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The Use of Agents in Applying to the U.S. Higher Education: Experience of Chinese Undergraduate Students

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The use of agents in applying to the U.S. higher education: experience of Chinese undergraduate students

by

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DEDICATION

This study is dedicated to all Chinese students who have struggled or are still struggling with pursuing higher education in the U.S.

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ABSTRACT

The purpose of this study is three fold: (1) to enhance understanding about Chinese undergraduate students' experience when applying to U.S. higher education institutions; (2) to examine rationale of Chinese students using, or not using, an agent to assist their application process and to identify differences or similarities between the two groups; and (3) to explore roles that agents play in Chinese undergraduates' application process and to identify to what extent agents assist their college application preparation.

This study adopts two theoretical frameworks. Cubillo, Sánchez, and Cerviño's (2006) theoretical model of international student college choice and Sharma's (1997) agent theory from a perspective of professions are used to explore the experiences of international Chinese students' application experiences to a U.S. higher education institution and the role that education agents play in students application. The frame work of international student college choice (Cubillo, Sánchez & Cerviño, 2006) provides an overview of factors that influence international students' decision regarding education destination. Sharma (1997) extend agent theory that was first evolved in economics as applied to professions. By using the agent theory from a sociological perspective, relationships between international Chinese students and their agents can be better understood.

This study collected both quantitative and qualitative data from two groups: prospective Chinese students in China and international Chinese undergraduate students in U.S. institutions. This study mainly employed a quantitative approach. Descriptive and inferential statistics were used to examine demographic characteristics, students' social economic status, and their academic performance. Independent samples t-tests were

administered to identify differences and similarities between students who planned to use or used an agent (agent-assisted students) and those who did not plan to use or did not use an agent (non-agent-assisted students). This study also used Chi-square tests to test for any associations between students' characteristics (categorical and dichotomous variables) and their choice of using or not using an agent. Sequential logistic regression analysis was used to determine factors that predict students' choice of using or not using an agent to assist their college application. In addition to quantitative approach, this study included a qualitative component. Semi- structured interviews were conducted to explore concerns that students had towards application and challenges that they encountered during the application process with or without assistance of agents.

The findings of the study can better inform education practitioners about international student experiences of college application, advantages and disadvantages of using an agent, and to what extent they are satisfied with agents' assistance. This study can be beneficial for recruitment officers and administrators, particularly those who work at institutions with large international student population or at institutions that would like to increase international enrollment. This study may also provide insightful knowledge for new policies, standards, and programs that intentionally improve college recruitment in general and practice with agents' assistance. Last, this study contributes to the limited literature on international students' application experience, the use of agents in the college application process, international recruitment practices, and ethical concerns of how agents' assist students' application or institutions' recruitment.

CHAPTER 1. INTRODUCTION

Since the 1960's, the United States (U.S.) has been a major education destination for international students. The U.S. hosts the largest number of international students compared to any other countries in the world: nearly one out of five postsecondary students studying outside of their home country studied in the U.S. (Verbik & Lasanowski, 2007). During the 2009-10 academic year, the number of international students at U.S. colleges and universities increased by 3% to a record high of 690,923 students with approximately 19% from mainland China (IIE, 2010a). Replacing India, mainland China has become the largest sending country to the U.S.in 2009-10. In fact, without the increase of Chinese students, international enrollments in the U.S. would have declined by more than 10,000 in 2009-10 (IIE, 2010a).

Historically, international Chinese students in the U.S. have generally studied at the graduate level. However, research conducted by the Institute of International Education (IIE, 2005; 2006; 2007; 2008; 2009; 2010a) indicates that the number of undergraduate Chinese students has been steadily increasing, particularly in the past three years. On some campuses, the number of Chinese undergraduate students has surpassed the number of Chinese graduate students. For example, in the academic year 2009-10, there were approximately 900 Chinese undergraduate students at Iowa State University (ISU) as compared to approximately 600 graduate students. In the upcoming fall, ISU is expecting larger increase in the number of undergraduate students from China.

The model of college choice for Chinese students who are considering postsecondary enrollment at an American university often follows a model unique from that followed by

American students. A large number of Chinese students first become aware of specific American institutions and subsequently chose one as their institutional choice through the use of an education agent, which is a third-party entity that is paid to assist a student to find, apply to, and/or prepare for college. In China, as well as in some other international locales, it has become a common practice for students to use agents to assist in finding an international institution that best fits their academic goals and personal interests. For example, many Thai students who studied in Australia obtained information about Australian institutions from agents and made their final decisions based on the agents' recommendations (Pimpa, 2003a).

