective of its uses.
We investigated the time proportion of surfing the Internet among users’ activities in the Library, which shows that 88 percent of the users spend less than 30 percent of time at the Library on the Internet, and over a half spend lower than 10 percent of time on it. Obviously, what users do at the Library are not always related with the Internet.
Fig. 5-3 Percentage of web surfing in library

- <=10%: 54%
- 10%-30%: 34%
- 30%-50%: 8%
- 50%-80%: 4%
Among our samples, there are 60% who use the digital resources of PKU Library at least once every week, and 13% even use it every day. It is surprising that some outside-campus workers use PKU Library every week.
Fig. 5-5 Frequency of user digital resources of the library

Fig. 5-6 Tools applied to web access
As to the tools for accessing the Internet, desktop PC and laptop are most used tools. Comparing PKU students with other users, there are similar patterns in tools use: proportions of using PC and laptops are nearly the same high. So, we can image that there are considerable amount of users who don’t need to use the computers provided by the Library. Thus, those computers can be available for more users.

![Tools used to connect the Internet](image)

**Fig. 5-7 Tools used to connect the Internet**

From our field work record, there are 75 computers at the e-resource search sector, but the average number of users is around 20. Also, most users use computers there for about 1 hour on average (see table 5-2). At one occasion, only 39 computers are open for users, and the others were turned down. Sometimes, there were 2 or 3 people who just bent on the computer desk and had nap, while the special rest sector is totally vacant. It is clear that those computers are not made full use of.

At the study sector, we find that about 25% of students take their own laptops to the Library. However, some were sitting in the Library only to play games. There is a subject in our survey whose online time at the Library is above 80%, totally different with other subjects. We learnt that he always took his laptop to the Library and kept it online.

Users work on different tasks when using computers at the Library. From the table below, we can see that they use for academic, entertainment and contacting purpose. On one side, those computers give the users opportunities to get into the cyberspace. On
the other side, the computers are underused at least during the summer holiday. As principal users of PKU Library are of great digital literacy, and many of them use their own laptop. Library computers sometimes are useless for them. Thus, the Library has spare computing ability which can be used by the wider general public.

A librarian told us that those computers at the Library were more sufficiently used at working times than during holidays. There are not many students coming to the Library at holidays, so the computers are always available.

In fact, not many students would use the Library computers. Even fewer are used by the staff. A retired librarian told us that he and his colleagues don’t need to use library computers, because it is very convenient to use it at home. Those facts support the possibility of public use of PKU Library computers.

<table>
<thead>
<tr>
<th>User numbers and using time</th>
<th>July, 20\textsuperscript{th}</th>
<th>July, 21\textsuperscript{th}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average user numbers</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>Peak user numbers</td>
<td>27</td>
<td>23</td>
</tr>
<tr>
<td>Average time using computers</td>
<td>53 minutes (27 records)</td>
<td>55 minutes (24 records)</td>
</tr>
</tbody>
</table>

How they use the computers?

<table>
<thead>
<tr>
<th>How they use the computers?</th>
<th>July, 20\textsuperscript{th}</th>
<th>July, 21\textsuperscript{th}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browse the webpage</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Use the database</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Web search engine</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Using digital document</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>See video</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Contacting tools such as BBS, Social network, twitter, e-mail etc.</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Playing games</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total numbers</td>
<td>24</td>
<td>19</td>
</tr>
</tbody>
</table>

Table 5-2

We interviewed 2 users who are outside the campus. One said that it is important to use the Library computer to search precious books of PKU Library. Another admitted that they had the special need to use library computers to search the database. It proves that outside-campus users definitely have a need to use the PKU Library computers.

\textbf{Digital Literacy and Need of Users}

Although users of PKU Library have high level of digital literacy, about half of them have met with difficulties when using digital resources of the Library. Figure shows that either users in or outside PKU may have difficulties in using digital resources, outside-campus students are more likely to have difficulties.
From our survey, we find that the frequency of users seeking help from a librarian is relatively low. Most of them only sometimes or occasionally ask for help.
Fig. 5-9 Frequency of demand for help from a librarian

When solving problems, most users in our survey will work out the problem by themselves, the other ways seeking for helps are from the librarians, other users and the Internet, with a decreasing proportion (see Fig. 5-10) The librarian can be part of users’ social networks in solving digital problems, but the fact is that not many users need their help.
Users may have different need of digital support from the Library. It appears from the data that digital research skills are mostly need to be supported by the Library. Supporting digital skills for special task is also important. Very few users need support of basic digital skills. And those are often related to questions of using library software such as log-in systems.
Facilities and Policies of the Library

There are 75 computers at the e-resources search sector of the Library. The computers have good configurations as follow.

<table>
<thead>
<tr>
<th>Status</th>
<th>Computer configuration</th>
<th>Display</th>
<th>upload speed</th>
<th>download speed</th>
<th>test time</th>
<th>explore</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intel Core 2 Duo CPU</td>
<td>17 inch LCD</td>
<td>1.67mkps</td>
<td>1.21mkps</td>
<td>165ms</td>
<td>IE</td>
</tr>
<tr>
<td></td>
<td>2.80GHz, 1.96G memory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Software installed in the computers is mainly for reading and searching.

Table 5-3 Status of Computers at the Library

The digital service of PKU Library can well support the users’ need. However, there are strict restrictions on using computers. PKU students and staff have 2 hours for free use of the Library computers, while outside-campus users have to pay 6 RMB/hour for computer use and 3 RMB for entering the Library. That fee is thought to be expensive by users we interviewed.

