

An Investigation of a New Green Initiative in Book Sharing: The Dandelion Model

An Interactive Qualifying Project Report

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123TSG.COM

123 Library

This report represents the work of one or more WPI undergraduate students submitted to the faculty as evidence of completion of a degree requirement. WPI routinely publishes these reports on its web site without editorial or peer review.

Abstract

Book sharing is an efficient mode of fostering the spread of information among a population. Our sponsor, 123Library, is interested in a comparative study of the Sino-American economic book circulation models. Through literature research, interviews, focus groups, and surveys, we collected data and analyzed the key differences between American and Chinese book prices, shipping costs, and sharing habits. We then used this information to analyze the potential expansion into the United States of 123Library's environmentally friendly system, the Dandelion Model.

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Executive Summary

123 Library, an online book sharing platform in China, implements a book sharing model coined the Dandelion Model. Book sharing in this study refers to the use of a book by multiple users, not at the same time but in succession. Their model allows users to exchange books between each other with the added benefit of cash bonuses to stimulate book circulation. Through this book sharing program the company hopes to prevent the destruction of trees to make books and thereby aid the environment. As a result there is a need to create a comparison of the book sharing models in the United States and in China in order to determine whether the Dandelion Model is an efficient way to share books and if it would be able to thrive in the West.

Project Goal and Objectives

The goal of this project was to research, develop, and create a comparative study of book sharing and recycling practices in the West and in China. Providing such a study would ultimately deliver new insight into the book sharing methods in both the United States and China and assist 123 Library in determining whether their book sharing model will be successful in the United States. In order to accomplish this within the limited time period provided, we created the following three objectives:

1. Become familiar with the economic differences and current state of book sharing business models in the United States and China.
2. Investigate book sharing habits and interests of American and Chinese populations.
3. Compile and analyze quantitative and qualitative data to support a comparative study of book sharing systems.

Project Methodology

The team investigated the history, business models, and policies of book sharing companies in the United States and China utilizing research journal articles, school databases, and company websites. This research was conducted in order to become familiar with the economic differences and the current state of book sharing models in both countries. The main companies researched included Chegg, Amazon, Craigslist, Taobao, Dangdang, and 123 Library.

In order to gather data on the perspectives of individuals in China and the United States concerning book sharing habits and interests we conducted online surveys on two platforms SoJump and WPI's Qualtrics software. The team also conducted a focus group with seven undergraduate US students. This was done to understand the book sharing habits of American students. In addition, to gain opinion on the subject of book sharing and the Dandelion Model from companies that specialize in book renting/selling, the team reached out to Chegg, a company that they have been researching. This reaching out was done in the form of an email interview sent out to the contact email listed on the company's website.

After the compilation of the survey results and focus group data we generated a comparative study of the Sino-American economic book circulation business models. This study comprised of detailed analysis of the responses we received from our focus group, the surveys conducted online, as well as the background research conducted throughout the research period.

Results and Recommendations

From the background research conducted we discovered that the book sharing models available in China and the United States are similar despite the different economic systems. We also found that providing incentives can increase the participation of people in an activity that would otherwise be seen as tedious. This is especially relevant when trying to break a deep habit,

such as the collecting of books on bookshelves rather than redistributing them. We therefore recommend that 123 Library should promote the Dandelion Model as a *green initiative* to drum up business. The recycling movement has been very successful to date due to the public awareness and education that was provided and the ease of contributing to the movement. If the Dandelion Model is promoted in the U.S. as a green initiative to refuse the waste of books, then people will want to use 123 Library's website.

By conducting surveys, interviews, as well as a focus group we found pertinent information regarding the book sharing habits of the Americans and Chinese population. The first is the difference in the environmental awareness focus. We found that while both Americans and Chinese had relatively similar interests in environmental protection, a larger percentage of Chinese respondents identified wasted books as a significant environmental issue (Appendix I, Q3 and 4). This shows the difference in emphasis that is placed on different environmental issues. Through informal discussions with HDU students on site, we received a response to the question "Why do the Chinese respondents consider wasted books a more impactful environmental issue?" We found that many of the students are educated about how deforestation, caused by logging industries that create paper for books, impacts the environment. The difference in emphasis on different environmental concerns, therefore, could very well be the reason behind the varying opinion on the big picture results of book sharing.

Therefore we suggest that 123 Library should start the Mobile Bookshelves program, which they already have in China, in the United States to promote 123Library and the Dandelion Model. Americans have barely heard of any book sharing programs in China, let alone 123Library (Appendix I). In order to make sure the Dandelion Model is successful in the States, there needs to be some effort given to promotion of the 123Library name. To do this, we

recommend to first start the Mobile Bookshelves program before the Dandelion Model. This will give Americans experience with what 123Library stands for. In communities where Mobile Bookshelves are implemented, 123Library will be known for sharing books and its environmental impact. From this, when the Dandelion Model starts operations in the United States, some Americans will recognize 123Library and become active users, kick starting the website's operation.

A common complaint that we received during the focus group that we conducted was the complexity of the Dandelion Model (Appendix H). We recommend that a brief English explanation video of the Dandelion Model should be made to earn trust and support in the United States. The Dandelion Model is quite complex, due to its novel structure and reward system. Once explained, however, the benefits that it procures are quite evident. The team was able to understand the model by watching a Chinese explanation video with our HDU partners, who translated key ideas, and speaking directly with its founder, Dr. Yang. If 123 Library wishes to expand its model to the U.S., then the company must have a compact method of explaining its business model in English. In the United States, this video could be posted on a website homepage, or even a crowdfunding page, in order to enlist support.

In conclusion, we found that there is an opening in the American market for another book sharing service. From our survey results, as well as the interview we initiated with Chegg, we believe 123 Library can create a niche of its own to provide users with the ability to circulate books and thereby contribute positively to the environment. To that end, we recommend that a simple, easy to use American website be created. A website is the launch pad for any online business in the modern world. And when it comes to websites, simpler is better. Simplicity has been the guiding light for many successful American companies, ranging from Craigslist to

Apple. Difficulties in transitioning to an English speaking market might arise. Given that the current employees of 123 Library speak minimal English, completing the above tasks might be difficult. While the benefits of the model are simple, the economic workings are complicated. Dr. Yang and his team at 123 Library will need to partner with an American business, or hire professional translators to create an English website and explanation video.

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1. Introduction

Deforestation of areas around the world is one of many environmental concerns that the planet is impacted by. Forest land is cleared for agriculture, logging, urbanization, and mining for oil and coal. Logging, to create furniture, cardboard, and paper products is a major reasons for the destruction of natural forest land. One solution to combat aggressive logging of forest areas is a movement that has been termed book sharing. The assumption behind book sharing is that, by promoting the continuous circulation of existing books in the population, the demand of paper products will decrease, culminating in a decreased need to cut down trees.

Hangzhou, China, the capital of the Zhejiang province, is the home of 123 Library (123 图书馆). The goal of this company is to provide an online platform book sharing model, coined the Dandelion Model, in order to promote the spread of knowledge and to reduce the amount of paper waste. China is interested in the company's efforts due to the government's burgeoning interest on the long-term development of its people by promoting a greater reading culture, rather than focusing primarily on financial growth (Davis, Dresser, Liu, & Robidas, 2014). While the economic slowdown that occurred recently has caused instability in Chinese markets, according to Deng, it allows for the opportunity to work on more fundamental problems such as promoting green initiatives and improving child literacy (2015).

In order to create a greater impact, and to draw foreign investments, 123 Library is looking to promote their book sharing model in the West, specifically in the United States. However the company is uncertain if it is feasible to introduce their sharing model, or any adaptation, into the United States. They are interested in the differences between American and Chinese economies, why certain book sharing models emerge in the United States as opposed to

in China, as well as what their company can do to be competitive in the U.S. The possibility of a Chinese born company integrating into the American market is feasible, as witnessed by Alibaba's efforts. An online wholesale and retail marketplace, Alibaba was established in 1999 by Jack Ma. By 2010 Alibaba was able to launch AliExpress which enabled exporters in China to reach consumers around the world and in September 2014 the company went public on the New York Stock Exchange. Looking at the precedence set by Alibaba, 123 Library may follow in similar footsteps.

However, there is a lack of available information on the differences and similarities between book sharing practices in China and the United States. The goal of our project was to create a comparative study of the Sino-American book sharing practices in order to provide information that will assist 123 Library in their endeavor to promote book sharing and environmental awareness. The methods implemented in achieving our goal were discussed prior to creating major objectives. We distilled our goal into three major research objectives.

The first was to conduct an in depth literature research in order to understand the history of book sharing, recycling practices, and the economic difference between the two countries. Our second objective, an investigation of Sino-American book sharing habits, was conducted through focus groups and surveys. By surveying both American and Chinese populations we aimed to get a bigger picture of the similarities and differences between each country. The focus group conducted also provided us with an in-depth view into the opinions of American college students, a population that frequently uses both online services and textbooks. Our third objective, a final compilation and analysis of the information, was to provide 123 Library with the additional information needed to make an informed decision when promoting their business in the United States.

2. Background

In this chapter we will provide a brief definition of book sharing, why book sharing and e-commerce companies have become so prominent, and the economic systems of China and the United States. Next, we will review the business models of several companies that are present in these two societies as a result of the economic systems. In addition we will present different book sharing methods, including an introduction to 123 Library's unique Dandelion Model, which our sponsor hopes to spread beyond the Chinese market.

2.1 Book Sharing to Solve Problems

“A book lying idle on a shelf is wasted ammunition. Like money, books must be kept in constant circulation... A book is not only a friend, it makes friends for you. When you have possessed a book with mind and spirit, you are enriched. But when you pass it on you are enriched threefold,” (Miller, 1952). According to Miller, a book lying on a bookshelf is useless. The value of a book lies in its ability to impart knowledge, and this is done through its circulation. This concept of book circulation will be a continuous theme during our exploration of the various book sharing companies present in China and the United States. Book sharing in this study refers to the use of a book by multiple users, not at the same time but in succession.

In our discussions we will use this definition with an additive clause; a book can be kept in circulation by allowing others to read it and thereby recycling the knowledge. Book sharing has become more prominent in the 21st century especially as a method for increasing literacy and spreading knowledge. There are many problems that the sharing economy endeavors to solve. In the next section we will provide an explanation of the sharing economy and discuss the social and economic problems book sharing resolves.

The Sharing Economy

Sharing, which we define as the joint use of an inherently finite resource within a group, has become increasingly popular since the turn of the century. According to Shaheen, Guzman, & Zhang (2010) increasing international attention has been placed on climate change, global modernization, and sustainability. This attention has spawned methods to solve several problems that arise due to a deficit of resources: lack of transportation for students, lack of local libraries, and a lack of stable predictability of local markets. An expanding interest in conserving resources and money has led to a growth of the economy of sharing. This sharing economy indicates that renting of property, automobiles, bikes, and more recently school textbooks has become a common scene in first world countries (Geron, 2013). China, which has been borrowing technologies and new business models in order to deal with novel problems (Davis, Dresser, Liu, & Robidas, 2014), is now implementing its own models to improve its sharing economy.

Illiteracy as a Global Concern

Research done by the United Nations Educational, Scientific and Cultural Organizations suggests that 175 million young people, predominantly from low to middle income countries, lack basic literacy skills (Tomlinson, Cooper, & Murray, 2015). Providing books to children earlier in their life increases the chance of creating a love for reading and therefore leads to an improvement in literacy. Being literate gives them a higher chance of breaking free from a cycle of poverty and adversity that may be inherent in their environment. Some companies that are discussed later on were motivated by this cause to create book sharing platforms in their towns, cities, or societies.

2.2 Economic Systems of China and America

According to Mankiw (2011) economics is how a society manages its finite resources. The way a society's economy works has a major influence on the functional areas of the businesses within the economic model. The discussion in this section will provide a brief foundational knowledge of the historical and present economic systems of both China and the United States. The section will also provide a basis for further comparisons of book sharing models within each system through a glimpse of the economic environments of both societies.

Economic System in China

Prior to Deng Xiaoping's introduction of the socialist market economy in 1978, China was primarily a communist society. The socialist market economy is a centrally planned system where all forms of production are controlled by the government (Heilbroner, 2008). The main goal of socialism, according to Seth (2014), is to "narrow, but not totally remove, the gap between the rich and the poor" by discouraging private ownership and producing goods and services for their usefulness rather than for profit. Following the death of Mao Zedong, Deng Xiaoping, his successor, began a series of economic reforms named the Four Modernizations (Ropp, 2010) that lead China away from its heavy economic focus on communism. These reforms, meant to open up China to foreign direct investment, targeted agriculture, industry, science and technology, and the military.

Deng Xiaoping enacted these reforms in order to promote modernity, industry, and economic growth. The opening regions were created and labeled Economic Zones, national Economic Technology Development Zones (ETDZs), and Science and Technology Industrial Parks (STIPs) from 2001 to 2005 (Lin & Wu, 2009). These special economic zones are districts

with intentionally low tax rates meant to attract foreign investment, thus speeding economic development (Ropp, 2010). Hangzhou, the site of our project, is one of these special economic zones. The policies enacted in districts like Hangzhou allows entrepreneurs and investors to take profit within the controls of the state (Seth, 2014). These districts, as a result, are a hotspot for new businesses to emerge and grow.

Economic System in the United States

In contrast to China's economic system, the United States' economy has remained relatively the same. The economic system of the U.S., primarily capitalist, is founded on economic individualism and competition between companies for sales and profits leading to innovation and greater performance (Hessen, 2008). Capitalism is based on the private ownership of wealth and production inputs and, as a result, places a large emphasis on consumption and profit ("Capitalism", 2015). The Industrial Revolution in the U.S. was a transition to new manufacturing processes that took place from the 19th to 20th centuries. During this time period the manufacturing process evolved from handmade and home production to mass production using machines and factories.

However, as the United States moves to a postindustrial era, there has been a shift from a product focused economy to a service focused economy (Collins, 2014). A product focused economy in this context refers to one where the focus is on the production of goods by blue-collar manual laborers with limited manufacturing. In contrast, as stated by Gershuny in his article regarding the post-industrial society, a service focused economy deals with the production of services by technical and professional workers with a greater emphasis on the theoretical and ethical implications of new technologies (Gershuny, 1977). Although the United States is still somewhat product focused, it is clear that the economy is transitioning into the postindustrial era.

Due to this economic shift current American businesses have focused on a for-profit, hub and spoke company model to vendor goods, even after the dot com revolution. Hub and spoke refers to a large central storage of goods that is distributed through many individual pathways. Typically, the company has warehouses where it stores products that are sold over the internet or phone to distributors or even directly to the public. This model is apparent in a wide variety of manufacturers, parts vendors, and online stores – notably companies like Amazon and Chegg.

2.3 American Book Sharing Companies

New methods of information sharing have emerged within the last decade due to the internet and advancing technology. Most notably, book rental websites, online stores, and e-reader devices have undermined the role of a bookstore and created a more digital book sharing culture. These new technologies can be difficult for older generations to use, leading to 91% of internet users in China being under the age of 40 (Clarke, Su, & Ruan, 2013). Therefore, people in this age group are the primary targets for companies like 123 Library. Our research goal has been focused on business models in the United States that also target teens and young adults.

There are three companies in the United States that we will explore in depth: Amazon, Craigslist, and Chegg. These companies are well known in the United States for their service, popularity among younger generations, and distinct methods of book distribution. We will also introduce a book sharing model, the Asthana-Chopra Book Sharing System, which proposes methods and systems for providing text book sharing management and funds management.

Amazon

Amazon, launched in 1995, is an example of an American company that successfully implemented a book sharing platform. Take any literature page on Amazon and you will find that

they all have some things in common that make Amazon such a popular book sharing site. Most other book sharing websites have information about the individual work but in addition to that Amazon also provides a space where users can rate, review, and critique the works that they have read. Amazon also tracks individual purchases and recommends purchasing interests based on similar topics and keywords. Another strategy that Amazon uses which makes it so successful is selling small volumes of difficult-to-find items instead of large volumes of popular books like most other bookstores (Barnett, 2011). In addition Amazon has implemented electronic book sharing into their company image and has e-books which users can use on their laptops, phones, or kindles.