Using agents to recruit has also become a well-established practice in other parts of the world like Australia, U.K., and New Zealand. The results of research conducted in 1993 found that almost half (46%) of the 7,000 international students studying in Western Australia acknowledged that they were recruited by an education agent (Mazzarol & Hosie, 1996). More recently, 32 out of 37 universities participating in the study "Benchmarking Australian University International Operations 2008" reported paying a commission for 48,388 international students in 2008, representing 55% of their international incoming pool (Olsen, 2009). Forbes and Hamilton (2004) pointed out that education agents play a significant role in helping different regions of Australia "determine, target and niche market to its best potential international student customer base" (p. 502). Although it is common practice to use paid agents to help higher education institutions to recruit international students in countries like Australia and Britain, it is still considered negatively by U.S. educational institutions and has a derogatory reputation in the U.S. (de Luca, 2010).

The majority of agents operate from a premise of finding the best institutions for their clients; however, not all education agents in China (or elsewhere) adhere to the highest of ethical standards (Franklin, 2008). In fact, the actions of some agents have raised educators' concerns. Researchers have pointed out that some agents painted an inaccurate picture of the colleges and universities that they represent (Mazzarol & Hosie, 1996). Even though the American International Recruitment Council was incorporated in Washington, D.C. in June 2008 with the purpose of combating unethical agencies, recruitment agencies still lack industry standards (Redden, 2009).

Statement of the Problem

International students bring great benefits to U.S. higher education. They are important contributors in the areas of medicine, science, and technology, and in the field of scientific research (Brainard, 2005). They strengthen the connections between different nations and provide opportunities to communicate with people from all over the world (Dalton, 1999; Heyward, 2002). In addition to their academic and cultural contributions to U.S. campuses, international students have a significant impact on the local, state, and national economy even though they represent only three percent of the student population in the U.S. higher educational institutions (NAFSA, 2010).

Much has been written about the factors that influence international students' choice of education destination (e.g., Daily, Farewell & Kumar, 2010; Mazzarol & Soutar, 2002; McMahon, 1992), international students' adjustment (e.g., Lee & Rice, 2007; Lin & Yi, 1997; Yeh & Inose, 2002), academic and social challenges (e.g., Cross, 1995; Ward & Kennedy, 2001), international marketing of higher education (e.g., Gray, Fam & Llanes, 2003;

Hemsley-Brown & Oplatka, 2006; Kinnell, 1989), and recruitment practices (e.g., Mortimer, 1997; Ross, Heaney, & Cooper, 2007). These studies illustrated the great interest of researchers in issues of international education and recognition of significance of international students; however, there is a scarcity of research on the role that third-party education agents play in international Chinese students' application to U.S. institutions and their influence on the institutional recruitment practices. In the current economic environment, recruitment officers and university administrators in the U.S. may need to update their knowledge about the practice of using an agent in order to enhance their understanding of student application experiences.

There is virtually no research regarding the balance of costs and benefits of using an education agent nor is there evidence of any testing if international students, particularly Chinese undergraduate students, have been well served by their agents when applying to the U.S. institutions.

Purpose of the Study

Recruitment of qualified international students by U.S. colleges and universities has become increasingly fierce. Moreover, the U.S. dominant status for international enrollment is facing serious challenges by other countries. U.K., Australia, New Zealand, Canada, and many other countries have emerged as strong competitors to U.S. higher education. They have taken steps to make their educational programs more attractive to students in the rest of the world. Using agents to recruit international students in these countries has become a well-established practice and it plays a critical role in increasing international enrollment. Facing a fast, steady growth of Chinese undergraduate students on American campuses and an

increasing competition, it is essential for the U.S. higher education policy makers to understand the role that education agents play in how Chinese undergraduate students select the institution they want to attend, their rational of using agents, and to what extent agents assist students' application. It is hoped that this knowledge can better inform U.S. higher education regarding international Chinese undergraduate's application experience with or without an agent, thus making their application process smoother and easier.

This study collected both quantitative and qualitative data from two groups: prospective Chinese students in China and international Chinese undergraduate students in U.S. institutions. The purpose of this study is three fold:

1. To enhance understanding about Chinese undergraduate students' experience when applying to U.S. higher education institutions;
2. To examine rationale of Chinese undergraduate students using, or not using, an agent to assist their application process and to identify differences or similarities between the two groups; and
3. To explore roles that agents play in Chinese undergraduates' application process and to identify to what extent agents assist their college application preparation.

