

8-2008

# A School-Library-Centered Community Information Resource Sharing Model and Its Impact on Cultural Life of Rural Communities in China

Wenjie Zhou

Elaine X. Dong

Tim J. Zou

University of Arkansas, Fayetteville, tzou@uark.edu

Follow this and additional works at: <http://scholarworks.uark.edu/libpub>

 Part of the [Information Literacy Commons](#), and the [Scholarly Communication Commons](#)

## Recommended Citation

Zhou, Wenjie; Dong, Elaine X.; and Zou, Tim J., "A School-Library-Centered Community Information Resource Sharing Model and Its Impact on Cultural Life of Rural Communities in China" (2008). *University Libraries Faculty Publications and Presentations*. 22.  
<http://scholarworks.uark.edu/libpub/22>

This Conference Proceeding is brought to you for free and open access by the University Libraries at ScholarWorks@UARK. It has been accepted for inclusion in University Libraries Faculty Publications and Presentations by an authorized administrator of ScholarWorks@UARK. For more information, please contact [scholar@uark.edu](mailto:scholar@uark.edu), [ccmiddle@uark.edu](mailto:ccmiddle@uark.edu).



## A School-Library-Centered Community Information Resource Sharing Model and Its Impact on Cultural Life of Rural Communities in China

Wenjie Zhou

Elaine X. Dong

Tim J. Zou

**Meeting:** 106. Asia and Oceania

**Simultaneous Interpretation:** Not available

---

WORLD LIBRARY AND INFORMATION CONGRESS: 74TH IFLA GENERAL CONFERENCE AND COUNCIL  
10-14 August 2008, Québec, Canada  
<http://www.ifla.org/iv/ifla74/index.htm>

---

### **Abstract**

*This paper provides a case study of the rural library programs sponsored by the Evergreen Education Foundation (EEF) and identifies the vital role of school libraries in improving local residents' access to information and enriching their cultural life. It analyzes the data collected from user surveys of one high school library and one book station from two library clusters in underdeveloped rural Tianzhu and Tongwei counties in Gansu Province of western China to assess the impact and effectiveness of a school-library-centered community information resource sharing model developed and implemented by China Evergreen Rural Library Service Stations (CERLS). A total of 1,350 surveys were distributed to the community library users in the two counties to gain a better understanding of their satisfaction level and expectations of the libraries' collections, services, and outreach programs, and to examine the impact of the model on the social and economic life of local residents. A quantitative approach was used to analyze the survey data and a standard structure and format of data presentation was followed so that the research might be replicated by CERLS libraries in other locations. As CERLS programs continue to expand into other locations in China, this study may provide useful information and a model to analyze prospective programs. This study could provide impetus for more studies on the rural library programs in other areas of China and in other underdeveloped regions of the world.*

### **Introduction**

#### 1. Evergreen Education Foundation (EEF)

EEF, a U.S.-based non-profit organization, was founded in 2001 to combat poverty and illiteracy in rural areas of China by providing local residents with free access to information resources. Upon its

inception, EEF set as its mission “to improve education opportunities for children and young adults in rural China by providing books, computers, relevant equipment and supplies, workshops, and seminars to schools and libraries.”<sup>1</sup> A long-term objective of EEF is to improve the quality of life in rural communities via its school library projects. For the past seven years, EEF has sponsored 38 school and public libraries in six provinces, including the most backward provinces of Qinghai, Gansu, Shaanxi, Guizhou and Yunnan. Today these libraries serve a combined student population of nearly 84,000 and a combined community population of about 340,000. Each year, EEF awards approximately 200 scholarships to selected students.<sup>2</sup>

## 2. China Evergreen Rural Library Service Stations (CERLS)

CERLS was established in 2002 as EEF’s Chinese associate. Through CERLS, partnerships between EEF and libraries are signed, funds are managed and distributed, and regional liaisons are appointed. Headquartered in Beijing, CERLS’s regional liaisons in the provinces of Qinghai, Gansu, Shaanxi, Yunnan, Guizhou, and Jiangsu are responsible for the communication among CERLS libraries in their regions as well as the coordination of cross-regional activities or programs. CERLS received the Bill & Melinda Gates Foundation Access to Learning Award for its innovative programs and pioneering work in 2004. This benevolent award has provided additional funding for CERLS to sustain its initiatives and programs.

## 3. School-Library-Centered Community Information Resource Sharing Model

The design of the school-library-centered model recognizes the power of influence derived from the following communication pattern:



A high school library in rural area, if adequately funded and staffed, promotes reading and learning among students. Students subsequently pass on the information literacy skills acquired from school, such as using library tools and resources as well as computers, the Internet, and multi-media formats, to their under-educated parents, of whom more than a half only finished middle school as indicated in our demographic data. These interactions between a school library and students, students and parents, and parents and a school library, stimulate a healthy learning environment in the building of a learning community.

EEF decided to use a high school—recognizing it as an immediate gateway connecting a rural community to a world of information and information technology—to “place information technology in the hand of those who need it most.”<sup>3</sup> EEF conceptualized a community resource sharing model centered on a high school library and implemented it with the following strategies to: (1) identify high school libraries as EEF’s partners and provide funding for revitalizing these libraries; (2) build a library cluster by establishing satellite libraries and book stations around each high school library; (3) connect these libraries through management software and the Internet to extend information access to local residents; and (4) promote library services and information literacy to communities through students and their

parents to maximize the outcome of outreach programs. Presently, any of the libraries within a cluster can issue a reciprocal borrowing card to allow a patron to borrow materials from other libraries in the cluster. Periodically, selected materials from the center library are delivered to book stations for users to browse and borrow. The libraries also share online cataloging information to enable a patron to locate a book within the cluster. There is no interlibrary delivery system in place yet.