Craigslist

There exists an alternative to the standard hub and spoke business model. This model is far simpler and has great potential. However, there is only one popular company in the U.S. that has mastered it. That company is Craigslist. Craigslist is an e-commerce platform started in 1995 where users can post used furniture, job openings, apartments, and other products they are looking to sell for anyone to view and purchase. It employs a simplistic web layout with no ads and very simple directions for posting and replying to posts. Everything is automated and user-controlled. The company consists of only 19 employees.

Apartment postings in select cities have a listing fee, while any other post is free. Even with only the minimal posting fees for apartments in select cities – such as Manhattan and San Francisco, the company pulls in enough revenue to attract the economic interests of many larger companies. The company takes no stake in sales made, no matter how large or small. The website has become extremely popular in America and across the globe, attracting 3 billion page views per month, and \$20 million a year of revenue. But the goal of the company is not revenue.

The owner, Craig Newmark, has stated that his goal since creating the company has always been to “give people a break.” The break that he wants to give people is an easy way of finding housing, friends, events, and relationships (Weiss, 2013).

The website maximizes the efficiency of long-standing industries known as commons. A commons is a public service where people can find one another with “minimal intervention from their minds” (Weiss, 2013). In other words, a company that provides a platform for the sharing of information between buyers and sellers, or employers and job-seekers. A classic example of this is newspaper classifieds. Craigslist, however, does not charge employers to post jobs online. The openly run e-commerce platform has become a major player in the classifieds arena, garnering more traffic than Monster, CareerBuilder, and Yahoo’s HotJobs all together (Wolf, 2009).

Chegg

Chegg is a rapidly growing textbook renting service and distributor of supplemental learning materials in the United States. The company started in 2003 with a similar model to Craigslist's: an online classifieds for textbooks. However, by 2006, Chegg had pivoted its business model to be a book rental platform (Del Ray, 2011). According to Helft (2009) this model capitalized on “the comfort zone that people have with renting things online from Netflix,” which is another company that has already made use of an online rental platform for movies. Chegg buys textbooks in bulk from different distributors in order to rent them out online to college students for lower prices. The books are then reused multiple times as they move from student to student.

There are several successful methods of expanding and earning profits that Chegg has implemented to become the conglomeration that it is today. A centrally located warehouse reduces shipping costs for students. Sorting books by ISBN, title, and author on their website allows for customers to easily find the textbooks that they need. Bright orange packaging makes Chegg's books easily noticeable and less likely to be lost in transit. Simple directions for returning the books at the end of a semester - printing out a label found in an email sent out near the due date and affixing it to the box removes the worry surrounding missing the due date or not knowing how to return the books.

Asthana-Chopra Book Sharing System

The Asthana-Chopra patent proposes methods and systems for providing text book sharing, management, and funds management (Asthana and Chopra, 2015). The patent was created with the intended purpose of mitigating the high cost of high school and college textbooks, which are generally only used for a short period of time, through an online platform. Two book sharing methods are discussed in the patent, but according to Asthana-Chopra the book sharing model is comparatively more effective than the book swapping model, which is commonly used among students. In a book swapping model students purchase books, use them, and then exchange them with other users. The book swapping model is not cost effective because in the end the user will still have to pay the full price of the book. Meanwhile in the book sharing model, the price of the book is divided among the users. Therefore, we can conclude that book sharing is a system that is better suited than the book swapping in a sharing economy.

The patent presents the idea of the difference between a pre-pay and a post-pay method for companies where payment is required for book sharing. A pre-pay method would allow Person A to pay the full price of the book plus any book share handling fees. Person A informs

the book sharing system when they are done with the book and the book is made available for Person B. Person B pays for the book based on the number of previous users of the book and the standard shipping price and when the book is handed over to Person B the payment collected is distributed among the past owners of the book. This cycle is continued until the current owner decides to keep the book, or the book becomes worn out.

In contrast, the post-pay method allows for the cost of the book to be distributed accordingly between the pre-determined set of users based on the estimated life of the book, ranging from 2-4 users, as well as the estimated time range that each user would have the book in their possession. The book sharing system purchases and supplies the book to user A, after calculating per-user price based on the life expectancy of the book, upon request and payment. User A pays for the price of the book plus book sharing handling fees. When user B pays for the book and requests to use it user A passes the book to the user B. If no other user claims the book within a predetermined time the current user is required to pay for the remainder of the cost of the book to the book sharing system. Otherwise the book is passed on until the life expectancy is reached.

2.4 Chinese Book Sharing Companies

China's turn-of-the-century economic transformation has presented new challenges both for the country's rapidly changing society and for the government, which has undertaken reforms to promote the rule of law, improve the environment, and encourage more broad-based development. According to The Asia Foundation (2015), green initiatives and a sharing economy are two outcomes of this change. Transportation sharing has been very successful in Chinese cities. Hangzhou itself has the second largest bike share program in the world. There are 65,000

bikes used daily for the journey to and from work in Hangzhou alone (Fishman, Washington, & Haworth, 2013). Looking at the success of bicycle sharing in Hangzhou causes us to believe that book sharing could also grow to similar heights. The industry, however, is very young, and very few companies are in the book rental arena, thus much progress has yet to be made.

Furthermore, urban Chinese residences are typically in skyscraper complexes where many people live geographically very close. Concurrently, having a personal library is common for middle-upper class citizens since public libraries aren't very prominent. This creates an opportunity for easily accessible book sharing programs. If the private libraries of most residents in an apartment complex were to be pooled and shared in a library on a lower floor, it would be easier for everyone to access and share knowledge.

123 Library and Dandelion Model

The Dandelion Model is a complex book sharing system designed to promote the repeated sharing, or circulation, of a book. Dr. Yang Suhong, a professor at Hangzhou Dianzi University and CEO of 123 Library, invented the model. His company is the pioneer of the Dandelion Model, providing an online platform for users to circulate books, textbooks, and journals. The name of the company (123 图书馆) refers to the price that a book is normally sold at – 1 折, 2 折, or 3 折 – which translates to 10%, 20%, or 30% of the wholesale price. 图书馆 means *tu shu guan* in Chinese, or library.

The process in which a book is circulated in the Dandelion Model is depicted bellow in Figure 1. The model requires a book, owned by Person A, to be sold through the 123 Library website, indicated by the green arrows, to Person B. Person B pays the company for the book, indicated by the black arrows, and Person A receives this money once the book has been shipped

and received by Person B. 123 Library handles the finances, but never the physical book. If Persons C, D, E, etc. buys the book after Person B is done reading it, then Person B gets a certain percentage of his money back, and Person A will earn a small bonus as gratitude for sharing the book in the past. The resell price and bonus amounts are dictated by how long customers have been using 123 Library and how many books have shared on the Library website. This process is repeated as the book is passed along: returning cash bonus to each of the previous owners.

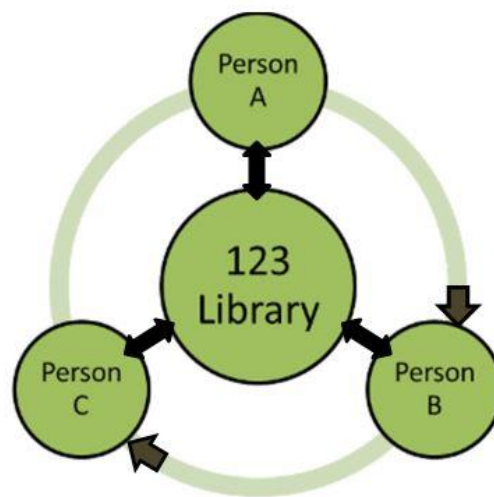


Figure 1: 123 Library's Dandelion Model. The black arrow represents the money exchanged and the green arrow represents the physical book sharing.

There are many benefits of this innovative model. By sharing the book many times, the environment and the user can benefit. With an increasing number of exchanges, more bonuses can be earned, less paper and ink is wasted, and knowledge is spread. The ultimate goals of the Dandelion Model are to create positive reinforcement for sharing books through a monetary reward system, and to develop a method for sustaining natural resources (Yang, 2014). As Dr.

Yang believes, people will be encouraged to do something good, like protecting the environment, if they are paid to do it.

Dangdang

While Amazon has a Chinese version of their website, a more popular electronic commerce company is Dangdang (当当网). The company was launched in 1999 to compete with Amazon.cn and JD.com, another online retailer. Dangdang sells products from household merchandise and home appliances to books and audio materials, with a focus on literature. They sell over 200,000 kinds of books from warehouses in China, and have competitive prices with the most popular book purchasing website – Taobao.

Taobao

In 2003, Taobao Marketplace (淘宝网) was launched as a consumer to consumer e-commerce platform to eBay's expansion into the Chinese market. Owned by Alibaba Group, the company offered some innovative features to attract users: free online listings for buyers and sellers, an instant messaging app to accelerate communications, and the now well-known online payment tool, AliPay. The app skyrocketed Taobao's market share in the Chinese mainland, and drove eBay out of the country. Taobao remains a leader today, as one of the top 10 most visited websites in the world (Alexa, 2015).

Taobao's business model is similar to that of eBay's, and not the Dandelion Model. It has a large listing section for leisure books and textbooks, among countless other products, but the system is designed for unidirectional transactions. Once a book is sold, the shipment received, and payment secured, the company plays no role in the continued circulation of that book. There is no rent option for books on the website either.

2.5 Summary

In this chapter we reviewed the literature on the economic systems and e-commerce business models of the United States and China to show the various ways that book sharing has manifested within each society. We focused on the book sharing models because 123 Library's Dandelion Model deals solely with the circulation of books. With this information we had a platform to conduct a comparative study between the economic book circulation business models in the United States and in China. This is necessary to understand why certain business models exist, and if new models such as the Dandelion Model would be successful beyond China – notably in the U.S. In the following chapter we will describe the methodology that the team used to gather data and discuss our reasons for using those methods.

3. Methodology

The goal of our project is to research, develop, and quantify information into a comparative study of book sharing practices in the U.S. and in China. This study will ultimately be used to determine the feasibility of expanding 123 Library's Dandelion Model, and potentially bringing it into the U.S. book sharing milieu. In order to achieve our goal we sought to gather data to address the following research objectives:

1. Become familiar with the economic differences and current state of book sharing business models in the United States and China.
2. Investigate book sharing habits and interests of American and Chinese populations.
3. Compile and analyze quantitative and qualitative data to support a comparative study of book sharing systems.

To help us gather relevant information, we developed research questions and specific goals based on the research objectives detailed above. These research questions and goals guided us in the creating and carrying out our methods.

3.1 Why is book sharing important?

Learn past and current history on book sharing and recycling practices in the West and China.

A working knowledge of various book sharing companies in both the U.S. and in China had to be obtained in order to understand why book sharing is important and the impact this practice has on societal and economic systems. Recognizing the currently successful business models for book sharing and how they function was crucial for considering the possibility of bringing implementing the Dandelion Model to in the U.S.

To acquire sufficient comprehension of what book sharing is, the team investigated the history, business models, and policies of book sharing companies in the U.S. and China utilizing research journal articles, school databases, and company websites. These companies included Chegg, Amazon, Craigslist, Taobao, Dangdang, and 123 Library. The team acquired peer reviewed information about the societal and environmental benefits of book sharing and, more importantly, specific details regarding pricing and the operations of each company. Understanding the various e-commerce platforms that promote book sharing is essential in grasping the topic in today's world.

We conducted two interviews, one in person with Gordon Librarian Karen Bohrer and one over email with Professor Robert Thompson, to gain personal insight on what book sharing is all about. Each set of interview questions were specifically tailored to what experience each had with books and can be found in Appendix B and D. Bohrer's questions related to her experience with interlibrary loan systems. Thompson's questions investigated his experiences donating books to a school in Liberia. Although the former interview mainly only had tangential relevance and the latter interview did not have much elaboration, the information we did gather aided us in forming our own definition of book sharing. The questions given to Professor Thompson were open ended and meant for discussion however, we were unable to receive much information from this email interview due to the brief response. If we were to conduct this method again a follow-up face-to-face interview would be suggested. The follow-up interview would have allowed us to gain further information about his endeavors and the story behind the answers he gave us in the email interview.

After coming to China, our sponsor Dr. Yang Suhong aided us in the understanding of book sharing systems in China, notably the Dandelion Model of 123Library. Our conversations,

however, were slowed due to the language barrier. In order to solve this problem, we sought the help of our HDU partners to translate documents such as agendas, charts, and questions. One of our partners, Roger, was instrumental in answering questions and translating live conversation. This facilitated information transfer between the team and 123 Library. The recorded minutes of each of our meetings can be found in Appendix F. Dr. Yang also helped our team each week to guide our research and survey questions towards only pertinent information for the project. Thanks to Dr. Yang, we gained a more complete understanding of book sharing systems in China.

3.2 What are the book sharing habits and interests?

Investigate book sharing habits and interests of American and Chinese populations.

Our team reached out to numerous populations to gain the perspectives of individuals in China and the United States concerning book sharing and the Dandelion Model. This was done in three different ways: we conducted online surveys on two platforms, SoJump and WPI's Qualtrics software, to large populations of Chinese and American people; we coordinated a focus group with a small group of WPI students; and we conducted an email interview with an individual who has a professional knowledge of book sharing. Each of these strategies has their own flaws and benefits. Surveys reach wider ranges and numbers of people, but runs into issues like self-selection bias and a lack of nuanced opinions. Focus groups allow for discussion and elaboration on particular topics, but a few participants can overpower others, leading to a lower variance of opinion. Interviews get very specific and educated knowledge, but have a greater chance of bias compared to other strategies as it is one person's opinion. By using all these methods in conjunction, we obtained an accurate understanding of habits and opinions relating to book sharing in China and the United States.

3.2.1 Survey

We determined that the benefits of this method outweighed the limitations and designed our surveys in order to combat the survey bias. The team created a survey to acquire data on people's behaviors and opinions concerning how they interact with books. The survey questions were based on the following research questions generated through our background research as well as sponsor queries:

- How much people think about the effect of wasted books contribute to environmental issues.
- The book purchasing/renting history of people.
- The motivations people have behind buying/selling books.
- The companies that people frequently use online to purchase books.

To prevent survey errors due to random answers a survey question was duplicated twice, Question #5 and #15. Another question was added regarding the demographics of the survey taker. In order to avoid access issues two surveys were designed intended to be distributed in China and the United States. The Mandarin survey was posted on a Chinese website SoJump and the English survey was posted on Qualtrics software. Both surveys were posted at the same time and kept up for 13 days. Each team member posted the QR code of the Chinese survey on a Chinese communication application called WeChat, similar to Facebook, in order to reach a larger population of people. In addition to this our sponsor, a professor at HDU, distributed the survey link to his students as well. The link to the American survey was also posted on our Facebook pages in order to obtain a similar sampling population. The distribution of our surveys, through Facebook, WeChat, as well as the HDU class of our sponsor will bias the majority of our

responses to be students. Our target population was mostly students because we believe that students are the highest users of books, textbooks in particular.

Getting approval for our surveys and translating them from English to Chinese proved to be a challenge. In order to reach the point where our surveys could be posted we had to seek translation help from our HDU students and our sponsor from 123 Library. After translating our surveys we sought the input from our advisors concerning the question content. Following this input we revised and retranslated the sections that had been changed and sent the new version back to our advisors, sponsor, and the HDU for approval. This process was longer than expected when creating our timeline so we had to work simultaneously; while the surveys were being reviewed we took the time to set up the surveys on the account. As a result the day we received approval we were able to make our surveys live. We planned to have around 2 weeks to allow responses to our survey and despite the challenges we were able to provide 13 days.