Research Questions

This study intends to examine Chinese students' experience of applying to higher education institutions in the U.S., with or without assistance of an agent, and to investigate students' rational of using or not using an agent during their college application process. Since prospective students in China and students have enrolled at U.S. institutions were at

different stages of application, two sets of research questions were developed. The following specific research questions were addressed in this study (Table 1):

Table 1

Research Questions

	Prospective Chinese Students (in China)		International Chinese Undergraduates (in the U.S.)
1A	What are the background characteristics of prospective Chinese students who choose to use an agent and those who choose to apply independently?	1B	What are the background characteristics of international Chinese undergraduate students who used an agent and those who applied independently?
2A	Why do prospective Chinese students choose to use or not to use an agent during application to U.S. higher education institutions?	2B	Why did international Chinese undergraduate students use or not use an agent during application to U.S. higher education institutions?
3A	What background factors predict prospective Chinese students' choice of using or not using an agent during application to U.S. higher education institutions?	3B	What background factors predict international Chinese undergraduate students' choice of using or not using an agent during application to U.S. higher education institutions?
4A	What do prospective Chinese students expect to receive from an agent?	4B	What did international Chinese undergraduates experience with an agent?
5A	How do prospective Chinese students describe their concerns of college application with or without assistance of an agent?	5B	How do international Chinese undergraduate students describe their experiences of college application with or without assistance of an agent?

Methodology

This study mainly employed a quantitative approach to answer the research questions in the study. Descriptive and inferential statistics were used to examine demographic characteristics, students' social economic status, and their academic performance.

Independent samples *t*-tests were administered to identify differences and similarities between students who planned to use or used an agent (agent-assisted students) and those who did not plan to use or did not use an agent (non-agent-assisted students). This study also used Chi-square tests to test for any associations between students' characteristics (categorical and dichotomous variables) and their choice of using or not using an agent. Sequential logistic regression analysis was used to determine factors that predict students' choice of using or not using an agent to assist their college application. In addition to quantitative approach, this study included a qualitative component. Semi- structured interviews were conducted to explore concerns that students had towards application and challenges that they encountered during the application process with or without assistance of agents.

Theoretical Frameworks

This study adopts two theoretical frameworks. Cubillo, Sánchez, and Cerviño's (2006) theoretical model of international student college choice and Sharma's (1997) agent theory from a perspective of professions are used to explore the experiences of international Chinese students' application experiences to a U.S. higher education institution and the role that education agents play in students application. The frame work of international student college choice (Cubillo, Sánchez & Cerviño, 2006) provides an overview of factors that influence international students' decision regarding education destination. Sharma (1997) extend agent theory that was first evolved in economics as applied to professions. By using the agent theory from a sociological perspective, relationships between international Chinese students and their agents can be better understood.

Significance of the Study

As discussed earlier, data collected by IIE (2010a) have shown a rapid and steady increase in the number of international Chinese students studying in the U.S. in the past decade. In the 2009-10 academic year, mainland China sent a record high number of Chinese students to the U.S.: almost one out of every five international students was from China (IIE, 2010a). Focusing on this rapid growing student population, this study addresses students' rationale of using or not using an agent for their college application preparation, their expectations and experiences of working with an agent, to what extent they are satisfied or dissatisfied with the agent, and whether the agent-assisted students are better prepared than their non-agent-assisted counterparts. This study is significant for recruitment officers and administrators to enhance enrollment services to better meet specific needs of these students.

U.S. higher education today is facing a more intensive competition even though it still remains the top destination choice for international students (Marginson, 2007). Other countries, such as Canada, Australia, New Zealand, and U.K., have dedicated considerable resources to increase their competitiveness in the market of global education (Varughese, 2005). Effective recruitment, such as using agents, is therefore viewed as a key to international competition. U.S. recruitment officers and university administrators should update their knowledge of working with agents and enhance their understanding of international students' application experience. In so doing, they can develop up-to-date recruitment strategies and to maintain the competitive position of the U.S. higher education in the international education market.

The findings of the study can better inform education practitioners about international

student experiences of college application, advantages and disadvantages of using an agent, and to what extent they are satisfied with agents' assistance. This study may be beneficial for recruitment officers and administrators, particularly those who work at institutions with large international student population or at institutions that would like to increase international enrollment. This study may also provide insightful knowledge for new policies, standards, and programs that intentionally improve college recruitment in general and practice with agents' assistance. Last, this study contributes to the limited literature on international students' application experience, the use of agents in the college application process, international recruitment practices, and ethical concerns of how agents' assist students' application or institutions' recruitment.

Definition of Key Terms

An understanding of the following key terms is essential to this study. They are defined in this section:

Agent-Assisted Student: international Chinese students who planned to use an agent or used one to assist their application to U.S. higher education institutions.