A librarian told us that, the rules are set in order to control the number of users who take the computers for long time. They want to keep the computers available for everyone who needs to use the computers. However, there is an obvious bias in the Library policy, that is: outside-campus users are strictly limited by high fees. From the perspective of the Library, academic use of the computers by PKU students and staff are encouraged, but digital resources of the Library are not encouraged to be open to the wide public.

There are lots of temporary workers at campus such as cooks, building workers, gate guards and cleaners. They do not have equal rights to use campus facilities as students and formal staff. Surely, they don’t have a library card and can’t use the computers there. Digital divide is obviously exists in that workers who serve us on campus cannot use our libraries as we do.

We can see from the policy of the PKU Library clearly that its target users are the very limited public, who may have many ways of accessing the digital world. On the other hand, the computer services at the Library are not in strongly demand from them.

In our research, it seems feasible that PKU Library can expand its specialized users to a more general public. The PKU library can be an important public computing site to narrow the digital divide.

One of the students we met told us that at her university, any user can enter into the Library for free with his/her student card. And each floor of the Library set some computers connected with the Internet that can be used for free. She considered the fee of PKU Library as too expensive for outside-campus students.

In our opinion, PKU Library is an important public site for computer use. As far as we know, funding of PKU Library comes from the national finance, which should be public resource.
We want to answer the questions that whether the policy can be changed more open? The librarians we met gave the negative answer. They don’t think the digital resources of library are public resource, instead they are owned by the Library. Also, expanding the range of users may add some operational cost, including labors and money. There are still some students who don’t want to share the Library resources with temporary workers, because they think those people will make the Library environment seem not well.

Another interviewee, who came to the Library at least once per week, said that PKU Library is of public attribute that should not be used only by PKU students and staff. He took it for granted that PKU Library should serve him.

In conclusion, we think PKU Library should be used as a public computing site. At least the spare computers during holidays can well serve the wider public. The policy of PKU Library is very exclusive, so it needs some change to exert the effect of public resources.

6 Feedbacks

All of the data and analysis will be compiled in a report, and we will have an oral report as well as a PPTs presentation in front of the instructors and classmates. Hopefully those who will participate in our presentation can better know our research site, Peking University Library, and understand our suggestions about how can a university library better serves the citizens as a public computing.

Most importantly, we are going to give some feedbacks and suggestions to Peking University Library so as to improve the services for patrons, not just for on-campus students and stuff in PKU Library but also for off-campus students and citizens. In summer and spring vacations, according to the results of our research, there are fewer patrons in the Library which releases a lot of the burdens of the Library’s services, and the Library has extra resources to serve the public. Therefore, we propose that the Library can try to change its access policy in summer and spring vacations: not only on-campus patrons but also off-campus patrons can be free access to the Library. Also, we suggested the Library, as a significant part in narrowing down the digital divide, to provide all the patrons with 2 hours per day free use of computer facilities, so that more people can be access to the public computing site.

7 Suggestion and Impact

Impact of our research on PKU Library

PKU Library spends more than 6 million RMB each year on the digital resources. The funding comes from the public finance. It is important to reconsider who should be the patrons of PKU Library. If its computers are not sufficiently used, it is reasonable to make it available for social service.

Our suggestion is to cancel the entering fee and cut off the computer using fee for outside-campus users. And during summer holidays, it is feasible to try a pilot project for public computer use, eg. one-hour free use of the computer each day. It’s extremely important for PKU Library to advance the information movement and make its effort to help people cross the digital divide.
**Impact of our research on the literature**

We provide empirical evidence for university library as public computing site. The theoretical contribution lacks in our report. Research in future can track the change of university library policy for public computing, and make comparison with our research. It is a good start for push Community Informatics research in China.

**Impact of our research on us**

Our research group has gained a lot from both the lectures and the research progress. Below are opinions about what our group has gained through the summer school.

Chen Qiuting: During the course of our research, we followed the D-7 method and strictly complied with collected data, which made our conclusion more realistic and practical. It is a precious experience for my future study, particularly for my master's degree thesis.

Zhang Lili: D7 method is the most impressive one I have ever experienced. And the research method had provided me with rigorous way for research while it will still help in my further study in pursuit of higher degree. And during the data cleaning process, I found there were incomplete questionnaires. Although these information are all precious gifts we found, but for the strict, these should be cleaned up. The research just taught me exactly about the standard scientific methodology.

Li Li: After the research, I understand that there is a great gap between the digital facility of the library and my ability to use them. So I will try my best to use them in the future, and I will suggest my friends and families to use such kind of facility as well. Firstly, I will use the library more than before our group did this research, because I knew that the library was of great importance. Secondly, I will pay more attention to the public computing facility that the library provides. The more I understand them the more I will take advantage of them. Thirdly, I will attend as many as possible the lectures that the library hosts, because only in this way can I understand the Library and its function well.

Zhao Kang: One of the most important things we have learned from the summer school is that, we must learn and study from the practice into actual experience. Our research not only pushes us to think about the reality of now, but also to find feasible ways to change the future and make results of our research more meaningful in real life. It was a tough but beneficial research process.