3.2.2 Focus Group

We conducted a focus group to record nuanced and personal opinions on book sharing and the Dandelion Model. The focus group population consisted of 7 WPI students in Hangzhou who generously helped us with our study. The attendance was limited, however, by the prevalence of sickness among students, as well as the work that some of the students needed to complete that prohibited them from participating. We chose to reach out to Americans considering their perspective is harder to find in China. The focus group began with the Qualtrics survey, serving to get more survey responses, to let each participant to begin thinking about book sharing individually before group conversation, as well as to critique our questions. The group as a whole was then asked a series of discussion questions about how they acquire, use and sell books. The focus group concluded on a discussion on the Dandelion Model. The specific

discussion questions can be found in Appendix H. The discussion was recorded both through note taking and an audio recording. With the more personal insight gained for the focus group, we had the opportunity to effectively weave the American perspective into our comparative study.

3.2.3 Email Interview

To gain insight on the subject of book sharing and international collaboration from an American company that specializes in book renting/selling, we reached out to Usher Lieberman, Vice President of Corporate Communications and Alex Hughes, Vice President of Investor Relations at Chegg. We sent them an email interview. The interview questions, which can be found in Appendix J, were constructed to understand why their company went with the direction they did with their book sharing model, as well as to gauge their interest in reaching out to an innovative Chinese book sharing platform. While we were only able to receive a response from one employee we believe that the perspective that we did receive brought a great deal of clarity to our research.

3.3 Will the Dandelion Model be well accepted in the United States?

Creating a Comparative Study

In order to determine objectively the effectiveness of the Dandelion Model in the United States, the team collected and analyzed a wealth of data. This was done through recording pricing of both books and shipping costs as well as analyzing the survey results. Having analytic, objective data is essential for proving how accepted the Dandelion Model will be in the United States.

3.3.1 Book and Shipping Costs

At the recommendation of our sponsor, we consolidated data on book prices and shipping costs to see how 123Library's Dandelion Model stacked up. For book prices, determining how exactly to compare overseas proved difficult. If we were to record exactly the same book with the same language across all companies, those companies who don't normally sell books of that language would be selling it for a higher price. Some companies would not have the book at all. So, we decided that, for leisure books, comparing books of the same content but with the native language of the company selling would be the fairest comparison. Textbooks were trickier since they aren't as commonly translated. Therefore, we only compared English language textbooks. We recorded the price of 18 leisure books and 8 textbooks for all companies involved (Appendix F). During the collection of book prices we also ran into the situation where common books sold in most companies were not present in 123 Libraries book sharing platform. As a result we used an algorithm ($\text{listedprice} \times 0.3$) to convert the listed price from Taobao of those missing books in to the suggested price that would be given if the ISBN number of those books were imputed into 123 Library's database. As a result, in order to differentiate between the books that were present in all companies and the books that were not, all the books that were present throughout are highlighted in green.

Additionally, we looked into shipping costs, as this goes hand in hand with the book price when determining the total cost of using a book sharing system. Thanks to our HDU partner Roger, an online tool was found that allowed us to determine the shipping costs between cities and for various weights in China. The online tool was used to estimate the cost of shipping a package of books between Hangzhou and four major cities in China. Averages of these shipping costs were later compared to the prices of actual books. The Chinese shipping costs were then

compared to the standard American shipping policies, which are listed directly on company websites. We converted those prices into RMB and recorded them for comparison. Our full shipping data sheet can be found in Appendix G.

3.3.2 Survey Analytics

Data from the survey were analyzed to find what was meaningful for the Dandelion Model and its spread to the United States. When the surveys were closed, the data was recorded on a spreadsheet for easy analysis. The data, American and Chinese, was first displayed side by side with all respondents to look for overall trends. Then, both the American and Chinese data sets were filtered for just the non-students to view the opinions of just the adults in their respective countries. The overall data was also filtered for those who ranked environmental protection as either 4 or 5 to see how those who are environmentally conscious interact with books and book sharing. All the charts and tables can be found in Appendix I.

Unfortunately, there were some issues with small portions of the data. During the data analysis of the survey results we came across the issue of whether to include the outlier responses of respondents who identified as being from China using Qualtrics and respondents from America using SoJump. In order to maintain the integrity of the data collected we opted to maintain the responses. This decision was made due to the ability of the respondents to complete the survey in the required language. Another issue we came across after the completion of the survey was a deviation in the number of people that answered the Qualtrics survey. After further research it was revealed that the questions were not mandatory. As a result, some respondents did not answer question number four. This is a problem that was unexpected and it was kept in

mind during the analysis of the question. With all that in mind, with the data we collected, we could make a better judgment as to the feasibility of the Dandelion Model's spread overseas.

3.4 Summary

Surveying students, conducting focused research on book sharing costs and policies, and working closely with Dr. Yang allowed the team to gather data to answer our research question. Several issues arose but we were able to resolve them. The problems facing our team included primarily a language barrier and time shortage. Translating documents for research, agendas, and survey questions and answers was an ongoing effort that consumed time and required the help of our HDU partners. Another limitation of our study was that we only had enough time to investigate a few issues and conduct electronic surveys. Future IQPs can assist 123 Library in bringing the Dandelion Model to the U.S. by investigating companies that would be willing to adopt or implement the model.

4. Results and Analysis

We analyzed various book sharing companies for information in relation to the book sharing models that they employ. From their business models and their relative success, we were able to proceed with a more in-depth comparative study of the following companies: Chegg, Amazon, Taobao, Dangdang, and 123 Library. The individual companies were compared and contrasted in order to provide a unique view into the similarities and differences in book sharing models in both China and the United States. In this chapter we will present our findings regarding the book sharing models in China and the United States, the opinions people in both locations have about these models, and discuss the significance of the data collected.

4.1 Similar book sharing models

The book sharing models available in China and the United States are similar

We had set out to investigate if different economic systems influence business models. By examining information on their websites about how each company functions we found that the sharing models are very similar. Dangdang and Taobao, two Chinese companies, employ the use of warehouses to store their books and other goods. This practice is comparable to the American companies; Amazon and Chegg. In these four companies books are commonly sold by suppliers rather than individual sellers. In contrast to this model, 123 Library and Craigslist provide an e-commerce platform where individuals sell their goods through the website. By comparing data collected from the background research of each company as well as research about the economies of both countries, we found that the different economies present in the two countries did not result in unique book sharing models. The book sharing models employed in

the United States and in China are comparable which means that the book sharing models are versatile and can thrive in different economic environments.

Providing incentives can increase participation

To determine whether providing incentives could decrease the tendency to keep books we gathered information from studies done on the topic as well as results we received from the surveys. Providing incentives can in fact increase participation. These incentives can be used to motivate people to share books, rather than to follow their natural inclinations to collect and store them on bookshelves. A study done by the Friends of the Earth organization, an environmental campaigning organization in the United Kingdom's, showed that providing households with incentives can increase their participation and recycling rates (2008). The book sharing movement is very similar to the recycling movement; the end goal is targeted at combating climate change and the environmental issues that are prevalent in the world today. If the incentives method is proving useful to increase participation in recycling the same can probably be said if it is implemented in book sharing. We found that 58% of the Chinese participants and 64% of the American participants prefer to buy used. Additionally, more than 50% of the survey populations in both cases prefer collecting books. This means that there is a large population of people who buy books and simply store them in their libraries. Implementing an incentive program could possibly spur them to, rather than collect books, keep them in circulation.

4.2 Book Sharing Habits in China vs. the United States

The environmental awareness focuses are different

In order to understand the reasons behind the book sharing habits of both societies we collected information from the surveys concerning the participants' personal interest in

environmental protection (Q3) and how strongly they believe wasted books contribute to environmental issues (Q4). The surveys were taken by 291 participants, 189 of them from China and 102 from the US. Figures 2 and 3 below show the results of survey questions. We found that while more than 50% of American participants identified their interest in environmental protection as either a 4 or 5, indicating somewhat interested or passionate respectively, less than 25% identify that wasted books contribute greatly to environmental issues. Roughly the same percentage of the Chinese participants also identified their interest in environmental protection as either a 4 or 5 but more than 50% identified that wasted books contribute more significantly to environmental issues.

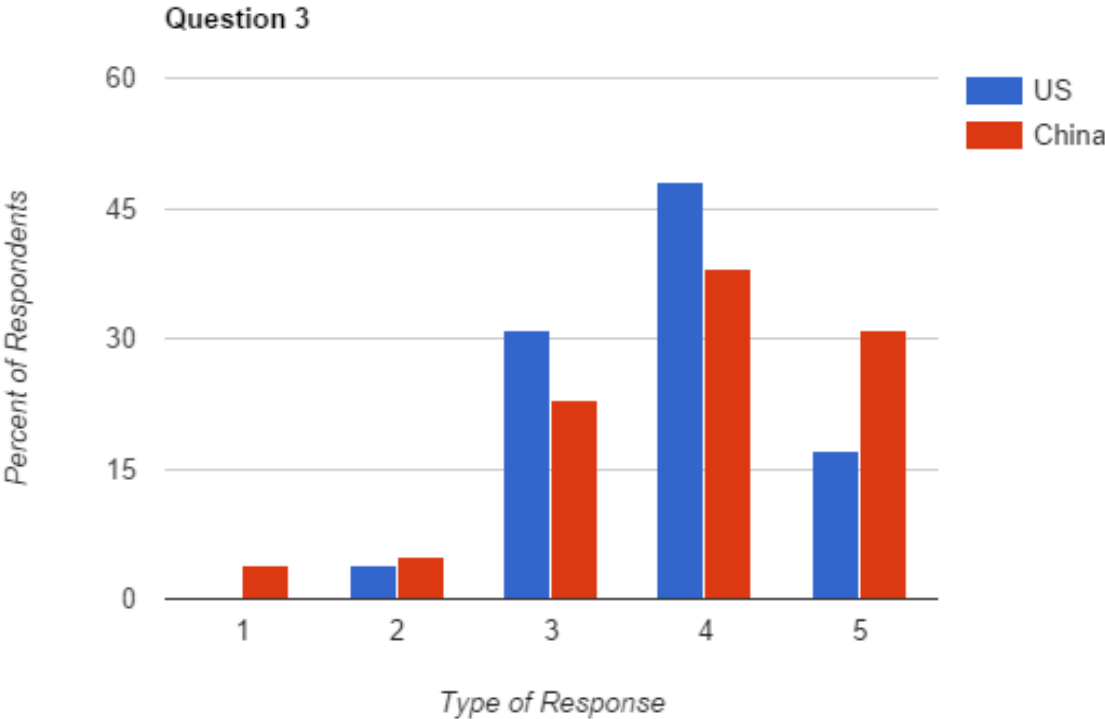


Figure 2: How interested respondents are in environmental protection.

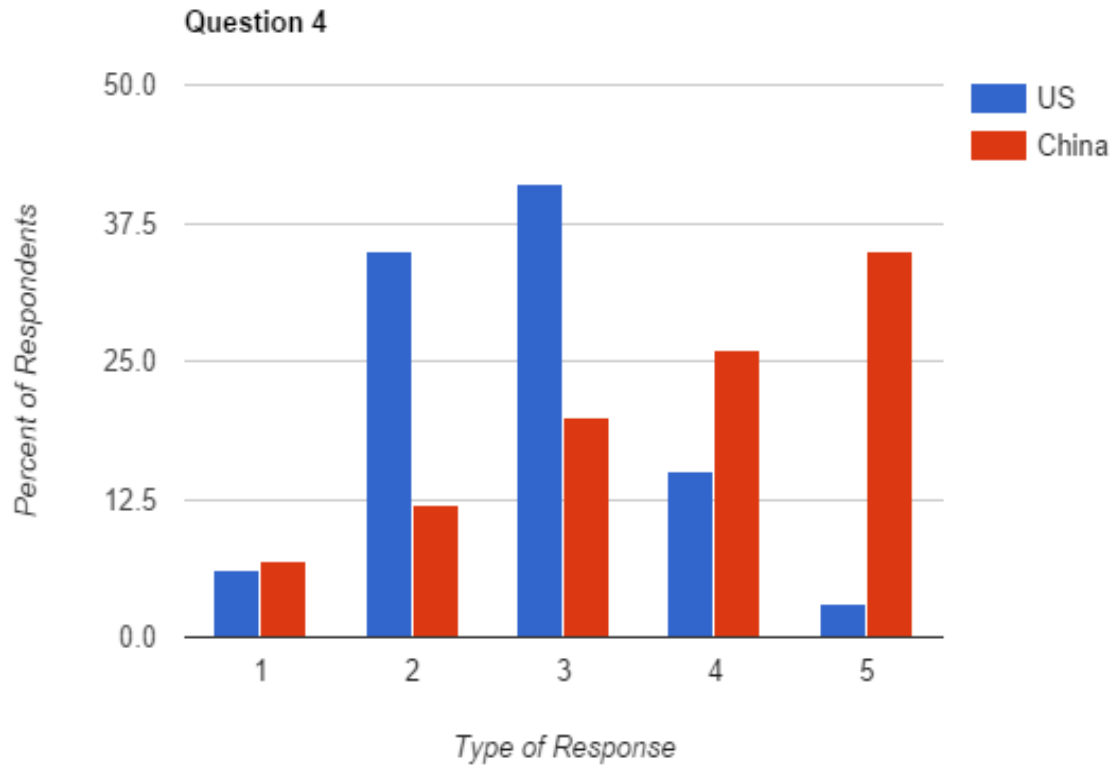


Figure 3: Respondent’s perception on how much wasted books contribute to environmental issues.

Pollution, climate change, global warming, deforestation and overpopulation are only a few of the various environmental concerns present in our society today. In recent years there has been a great surge in providing education about these issues in order to stop the cycle and as a result more and more people are gaining awareness about this issue. Through informal discussions with HDU students on site, we received a response to the question “Why do the Chinese respondents consider wasted books a more impactful environmental issue?” We found that many of the students are educated about how deforestation, caused by logging industries that create paper for books, impacts the environment. Especially in a developing country with the

population that China possesses deforestation of land possess as a real risk. The difference in emphasis on different environmental concerns, therefore, could very well be the reason behind the varying opinion on the big picture results of book sharing. However since we were only able to discuss the findings with a small group of HDU a more representative population could have yielded greater insight into the social/educational reasoning behind the difference in opinion. Additionally a larger and more diverse survey group may have also yielded varying results, thereby providing alternative viewpoints.

The Chinese population prefers to buy books, whereas American's prefer renting

In order to find out book purchasing habits survey question 6 was asked. The question asked preferences regarding buying or selling books, given that the used book was 50% cheaper. We found that the cost of a book does not affect the decision to buy used or new books as much as it does in America. In Figure 4, the data revealed that 62% of Chinese students prefer to buy new instead of old, whereas only 17% of U.S. students prefer to buy new. Instead, 83%, in the American study, opt to save money if a used option is available.

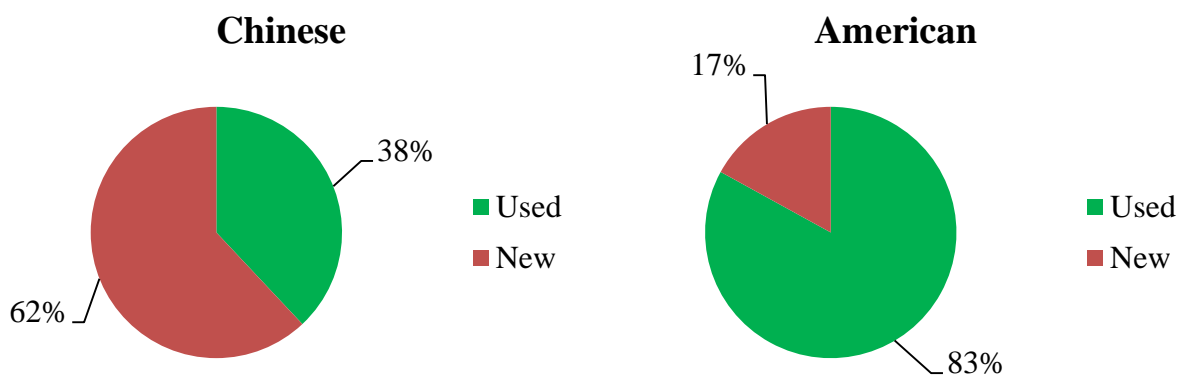


Figure 4: Survey question 6. Preference to buying new books versus used ones at half price.