Education agent: third-party entity, which could be a person or a company, who provides services to students seeking to study abroad (usually to pursue a degree) in exchange for a fee. Agents may also receive a commission from the foreign intuitions with whom the agent has an agreement.

Gaokao: a unified national college entrance examination in mainland China. Shortly after the Communist government was established, the *Gaokao* system was launched in 1952. The exam was held once a year until the Great Cultural Revolution broke out in 1966.

College education was abandoned and the *Gaokao* was not resumed until 1977, when the Revolution ended (Liu & Wu, 2006). The *Gaokao* is a "typical example of large-scale selective exams with fierce competitions and extremely high stakes. It has been the most important and most influential exam in China" (p. 8). The *Gaokao* is used as a means to determine college admission as well as a guideline for teaching and learning in secondary education.

Globalization: is defined as actions and procedures in higher education that have cross-national implications which include mass higher education; a global marketplace for students, faculty, and highly educated personnel; and the global reach of the new Internet-based technologies, among others (Altbach, 2002).

High School Track: a common practice in Chinese high schools. High school students usually are asked to choose a science track or liberal arts track in the second or third year of high school. Different exams of the *Gaokao* are designed correspondingly for science- and liberal-arts-track students. Additionally, majors in colleges and universities are designed for candidates in different high school tracks. For example, an engineering program in a 4-year university only recruits students in science-track.

IELTS: an acronym of the International English Language Testing System. IELTS measures English skills of students whose first language is not English. IELTS is now recognized by more than 6000 institutions in over 135 countries, including the U.S. (IELTS, 2011).

Internationalization: refers to the "specific policies and initiatives of individual academic institutions, systems, or countries that deal with global trends, including policies

relating to recruitment of foreign students, collaboration with academic institutions or systems in other countries, and the establishment of branch campuses abroad" (Altbach, 2002, p. 29).

International students: non-U.S. residents with non-immigrant status while studying in the United States. International students generally hold an F-1 or J-1 visa.

Non-Agent-Assisted Student: International Chinese students who did not plan to use or did not use an agent to assist the application to U.S. higher education institutions.

TOEFL: an acronym for the Test of English as a Foreign Language. TOEFL measures English proficiency of students whose first language is not English. It is also an important test for studying in an English-speaking country. Most of the institutions in the U.S. require international students to submit a TOEFL score for full admission (ETS, 2011).

Delimitations and Limitations

This study was delimitated to prospective Chinese students in Central China who intend to pursue a degree in the U.S. and international Chinese undergraduates who enrolled at the U.S. institutions in the Midwest.

As with all research, interpretation of results of the study is subject to several limitations. A limitation of this study is that students at an early stage of application preparation were all recruited from one city in Central China. Zhengzhou, the capital city of Henan province, has a population of over 6,000,000. Compared to large cities like Beijing and Shanghai, students in Zhengzhou have fewer educational opportunities and very limited access to international education. However, Zhengzhou was reported as an emerging center that sends an increasing number of students overseas (Aoji Education Group, 2008).

Research in Zhengzhou can represent many cities of similar size and with limited access to international education, but the results may not be applicable to cities or regions at a very different level of economic development and international education exchange activities. An additional limitation associated with this group of students is that these prospective students may not actually do what they intended to do at the time of the survey or interview. Since they were still at an early stage of college application preparation, their responses to the survey and the interview questions are subject to changes.

Another limitation is a relatively low response rate of the survey that was used to collect data from participants in the U.S. The overall response rate was 29.8%, which can be attributed to several factors. First, email surveys tend to have a lower response rate than those of traditional mail surveys (Sheehan & McMillan, 1999). Second, university registrar or admission offices only provided students' university email accounts. Students may not regularly use their university email accounts. Third, due to the settings of email account, some students may receive the invitation as a junk email and delete it. Some students may not respond to the survey before the deadline.

Both quantitative and qualitative data were self-reported. For various reasons, students sometimes choose not to answer certain questions in the survey. Partially completed surveys were not used in the study.

This study intends to provide perspectives of pre- and post-enrollment to U.S. institutions. This study includes both students in the process of application and those who have successfully completed the application and enrolled in U.S. institutions. However, no statistical analyses can be conducted between the two groups of students since they represent

different sub-populations. Longitudinal changes of students' attitude, over time, towards the application process and their experiences with agents cannot be analyzed through the cross-sectional design of the study.

Outline of Dissertation

This study is designed to better understand Chinese students' experiences applying to U.S. higher education institutions, to investigate factors that predict their choice of using or not using an agent to assist their college application process, and to explore the roles that agents play in students' application. In total, this study includes six chapters.