**Bibliography**


**Webliography**

Chapter Appendices

1) Questionnaire
2) Raw data and records
3) Photos taken from PKU Library
4) Maps related to PKU Library
5) Collected documents
1) Questionnaire

北京大学图书馆及其网络使用情况调查问卷

尊敬的用户:

您好！我们正在进行一项关于用户对北大图书馆使用情况的调查。恳请您帮助我们完成以下问卷，本问卷的内容只用于学术目的，非常感谢您的合作！

北京大学社群信息学暑期学校调研小组

2011年7月

以下题目可以多选。

1. 您来图书馆的主要目的是什么?
   A: 查阅印刷本图书、期刊等资料
   B: 上网处理日常事务或娱乐（如，电子邮件、阅读新闻、聊天、玩游戏等）
   C: 使用图书馆的数字化资源（检索书目、使用电子数据库等）
   D: 为特定需要使用互联网资源（如，电子商务、申请工作、查阅医疗信息等）
   E: 自习
   F: 其他

2. 您使用图书馆的数字化资源的频率为?
   A: 每天至少使用一次
   B: 每周至少使用一次
   C: 每月至少使用一次
   D: 更少
   E: 从不使用

3. 您在图书馆上网的时间占在图书馆总时间的比例约为:
   A: 10%以下
   B: 10%到30%
   C: 30%到50%
   D: 50%到80%
   E: 80%以上

4. 您在图书馆上网使用的工具是?
   A: 不上网
   B: 笔记本
   C: 台式电脑
   D: 移动终端（如手机）

5. 您对使用图书馆的数字化资源方面是否遇到过困难?
   A: 是
   B: 否
   如果是，一般向谁求助?
   A: 图书馆管理员
   B: 其他用户
   C: 上网搜索
   D: 自己摸索
   E: 其他

6. 你需要图书馆人员提供数字化资源应用指导吗?
   A: 经常
   B: 有时
   C: 偶尔
   D: 不需要

7. 需要哪些方面的指导
A: 休闲娱乐（基本上网技能）
B: 科学研究（查找文献数据库）
C: 特定需求（寻找特定信息或完成特定工作需要，如网上申请工作、查询政府信息等）
D: 其他-----------------------

8. 您一般和谁一起去图书馆：
A: 同学 B: 老师
C: 自己 D: 家人

恳请您提供您的基本信息：
1. 您的年龄段为：
A: 90 后 B: 80 后
C: 70 后 C: 60 后
E: 其他
2. 您的性别为：
A: 男 B: 女

3. 您的学历为：
A: 大专及以下 B: 本科 C: 研究生

4. 您的专业为：
A: 社会人文类 B: 理学工学类

5. 您的身份是：
A: 本校学生 B: 外校学生 C: 本校职工 D: 其他校外人员

6. 您已经使用计算机的年限为：
A: 1 年及以下 B: 1-3 年 C: 3-10 年 D: 10 年以上

再次感谢您的合作！
Appendix A. Letter of approval

2011年度“北京大学研究生教育创新计划”项目任务书

信息管理系：

贵单位申报的“北京大学社群信息学暑期学校”研究生暑期学项目
获北京大学2011年度“研究生教育创新计划”专项资助，项目负责人为韩圣龙，
资助金额为人民币8万元。请做好相关的筹备和组织工作，具体要求如下：

1、项目经费已由学校财务部划拨至项目负责人账户，请查收并核实。经费
使用应符合学校财务部相关规定和要求，按“厉行节约、专款专用”的原则，在
规定的列支款项范围内使用。

各单位应按照项目实施方案的要求，精心筹备、组织并落实。在项目实施过
程中，应及时与研究生院培养办公室沟通信息，妥善安排项目各环节。暑期学校、
学术论坛、学术会议等项目的有关网页地址和对外宣传信息，应同步发送至研究
生院，在研究生院专题网站上公布以扩大影响。

2、项目完成后一个月之内，应提交工作终结及经费决算（书面及电子版）。
工作终结一般应包括项目的基本数据、项目实施过程，项目特色、取得的效果、
教学管理经验及存在的问题、今后改进的建议和设想等。

承办单位应同时做好项目相关资料和档案的收集、整理和汇总工作，装订成
册保存，并提交研究生院一份以备存档。经费决算应以表格形式详细列出各项支
出的名称及金额。

“研究生暑期学校”项目，应同时提交学员基本信息表。

如有其他问题、意见和建议，请及时与研究生院培养办公室联系，联系人：
何峰，电话：62755598，电子邮件：grshefeng@pku.edu.cn。
研究生院培养办公室
2011年5月
Appendix B. Syllabus and assignments

Peking University / University of Illinois at Urbana Champaign
Community Informatics Summer School, July 2011
Monday-Wednesday 9-11:50 in Building 3, room 404
Course documents available at http://forums.pku.edu.cn/ci2011
Course discussion group on QQ

“No investigation, no right to speak”—Mao Tse-Tung

Instructors
Professor Abdul ALKALIMAT (UIUC)
Assistant Professor Kate WILLIAMS (UIUC)
Associate Professor HAN Shenglong (PKU), local host and faculty advisor
Assistant Professor YAN Hui (Nankai U), guest lecturer

Office hours
2:30-4:30 Wednesdays in Room 207, Department of Information Management

Course description
This course is an introduction to key aspects of the field of community informatics. It is a cooperative effort of the Department of Information Management at Peking University (PKU) and the Community Informatics Research Lab at the Graduate School of Library and Information Science at the University of Illinois (UIUC). The course is a graduate level curriculum involving lectures, discussions, and field research.

Course structure
1. There will be twelve sessions, each three hours long. Each session will focus on a major topic in community informatics.
2. Each session will have assigned readings and a set of core concepts. These readings should be read before the relevant session. Students are asked to "read with a pencil."
3. Each session will be divided into three parts, including a 15 minute break:
   a. a one hour lecture
   b. a 45 minute small group discussion
   c. a one hour full class discussion/lecture
4. All students are expected to be fully engaged, raising questions and making statements to demonstrate understanding and to contribute to the general progress of the class.
Texts

All texts are available at the course website and in print. The packet should be brought to every class so that students can refer to and annotate it.