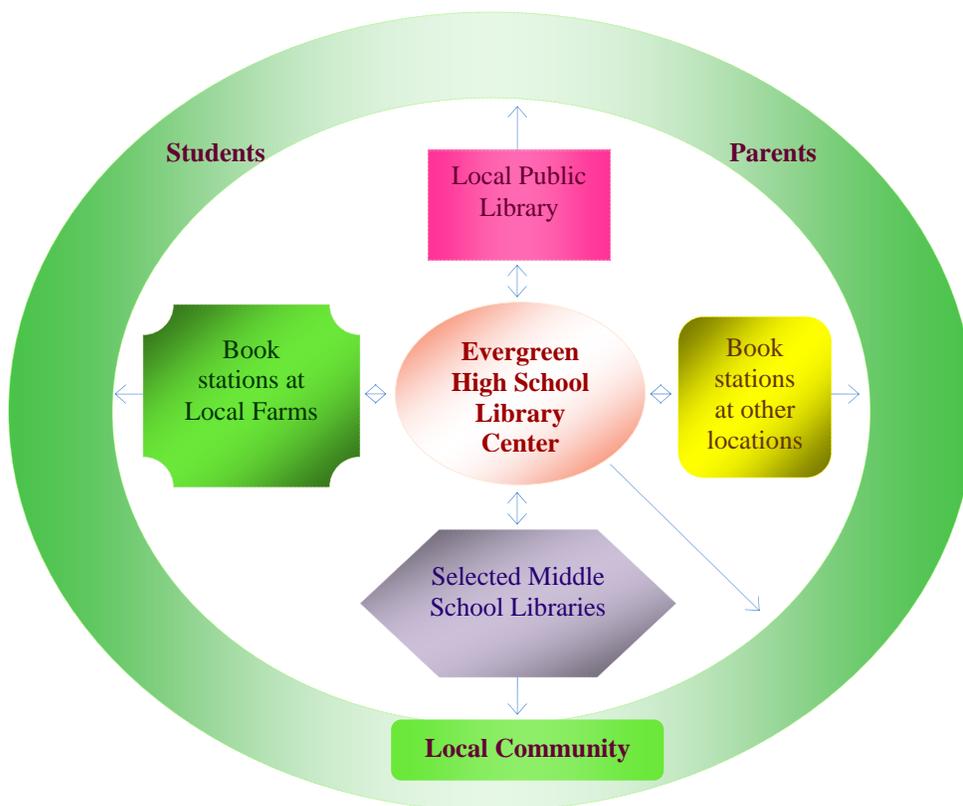
Following these strategies, EEF established a contribution profile:

- a computer server to host library online catalog and connect to the local network
- work stations to search online catalog and circulate library materials
- a digital camera and a laser printer for making photo library cards; a barcode scanner for checking in and out books
- 50-60 computers for a digital reading room that enables students to search library holdings and information on the Internet and to read e-books

In addition to the emphasis on providing technology, EEF also donates books to enhance the lending program for community users, supports cultural events, and training sessions and workshops for local communities, and provides training programs for CERLS librarians.

The chart below illustrates EEF’s community information resource sharing model:

Chart 1 -- A School-Library-Centered Community Information Resource Sharing Model



#### 4. Model Implementation in Tianzhu and Tongwei

Tianzhu and Tongwei are listed among the 43 poorest counties in Gansu province.<sup>4</sup> Tianzhu's economy is limited mainly to agricultural and livestock industries. An autonomous prefecture of 13 ethnic groups, Tianzhu has Han Chinese and Tibetans as the two largest populations. Other ethnic minorities include Muslim Hui, Mongolian, Tu, Man, etc. Its population is 230,000. Tongwei on the other hand, is poorer than Tianzhu and relies entirely on agriculture that is frequently devastated by severe draughts. Tongwei's population consists exclusively of Han Chinese. Economically stagnant as both counties have been, Tongwei carries a long history of producing paintings and calligraphy and has been home to many craftsmen and folk artists. Therefore, it is known in the region for its cultural orientations. The total population in Tongwei is 420,000. Factors contributing to the poverty and illiteracy of the populations in both counties are decades of isolation from the industrialization of the country at large, scarcity of capital investment, and extremely limited access to information resources.

Before 2002 there were no computers or automated systems in any of the school or public libraries in Tianzhu and Tongwei. The collections of most libraries were woefully inadequate and outdated. For many years, libraries had no budget to purchase new books. As a result, the usage of the book collections was low.

Both Tianzhou Number 1 High School and Tongwei Number 1 High School began to receive funding from EEF in 2002 to expand and transform their outdated school libraries. Soon thereafter, satellite libraries were set up around and connected to each of these two revitalized high school libraries. Through these satellite libraries free information services were delivered to the communities. Today, Tianzhu Number 1 High School Library has a collection of over 41,000 books and subscriptions to over 140 periodicals and newspapers. Tongwei Number 1 High School Library houses about 35,000 books. Both have online reading rooms equipped with over 60 computers at each site. All libraries in the clusters provide access to a Chinese e-database (sponsored by a vendor) that contains over one million eBooks and 10 million e-journal articles. In total, the library clusters in the two counties offer information services to approximately 30,000 students. Through these students the libraries reach out to at least 100,000 parents and residents who previously were served only by public libraries.