Chapter 2 first summarizes and synthesizes previous literature on history and current status of international students in the U.S., the benefits they bring to U.S. higher education, and particularly Chinese students in the U.S. Then, chapter 2 reviews previous research that has been done exploring factors that influence international students' choice of country and institution. Additionally, chapter 2 highlights studies of international student recruitment, including challenges for universities increasing international student enrollment, recruiting methods and venues, and particularly, recruitment by agents. Theoretical model of international student college choice is used to explain international Chinese students' choice of studying in the U.S. Agency theory from a professional perspective is adopted to explain the relationships between students and agents.

Chapter 3 explains the quantitative and qualitative methodology in this study. This chapter focuses on research design, research questions, hypotheses, setting, population and sample, instrumentation, data collection, methods of data analysis, and ethical considerations.

Chapter 4 presents detailed information of the findings of data collected from

participants in China. This chapter first provides descriptive statistics of the participants, comparisons between agent-assisted and non-agent-assisted students regarding their background characteristics. Then the chapter shows predictors that were identified from sequential logistic regression. Lastly, this chapter presents themes of findings from focus-group interviews of participants from China.

Chapter 5, focusing on participants in the U.S., presents descriptive statistics of students' background characteristics, comparison between agent-assisted and non-agent-assisted students, and predictors of students' choice of using or not using an agent. This chapter provides themes of findings of interviews from participants in the U.S. institutions.

Chapter 6 summarizes the findings and provides conclusions and recommendations for researchers, educators, recruitment officers, and policy makers.

CHAPTER 2: REVIEW OF THE LITERATURE

Introduction

The presence of international students in the U.S. has been changing over the years. Covering a brief retrospect of the history of international students in American higher education institutions, this chapter provides a review of literature that is important to understand issues related to international students in U.S. higher education institutions, importance of international students to American higher education, international recruitment practices and challenges, and particularly, recruiting international students through education agents. This review of previous literatures provides a foundation for this research. A literature map highlighting essential literature regarding international students' application and recruitment is shown in Figure 1.

History and Current Status of International Students in the U.S.

Since its first establishment, U.S. higher education attracted students from the rest of the world. Internationalism in higher education developed concurrently with higher education itself. International education has been one of the most significant elements in higher education through its history (Hess, 1982).

During the colonial period, U.S. institutions were observed to "have solicited the admission of students from England and the British West Indies, as well as other parts of the world" (Schulken, 1968, p. 13). In the 1800's, students from China were brought to the U.S. by the American Board of Commissioners for Foreign Missions, Asian students from China and other Asian countries were also sponsored by other American foundations. Many Japanese students were supported by their government to study in the U.S. in 1868. In 1872,