Assignments


Schedule

**Monday, July 4. What is community informatics?**


**Tuesday, July 5. What are the research methods of community informatics?**


Williams, K. Finding aid to the collection ‘Toledo Spiders: A joint archive of the W. J. Murchison Community Center and the University of Toledo Africana Studies program.’ 2002.

**Wednesday, July 6. What is community?**


**Monday, July 11. What is our summer research design?**

Turn in Assignment 1.

**Tuesday, July 12. What are social network theory and social capital theory?**

Wednesday, July 13. Community informatics research advances in China (Guest lecture by Professor Yan)


Monday, July 18. How do communities represent themselves in cyberspace?


Tuesday, July 19. How does a library function as a community technology center?


Wednesday, July 20. How to help the digital poor in China? (Guest lecture by Professor Yan)


Monday, July 25. How is public computing, especially the community technology center, the key unit of analysis in community informatics?


Turn in your draft of assignment 2. (This assignment will not be graded, but is a check-in to help you organize your time)

Tuesday, July 26. How is cyberpower a key dependent variable in community informatics?


http://uac.utoledo.edu/Publications/cyberorganizing.pdf

Wednesday, July 27. Our summer research: What have we done and what have we learned?

Turn in assignments #2 and #3.
Community Informatics Assignment 1: Internet Speed Study

Carry out field work in a small team and bring a team write-up (roughly 3 pages single spaced) to class. Due Monday, July 11.

Working in a team of two or three people, find six locations to get online either with a desktop or a laptop computer, via either wired or wireless connectivity. Each location should be as different as possible with respect to social context. For example, a set might include:

1. Wireless speed in the PKU library
2. Wireless speed in a PKU office or classroom
3. Wired speed in a cybercafé
4. Wired speed in a public library
5. Wired speed in a hotel
6. Wireless speed in a home

Measure the upload and download speeds using these two tools:

Record your findings in a table where each row is a location. The columns in your table should be:

- Name of location
- Address of location
- Type of location (commercial, government, community i.e. not-for-profit, or education)
- Measured with desktop or laptop
- Measured wireless speed or wired speed
- Time of day
- Upload speed
- Download speed
- Units of measurement

In addition to the table, your report should provide answers to four questions:

1. How did you choose your sample of six places?
2. Can you identify any pattern across the sites, that is, any relationship between the location, the connection mode (wired or wireless) and the internet speed? What is that relationship?
3. So what? What is the significance of your findings?
4. What surprised you about the process or content of this assignment?
Community Informatics Assignment 2: Case study

In a small team, carry out a case study of a public computing site and bring a team write-up (roughly 10 pages) and oral presentation to class. Due Wednesday, July 27.

The ten sites have agreed that you can come and learn from and about them and they have a copy of this assignment. A list of sites will be provided and assignments made to each team.

You will use methods of observation, participation, interview, and questionnaires as appropriate to learn about your site. Expect to visit the site at least three times, once at the beginning to introduce yourselves to your site contact and work out a schedule for your research visit or visits, and once at the end to show your contact your draft report and get his or her feedback and suggestions.

Topics to learn about and to cover in your report include:

1. Identity (name of the site, public presentation or manifestation)
2. Context (physical and social environment)
3. History (when established, by whom, key moments of growth or change)
4. Organization (the social organization of the site: who is the staff and what is their expertise, academic or work background)
5. Structure (the physical and network resources of the network: hardware, software, location, spatial size and layout, hours)
6. Process (how do they attract users/customers? Is there an intake process? Is there a fee? What services are delivered?)
7. Users (who uses it? How many people over the period of a week?)
8. Utility (what do people use it for?)
9. Policy (what is the government or other policy governing this site)
10. Sustainability (what sustains the site? To what extent is it stable?)

We encourage the use of photography and videography, where feasible, to help the report and the class presentation come alive.
Assignment 2: Field Research Guide

D-1
1. This is a study of how a public computing facility helps people cross over the digital divide and what kind of cyber power is being created.
2. This definition process will be deepened and operationalized by the research team in one hour meetings twice a week to discuss the research and the course readings

D-2
1. The research team will select a public computing site and get the written permission from the management to conduct the study.
2. The research team will conduct data collection onsite for at least a total of 40 person hours, on at least 6 different occasions
3. The research team will volunteer labor to assist the site in ways agreed to by the management during the 40 hours.
4. The research team will fill out the ethnographic data forms for each visit, will interview 4 people (manager, employee, patron, patron) based on the interview schedule, take photographs of the site, measure the test speed of the site, provide a map of the site location, describe the social environment (neighborhood community) of the site including an inventory of the block (from street to street on the same side of the street) and census data of the district (or smaller unit), collect any media coverage and materials produced by the site
5. If possible the interviews should be taped as well as written
6. The research team will compile this information on a weekly basis so that each team member has all of the data on a weekly basis

D-3
1. On a weekly basis the research team should digitize their data, including scanning the texts, uploading the interview and ethnographic data into spreadsheets, uploading the visual data, and any recordings of the interviews
2. The digitized data should be shared with the instructors on a weekly basis, this means that there will be two weeks of review before the final report due on the third week
D-4
1. Compile all of the data into an organized collection and make sure each member of the research team has access to all of the data
2. Define your variables based on operationalizing your theoretical concepts and describe each one separately
3. Determine which independent variables help explain the dependent variable
4. Answer the basic questions you have in the definition (D-!) about the digital divide and cyberpower

D-5
1. Compile a report of all of your data and analysis
2. Write a letter to the manager of your site explaining what you have done and what you have found

D-6
1. After approval from the instructors each team should organize a meeting with the manager after giving/mailing/emailing them the letter and the report
2. Arrange to have at least one of the instructors attend this meeting and final discussion

D-7
1. Ask the site manager to fill out a questionnaire a month after the final discussion
2. You fill out a questionnaire 6 months after the end of the course
Assignment 2 final report instructions

A general goal is 10 pages single spaced, plus 15 pages of appendices. Use the “assignment 2 template.dot” file we will share with you as a template (open it up in MS word, then “save as…” a doc or docx file). Refer to both our past instructions – “assignment 2.pdf” and “assignment 2 draft field manual.pdf.” Share ideas with the rest of class and borrow as you like, but always cite your source. Be gracious, in print as everywhere!