Both high school libraries reserve morning and afternoon hours for the high school students but are open to the general public between 4:00 pm and 7:00 pm when there is no formal classroom instruction. On the weekends, the libraries are open just for local residents who enjoy the same access to the libraries' resources as the students do. During those hours, community users can browse, read, and borrow from collections, and use computers and the Internet free of charge. Training sessions and workshops on information literacy, cultural heritages, and practical knowledge and skills are held periodically in accordance with the needs of the local communities.

## **Research Methodology and Tools**

### **1. Survey Design**

Two sets of surveys (see Appendixes A & B) were designed by Mr. Wenjie Zhou to survey users of Tianzhu High School Library and the book station in Tongwei. The surveys are identical except for the services that are not yet available at the book station and consist of three parts. The first part asks about a respondent's demographic information, including ethnicity, education, personal and household income. The second part collects a respondent's evaluation of the library's hours of operation, print collections, electronic resources, and remote access to library resources. The third part surveys a respondent's expectation of library services and the patterns of his/her use of information.

A total of 1350 surveys were distributed to the library users in the two counties. One thousand were distributed via Tianzhu High School students to their parents and 350 were disseminated to Tongwei residents who had obtained a library card from the book station at the Agricultural Technology Development Zone in Tongwei. By surveying the two different populations, the study intends to understand better our library users' socio-economic background, their patterns of information use, and their expectations and needs for information services. Most important, we wanted to assess the new service model and the effectiveness of the resource sharing programs. We also believe that this focused study of library programs in Tianzhu and Tongwei can best demonstrate the vision and objectives that EEF has strived to accomplish.

### **2. Survey Response Rates**

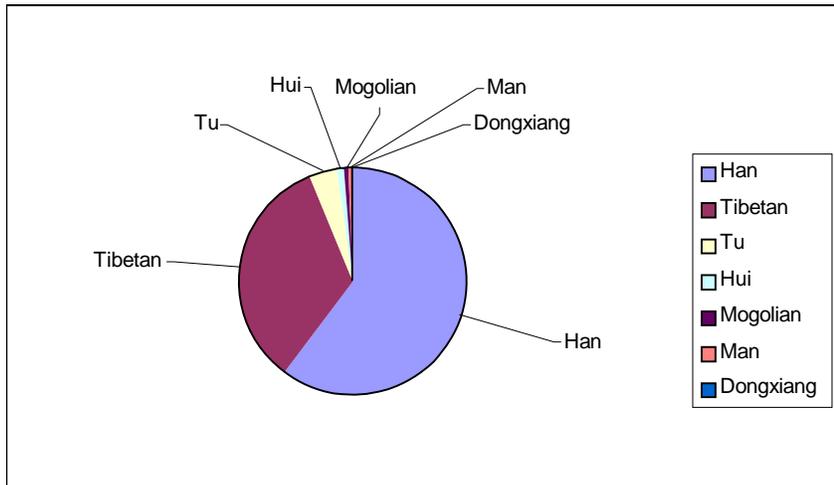
A high rate of response was obtained from both sample populations owing to the way the surveys were disseminated. Zhou administered the surveys with the involvement of Tianzhu High School students who encouraged their parents to complete the survey and return them to teachers on time. Surveys for Tongwei community users were hand-delivered to their homes. The survey return rate for both surveyed population groups was at 90% ( $903/1000 = 90.3\%$  for the Tianzhu group and  $316/350 = 90.2\%$  for the Tongwei group). Such high response rates boost the relevancy of the data and probability of the resulting accuracy.

## Survey Data Analysis

### 1. Demographic Data

#### 1.1 Respondents' Ethnicity in Tianzhu

Chart 2 -- Respondents' Ethnicity in Tianzhu (N=903)



The survey results from Tianzhu reflected the demographics of the county. Of the 903 respondents, 60% (543/903) were Han Chinese, 34% (305/903) were Tibetans, and the remaining 6% were from five other ethnic groups. Respondents in Tongwei, as we had expected, consist exclusively of Han Chinese. What we did not gather through this survey process were data regarding gender, age, and occupation, as the focus of this research was on respondents' ethnic, educational, and economic status in relation to their needs for services.

#### 1.2 Level of Education

Table 1 – Level of Education				
	Tianzhu (N=903)	%	Tongwei (N=316)	%
Four Year College	37	4%	8	3%
Community College	65	7%	17	5%
Vocational School	23	3%	3	1%
High School	253	28%	111	35%
Middle School	375	42%	137	43%
Elementary School	144	16%	35	11%
Unspecified	6	1%	5	2%
<b>Total</b>	<b>903</b>	<b>100%</b>	<b>316</b>	<b>100%</b>

For both populations, the level of education was low. More than 50% of Tianzhu and Tongwei populations had attended only a middle school or an elementary school and were thus less educated than their high school children. Thirty-one percent of Tianzhu population had attended a high school or a vocational school. Only slightly about 4% of the population from each group had attended a community college or a four-year college.