American students prefer convenience

From our data, we found that the students in our focus group preferred the simplicity of Amazon over the more complicated nature of 123 Library. The participants of the focus group were seven undergraduate US students. The focus group conversation focused mainly on the comparison of Amazon's and 123 Library's book sharing methods. Numerous participants praised Amazon's ease of use as well as its quality control. One student mentioned that "Amazon has really good search algorithms, so it's easy to find what you want," and another stated that selling books on Amazon is "really simple" and that the site "recommends to you a best time to sell your textbooks." Every participant had used Amazon before for purchasing books, but 4 out of seven participants actually mentioned selling books online (Appendix H). The fact that every participant had heard of and used Amazon was expected due to the profile of the focus group population. Their responses were expected because for most students, in the United States, Amazon is the first destination for textbook purchasing needs. This is also corroborated by the data collected showing that Amazon was the most popular book sharing website in the US and China. The responses they gave also complied with the data collected regarding the sharing websites the survey participants had heard about (Appendix I).

The Dandelion Model is complex

Since the goal of 123 Library is to understand whether their model will be successful in the US we implemented a question during the focus group by explaining the model and then asking, "What do you think of the model?" We found that there were complaints about the complexity of 123 Library's Dandelion Model. Most participants had to ask more clarifying questions after the basic explanation, indicating possible difficulties in explaining the model to American internet users in general. Issues that were important to US students based on the

questions they asked include book quality, the number of times the books exchanged hands, and the tracking methods in order to ward against cheating. The specific questions asked by the participants included; how 123 Library insured the quality of their books, the average number of books exchanges possible before a book would be considered no longer viable for sharing, and if any method was currently in place to track the books in the system in order to ensure against foul play. These are areas where 123 Library could improve their model in order to create an easier entry into the United States.

US students find it easier to keep their books than to sell them

In order to understand what influences the decision on whether to sell or keep books certain questions were implemented in the focus group conducted as well as the survey results taken from SoJump and Qualtrics. From our results on Q11 it was clear that the greatest percentage of both societies prefer saving and collecting their books to distributing them. Q12 of the survey addressed the preference of collection verses reselling and we found that only 21% of the Chinese population would prefer to sell their books. The American population had about double this number, 41% of the participants would prefer to sell their books back. This lack of drive to share the books that are being collected can be due to how hard it is to resell books.

While conducting our focus group, we found that the students in the focus group found it difficult to resell their books after their courses were complete. This issue is due to the frequency of change in edition preferences in American universities. The problem witnessed by these students might be exacerbated due to the constantly changing nature of their fields of study. In order to receive a more accurate viewpoint, conducting more than one focus group with students from different disciplines and universities would be ideal.

Another aspect that was mentioned was that the shipping process was found to be too difficult and time consuming. Even when told about the Dandelion Model, the majority of the participants wanted to keep the book unless there was some hard data spelling out exactly how much money could be made from the exchange. Many students admitted that they were not willing to put in the effort to ship the textbooks only to receive 30% of the original list price, even with the long term possibilities of collecting a monetary value greater than the list price.

Reasons were also provided as to why they would prefer to keep their books than to sell them. These reasons include decorating with them, sharing them with friends, and potentially re-reading them. Although there was no question directly asking about it, no participant stated any social obligation, or want, to share books outside of their family and friends. In the survey Q9 we found that 68% of American s and 81% of the Chinese participants have never sold a book online. So it is clear that there is either a lack of motivation to sell their books online or there is a lack of online platforms that give them the ability to sell their books without a great amount of effort. This finding is supported by the results we found in the response to the Q10, which asks “if there was an easier way to sell books, would you like to do that?” The American responses showed that 70% would sell their books online if there was an easier way. What this expresses is that there is that people do see a need for an easier service by which to sell their books, and if one was provided it would be used by a significant amount of people.

Chegg believes the future of textbook purchasing is in buying digital books

Upon reaching out to Alex Hughes, VP of Investor Relations at Chegg, the team learned about Chegg’s mission and general strategy for the future. His response to the team email can be found in Appendix K. In response to the team’s email, which stated that Chegg is the most

popular online bookstore for students in the U.S., Hughes said that the company's strategy is to "Put the student first ... Our mission is to save the time, save them money and help them get smarter." Indeed, placing a greater interest on offering services to help students, the company's target population, to learn has greatly helped grow their brand. The future of Chegg, according to Hughes, with respect to their textbook purchasing services, is with renting physical and buying digital. In line with helping students save money and time, Hughes commented, "We offer textbook rental, which helps students save as much as 80% of the price of a new textbook". When asked about collaborating with an innovative book sharing platform in China, Hughes replied, "We are more interested in offering digital services." This is understandable, as Chegg is well established in the U.S. as a book purchasing and education platform. The logical future for this company is digitalization and expansion.

Although this finding shows that Chegg, according to Hughes, believes the future of textbook purchasing is in digital books and renting books, this response does not mean that there is no room in the market for other book sharing companies to enter. With the withdrawal of Chegg from physical books 123 Library can insert itself into a niche that will provide the exchange of physical books for those who are looking for the opportunity.

4.3 Comparative Analysis

123 Library provides the least expensive textbooks and leisure books

Comparing the data collected from Amazon, Chegg, DangDang, Taobao and 123 Library, we found that the average price for each category of book was cheapest with 123 Library. In Figure 5 and 6 the average price for books in each company is displayed. The prices from 123 Library are designed in order to minimize the costs of textbooks in order to promote the

circulation of the book. In addition the currency difference between the United States and China creates a Books on 123 Library are priced in one of two ways, the use of an ISBN that calculates the price as 30% of the list price, or by the user taking a picture of the book and selecting their own price. 123 Library's ability to offer low prices is limited by the lack of variety in the books available, especially books in languages outside of Chinese. As a result, it would be difficult to promote this book sharing system in America primarily due to the existence of one-stop-shop systems of buying and selling books. However, after time the website could grow in popularity, as Craigslist did, and a plethora of books entering the system would cause the company to take off due to the inexpensive prices and reward system.

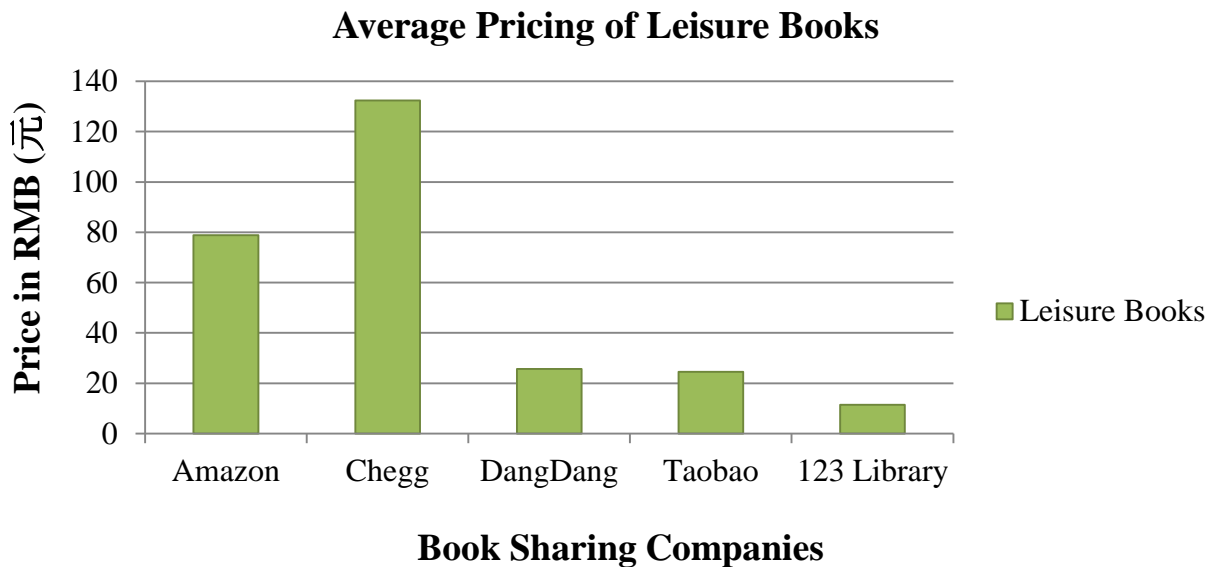


Figure 5: Book Sharing Pricing for Leisure Books.

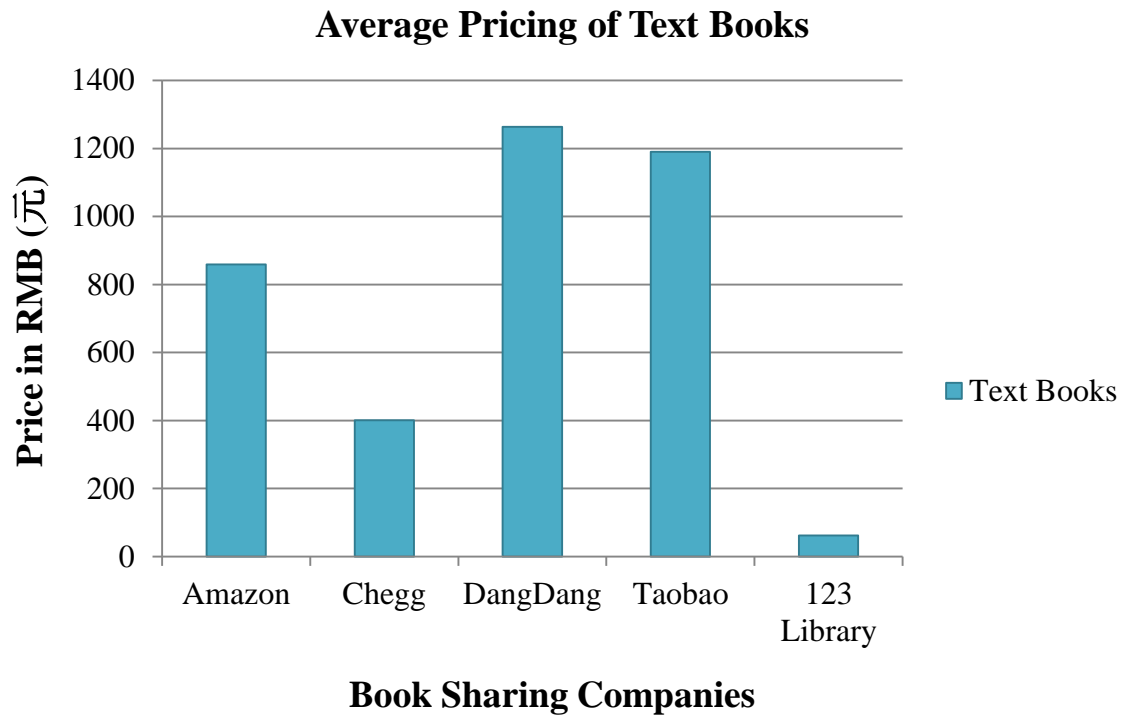


Figure 6: Book Sharing Pricing for Text books.

Despite the averages book pricings displayed in the bar graph in Figure 6, textbooks generally cost less through American book sharing systems. In Appendix F the individual book prices are listed in order to provide a more accurate view of the data collected. Although 123 Library provides the most cost effective prices for both textbooks and leisure books, in the case of textbooks we found that American book sharing systems placed second and third in price. The reason why these books are more expensive on Taobao and Dangdang is because they are English versions of common textbooks. The Chinese versions are often much cheaper. This can be seen in Appendix F, where the prices of the English textbooks are sometimes more than double the prices in the United States. 123 Library is an outlier to this trend due to its Dandelion Model system. The more a book is circulated, the cheaper it can be sold at initially such as Chegg's business model. If there are only one or two transactions before the book is retired,

however, the initial and secondary selling prices must be very high. By comparing 123 Library's prices with DangDang and Taobao, it seems that out of the three book sharing programs, 123 Library's would be the most successful at entering the United States.

Shipping costs in China and the United States are very similar

In order to accurately compare the cost of the various companies we found the shipping costs for each company. This is because an important variable in considering the effectiveness of book sharing models is the relative cost of shipping in that country. Shipping and handling fees can be a significant factor because of the expense that they add to the total cost of each book sharing transaction. While the additional fee for shipping may be considered small in the U.S. – if not free for large orders, slower shipping, or with a special code – the shipping cost is no small matter in China. Compared to the average cost of leisure books, shipping can range from 50% to 150% of this cost. This is because the price of books is so low in China, but shipping costs in China and the United States are very similar. Standard (4-5 business days) shipping costs in America range from four to five dollars before special offers or membership discounts. In RMB, this equates to about 28 元. We found that shipping costs across China range from 15-30 元 (See Appendix G)

There are several differences between American and Chinese shipping policies. By examining the business models described on company websites, as well as discussing Chinese book sharing models, we found out some important differences. All major e-commerce websites use third party shipping companies to deliver goods in China. In the U.S., shipping is often handled directly through the platform itself. For this reason, separate membership programs have developed. Amazon's Prime Membership allows for users to pay an annual fee in order to receive free 2-day shipping and free e-reader book borrowing. Amazon even offers 6 months of

free Prime Membership to students to get them hooked. In the last three years, the program has become very popular. About 20 million users have Prime accounts today, up from 3.5 million three years ago. Such a program would be likely to fail in China, however, due to the significance of shipping costs. One such initiative to offer free shipping for an annual fee was called 青番茄 (Green Tomato). This company rose and fell from 2011 to 2014 as it attempted to offer a 3rd party membership service similar to Amazon's "Prime" membership. The company failed because shipping prices became too high and users did not want to pay for a hiked annual fee.

Shipping is still a hassle

In America, pickup services have advanced much more slowly than delivery services. Many companies have expedited their shipping policy so that one can order a product online and have it delivered directly to their house. However, if you want to send something – a book for example – to another user or even back to a company, it takes time. The book has to be packaged, labeled, and brought to a shipping store. From our focus group with WPI students, we learned that this process is deemed old-fashioned and requires quite a bit more effort than buying the book online. Companies such as Chegg and Amazon have grown in popularity partially because of its fledgling effort to make sending the books back to the company easier. When the book is due for return, they email you the correct shipping label so that you don't have to write it out yourself. Implementing methods such as this would make it easier for people to use the book sharing model.

There is an opening in the American market for another book sharing service

In order for the Dandelion Model to spread to the United States, there needs to be enough demand from potential American users to join and keep the company afloat. We found from our

survey that 41% of Americans prefer to sell rather than keep their books, while only 32% have sold a book online. This indicates a need for another online service for book sharing for this 9% differential. However, these questions do not consider selling books physically, and although we didn't find that to be a common occurrence, that hampers the significance of this survey statistic. But, we also learned in our email interview with Alex Hughes of Chegg that his company is moving more towards e-books in the coming years. With Chegg moving to digital, there is more of a market for physical books. This insight, along with our survey results, proves the existence of an opening in the book sharing market of the United States that would help 123Library spread their Dandelion Model.

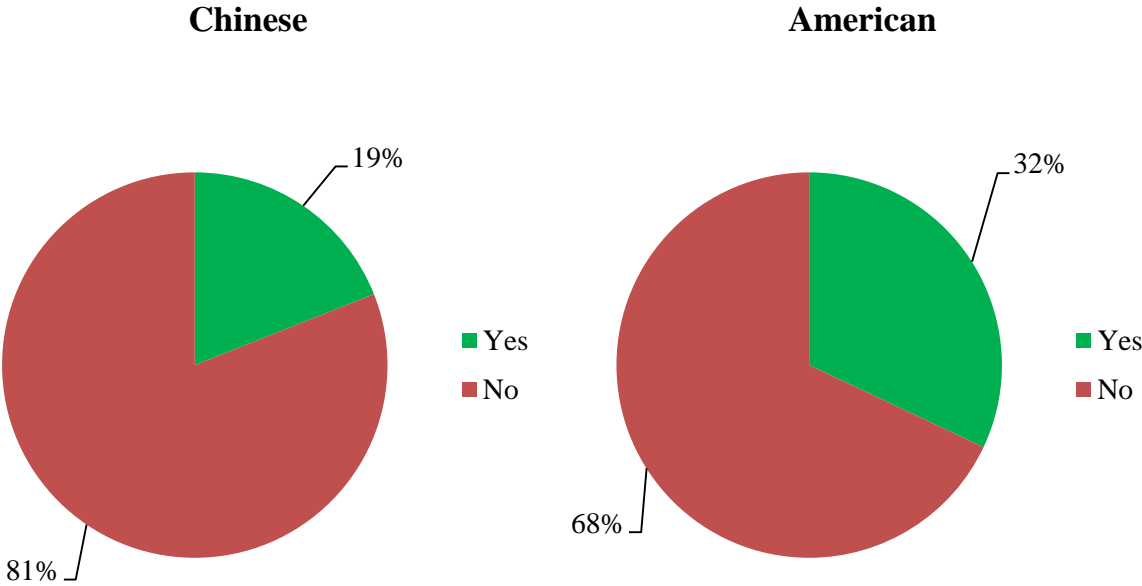


Figure 7: Survey question 9. Respondents that have sold books online vs those that have not.