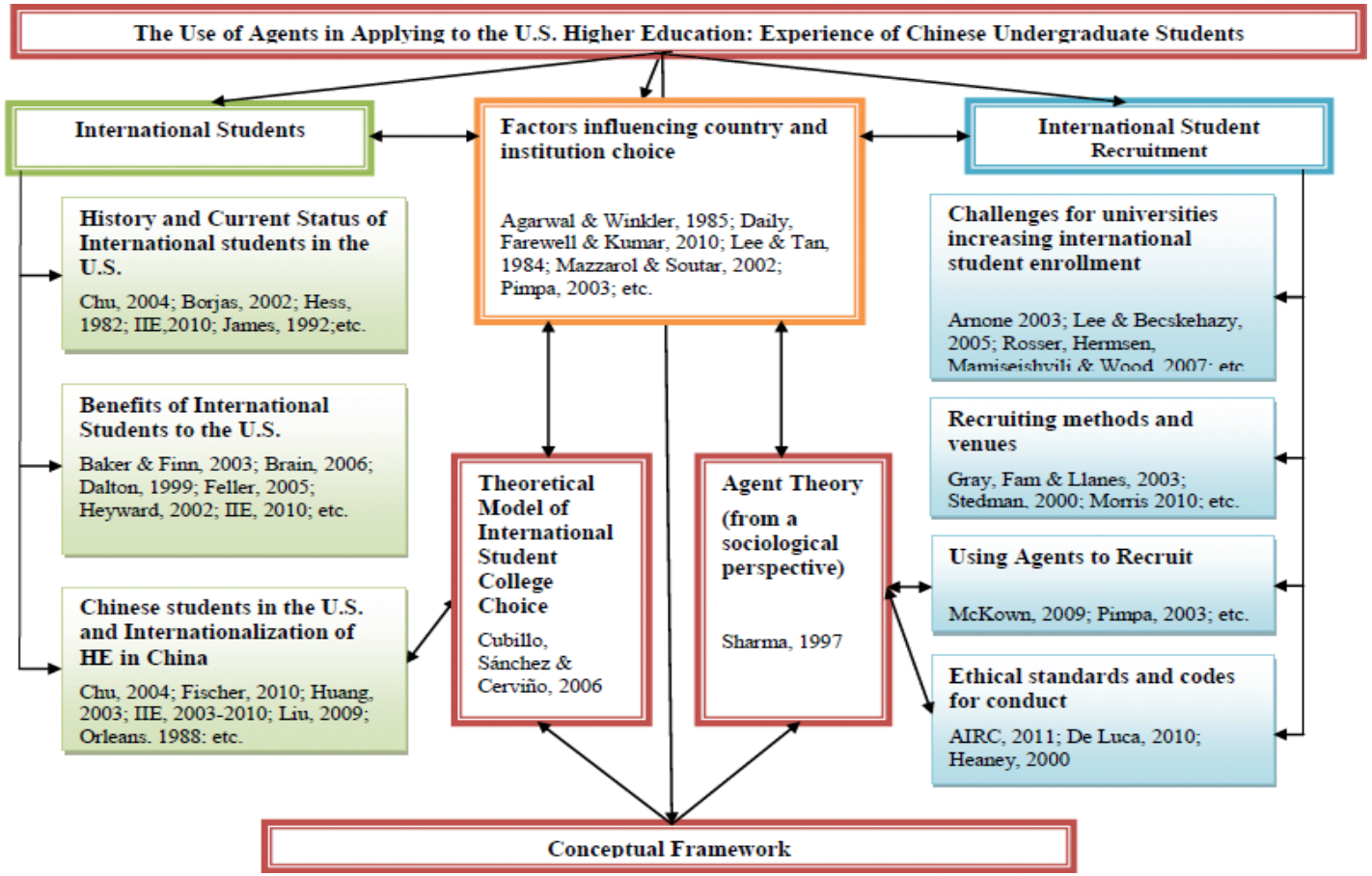

Figure 1. Literature map of the international students' application and recruitment

the Chinese imperial government sent its first dispatch of 30 teenage students to America (Chu, 2004).

This first phase of international student recruitment is accredited to missionaries and their efforts to increase the global Christian population. The second phase of international student recruitment began in the early 1920's when international students were no longer viewed just as potential recruits for the Christian Army. They started to be looked upon as a source of altruism and international comprehension. There was an increasing belief that the only real path to world peace resided in the extensive exchange of people and ideas throughout the world (Schulken, 1968). The Institute of International Education (IIE), which today serves as an advocate to promote student study abroad for American students as well as to attract international students to the U.S., was established by the Carnegie Foundation during the 1920's. The International Education Board of the Rockefeller Foundation and the Ford Foundation also actively participated in the establishment of nonprofit organizations to assist students from abroad (James, 1992).

The third phase of international student recruitment started at the end of WWII and was focused on increased government involvement in international education where cross-cultural and transnational understanding would bring about peace and economic development in the world. The Fulbright Commission Scholarships, funded by the income of war supplies to foreign governments, and other scholarships, sponsored by the U.S. Congress, were aimed at boosting international education (James, 1992).

Since the 1960's, the U.S. has been a major destination of international students. The number of international students pursuing higher education in the U.S. has been increasing

over the past decades and is expected to continue to grow in the future (Figure 2). The number of student visas issued by the State Department increased from 65,000 in 1971 to 315,000 in 2000, almost five times (Borjas, 2002). According to the Observatory on Borderless Higher Education (2003), the U.S. hosts the largest number of international students among all the countries in the world: One out of every five international students selected the U.S. for their higher education (Verbik & Lasanowski, 2007).