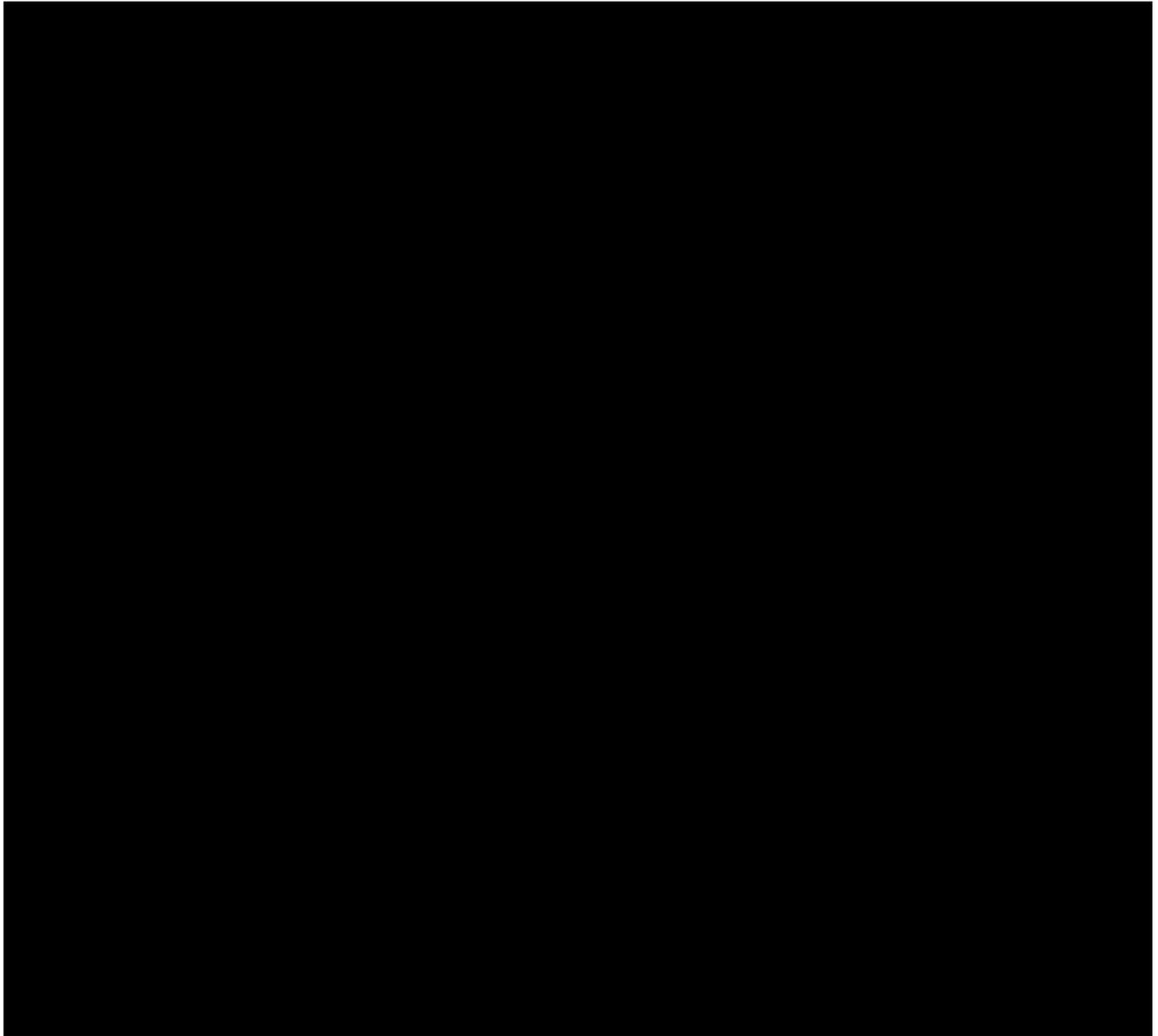


Chart 3 – Educational Level of Han Chinese and Ethnic Minorities in Tianzhu

Survey data about respondents' education do not demonstrate significant disparity (to the extent we had assumed) between Han Chinese and ethnic minorities. In the Tianzhu sample group, the educational background for ethnic minorities and Han Chinese was strikingly identical.

### 1.3 Household Income & Internet Access from Home

Chart 4 Household Incomes in Tianzhu (N=903) & Tongwei (N=316)

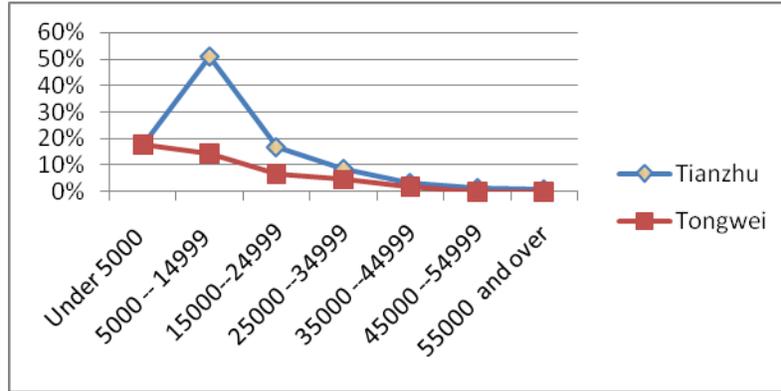


Table 2 – Internet Access from Home				
	Have Internet Access	%	No Internet Access	%
Tianzhu (N=872)	66	8%	806	92%
Tongwei (N=292)	11	4%	281	96%

The range of annual household income for Tianzhu population was between 400 and 200,000 yuan with a median annual income of 10,000 yuan (about \$1,429), whereas the range for the Tongwei population was between 4,000 and 50,000 yuan with a median of 7,000 (about \$1,000). Chart 4 shows that for both populations the household incomes for the majority of the surveyed families clustered in the range of 5,000 - 25,000 yuan. For Tianzhou population, the mode was 5,000 – 14999 yuan, whereas for the Tongwei population, the mode was under 5,000 yuan, indicating Tongwei is poorer than Tianzhou.