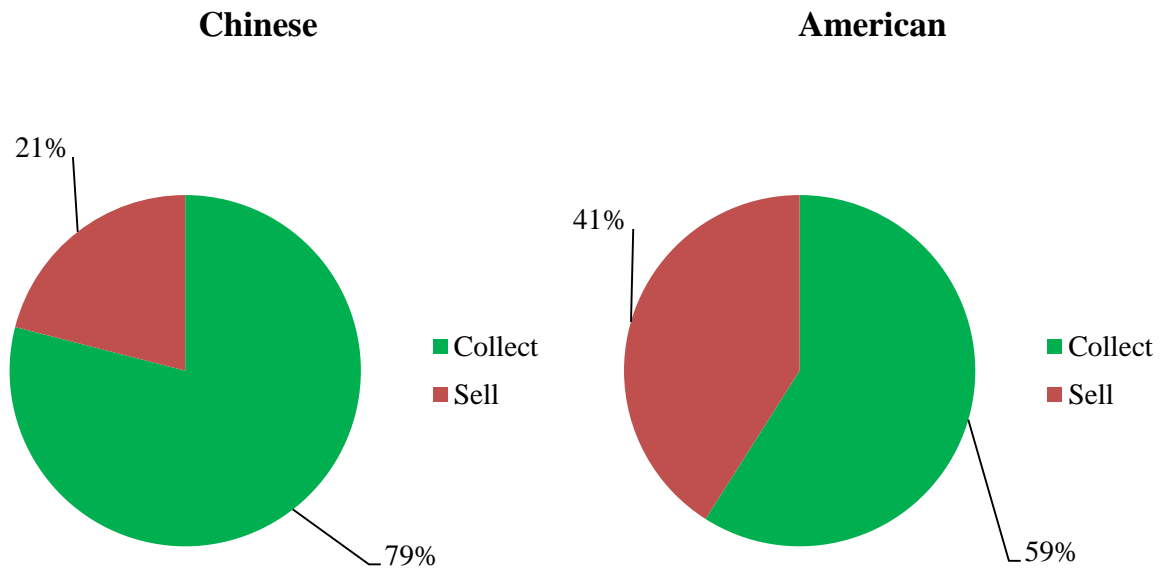


Figure 8: Survey question 12. Respondents prefer to sell books vs collect them.

4.4 Summary

By examining information published on the websites, analyzing survey results, conducting a focus group, and informally interviewing Dr. Yang and HDU students, we were able to determine the key differences between Sino-American book sharing business models. The purpose of our project is to find these differences and come up with suggestions for 123 Library as to how they can expand their model from China to the U.S. In the next section, we will analyze the findings further, and discuss how they are applicable to 123 Library’s quest for expansion.

5. Conclusion and Recommendations

After analyzing our data, we were able to determine several key differences between American and Chinese book sharing habits, as well as present some recommendations to help 123 Library expand into the American market. The findings previously gathered were evaluated and separated into two sections. The first is a set of key differences about the current states of book sharing in China and the United States. These conclusions were gathered from the combined efforts of several methods of investigating book sharing practices in China and the U.S. The second section is our recommendations for 123 Library to follow in order to most efficiently implement the Dandelion Model in the U.S.

Buying used books is becoming increasingly popular in the United States

A VP of Investor Relations at Chegg said that renting and selling used books helps students to save them money, time, and make them smarter. A majority of American survey respondents said that they prefer to buy used books instead of new if the used book is 50% cheaper. Clearly, the primary drive behind buying used is the potential for monetary savings.

Furthermore, the side effects of buying used books are not always bad, as participants of our focus group noted. While there is the possibility of receiving a poor quality book, this can be guarded against through online rating systems or calling the previous user of the book, if available. Other common sights in used books are underlining, notes, or comments in a book. These can help the next reader to see what past users thought was important or interesting, especially in an academic setting. For textbooks, highlights or margin notes are often appreciated while studying a topic.

Buying used or new in China doesn't have as much of an impact on price as in America

Both leisure books and textbooks in the native language are much cheaper in China than in America, as the book pricing tables show (Appendix F). A vast majority of Chinese respondents in our survey said that they prefer to buy new books instead of used ones. Students that we discussed the topic with stated that they generally buy new textbooks from the campus bookstore, rather than search for cheap used versions online.

With the widespread closing of bookstores across America, online leisure and textbook shopping has dominated the market. Online book purchasing is far less common in China than in America. Campus bookstores offer competitive prices, and numerous bookstores can still be found in local shopping malls. One reason for this is that the cost of an online book purchase is often dictated by the price of shipping rather than book condition, as will be discussed in the next section.

There are several differences between American and Chinese shipping policies

All major e-commerce websites use third party shipping companies to deliver goods in China. This might be due to the high cost of shipping relative to the cost of goods, such as books. Shipping usually costs around 30 RMB, which can heavily weigh the price of an online transaction. It has caused a roadblock for the book sharing efforts in China, as shipping can often time cost the same or even more than a book itself.

In the U.S., shipping is often considered a small additional fee. While the average cost of about \$5 is equivalent to 30 RMB, the goods or books purchased usually heavily outweigh this fee. Furthermore, shipping is handled directly through the platform itself. For this reason, there are several ways to obtain free shipping. Large orders, where the cost outweighs shipping by a factor of 10, for example, can lead to free standard shipping (4-5 business days). Amazon's

Prime Membership allows for users to pay an annual fee in order to receive free 2-day shipping and free e-reader book borrowing.

Such a program would be likely to fail in China, however, due to the significance of shipping costs. One such initiative to offer free shipping for an annual fee was called 青番茄 (Green Tomato). This company rose and fell from 2011 to 2014 as it attempted to offer a 3rd party membership service similar to Amazon's "Prime" membership. The company failed because shipping prices became too high and users did not want to pay for a hiked annual fee.

The effort involved in shipping books, however, has yet to be addressed

In both the U.S. and China, a person must package a book and bring it to a shipping store or bookstore for each book sharing transaction. In other words, while delivery is a common service, package pickup is rare. This concern was brought up in the WPI focus group, where one student stated, "I wouldn't mind selling my books, but shipping them out is a hassle ... The [money received from selling a book] is not worth the effort of shipping it."

Recommendations

Firstly, we recommend that 123 Library should start the Mobile Bookshelves program in the United States to promote 123Library and the Dandelion Model. Americans have barely heard of any book sharing programs in China, let alone 123Library. In order to make sure the Dandelion Model is successful in the States, there needs to be some effort given to promotion of the 123Library name. To do this, we recommend to first start the Mobile Bookshelves program before the Dandelion Model. This will give Americans experience with what 123Library stands for. In communities where Mobile Bookshelves are implemented, 123Library will be known for sharing books and its environmental impact. From this, when the Dandelion Model starts

operations in the United States, some Americans will recognize 123Library and become active users, kick starting the website's operation.

Secondly, promoting the Dandelion Model as a *green initiative* can help develop this business. The Dandelion Model is unique in that it provides its users with monetary incentives which promote the recirculation of books. A study done by the Friends of the Earth organization, an environmental campaigning organization in the United Kingdom's, showed that providing households with incentives can increase their participation and recycling rates (2008). The book sharing movement is very similar to the recycling movement. Their end goals are targeted at combating climate change and the environmental issues that are prevalent in the world today. The recycling movement has been very successful to date due to the public awareness and education that was provided and the ease of contributing to the movement. Educating the American public about the environmental importance of book sharing will help promote the Dandelion Model as a green initiative.

What makes 123 Library's model unique is that the other online bookstores, such as Dangdang, Taobao, Amazon and Chegg, do not provide incentive programs for circulating books throughout the population. As a result, 123 Library could introduce itself into America as a green movement. If the Dandelion Model is promoted in the U.S. as a green initiative to refuse the waste of books, then people will want to use 123 Library's website.

Thirdly, making a brief English explanation video of the Dandelion Model will earn trust and support in the United States. The Dandelion Model is quite complex, due to its novel structure and reward system. Once explained, however, the benefits that it procures are quite evident. The team was able to understand the model by watching a Chinese explanation video

with our HDU partners, who translated key ideas, and speaking directly with its founder, Dr. Yang. If 123 Library wishes to expand its model to the U.S., then the company must have a compact method of explaining its business model. For this reason, we recommend that 123 Library create an English explanation video, similar to the Chinese Dandelion Model Explanation that already exists. In the United States, this video could be posted on a website homepage, or even a crowdfunding page, in order to enlist support.

Finally, we recommend that a simple, easy to use American website be created. A website is the launch pad for any online business in the modern world. And when it comes to websites, simpler is better. Simplicity has been the guiding light for many successful American companies, ranging from Craigslist to Apple. When searching for a product on Craigslist, the website has no distractions in the background – no colors, pictures, or advertisements. There are clearly labeled headings with categories below, all of which are hyperlinks to a respective list of products. Amazon uses a more software based approach, where complex search algorithms help the user to find exactly what they want in whatever department they choose. Either way, the ease of using a website is essential to its success, and this should be the focus for 123 Library’s future American website.

We also anticipate difficulties in transitioning to an English speaking market might arise. Given that the current employees of 123 Library speak minimal English, completing the above tasks might be difficult. In order to fully explain the Dandelion Model, one must have a mastery of the language that it is conveyed over. While the benefits of the model are simple, the economic workings are complicated. Dr. Yang and his team at 123 Library will need to partner with an American business, or else hire professional translators to create an English website and explanation video.

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Appendix A: Timeline in Hangzhou



Appendix B: Interview Questions for Librarians

Interview Question	Answer Format
How long have you been working as a librarian?	Short Answer
What do you think of when you hear book sharing/recycling	Short Answer
Do you believe that the library recycles its books?	Yes/No
If the library does recycle books, what methods are used?	Short Answer
What is the goal of the libraries book sharing practices?	Short Answer
Is there a book sharing network between colleges in the town, if so how does it work (history and how it is funded)?	Short Answer
If there is a book sharing network, would you say it is effective?	Short Answer
Is there anything you believe this book sharing network does right? If so what is it and why do you think it is effective?	Short Answer
Is there anything you would change/improve about the book sharing network? If so, what is it and why?	Short Answer

Appendix C: Survey Questions while in Hangzhou

English Survey: Qualtrics

Feedback gathered from this survey will greatly help the IQP team understand the book sharing habits of individuals in the United States and in China.

Additional information:

- * Your responses will remain anonymous
- * Participation in our survey is completely voluntary
- * This project has been approved and exempted by the WPI Institutional Review Board (IRB)
- * The survey will take you less than 5 minutes to complete

1. Are you a student?
 - Yes
 - No
2. What country do you currently live in?
 - China
 - United States
 - Other
3. On a scale of 1-5 how interested are you in environmental protection?
 - 1 Don't Care
 - 2 Somewhat Disinterested
 - 3 Neutral
 - 4 Somewhat Interested

Chines Survey: SoJump

大家好，我们是美国 WPI 的学生，下面是我们对于图书循环利用的问卷调查。收集到的信息会帮助我们团队更好地理解中美学生在图书分享习惯上的区别。感谢您的参与!

1. 你是学生吗?
 - 是
 - 否
2. 你现在居住在哪个国家?
 - 中国
 - 美国
 - 其他
3. 你关注环境保护吗?
 - 1 不关心
 - 2 不怎么关注
 - 3 一般
 - 4 比较关注

- 5 Passionate
4. On a scale of 1-5 how much do you think wasted books contribute to environmental issues.
 - 1-Little Impact
 - 2
 - 3
 - 4
 - 5-Great Impact
 5. Do you prefer to rent or buy books?
 - Rent
 - Buy
 6. Would you prefer to buy a used or new book?
 - New
 - Used
 7. How often do you purchase books online?
 - Never
 - 1 Year
 - 3 Month
 - 1 Month
 - 1Week
 8. Do you usually purchase your books online or at a book store?
 - Online
 - Book Store
 9. Have you ever sold a book online?
 - Yes
 - No
 - 10.If there was an easier way to buy/sell your books would you like to do that?
 - Yes
 - No
 - Indifferent
 - 11.How do you deal with your old books?
 - Sell Them
 - Donate Them

- 5 非常关注
4. 你认为闲置图书的浪费对环境有多大的影响?
 - 1 很少影响
 - 2
 - 3
 - 4
 - 5 影响很大
 5. 你更愿意租书还是买书?
 - 租书
 - 买书
 6. 你更愿意买新书还是二手书?
 - 新书
 - 二手书
 7. 你多久网上买一次书(电子书除外)?
 - 从不
 - 一年一次
 - 一月一次
 - 三月一次
 - 一周一次
 8. 你经常在网上买书还是在书店买书?
 - 网上
 - 书店
 9. 你在网上卖过书么?
 - 是
 - 否
 - 10.如果有更简单的途径去买书/卖书,你愿意尝试吗?
 - 愿意
 - 不愿意
 - 无所谓
 11. 你是如何处理你的旧书的?
 - 出售

- Give Them to Friends
 - Rent Them Out
 - Keep Them
 - Other
12. After you read a book, do you prefer to collect it or sell it back for some money?
- Collect
 - Resell
13. If you could give your used books away for 30% of the buying price, but potentially regain the other 70% and additional profit over the next three years as others circulate your book, would you agree to this investment?
- Yes
 - No
 - Not Sure
14. What book sharing websites have you heard of?
- 123 Library 123
 - Amazon
 - Chegg
 - DangDang
 - Taobao/Alibaba
 - Other
15. In order to confirm data, have you ever sold a book online?
- No/Yes

- 捐献
 - 给朋友
 - 租出去
 - 保留
 - 其他
12. 你更愿意把读完的书保留下来还是卖钱?
- 保存
 - 再卖
13. 假如把你的闲置书以原价三折以内的价格卖出，在之后的三年内，当这本书在其他人之间交易传递的时候你也能获取红利，你愿意这么做么?
- 愿意
 - 不愿意
 - 不知道
14. 你听说过哪些分享书的网站?
- 图书馆
 - 亚马逊
 - 齐格
 - 当当网
 - 淘宝/阿里
 - 其他
15. 你有过网上卖书的经历吗?
- 否
 - 是

Appendix D: Interview with WPI Professor

Email interview with Robert Thompson at WPI

1. What do you normally do with personal used books?

Nothing in particular; sometimes I give them away to friends, library, etc.

2. What motivated you to start collecting and recycling books/textbooks?

A friend of mine is engaged in collecting Books for Liberia.

3. How do you ship books to Liberia? (Is there a company or are you on your own)

She packages them in boxes and puts them on a ship to Liberia.

4. What is the cost of sending these books to Africa?

\$15 per box.

5. Once the books arrive, how are they distributed?

They go to various schools and universities.

6. Have you gotten a response on the effectiveness of this program? (Have you done programs like this before?)

No. No.

Appendix E: Interview with WPI Librarian

Karen Bohrer (Collections Assessment and Development Librarian at Gordon Library)

1. How long have you been working as a librarian?

My whole life - 33 years so far. I have been at WPI since January 2014 - so 2 years here.