Start NOW writing up D1, 2, 3, 5, and 6. D 4 and D7 have to come last. Don’t wait to write it all up at the same time. Turn your work in in hard copy AND as a zipped file emailed to pkuci2011@sina.com. DON’T use a DVD as mentioned in class.

Title: use template. Provide all authors institutional affiliation and emails.

Acknowledgements
a. list everyone who has helped you prepare this report
b. give credit to those who participated in your study by sharing their information (anonymously) and to any site staff that you like to thank by name or anonymously
c. give credit to your classmates
d. give respect to your course instructors
e. give respect to whoever helped you come to this summer school

Table of Contents: follow D-7 (7 sections plus intro), but give each section an original title

Introduction
a. describe the assignment
b. introduce the research team
c. how did you select the site
d. explain the D7 method

D 1
a. the history of your site: origins and stage
b. Social context including maps and photos of outside and inside
c. And the main thing in this section is your research question
d. What about any literature (from class, from the world, from a library or database search) that connects to this question or led you to select this question

D 2
a. Operationalize your variables, and cite your research instrument/tools (they will be in an appendix)
b. Describe your field work plan and the schedule you used to carry it out
c. Tell a couple of interesting stories about your experience in the field, some interesting people you encountered or what surprised you

D 3
a. describe what data was born digital
b. describe what data was not and how you digitized it (tools used and software)
c. described how you aggregated the data into one format from all team members
d. Be sure that you have created metadata for your data. Follow the example in the file “first use data anonymized.xls” at the Illinois course URL (http://people.lis.illinois.edu/~katewill/ci-in-china)

D 4
a. describe the data collected for the dependent variable (the dependent variable is the phenomenon that you want to explain)
b. describe the data for each independent variable in relation to the dependent variable (any independent variable is a factor that influences your dependent variable)
c. explain how you have answered the research question based on the data you have just presented
d. any other findings?

D 5/6
a. think about the tables and graphs that need to be IN your document. There may be others in the appendix, but the most meaningful ones should be in the document itself.
b. Explain that this report is for class per the specifications requested by the instructors, and describe what format you will report your findings to your site. Or explain why you cannot report to the site.

D 7
a. A difference in the world: explain what difference you hope to make for your site, what can they learn from you
b. A difference in the research community: what difference can your study make to the literature you read
c. A difference to you: what difference does this research to each member of the research team? Provide an answer from each individual.

Appendices
a. include each questionnaire and research instrument
b. more photos (with captions as appropriate)
c. maps (1) google (2) of the local neighborhood (3) of the inside of the site
d. bibliography
e. webliography
f. sticky fingers – pdfs of any documents you collected
g. raw data, anonymized, in one or more tables
h. whatever else you like to provide in appendix
<Your report title here>

<author 1 here for example YAN Hui 闫慧 list all team members in alphabetical order by pinyin family name. use pinyin AND chinese characters for your name>
<your role: undergraduate student? masters student? PhD student? assistant professor?>, <your university as of fall 2011, or if that is uncertain, then as of spring 2011>, <your email>

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This is a caption. It explains the table or diagram or image. Make your tables diagrams and images just as wide as the text.

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2 < your title for d1 section here>

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3 <your title for d2 section here>
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4 <your title for d3 section here>
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5 <your title for d4 section here>
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6 <your title for d5 section here> Text here
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7 <your title for d6 section here> Text here
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312
8 <your title for d7 section here>Text here

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Bibliography

For more guidance on writing “Chicago Author-Date” citations and bibliography, see many examples at http://library.williams.edu/citing/styles/chicago2.php. Here are a few examples.


Webliography

<author or publisher>, “<title of page in quotes>”, accessed <date accessed>, <URL>.


Appendices

This is a list of the other appendices. Then put them on following pages.
Community Informatics Assignment 3: Reflection

Discuss the community informatics summer school with your classmates in as much depth as possible—the process, the content, its applicability. Then write an essay (3 pages) reflecting on the course, and bring it to class. Due Wednesday, July 27.

1. What idea or ideas did you find to be the most powerful or intriguing? Why?
2. What reading or readings? Why?
3. What aspect or aspects of the learning process? Why?
4. What is the proper place for community informatics research and teaching in China? Why?
5. What did you expect, and what surprised you?
6. Any suggestions for the organizers or instructors?
Appendix C. Course website
Appendix D. FAQ in four parts and two languages

This document shares the content and outlook of the summer school with interested academics, policymakers and others.

Toward Building the Information Society with Chinese Characteristics

Communications for 2011 CI Summer School @ PKU

By Abdul Alkalimat, Kate Williams, Hui Yan, and Shenglong Han

English to Chinese by Shenglong Han

创建有中国特色的信息社会——2011 北京大学“社群信息学”暑期学校通讯

阿卜杜·阿尔卡利麦特 凯特·威廉姆斯 闫慧 韩圣龙

PART I: Why is the digital divide a serious problem in society? How can “community informatics” help deal with this problem as a field of academic research and teaching, as well as a field of policy development and practice in community development?