Apparently, at this level of income, most families can hardly afford a computer for remote access of the library databases and web resources. This is proved in Table 2, which shows that 92% of the surveyed families in Tianzhu did not have Internet access from home, compared to 96% of the surveyed families in Tongwei. Income is the primary indicator of the technological divide. The same pattern is observed with the level of education. The lower the educational level of a resident, the less likely he/she is to have Internet access from home. Of those who had only gone to an elementary school, 96.5% did not have Internet Access from home, compared to 51% among those with a college degree. The data affirm that libraries should proactively provide hardware, software, electronic resources, and training sessions for poorer and less educated residents to overcome the digital and technological divides, since only libraries provide these equipment and resources.

## 2. Satisfaction Level with Services and Programs at the Library/Book Station

Table 3 -- Satisfaction Level with Services and Programs		
	Tianzhu (N=903)	Tongwei (N=316)
<b>Hours of Operation</b>		
<i>Very Satisfied</i>	33.3%	20.6%
<i>Satisfied</i>	53.8%	64.9%
<i>Not Satisfied</i>	12.0%	12.7%
<b>Services Provided</b>		
<i>Very Satisfied</i>	22.9%	23.1%
<i>Satisfied</i>	66.8%	62.0%
<i>Not Satisfied</i>	9.4%	13.6%

Survey results in Table 3 show a consistently high level of satisfaction with most services. Although the services and programs have been different at Tianzhu and Tongwei, identical responses to the services were observed. More than 85% of respondents in both populations were satisfied with the hours of operation and the services. The number of respondents who are “not satisfied” with library services are slightly higher at 13% for the Tongwei population in comparison to 9.4% for the Tianzhu population.

Training Sessions and workshops were also the areas which we wanted to evaluate. However, because of the small numbers of training sessions offered, the authors do not consider the data collected in this category were reliable enough to reflect the entire population. Much lower attendance and satisfaction rates on training sessions and workshops were observed in Tongwei (16.8% attendance and 30.4% satisfaction rate) than in Tianzhu (38.6% attendance and 55.3% satisfaction rate). The main reason for the low rates of attendance was that only 4 - 5 training sessions were held at each site during a year. Thus, only a few respondents had gone to a training session to be able to give feedback. Moreover, topics were limited in choice and interest, which reduced the audience further. Based on income and educational level, respondents in Tianzhu enjoyed cultural events more than those in Tongwei, most of whom preferred workshops and training in practical knowledge and skills.

Table 4 -- Satisfaction Level by Ethnic Group in Tianzhu (N=903)		
	Minorities	Han Chinese
<b>Access the Internet from home? (Yes)</b>	7.2%	7.4%
<b>Satisfied with hours of operation?</b>		
<i>Very Satisfied</i>	37.2%	30.8%
<i>Satisfied</i>	52.5%	54.7%
<i>Not satisfied</i>	9.2%	13.8%
<b>Satisfied with print resources (books, magazines &amp; newspapers)?</b>		
<i>Very Satisfied</i>	26.4%	22.1%
<i>Satisfied</i>	66.7%	66.7%
<i>Not satisfied</i>	6.7%	10.1%
<b>Satisfied with electronic resources in the library?</b>		
<i>Very Satisfied</i>	18.6%	13.4%
<i>Satisfied</i>	57.5%	56.5%
<i>Not satisfied</i>	15.6%	23.2%
<b>Satisfied with services provided?</b>		
<i>Very Satisfied</i>	23.4%	22.5%
<i>Satisfied</i>	66.1%	67.2%
<i>Not satisfied</i>	9.2%	9.6%

Although the materials and information available in Tianzhu library are mostly in the Chinese language, the survey results from Tianzhu in Table 4 did not show any significant difference among ethnic groups in their assessment of the library's collections and services. In fact, linguistic minorities appreciated library services more than the Han Chinese. About 90% of minorities were satisfied with the library hours of operation compared to 86% of Han Chinese. Ninety-three percent of ethnic minorities were happy with the current library print collections, compared to 89% of Han Chinese. The same pattern was observed in the use of electronic resources available in the library.

Table 5 -- User Satisfaction by Level of Income in Tianzhu (N=903)				
	< 1000 yuan	1001 – 10,000 yuan	10,001 – 20,000 yuan	> = 20,001 yuan
Do not have Internet access from home	92.9%	93.9%	82.7%	51.7%
Never used electronic resources	73.8%	76.1%	71.4%	77.6%
Not satisfied with electronic resources	26.2%	21.6%	15.3%	20.7%
Don't know how to search or use library resources	16.7%	10.2%	5.1%	3.4%
Not satisfied with the library's print resources	19.0%	8.0%	5.1%	19.0%
Library services do not meet needs	16.7%	9.4%	8.1%	5.2%
Not satisfied with library hours of operation	14.3%	13.5%	6.1%	5.2%

Table 6 -- User Satisfaction by Educational Level in Tianzhu (N=903)

	Four year College	Community College	Vocational School	High School	Middle School	Elementary School
Do not have Internet access from home	51.4%	66.2%	84.6%	90.4%	93.6%	96.5%
Never used the library's electronic resources	72.9%	75.4%	88.4%	70.0%	77.9%	77.1%
Not satisfied with the library's electronic resources	13.5%	18.5%	23.5%	20.8%	19.8%	21.5%
Not satisfied with the library's print resources	5.40%	9.20%	19.20%	10.00%	7.20%	9.70%
Library services do not meet Needs	2.7%	4.6%	7.7%	10.0%	9.9%	11.1%
Not satisfied with library hours of operation	0.00%	9.20%	11.50%	10.40%	13.00%	16.00%

Household income and education were two variables that affected people's needs for information services. Survey results in Table 5 indicate that respondents with lower incomes need libraries more. In Table 6, of all the categories except for electronic resources, a noticeable pattern is present: the level of dissatisfaction increases as the level of education decreases. Of course, the level of education, which goes hand in hand with level of income, determines respondents' skills and use of information technology, and becomes a very important cause of technological divides.