2. What do you think of when you hear book sharing/recycling.

Yeah, Librarians always put a library type spin on it. Paige and I both thought about interlibrary loans. One library lends materials from their own to another. When I think of recycling I think of big recycling plants where books are pulped. I think I have those associations because from being a librarian recycling and sharing knowledge is what libraries are all about. I personally own very few books, because I have always been a librarian and they have always been available. For your specific project when you talk about book sharing and recycling I do think about it in the context of textbooks and students sharing the textbooks.

3. Do you believe that the library recycles its books?

Yes.

4. If the library does recycle books, what methods are used?

In collections here it is a big blue bin. But it [the book] actually has to be physically recycled.

5. What is the goal of the libraries book recycling/sharing practices?

The goal is to supply another library with a book or resources that they do not have. We put carts of free books in the front of the library. Many libraries have book sales, uhm, but to my mind that makes people have to do more work. We can give them away. If we are not using them in the library anymore, why not just give it away?

6. Is there a book sharing network between colleges in the town, if so how does it work (history and how it is funded)?

We have the academic research collaborative (ARC). Librarians love acronyms and initials. But that is the cooperative of the libraries in the colleges here in Worcester. I don't know if the high school libraries have interlibrary loans. I never knew what an interlibrary loan was before I got out of high school. I don't know what the high schools do. I would image that there might be more robust interlibrary loan in high schools these days due to funding cuts. They might work more closely with public libraries. I think the interlibrary loans are ramping up due to impact from budget cuts so not every library can afford to get everything that it would like to have. There is also a space issue, not every library has the space to have a physical library of all the things it would like to have.

With standard interlibrary loans, one library buys the book and is the owner and shares the books as the rules of the cooperative they are in requires. A new model that I am seeing is the concept of the floating collection where a group of libraries would buy a collection of books all together and share the costs and books would go to whichever library needed the book at certain times. That addresses funding and space.

7. Is there anything you believe this book sharing network does right? If so what is it and why do you think it is effective?

We have super simple procedures. East (Eastern Academic Scholars Trust), with grant funding we are analyzing the prints of all of the members and deciding who should retain all books. As the collections librarian I am happy that you [Michael] are able to get whatever you need at this library without having to look around too much. I don't know what the situation in China is, I lived in Greece for 12 years and there was no interlibrary loan system. There wasn't the delivery network; there wasn't the structure in many ways.

8. Is there anything you would change/improve about the book sharing network that the library is involved in? If so, what is it and why?

Yes, and it is not something that we can change by ourselves or that librarians can change by ourselves but we can lobby for the change to make electronic books sharable. Because the publishers or businesses do not want these e-books to be sharable (so each library will have to have their own copy). I borrow e-books from WPI on my kindle, and it's free. Springer (publisher) has an arrangement with a cooperative of librarians in the main south (Occam's reader) program that allows for e-books to be shared. Occam's razor means that the simplest solution is the best solution.

9. How was the book sharing network between colleges in Greece?

I worked in American Institutions (American school for classical studies) It is a very different view of libraries generally, and there aren't public libraries. In the major towns there is a building that calls itself a public library but they are nowhere near American public libraries. The university libraries are big warehouses of books. And yeah people don't go into libraries. You could get a degree in a Greek university and never step into a library. So it was interesting being at an American run college, which would have a large cohort of American and Greek students so as a librarian you would be doing your freshman orientation and the American students would stride in the librarians and the Greek students would be going into the library for the first time in their life. The expectations were wildly different. It made orientations interesting. We belonged to a consortium called (American international academic library consortium) with about 20 members of American libraries abroad.

10. Do you have anything else you would want to say about how we can help 123 Library with book sharing?

Not knowing the situation it is kind of tough, if you could get all the universities to buy into this program I am sure all the students would be delighted. And um, you have said that you have done research so you have probably already heard about this "better world books". It takes books donated by libraries and also individuals and collects these books and sends them to developing countries that do not cost anybody anything but time.

11. Are they connected to books for Africa?

I am not aware of that form of connection. There are campus programs too [involved in better world books].

Appendix F: Book Pricing

Leisure Book Pricing: in RMB (¥) with exchange rate of 6.38¥ to 1\$

Name of Leisure Book	Amazon	Chegg Buy	Chegg Rent	Chegg Rent Saving	DangDang	Taobao	123 Library	ISBN US	ISBN China
A Tale of Two Cities	31.90	114.78	63.74	0.44	59.00	19.02	9.84	486406512	9787540465599
Little Prince	38.22	124.35	63.74	0.49	14.50	14.43	5.34	156012197	9787802185302
Harry Potter and the Deathly Hallows	95.64	143.49	63.74	0.56	32.30	46.00	26.40	545139708	9787020063659
Romance of the three Kingdoms 2 Volumes	185.02	N/A	N/A	N/A	16.80	16.88	16.40	7119005901	9787802204461
Frankenstein	25.52	31.84	63.74	-1.00	20.70	24.84	10.50	486282112	9787506353663
1984	63.74	130.73	102.02	0.22	11.30	20.00	3.00	451524934	9787532739974
Animal Farm	63.74	130.73	82.88	0.37	9.50	7.00	3.60	451526341	9787020088058
Three Cups of Tea	108.46	114.78	63.74	0.44	16.80	17.80	19.60	143038257	9787807027157
Better: A surgeon's Notes on Performance	102.08	130.73	156.25	-0.20	35.90	35.90	32.50	312427654	9787213067914
The Hunger Games Trilogy Collection	235.87	242.38	140.30	0.42	74.00	59.16	25.50	545670314	9787506368513
The Hobbit	89.00	140.30	63.74	0.55	11.90	17.00	4.50	054792822X	9787806571903
Catcher in the Rye	43.00	124.35	73.31	0.41	60.50	59.50	16.80	316769487	9789861732091
To Kill a Mockingbird	57.36	130.73	95.64	0.27	25.60	26.19	9.60	446310786	9787544722766
Adventures of Huckleberry Finn	28.71	117.97	63.74	0.46	10.90	12.40	5.94	486280616	9787538729337
Little Women	57.10	137.11	63.74	0.54	14.00	15.80	4.00	199538115	9787500126867
Great Expectations	35.09	127.54	63.74	0.50	13.30	13.96	5.40	486415864	9787506261500
Chicken Soup for the Unsinkable Soul	95.38	162.63	63.74	0.61	15.2	14.00	5.70	1623610834	9787533728779
The Da Vinci Code	63.74	146.68	63.74	0.57	20.5	22.10	8.00	307474275	9787020069828
Average	78.86	132.42	79.50	0.33	25.71	24.55	11.81		
Average of books present in all companies	74.84	135.83	76.82	0.43	18.57	21.699	11.44		

Textbook Pricing: in RMB (¥) with exchange rate of 6.38¥ to 1\$

Name of Textbook	Amazon	Chegg Buy	Chegg Rent	Chegg Rent Savings	DangDang	Taobao	123 Library	ISBN US	ISBN China
Eng. Mech. Statics	1392.82	357.22	197.72	0.45	2062.00	2062.00	N/A	132915545	9780132915540
Essential Cell Bio	901.88	583.71	165.82	0.72	N/A	980.70	N/A	815344546	9780815344544
Psychology and Life	1239.06	810.20	264.71	0.67	1974.00	1974.00	N/A	205859135	9780205859139
Computer Science Illuminated	541.53	366.79	290.23	0.21	1406.00	1421.00	N/A	144966573X	9781449672843
A Short History of Modern Philosophy	146.42	229.62	127.54	0.44	144.30	213.00	52.80	415267633	9780415267632
Organic Chemistry for Students of Medicine and Biology	535.92	N/A	N/A	N/A	27.70	29.80	13.00	7560936474	9787560936475
Human Anatomy & Physiology (9th Edition)	1851.92	271.09	159.44	0.41	2688.00	2432.00	N/A	321743261	9780321743268
The Norton Anthology: English Literature	259.16	188.15	98.83	0.47	546.00	407.34	120.00	393912523	9780393928280
Average	858.59	400.96	186.32	0.48	1264.00	1189.98	61.93		
Average of books present in all companies	202.79	208.88	113.18	0.46	345.15	310.17	86.40		

Appendix G: Shipping Pricing

Weight 重量	1.5kg	Hardcover books average in at 1.5kg					Days	COD是否到付
							3天	否
Company Name 公司	天天快递	申通快递	韵达快递	中通快递	圆通快递	汇通快递		
To: 出发地 (到达地: 杭州)								Average 平均
Beijing 北京	17	30	23	21	18	21		21.7
Shanghai 上海	14	30	23	21	8	21		19.5
Hong Kong 香港	25	30	N/A	N/A	28	N/A		27.7
Tianjin 天津	17	30	23	21	18	21		21.7
Average 平均	18	30	23	21	18	21		
From: 到达地 (出发地: 杭州)								
Beijing 北京	17	30	23	21	22	21		22.3
Shanghai 上海	14	30	23	21	9	21		19.7
Hong Kong 香港	25	30	N/A	N/A	18	N/A		24.3
Tianjin 天津	17	30	23	21	18	21		21.7
Average 平均	18	30	23	21	17	21		

Company Comparison 公司对比	Standard Shipping Cost 标准运费	Free Shipping Circumstances 免运费条件
123 Library	See Above Chart	Books exceeding 49 元 书的价格超过 49 元
Amazon	\$4.98 = 31.8 元	Orders exceeding \$35 = 223 元 书的价格超过 223 元 Prime Membership ¹ 会员
Chegg	\$4 = 25.5 元	Orders exceeding \$85 = 542 元 书的价格超过 542 元
Book Renter	Free 免费	Always 一直

¹ Prime is offered for free for 6 months to students and then \$50/year afterwards. Prime is \$100/year for non-students. Benefits include free 2-day shipping and free e-reader book borrowing.

¹VIP 对学生前 6 个月是免费的，之后是 50 美元 1 年，VIP 对不是学生的人收费 100 美元 1 年，会员的福利包括你可以在 2 天内收到书，e-reader 可以免费借。

Appendix H: Focus Group

Michael Cournoyer: Hello everyone thanks for coming. Today we want to get some honest opinions about your book sharing behaviors. Whatever you say may get recorded but your name won't be linked to it because we don't care who says what. We will ask a question, if you have an answer raise your hand and the loop will start at you. If it comes to your turn and you have nothing to say, just say pass.

Questions:

1) Do you prefer ownership of books, or to rent them, assuming the rent price is 40% the buy price?

- 1 new because you can reference textbooks, and circulate fiction books
- 2 used because he doesn't look at them much
- 3 new because it's nicer, no sloppy seconds
- 4 rent the book because he won't read it again
- 5 rent because cheaper
- 6 buy used and resell
- 7 rent unless it's a core textbook

2) When you buy, do you like to buy used or new, assuming used is about half off, but you don't know the condition of it?

- 1 buy because no sloppy seconds
- 2 used because cheaper, and highlights are good
- 3 used is cheaper, good notes
- 4 buy new, edit and no hindrance
- 5 Amazon has rankings of how used it is
- 6 If 60%, buy used and maybe sell after

3) a) How many of you have bought a book online (hands)? Call on a personal experience.

100% 7/7

b) How many of you have bought a leisure book online (not using an e-reader) (hands)?

4/7

Amazon started as an online bookstore

Amazon is very easy, Prime is nice, good search algorithms, can always trust buyer

Alibaba didn't

4) Have you ever sold a book online? If so what websites do you use?

3/7 have sold a book online

To sell:

Amazon, eBay, Amazon trade in

5) After you read a leisure book, do you prefer to collect it or sell it back for some money/donate? The same for textbooks?

Keep them if they are nice, too much of a hassle

Like people to think you are smart, keep them!