一、为什么社会中存在的数字鸿沟？作为一个科研、教学领域，同时又和政策制定和社区发展实践密切相关的领域，“社群信息学”如何帮助我们解决这个问题？

1. The 21st century is the time of the information revolution by which digital technology is transforming society from the market to the government to everyday social life. The netizen is the first class citizen in every society because only the netizen has access to all of the information in a timely manner, and can express their ideas in a democratic manner. Everyone who can afford to own a computer gets one immediately. Every child wants to use a computer to achieve a high standard in education and to aspire for a good career. Every business person and farmer wants to use a computer to gain an advantageous position in the market. Everyone who can read this message knows all of this very well. (See http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2576/2306)

二十一世纪是信息革命的时代，数字技术正在政治、经济和民生等领域改变着我们的社会。网民在社会中是“一等公民”，因为只有网民可以及时地获取信息，同时可以以一种民主的方式来表达自己的观点。每个买得起电脑的人都会毫不犹豫地购买电脑。每个孩子都想要使用电脑来获得更好的教育，从而有一个更好的职业前景。每个商人和农民都希望通过使用电脑在市场竞争中获得优势。每个看过这篇文章的人都会同意上述观点。（参见 http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2576/2306）
2. **The digital divide** means that not everyone is a netizen, and that large sectors of society lack computer skills, lack access to computers, and do not go online for information sharing. This is a crisis because it slows development, is costly, and prevents the society from moving rapidly to achieve a high standard of living. This is a great manifestation of all forms of inequality in society. The rural is more digitally divided than the urban areas, some regions more than others, some ethnic groups more that others, small business more than large corporations, low income jobs versus university students, etc. This inequality must become the subject of academic research and social policy.

3. The main focus for research and policy formulation is the area of public computing. **Public computing** is the process whereby access to computers and computer literacy training is made available to people who are currently digitally divided. This includes people of all ages, but especially the children of the poor and isolated populations as this is the most serious loss of talent for the society.

4. The first institution that fits this definition is the **local community library**. Every library is an information center, but up to now this information has been books, magazines, and newspapers. Now it is the computer that is the tool for information access, information development, and information sharing. But it is not enough to put computers into the library, because people have to have the skills and motivation to use these computers. We need policy for every library to become a public computing center.

5. This means a new approach to **the training of librarians**. The 21st librarian must have additional courses in computer applications so that they can be active agents of change in their jobs by mobilizing the community to march over the digital divide to become netizens. (See [http://forums.pku.edu.cn/ci2011](http://forums.pku.edu.cn/ci2011))

6. There is need for **public community technology centers** to be created in every neighborhood, in every urban and rural village so that the digital divide can be ended within one generation. Computer literacy is as important in the 21st century as the ability to read and write was in the 20th century and before.
城镇化和乡村的每个社区都需要一个公共社区技术中心，这样才有可能下一代人跨越数字鸿沟。在二十一世纪，电脑使用技能和二十世纪及以前的时代中的读写技能一样重要。

7. The 12th Five Year Plan for Development calls for community informatics without mentioning the term. There can be no “domestic…informatization” without community informatics based on public computing centers. This is the main way we can serve all of the people at this early stage of the information revolution.

尽管没有明确指出，十二五规划在很多方面谈到了社群信息学。离开基于公众计算中心的社群信息学，将没有“社会信息化”。这是在信息革命早期我们能够服务于所有人的主要手段。

8. Our next communication will cover some lessons about community informatics from the experience of the USA. There are great lessons to be learned from both successes and failures.

我们将下一节通讯介绍美国在社群信息学领域的成功的和失败的经验和教训。

PART II: What has been the US experience with community informatics? What are the lessons that can be learned from the US to build on in developing the information society with Chinese characteristics? What research results need to be studied?

二、美国在社群信息学领域有什么经验？在创建有中国特色的信息社会的时候，我们可以从美国的实践中吸取哪些教训？有哪些研究结果值得探究？

1. There have been two tendencies in the US experience, the private and the public, the market and the government/non-profit sectors. The market facilitated the expansion of computer access through technological innovation that led to personal ownership of computers, and home and work connectivity. But this was a top down process that fed on high incomes and actually created the digital divide. In fact this was a discriminatory process that led to court decisions against telecom redlining because the telecoms illegally built a business model that refused to offer services to poor communities.

在美国的实践中，我们可以发现两种趋势：私有的和公众的，或者市场和政府的/非营利机构。市场通过技术革新使人们可以拥有电脑，可以在家里和工作场所上网，因而促进了电脑的普及。但是这种依赖于高收入的自顶向下 的过程事实上加剧了数字鸿沟问题。实际上，这是一个歧视性的过程，如果被起诉，电信企业将败诉，因为电信企业的商业模式拒绝向贫穷社区提供服务，这在美国 是不合法的。

2. The government recognized the importance of this new technology and provided subsidy so that every school class room and every library would be able to afford connectivity to the Internet. This was called the e-rate, but it provided speeds that did not keep up with global standards. (See http://en.wikipedia.org/wiki/E-Rate). Now almost every library is changing their budget every year to allocate more and more to computer equipment,
software, and better connectivity. This includes replacing the purchasing of books to subscribing to data bases and ebooks.

政府意识到这种新技术的重要性并且下拨了补贴，这样，每个学校和图书馆就可以使用互联网。这被称为 E-rate 项目，但是它提供的网络连接速度没有达到国际标准。（参见 http://en.wikipedia.org/wiki/E-Rate）现在几乎所有图书馆都在修改他们的预算，以购买更多地电脑设备、软件和更高质量的网络接入服务，以及数据库和电子图书。

3. The social institutions of civil society (eg. Churches, community centers, social clubs and neighborhood organizations) began to set up community technology centers to transform their organizational structure and teach computer literacy to their staff and constituency.