### 3. Impact of Services and Programs at Library/Book Station on Respondents' Cultural Activities

Table 7 – Benefits Perceived by Income Group in Tianzhu (N=903)

Benefits Perceived by Respondents with Different Level of Income	< 1000 yuan	1001 - 10,000 yuan	10,001 - 20,000 yuan	>= 20,001 yuan
<i>Enrich Cultural Life</i>	38.1%	33.9%	55.1.4%	46.6%
<i>Continue Education</i>	19.0%	12.6%	13.3%	10.3%
<i>Acquire Practical Knowledge &amp; Skills</i>	14.3%	13.5%	1.0%	6.9%

As seen from Table 7, respondents across the spectrum rated the library's importance highly. They valued the library and gained benefits in terms and in the order of the following: (1) enrich cultural life; (2) continue education; and (3) acquire practical knowledge and skills. Lower income respondents value the library for meeting their practical needs, using it to gain and update practical skills pertaining to trade and livelihood, and, for some, even to learn to read and write. Respondents with higher incomes used a library for leisure and recreational purposes. Thirty-eight percent of respondents with an income lower than 1,000 yuan appreciated the library for the enrichment of cultural life in contrast to 46.6% with an

income above 20,000 yuan. The data from Tongwei showed the same pattern except that the percentages of respondents that gained benefits in acquiring practical skills were higher; for example, the rate for the lowest income group (<1000 yuan) was 29% in Tongwei compared to 14.3% in Tianzhu.

Table 8 – Using Library Resources by Educational Level in Tianzhu (N=903)

	Four year College	Community College	Vocational Schools	High School	Middle School	Elementary School
<b>Purpose of Visiting Library?</b>						
<i>Read Books, Magazines and Newspapers?</i>	40.5%	55.4%	57.7%	57.6%	53.1%	60.4%
<i>Borrow Books</i>	27.0%	18.5%	11.5%	19.5%	21.9%	13.9%
<i>Use Electronic Resources</i>	2.7%	1.5%	0.0%	2.8%	1.1%	2.1%
<b>Types of Materials Used?</b>						
<i>Magazines &amp; Newspapers in Chinese</i>	37.8%	55.4%	30.8%	35.2%	30.9%	27.8%
<i>Books in Chinese</i>	21.6%	18.5%	34.6%	39.6%	41.3%	39.6%
<i>Books in Tibetan</i>	5.4%	1.5%	0.0%	3.6%	2.7%	5.6%
<i>Electronic Resources</i>	2.7%	0.0%	3.8%	3.2%	1.3%	2.1%
<b>Skills and Knowledge of Using Library Resources?</b>						
<i>Don't Know How</i>	2.7%	7.7%	3.8%	7.6%	12.3%	11.1%

As seen in Table 8, regardless of education background, the majority of the respondents visited the library to read books, magazines and newspapers in Chinese. Less than one third of the respondents came to borrow books. However, fewer than 3% of respondents came to use electronic resources, indicating that either the users did not know how to use electronic resources or were not used to reading this format. For whatever reason, this is an area with much room for improvement, since about 90% of respondents have no access to the Internet at home and are dependent on the library's facilities to learn and to use electronic information.

The most frequently used resources were magazines and newspapers in Chinese, followed by books in Chinese. Better-educated users tended to use magazines and newspapers more than those with less education, who preferred to read books. Books in Tibetan were used by only about 5% of the respondents. If we look at the percentage of satisfaction with books between minorities and Han Chinese, the positive response rate was equal at 66.7%; this figure seems to indicate that the low use of the Tibetan collection was due to the inadequacy of those materials. Again, regardless of educational background and level of income, electronic resources had the lowest rate of use.

Skills and knowledge in using library resources is correlated to the level of education and income. Seventeen percent of respondents with an annual household income of less than 1000 yuan did not know how to search or use library resources, versus 3.4% of the respondent group with an annual household income above 20,000 yuan. Likewise, 33% of respondents who had only middle school or elementary school education did not know how to search or use library resources, while only 3% and 7.7%

respondents who had received a four-year college education or possessed a community college certificate reported the same difficulty respectively.

Table 9 – Library/Book Station Visits & Respondents’ Book Reading and Purchasing Habits

	<b>Tianzhu (N=903)</b>	<b>Tongwei (N=316)</b>
<b>Library/Book Station Visits</b>		
<i>At Least Once a Week</i>	61.8%	38.9%
<i>At Least Once a Month</i>	17.4%	33.2%
<i>Less Than Once a Month</i>	18.8%	25.9%
<b>Impact on Leisure Reading</b>		
<i>Time on Reading Increased</i>	59.9%	56.3%
<i>Time on Reading Unchanged</i>	27.2%	27.5%
<i>Time on Reading Decreased</i>	6.8%	11.4%
<b>Impact on Spending on Books</b>		
<i>Increased</i>	21.0%	22.8%
<i>Unchanged</i>	24.4%	20.6%
<i>Decreased</i>	53.7%	48.7%

Data in Table 9 show that more people visited Tianzhu library on a weekly basis than the book station in Tongwei. Over 60% respondents in Tianzhu visited the library at least once a week, whereas about 40% respondents went to the book station once a week.