Keep or give to friends unless they sell for more than 20

~~~~~**Dandelion Model presentation/clarification**~~~~~

**6) If you could give your used books away for 30% of the buying price, but potentially regain the other 70% and additional profit over the next three years as others circulate your book, would you agree to this investment?**

The general opinion is no

Books look nice on a shelf

Not easier because you have to handle shipping, even though you get

Textbooks are more viable for this option because people need them and aren't going to keep it because it looks nice.

Quality control?

Book tracking?

Average number of hops?



It's way too complicated

Already a bunch of systems out there

Crowdfunding is a crapshoot; even a potato salad can be funded

Already a bunch of systems out there for books.

**7) What do you think of the model? Is there a way to take advantage (game) it?**

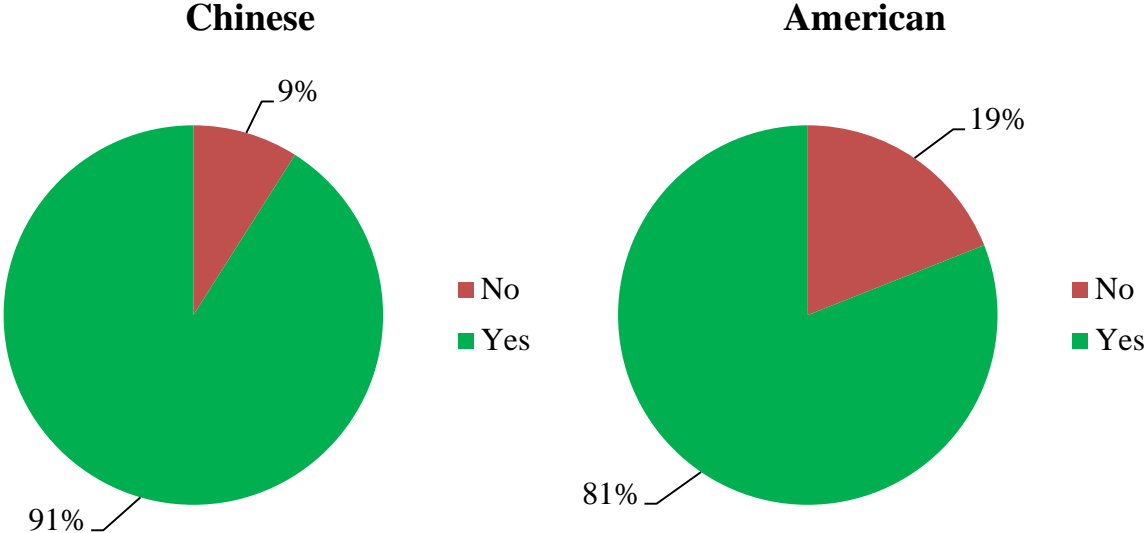
>Flood the system with cheap books to level up fast?

**Major conclusions:**

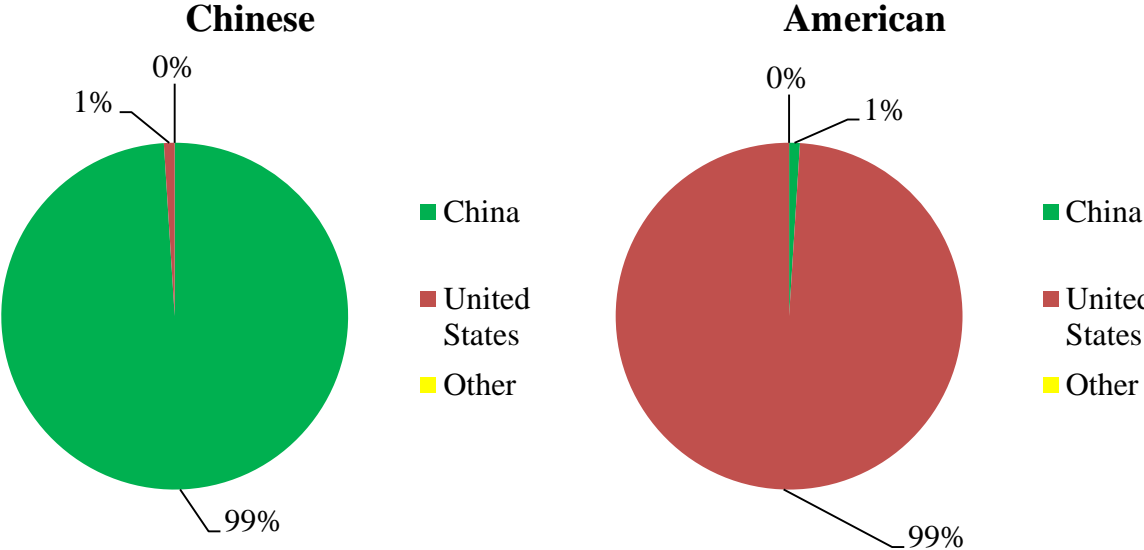
1. One of the differences between US and China is that US people have more space and enjoy the pride in looking smart with a bookshelf. In China, they don't have as much space and want to get the books out, and probably don't care about the bookshelf thing.
2. It seems complicated, and it probably wouldn't be any easier than Amazon. Amazon gives you a best time to resell your book (July or August usually), and is very easy to use for people that like to sell things online.
3. There are so many ways to resell your book for near the same price, the initial 30% selling price might not be appealing. Of course there is the picture option, and when you resell the book you can technically get 100% of the price you paid if you are level 10, so I don't know.

# Appendix I: Survey Results

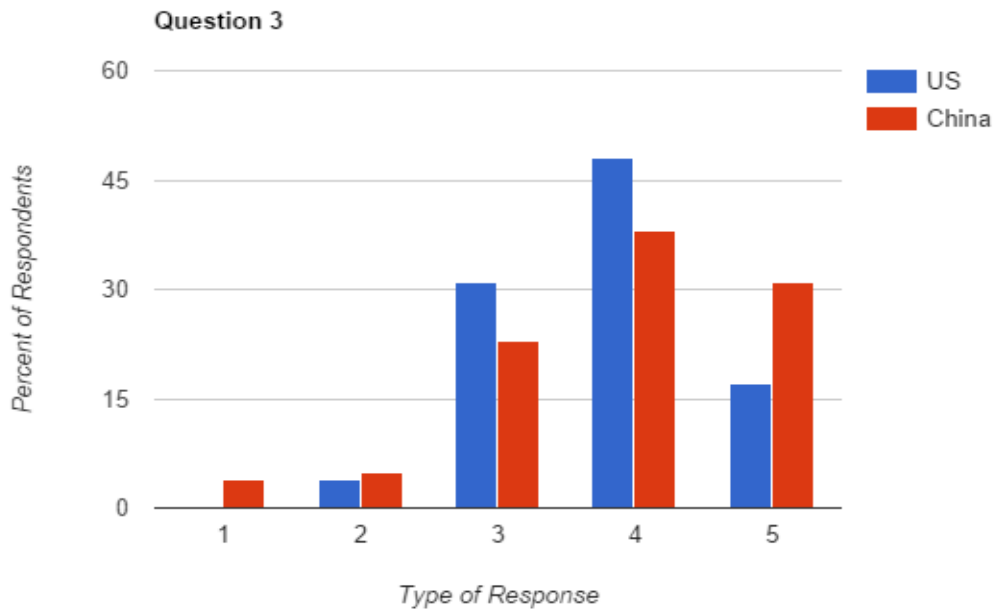
1. Are you a student?



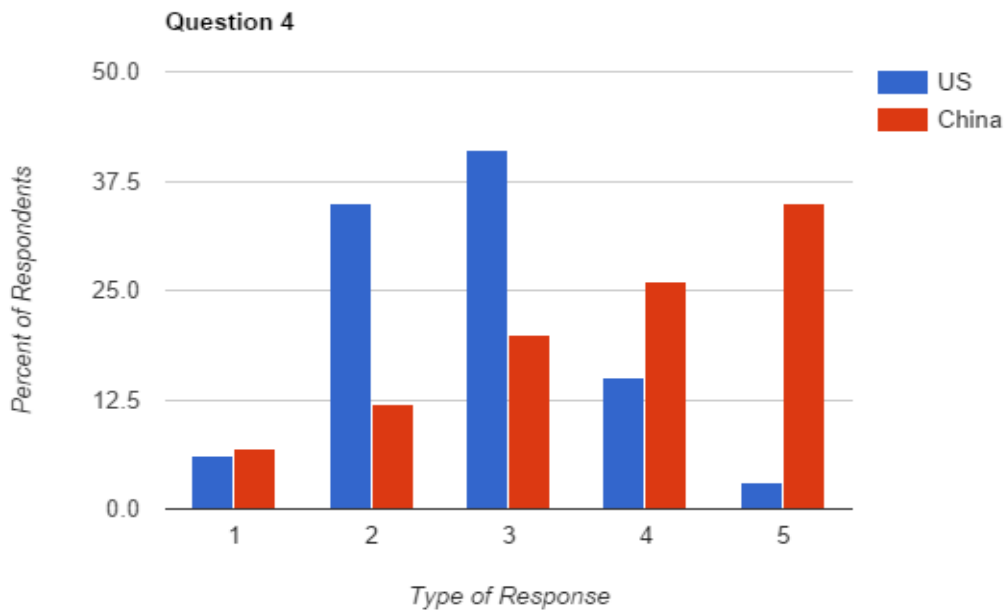
2. What country do you currently live in?



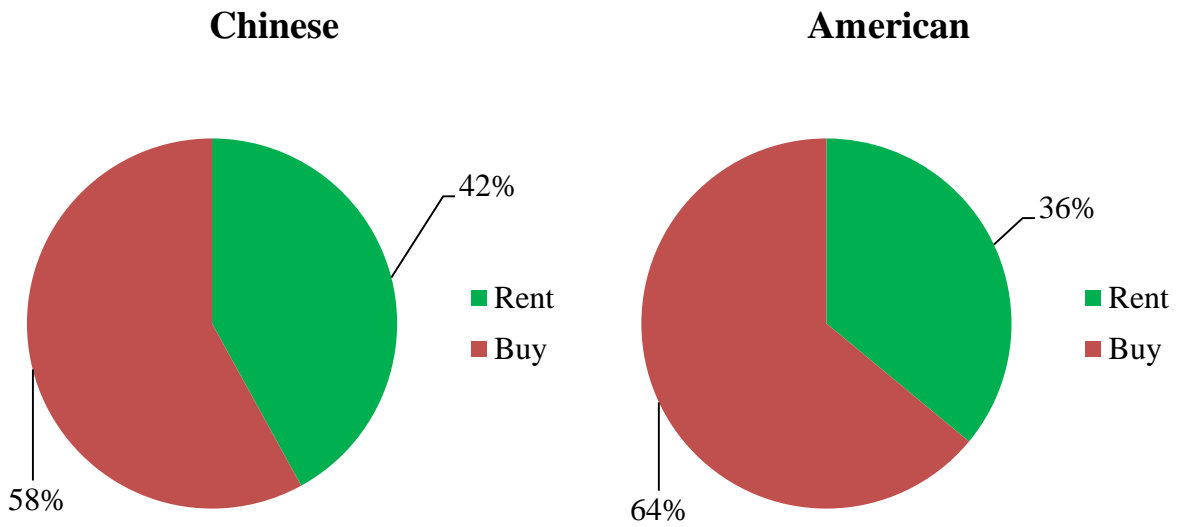
3. On a scale of 1-5 how interested are you in environmental protection?



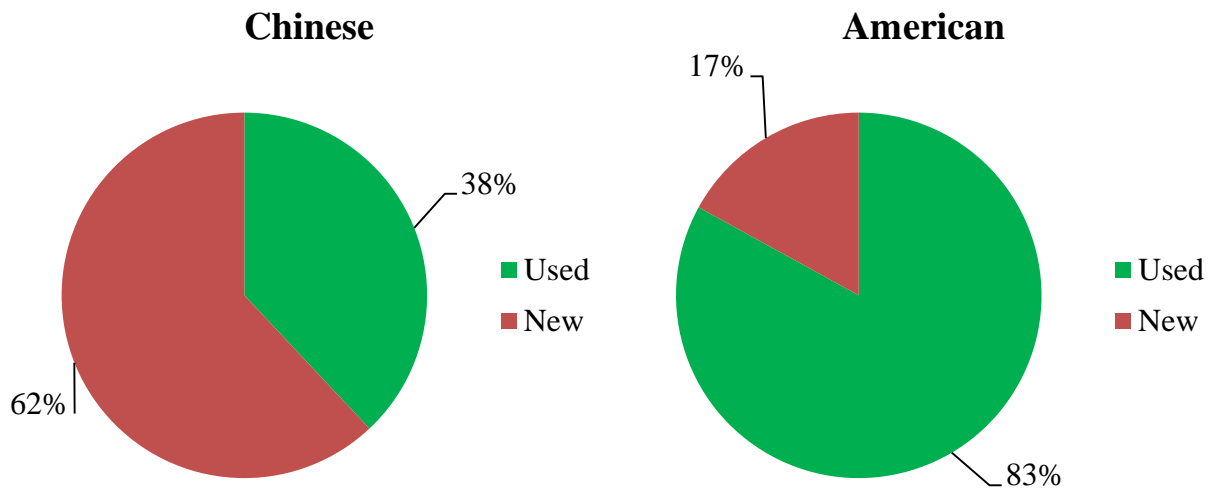
4. On a scale of 1-5 how much do you think wasted books contribute to environmental issues.



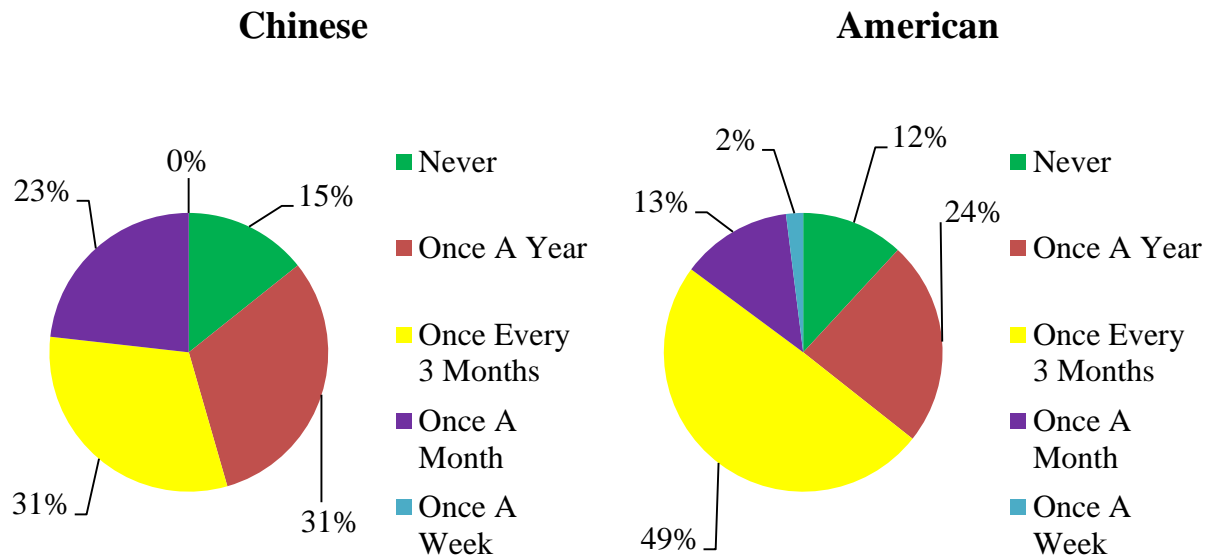
5. Do you prefer to rent or buy books?



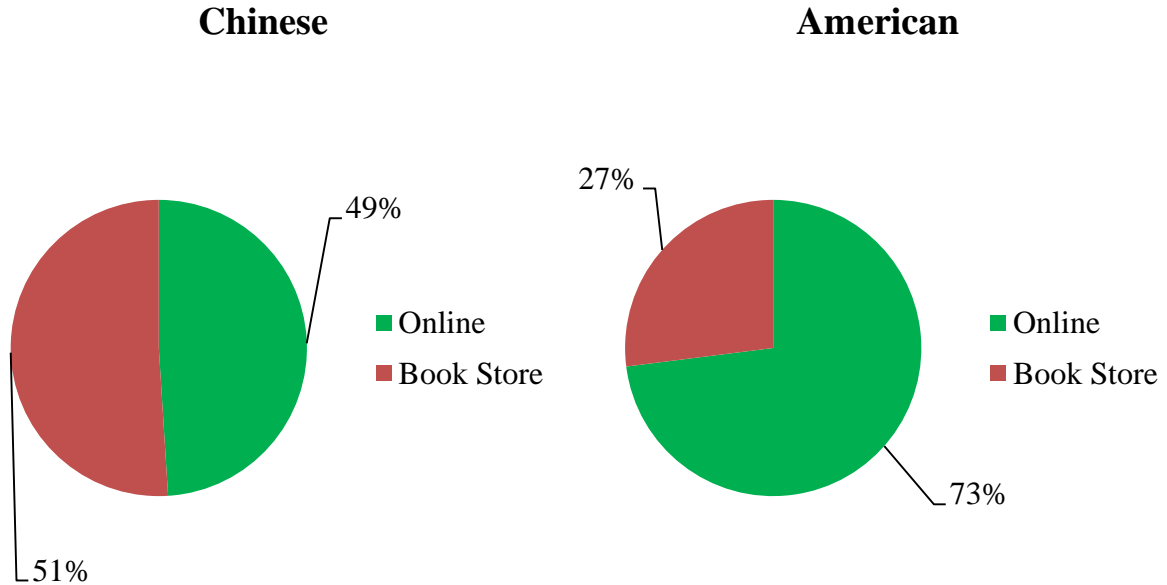
6. Would you prefer to buy a used or new book?



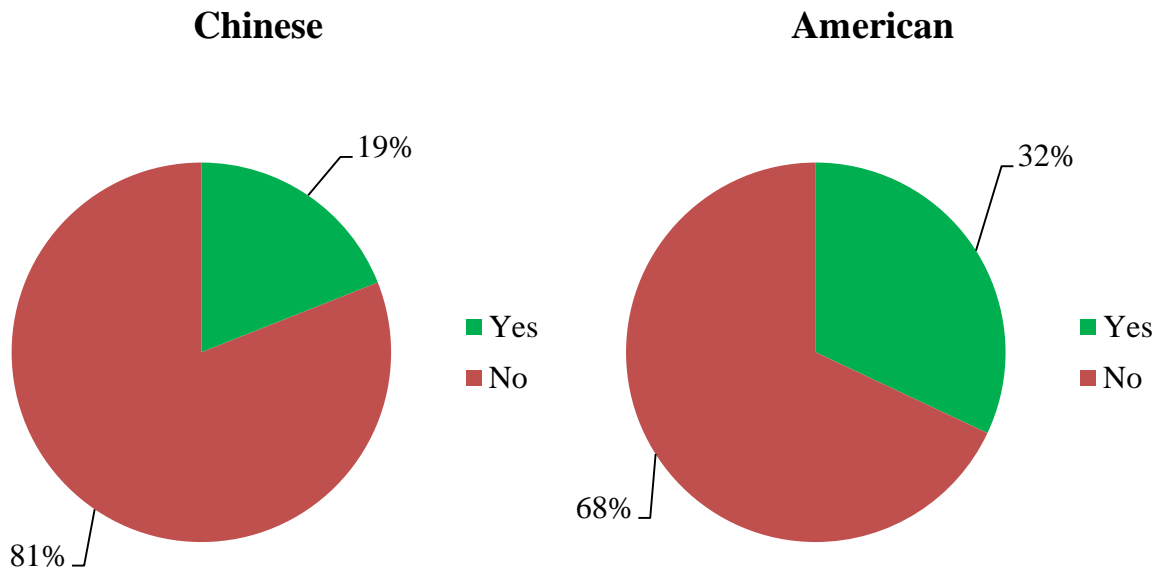
7. How often do you purchase books online?



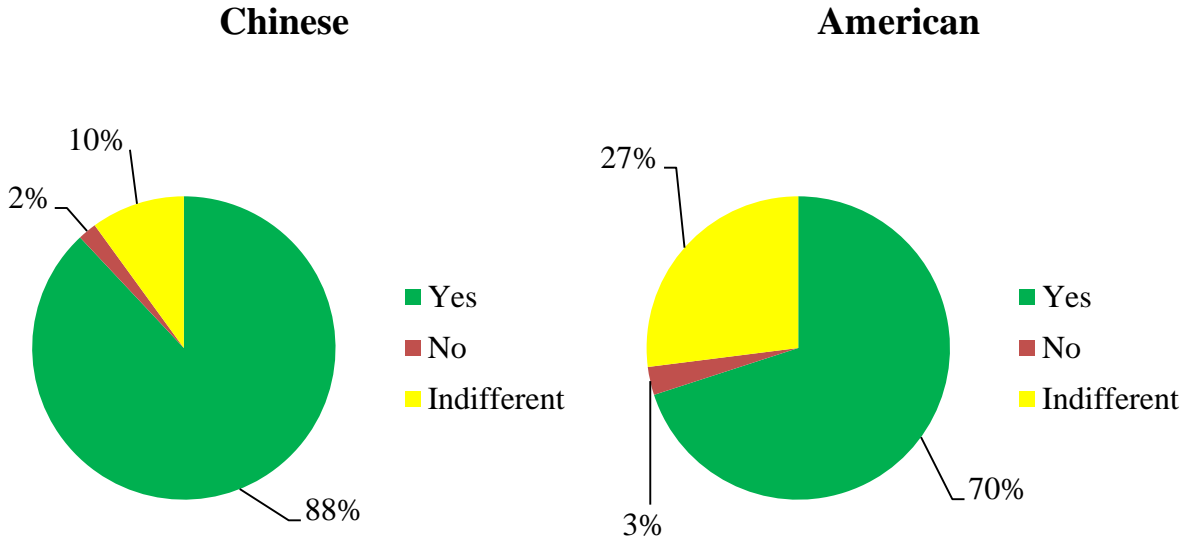
8. Do you usually purchase your books online or at a book store?



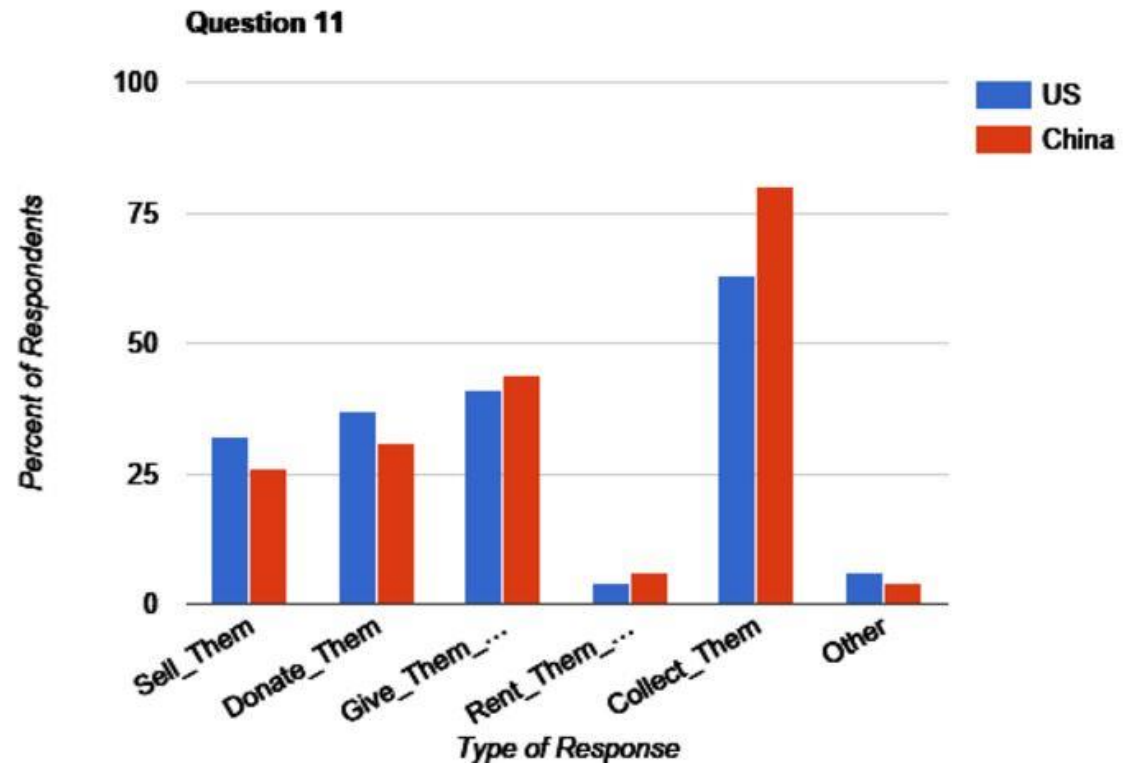
9. Have you ever sold a book online?



10. If there was an easier way to buy/sell your books would you like to do that?

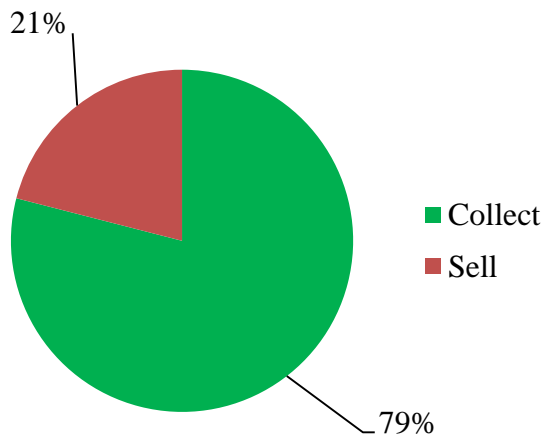


11. How do you deal with your old books?

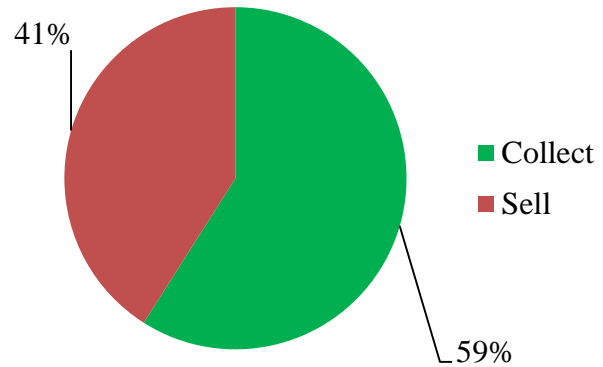


12. After you read a book, do you prefer to collect it or sell it back for some money?

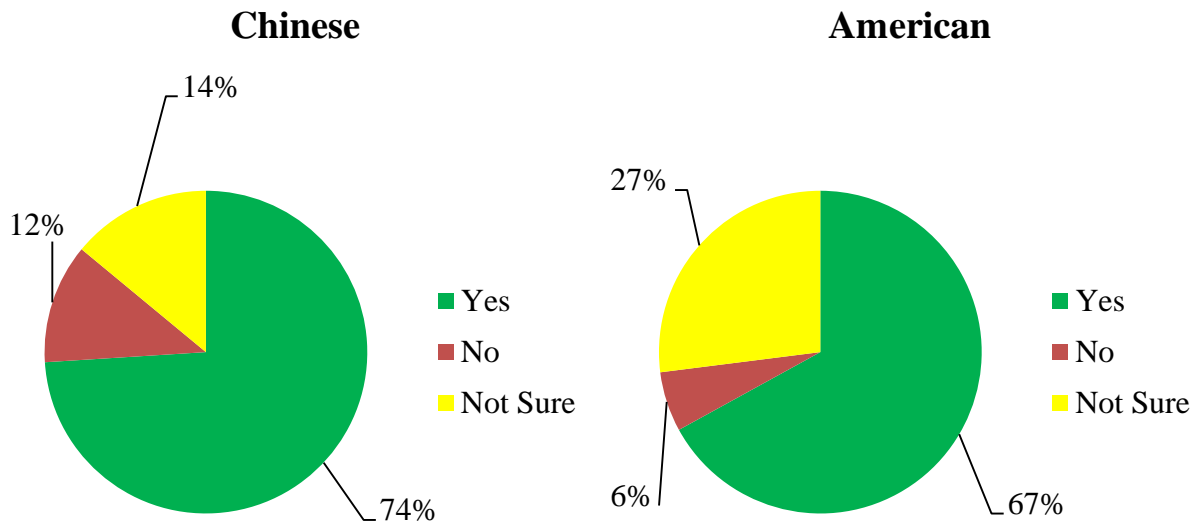
**Chinese**



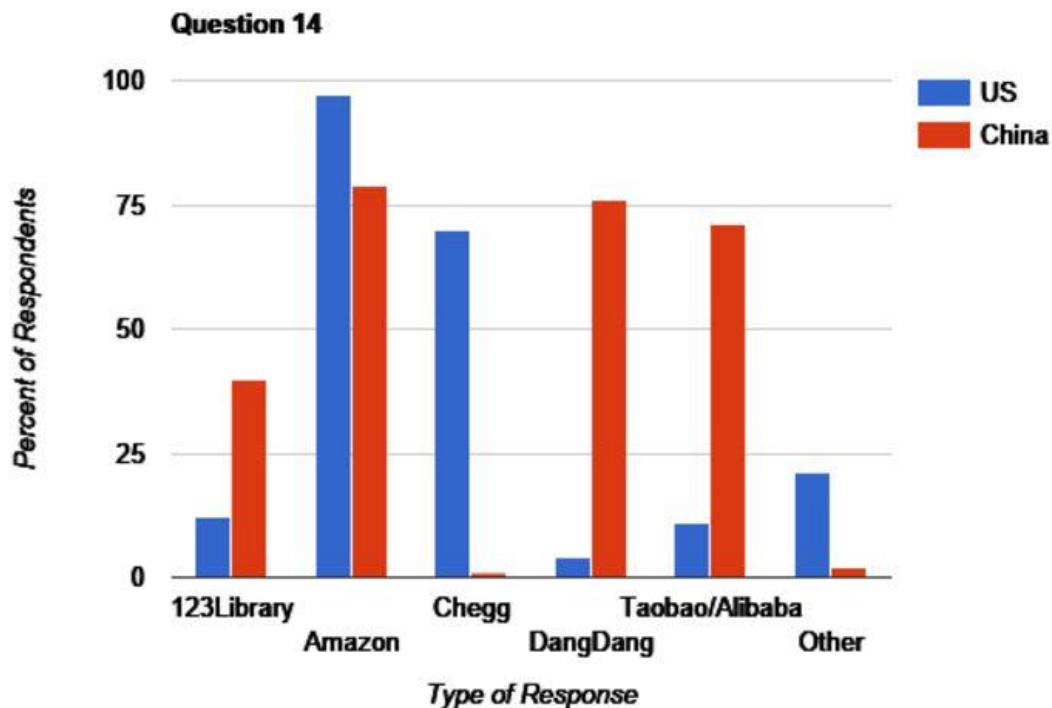
**American**



13. If you could give your used books away for 30% of the buying price, but potentially regain the other 70% and additional profit over the next three years as others circulate your book, would you agree to this investment?

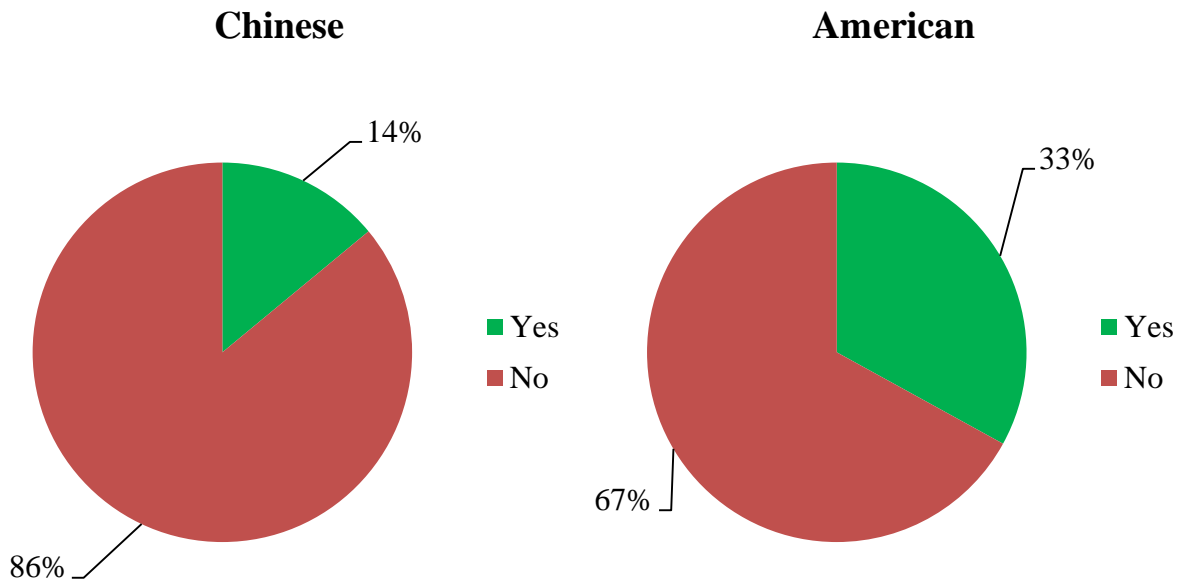


14. What book sharing websites have you heard of?





15. In order to confirm data, have you ever sold a book online?



## Appendix J: Inquiry Message Sent to Chegg

Sent to:

Alex Hughes, Vice President of Investor Relations

Usher Lieberman, Vice President of Corporate Communications