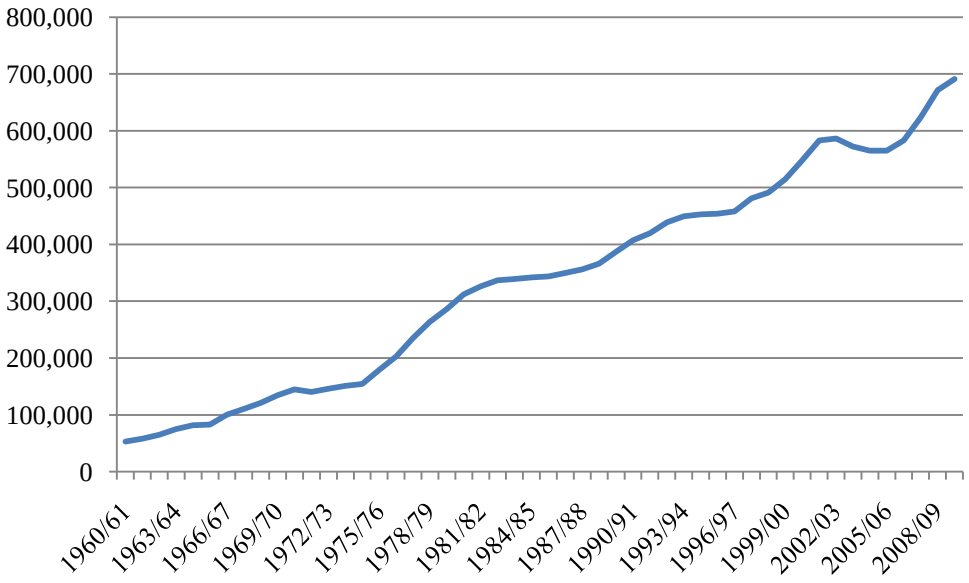

Figure 2. Increasing number of international students pursuing higher education in the U.S.

In the academic year of 2009-10, American colleges and universities have attracted a record number of 690,923 international students, representing almost a 20-fold increase since the mid-1950's (IIE, 2010a). Almost half of the international students (44%) were from the top three sending countries: China, India, and South Korea. Five of the ten leading countries sent more students to the U.S. compared to the previous year. Two countries had double digit increases: China (30%) and Saudi Arabia (25%) (IIE, 2010b). More than one-fifth of the

international students (21%) chose to major in Business and Management in 2009-10, which remained most popular field of study for international students in the U.S. (IIE, 2010b). This is an increase of 5% over 2009. The majority of international students were enrolled at graduate level and nearly 40% were undergraduate students (IIE, 2010a).

Although the U.S. higher education has been dominating the international student market in terms of student numbers in the past decades, in recent years the U.S. has a comparatively weak growth in international student enrollments. For instance, international enrollment in U.K., Australia, Germany, and France increased by 29%, 42%, 46%, and 81%, respectively, from 1999 to 2005, while the increase rate of the U.S. was only 17% over the same period (American Council on Education [ACE], 2006). The U.S. attracts a larger share of the international recruitment market than any other country in the world. Given the capacity of higher education in the U.S., international students were only equivalent to 3.5% of total higher education enrollments in the U.S. (IIE, 2010a).

Benefits of International Students

International student mobility is a rapidly growing phenomenon worldwide, with over 2.5 million students pursuing higher education outside their home country. During the 2009-10 academic year, the number of international students at colleges and universities in the U.S. increased modestly by 3% to a record high of 690,923 students followed a 8% increase in 2008-09 (IIE, 2010a).

According to a national poll commissioned by NAFSA: Association of International Educators (2007), more than 90 percent of Americans believe it is important to prepare for a global society. According to Allan Goodman, President and CEO of the Institute of

International Education, "International educational exchange has never been more important for the United States. International students bring "intellectual, economic, and cultural benefits" to the U.S. campus and communities (IIE, 2003). International students strengthen the connection of different nations and provide opportunities to communicate with people from all over the world.

Academic

International students are important contributors in the areas of medicine, science, and technology, and in the field of scientific research. In fact, academic research and publications heavily depend on international students, particularly graduate students (Brainard, 2005).

The top fields of study for international students are engineering, mathematics, computer science, and physical and life sciences (IIE, 2009). Coincidently, a decreasing number of American students are interested in pursuing degrees in these fields. Except for attracting more domestic students, U.S. higher education institutions have also been encouraged to recruit more international students and scholars to stimulate interest in sciences, technology, engineering, and mathematics (Feller, 2005). It was estimated that in early 2000s, foreign students received almost half of all doctorates in engineering, more than one third in the physical sciences (Borjas, 2002), and approximately 50% in economics (Baker & Finn, 2003). According to Florida (2005), foreign-born scientists and engineers made up 22% of the science and engineering workforce in 2000, which increased from 14% from 1990.

Social and Culture

International students provide American students with additional opportunities to engage in learning from other cultures without leaving home. Domestic students can communicate with diverse peers, explore different cultures, and are exposed to multiple points of view. Through interaction, American students, as well as international students, develop an appreciation for and an understanding of cultural diversity and sensitivity to the peoples within the cultures (Dalton, 1999). Scholars also indicated that through the exposure to diversity and differences, native students developed their cognitive skills and thinking abilities (Heyward, 2002).

Economic

In addition to their academic and cultural contributions to U.S. academic institutions, international students have a significant impact on the local, state, and national economy, although they represent only 3.5% of the student population in higher education institutions. During the 2009-10 academic year, NAFSA estimated that international students and their dependents contributed approximately $18.8 billion to the U.S. economy through expenditures on tuition, housing, books, fees, and other educational and living expenses (NAFSA, 2010). On average, each international student in the U.S. contributed almost $30,000 to the U.S. economy. These expenditures are directly contributed by nearly 70% of international students who relied on personal and family funds or home government/university as their primary source of funding for their higher education in the U.S (IIE, 2010a).