民间社会机构（例如教堂、社区中心、社交俱乐部等）开始建立社区技术中心，并向他们的工作人员和社区居民讲授电脑使用知识。

4. There are four basic types of public computing: commercial (e.g. Starbucks wifi), government (e.g., the public school and public library), the university campus, and the non-profit sector. These types of public computing sites are in every city. (See http://uac.utoledo.edu/Publications/public-computing.pdf)

公众计算共有四种：商用（比如星巴克无线网接入）、政府（比如公立学校和公共图书馆）、大学校园和非营利机构。这些公众计算场所存在于每个城市。（参见 http://uac.utoledo.edu/Publications/public-computing.pdf）

5. The greatest impact on public computing is being carried out as part of the national legislation regarding the financial crisis and the bail out of the large banks and corporations. In the American Recovery and Reinvestment Act of 2009 over $7 billions was allocated to build a new cyber infrastructure for the entire country, especially providing connectivity to anchor social institutions in every community. This program is called BTOP: (See http://www2.ntia.doc.gov/).

对公众计算的最大影响来自于美国政府对金融危机和对大型银行和公司的政府救助行为的立法。2009 年的美国恢复和再投资法案中，70 亿美元将被用于建设一个新的全国性的网络基础设施，特别是为各个社群中的基础社会机构提供网络接入。。这个项目是 BTOP。（参见 http://www2.ntia.doc.gov/）

6. The major finding of research in public computing for low income groups is that given a chance the community will help itself, will use its own networks for help and support. With limited funding the social capital of the community will be invested for their own community development. This has been demonstrated in a community case study (See http://people.lis.illinois.edu/~katewill/ci-in-china/readings/alkalimat%20williams%20cyberpower.pdf) and also as part of studying how people cross the digital divide in the public library (See http://people.lis.illinois.edu/~katewill/ci-in-china/readings/williams%20paper%20june%202011.pdf)

针对低收入群体的公众计算的研究发现，给他们一个机会，低收入社群可以利用其社会资源来帮助和支持社群及社群成员。在资金有限的情况下，社群可以利用其社会资本来实现社群的发展。一个相关社群案例研究（ http://people.lis.illinois.edu/~katewill/ci-in-
7. In general the findings are that becoming a netizen in society is the best 21st century door way to better employment and social mobility for individuals, and that a community develops faster when its residents are netizens. The US is a dual society with its netizens among the best in the world, but it is limited by its digital divide. This is the context for the rise of community informatics as an academic filed of study and a focus for community level activism.

PART III: There is a “Community Informatics Summer School 2011” being hosted by the Department of Information Management at Peking University. How is this summer school building on the US experience? What are the students learning in this course? How will this benefit the development of China to narrow the digital divide and become an information society?

三、北京大学信息管理系举办了“社群信息学暑期学校 2011”。这个暑期学校是如何在美国经验的基础上举办的？学生们在暑期学校课程里学习内容是什么？这个暑期学校对中国的 发展、缩小数字鸿沟并最终走向信息社会有什么好处？

1. The Department of Information Management got the financial support from the graduate school of Peking University to host a summer school in Community Informatics. There are four course staff, two from the University of Illinois, one from Nankai University, and one from Peking University.

北大信息管理系获得北大研究生院的资助举办了社群信息学暑期学校。暑期学校有四位教师，两位来自美国伊利诺伊大学香槟分校，一个来自南开大学，一个来自北京大学。

2. The summer program has a website that identifies the instructors and provides a syllabus and assigned background readings for each lecture:

社群信息学暑期学校有一个网站，网站上有教师介绍，课程大纲，以及每次课的课程阅读材料：http://forums.pku.edu.cn/ci2011

3. The students heard lectures, were exposed to power point slides, videos of field research, mini discussion groups, and extended office hour discussions with their instructors every week. In addition they were organized into nine research teams of 3-4 students
each. They studies the following locations to examine the extent to which they were
classified as public computing sites carrying our community informatics:

- Dangze Cyber Café
- Starbucks Coffee at Xidan
- Anzhen Street Community Library of Chaoyang District
- Daxing District Library
- Civilian Mobile Library
- National Library Information Commons
- National Science Library Information Commons
- Library of China Agricultural University
- Peking University Library

4. The students are learning **several data collection methods** that enable them to gather
detailed data about the digital divide. They are studying specific examples of the Chinese
experience in community programs that are building bridges to end this digital inequality
through public computing. Each example reflects a different definition of public
computing. Their methods include ethnography and involved observation, survey and in-
depth interviewing, and focus groups.

5. The students projects are being organized around the **innovative D-7 Method** being
developed by the two faculty from the University of Illinois:

- D 1 = Definition of a research problem
b. D 2 = Data collection
c. D 3 = Digitization of the data into electronic files
d. D 4 = Discovery by analyzing the digitized data
e. D 5 = Designing how to format and present research results
f. D 6 = Dissemination of research results
g. D 7 = Difference in society and the scientific literature based on this research

学生们学习了由伊利诺伊大学的两位教师提出的 D-7 方法：
a. D1 = Definition 研究问题的定义
b. D2 = Data collection 数据收集
c. D3 = Digitization 数据的数字化
d. D4 = Discovery 数据分析的发现
e. D5 = Designing 设计如何规范化和展示研究结果
f. D6 = Dissemination 研究结果的发布
g. D7 = Difference 研究活动给社会和科研文献带来的变化

6. The student research is being aggregated into a bound printed volume of proceedings for evaluation by all interested parties, including the Department of Information Management, The Graduate School of Peking University, and the Ministry of Education.