More than 50% of respondents from both groups reported an increase in time spent reading books after being issued a library card. Fifty-four percent from Tianzhu and 49% from Tongwei reported that they saved money buying books through borrowing from the library and the book station. However, about slightly over 20% respondents reported that they increased spending on books. In either scenario, libraries had a noticeable impact on time and money spent on reading.

#### 4. Analysis

The study found that the implementation of the school-library-centered model was generally well received by the residents. Offering free access to library resources and services has yielded very positive results in the promotion of reading, learning, and continuing education in the communities. An overwhelmingly large percentage of the populations was satisfied with the hours of operation and services at the library and the book station. T tests have indicated that survey results between the two surveyed groups are comparable except for the ethnic diversity of Tianzhu population.

The demographic data collected for this study generally reflect the entire population and could provide useful references applicable to other similar populations.

This study recognizes education and income as two key variables that affected users' information needs and their perception of the services and programs. Ethnic background and language barriers did not prove to make significant difference in respondents' selection of services and materials to read. However, since the collection of non-Chinese language books was very small in Tianzhu's library, it indicated that diversity of the book collection needs to be enhanced to better represent the needs of the 40% ethnic minorities in Tianzhu.

Users were generally pleased with the content, size, and format of library resources. Services offered were also perceived to have been useful and relevant to the respondents' needs. For this particular survey, ethnic background seemed to bear no immediate relation to users' needs for and perception of the library.

Technological divides were strongly observed. Digital resources and accessibility to them are two areas that need to be given more attention. Increases in living standards would allow more families to buy computers and access to the Internet from home. Before that happens, however, the library is still the most practical place to help lower income users with training and access to digital resources as this group of users visits libraries more often and are more dependent on the libraries to acquire knowledge and skills.

Sharing the print collections is very important and necessary for supporting the resource-sharing model, but at this stage the model has been handicapped by (1) a lack of a shared online union catalog; (2) a lack of a courier system to support interlibrary borrowing among CERLS libraries; and (3) insufficient funding to support (1) and (2). To address these issues, the delivery of digital resources becomes a feasible and the ideal method for future resource sharing, and therefore needs to be given priority.

Survey data indicated low attendance rates for training and workshops held at both sites. The number of training sessions offered so far was small, and topics were limited. A more vigorous program is necessary, and broader topics could better serve the diverse needs of the local residents.

By making information available and accessible to the local residents free of charge, libraries and book stations in Tianzhu and Tongwei have positively affected the cultural and economic lives of the local residents. This has been accomplished particularly through the increased use of libraries, book stations, and their resources, increased time on reading books, and money saved purchasing books. The outreach programs have been successful with the support of the community library clusters and with the aid of school students. The resource-sharing model has brought local residents together to learn and read, and also provided them social spaces for communication and entertainment.

### **Future Directions**

To resolve the issues identified in this study and deal with other challenges that EEF and CERLS face, the authors suggest the following for the future development of CERLS libraries, particularly those in Tianzhu and Tongwei:

1. Build a virtual community of CERLS libraries

Establish a virtual community via a unified platform where all CERLS libraries' resources are integrated and shared through the Internet. The major components of the platform could include:

- An online union catalog that facilitates the sharing of library holdings, analysis of collection strength, and tracking the movement of books among libraries and stations
- Licensed commercial electronic databases and selected links with annotations to free Internet resources in various topics and formats, as well as links to relevant websites such as the National Cultural Resources Sharing website, and primary and secondary education websites
- Newsletters, blogs, and training materials for timely communication among CERLS libraries

The benefits of building a virtual CERLS library community are obvious. It would help to:

- Improve library management and reduce costs for all CERLS libraries

Current library management software used in CERLS libraries does not support cooperative cataloging. It is also complicated to operate, and the interface is not user-friendly. Open source software such as Koha Integrated Library System would be a good choice since it is free and allows anyone to study, modify and customize the software. It has a simple and clear interface, and supports cooperative cataloging, acquisitions, circulation, and other necessary functions. Through a union cataloging system, CERLS librarians would be able to collaborate on cataloging, saving labor and time.

To build the virtual community, the hardware, technical support, and software maintenance would be centrally managed from one site for all CERLS libraries to improve cost-effectiveness since it reduces hardware needs (for example, each CERLS high school library center would not need its own server) and requires fewer technical staff and system maintenance.

- Create easier, extended access to more information resources for all CERLS library users

Users would be able to search the collection information of all CERLS libraries through the union catalog, and have access to linked electronic books, journals, encyclopedias and other Internet resources. The virtual community would integrate all the CERLS libraries' information resources and make them accessible online at any time and in any place.

## 2. Increase both print and electronic resources for CERLS libraries

CERLS libraries have obtained new equipment and technology such as computers and Internet connections. Their print and electronic resources, although somewhat increased, need to be further enhanced. Survey results also indicated the inadequacy of Tibetan materials in Tianzhu No. 1 High School Library where ethnic Tibetans comprise 34% of its sample population.

Feasible collection plans need to be developed to decide priorities on collecting different formats and subjects of resources to reflect the needs of users and the reality of limited resources. A top priority is to enhance the collection, preservation, and access of rare and special resources that represent the unique identity of a community and reflect community cultural and intellectual life. Examples of such resources are the language and historical materials of local ethnic minorities.

3. Organize more cultural events as well as workshops and training sessions to attract broad library users

To increase the attendance to training sessions and cultural events, the following strategies are suggested: (1) increase the frequency of workshops and cultural events; (2) conduct workshops and events that better serve the diverse needs of residents with different educational, ethnic, and economic backgrounds in different communities; (3) ensure the quality of speakers and lectures; and (4) gather feedback from the attendees for future improvement. These strategies would enhance local residents' cultural activities and promote their information literacy and practical knowledge and skills, and as a result, enrich the cultural life and improve the economic conditions of local residents.