We are a student lead research team at Worcester Polytechnic Institute (WPI) in the process of writing a research paper about book sharing practices in China and the United States. Our team understands that Chegg is a very popular website for students from high school onwards to rent or buy their textbooks. We have already compared the relative prices of books on Chegg with other websites such as Amazon, Taobao, Dangdang and 123 Library. However, we are interested in collecting information from an American website on their opinion on the sharing economy and book sharing as a whole. We selected Chegg because they are the most popular book sharing company among students in the United States.

We would like to ask you the following questions on the company's opinions on this subject:

1. What is the philosophy behind your book sharing model?
2. Has your company ever considered implementing a user to user e-commerce platform, similar to craigslist, for textbook circulation?
3. Has your company ever considered rewarding those who decide to rent books due to its environmental benefits?
4. Would your company consider collaborating with an innovative book sharing platform in China?
5. Would Chegg be looking for overseas partners to reach international customers?

Sincerely,

The Book Sharing Team

# Appendix K: Chegg's Response to Inquiry

Alex Hughes: Vice President, Investor Relations at Chegg

## **1. What is the philosophy behind your book sharing model?**

Education in the US is a business that often serves constituent interests in the ecosystem ahead of the primary customer itself, the student. One of the primary examples of this is the textbook market where historically the five largest publishers would charge top price for textbooks, professors would require them for the class, and every three years a new addition would come out with marginal changes but at a high price again. Our strategy is to put the student first and our mission is to save the time, save them money and help them get smarter. In line with this, we offer textbook rental, which helps students save as much as 80% of the price of a new textbook. We see this as a good business to be in because it grows our brand with students, leads to a very high net promoter score, and enables us to bring additional online services to students. When you say sharing, I assume you mean textbook rental. That is the closest thing we have to sharing. We do not have any service that allows students to share content.

## **2. Has your company ever considered implementing a user to user e-commerce platform, similar to craigslist, for textbook circulation?**

The closest thing we have to a user to user e-commerce platform is our tutoring business where students tutor other students online for a per minute fee as low as 60 cents a minute.

## **3. Has your company ever considered rewarding those who decide to rent books due to its environmental benefits?**

Not that I'm aware of, but if you think about it, the reward is in the money they save through rental.

## **4. Would your company consider collaborating with an innovative book sharing platform in China?**

If by sharing you mean book rental, it's a business that we have not really considered expanding internationally because of its inherent capital intensity and costs. We are more interested in offering digital services. If by sharing you mean sharing user generated content, we are generally careful there so not to get mired in any copyright infringements with publishers etc.

## **5. Would Chegg be looking for overseas partners to reach international customers?**

Yes, we have already partnered with a company in Brazil to bring some of our learnings services there. China is a market we are interested in but probably for our digital services.