学生的研究结果将被汇编成一个论文集，供包括北大信息管理系以及教育部等所有对此感兴趣的机构和个人查阅。

7. We are also gathering student evaluations so that we can learn from the strengths and weaknesses of this course to assist us in planning future summer schools and activities to promote community informatics research and practical activities.

我们也将收集学生的反馈评估，了解此次暑期学校的优势和不足，帮助我们更好的规划今后的暑期学校，提升社群信息学的研究和实践活动。

PART IV: What future plans are being proposed based on the 2011 Community Informatics Summer School? Should the collaboration between scholars in China and the US continue in the field of community informatics? What kinds of activities might prove to be mutually beneficial?

四、在2011社群信息学暑期学校的基础上，我们未来的计划是什么？社群信息学领域中中美研究人员的合作是否应该继续？什么样的活动是双赢的？

1. We have argued that community informatics is an important field of study, and a focus for policy and practical activity in dealing with the pervasive social problems caused by the digital divide. There has been some development of this field in the US,
including the recent national project to connect local community institutions with high speed Internet connections and provide public access to community technology centers. During this 2011 summer we have introduced the field of community informatics during a course taught at the Department of Information Management at Peking University. There is much more to do.

我们如果信息学是一个重要的研究领域，也是为解决数字鸿沟带来的普遍社会问题而进行政策制定和实践活动所关注的焦点。美国在这一领域有所进展，最近有一个国家项目致力于为地方社区提供高速互联网接入服务，并让公众可以使用社区技术中心。2011年暑期，我们在北京大学信息管理系教授社群信息学课程，把社群信息学介绍到中国。

2. As we have learned from our experience this summer we want to affirm the necessity to continue to develop community informatics in each national context and at the global level of China/US collaboration. It is essential to build a harmonious global environment at the local level, people collaborating directly with each other in order to understand that we all have common problems for which we can seek common solutions.

我们在自己的实践活动中积累经验，这个夏天，我们想证实在未来国家环境下持续发展社群信息学以及中美合作以及全球化合作的必要性。在当地建立一个和谐的国际环境很重要，人们可以更直接地进行合作，从而可以更好地理解我们面临的共同问题，寻求通用的解决方案。

3. Our first proposal is that we continue what has been successful:

a. Exchange of scholarly visits to foster research training and sharing of experiences in conferences and campus based research units

b. Summer school courses that focus on the theory and research of community informatics in both countries and on the global level

c. Joint scholarly publications, including conference proceedings, journals articles, and book length anthologies

我们的第一个计划是持续开展已经成功的活动：

a. 通过会议和以及对研究单位的学术互访来促进研究生的培养和研究经验的分享

b. 在两国间以及国际层面继续举办专注于社群信息学理论和研究的暑期学校

c. 继续合作发表学术出版物，包括会议论文集、期刊论文和专著

4. We also propose that several new projects be developed that require more advanced collaboration and multi-year funding from both China and the US:

我们还计划开展一系列需要更高层次合作的和来自中美双方更长期资助的项目：

a. National statistical data sets have been developed in both the US and China. It would be very useful to have a joint program for developing comparable data at the national level to measure the trends in how each society is overcoming the digital divide at the community level, especially in terms of public computing. (For research toward this end see the following article: http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2576/2306)

中美两国都已建立了各自的国家统计数据集。一个建立国家级的兼容数据集的合作项目对测量两国是如何在社区层次解决数字鸿沟问题是非常有帮助的，尤其是
从公众计算的角度来看。（这方面研究请参见：
http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2576/2306）

b. Specifically, data sets on the public computing services of schools and libraries would be critical to how all people in each society are being trained to become netizens. Some examples from the US, on computers in us libraries:
http://www.ii.fsu.edu/Solutions/Public-Libraries-The-Internet; and in schools:
http://nces.ed.gov/fastfacts/display.asp?id=46


c. And of course we need more general data on public computing. We have done such surveys in Toledo, Ohio (http://people.lis.illinois.edu/~katewill/ci-in-china/readings/williams%202004%20public%20computing%20toledo.pdf) and in Champaign-Urbana, Illinois (http://people.lis.illinois.edu/~katewill/echambana.pdf) It would be very important to have such surveys on more US cities and on Chinese cities as well.

当然，我们还需要更多的关于公众计算的一般数据。我们在美国进行了如下调查，俄亥俄州托莱多市：http://people.lis.illinois.edu/~katewill/ci-in-china/readings/williams%202004%20public%20computing%20toledo.pdf，伊利诺伊州尚佩恩-厄巴拿市：http://people.lis.illinois.edu/~katewill/echambana.pdf。对更多的美国城市以及中国的城市进行这样的调查是非常重要的。

d. And, as the China - US collaboration continues and builds a sustainable network of scholars and databases, then our community informatics project can be globalized by including other countries in which we already have individual contacts including Canada, Japan, Cuba, England, Mexico, Trinidad-Tobago, Jamaica, South Africa, India, France, and Germany.

随着中美合作的持续，我们将建立一个可持续的学者网络和数据库。之后，和我们已经有个人联系的其他国家（包括加南大、日本、古巴、英国、墨西哥、特立尼达和多巴哥、牙买加、南非、印度、法国和德国）的学者的加入将使我们的社群信息学项目变得更加国际化。

for more information, please contact hansl@pku.edu.cn
Appendix E. Summer school snapshots
How to Help the Digital Poor in China
Report on a Ph.D. dissertation
Hui Yan, Ph.D.
Norfolk University