4. Provide more training programs to improve the quality of CERLS librarians

Develop a team of qualified library staff is very essential for CERLS projects, since library staff should be the experts to train students, parents and other residents in the communities in how to use library resources and tools. For the past few years, CERLS has provided training sessions for its staff who have no formal professional training due to the absence of school librarian programs in China. CERLS should continue to provide conference and training sessions and create more training avenues for its staff, such as online training sessions and materials and online discussion forums for exchanging expertise and ideas among CERLS staff. The president of EEF, Faith Chao, mentioned that EEF plans to initiate a school librarian certificate program in China with the intention of supplying sufficient numbers of qualified professionals to offer best practices at school libraries and help shape the future school library environment in China.

### **Acknowledgement**

The authors would like to express their sincere gratitude to Phillip J. Jones, Head of Reference Department at the University of Arkansas Libraries, for his valuable suggestions; thanks also to Arthur Morgan from the Web Services of the Libraries for his generous editorial advice.

### **References & Notes**

1. "Evergreen Education Foundation home page." <http://www.evergreeneducation.org/EvergreenNew/missionstate.htm> (accessed May 5, 2008)
2. "Evergreen 2007 Newsletter." <http://www.evergreeneducation.org/EvergreenNew/Newsletter07.pdf> (accessed May 5, 2008)
3. Geoffrey Liu, "Evergreen Bringing Information Resources to Rural China: Bill & Melinda Gates Foundation Access to Learning Award Recipient 2004." *Washington, D.C. Council on Library and Information Resources*, 2005.
4. The poverty line set by the Chinese government three years ago specifically identifies any individual with an annual income below 882 yuan (\$106) as poor. The Chinese standard is lower than that of the World Bank, which sets the poverty threshold at less than \$1 a day for an individual. The populations we sampled for this study shows that the average individual incomes are all above the poverty line set by the Chinese government and World Bank. Tianzhu and Tongwei were determined by the Chinese government as below the poverty line based on their GDP.

**Appendix A**  
**Tianzhu No. 1 High School Library**  
**User Survey**

In an effort to better serve our customers, the library is conducting a user survey to evaluate how we may improve upon the library’s collection and various services. Please take a few minutes to share your thoughts and opinions about the collection and services that the library provides. Thank you!

**I Demographic Information**

Name		Ethnicity	
Educational Level		Personal Annual Income	
Household Annual Income		Internet Access from home	

**II Please check all that apply for the following questions**

1. Are you satisfied with the library hours of operation?  
 A. Very satisfied                      B. Satisfied      C. Not satisfied
2. Are you satisfied with the library’s print resources (books, magazines, and newspapers)?  
 A. Very satisfied                      B. Satisfied      C. Not satisfied
3. Have you ever used the library’s electronic resources?    A. Yes              B. No
4. Are you satisfied with the library’s electronic resources (eBooks & e-Journals, etc.)?  
 A. Very satisfied                      B. Satisfied      C. Not satisfied
5. What types of materials do you often borrow or use in the library?  
 A. Chinese books                      B. Chinese magazines and newspapers  
 C. Tibetan materials                      D. Electronic resources
6. What are your purposes in visiting the library?  
 A. Borrow books                      B. Read books, magazines and newspapers  
 C. Use electronic resources      D. Other
7. What is the level of your skills and knowledge of using library resources?  
 A. Excellent                              B. Average  
 C. Poor                                      D. Don’t know how
8. Are you satisfied with the library’s services? A. Very satisfied    B. Satisfied    C. Not satisfied
9. How often do you visit the library?  
 A. At least once a week              B. At least once a month              C. Less than once a month
10. Have you attended any of the library’s training sessions and workshops?    A. Yes              B. No
11. Were these training sessions and workshops helpful?                      A. Yes              B. No
12. After you received a library card, how did your reading time change?  
 A. Reading time increased    B. No change in reading time    C. Reading time decreased
13. After you received a library card, how did your expenditure on books change?



**Appendix B**  
**Book Station at an Agricultural Technology Development Zone of Tongwei**  
**User Survey**

In an effort to better serve our customers, the book station is conducting a user survey to evaluate how we may improve upon the station’s collection and various services. Please take a few minutes to share your thoughts and opinions about the collection and services that the station provides. Thank you!

**I Demographic Information**

Name		Ethnicity	
Educational Level		Personal Annual Income	
Household Annual Income		Internet Access from home	

**II Please check all that apply for the following questions**

1. Are you satisfied with the hours of operation at the book station?  
 A. Very satisfied      B. Satisfied      C. Not satisfied
2. Are you satisfied with the book station’s services?  
 A. Very satisfied      B. Satisfied      C. Not satisfied
3. How often do you visit the book station?  
 A. At least once a week    B. At least once a month      C. Less than once a month
4. Have you attended any of the book station’s training sessions and workshops?  
 A. Yes                      B. No
5. Were these training sessions and workshops helpful?                      A. Yes                      B. No
6. After you received a library card, how did your reading time change?  
 A. Reading time increased    B. No change on reading time    C. Reading time decreased
7. After you received a library card, how did your expenditure on books change?  
 A. Increased    B. No change    C. Decreased
8. What are the benefits of using the book station?  
 A. Enrich culture life                      B. Continue education  
 C. Acquire practical knowledge and skills