Chinese Students in the U.S. and Internationalization of Higher Education in China

During the past hundreds of years, sending students to study abroad has been viewed by many progressive leaders in China as a means to accelerate the nation's modernization (Orleans, 1988). The Chinese imperial government sent its first group of 30 students to America in 1872. Prior to the establishment of the communist government in 1949, students who returned to China with a degree from a foreign country such as Japan, France, and U.S. played a major role in the awakening society. After 1949, the new government sought support from the outside to strengthen the development of China. This was generally limited to its borders- the former Soviet Union. However, exchange between the two nations did not last long. For political reasons, the relationships between the two countries collapsed in 1960-61 and it did not recover until 20 years later. China shut down almost all the venues to the outside world and only had limited exchanges between Japan and some European countries. With the exception of several hundred students who studied language in U.K., France, Canada, former West Germany, and Japan, however, none of the Chinese students went overseas for professional training (Orleans, 1988). The exchange between the U.S. and China did not occur until U.S. President Nixon's visit in 1972. On December 16, 1978, the two countries announced that a diplomatic relations would be established and soon the first group of 50 Chinese students, mostly physicists and mathematicians, were sent to the U.S. They studied English before enrolling in two-year programs in higher education institutions across the U.S. In the early exchanges, only a small proportion of students were undergraduates and the majority of them were scholars and researchers (Chu, 2004).

The majority of Chinese who studied in the U.S. in the 1970's and 1980's were sponsored by the Chinese government agencies or work units and obtained permission from

the government (Orleans, 1988). Most of them were in their forties, fifties, or even older and came to the U.S. with a J-1 visa. The first small group of Chinese students went abroad using private funds in 1978. Soon an increasing number of students who could demonstrate sufficient financial support went to study in the U.S. It was noted that in 1985, for instance, the number of students who took TOEFL increased shapely. "Study-abroad fever" started sweeping urban China in mid 1980's (Orleans, 1988).

This phenomenon was directly driven by the national open-door policy[1], the needs of economic reforms, and efforts of establishing an education system within the Populism philosophy (Huang, 2007). Internationalization of higher education in China also evolved from outflows of students and scholars studying abroad to a more inclusive process. Since the late 1990's, China has conducted radical reforms of all levels of its education system and endeavored in a series of activities to internationalize higher education, Activities have included internationalization of curricula, inter-institutional cooperation in teaching, learning, and researching, and establishment of joint research and degree programs between Chinese universities and universities abroad (Huang, 2003). To enhance China' global competitiveness and meet the demands of Chinese citizens for higher education, a large-scale, rapid expansion of higher education has taken place since 1999 (Liu, 2009). China's higher education now has shifted from an elite system to mass education and open access. Given the huge population of China, the demand for postsecondary education greatly outnumbers the supply. With an ever growing influence of internationalization, an increasing

[1] Open-door policy, evolved since the late 1970's, is a significant part of China's strategy of economic development via adapting advanced knowledge and technology from foreign countries (Sung, 1991).

number of students seek educational opportunities oversees and went abroad for a degree. And with sustained economic development in the mainland, the option of studying abroad has become more affordable for an increasing number of Chinese families. From 1978 to the end of 2009, approximately 1.6 million Chinese students were either studying at a university outside of China or had completed their degrees (Xinhua Press, 2010).

In the U.S., the number of international Chinese experienced a fast, steady increase in the past decade (Figure 3). In the 2009-10 academic year, China sent a record number of students to study in the U.S., which doubled the number in 2000-01 and increased 30% from the previous year. In total, 127,628 students were studying at the U.S. higher education institutions in 2009-10, suggesting that one out of every five international students studying in the U.S. came from mainland China (IIE, 2010a). In fact, without the increase of Chinese students, international enrollments in the U.S. would have declined by more than 10,000 in 2009-10 (IIE, 2010a).

International Chinese students in the U.S. have generally studied at the graduate level, but the large, rapid influx in recent years has mainly been among undergraduate students (Figure 4). In the 2000-01 academic year, 14.7% of Chinese students pursuing a degree in the U.S. were enrolled in undergraduate programs, while the percentage of undergraduate students increased to almost 40% in 2009-10. The most apparent increases occurred in the past three years, 2008 through 2010. Colleges and universities in the Midwest experienced the greatest increase. Michigan State University had only four Chinese freshmen in 2005 and the number jumped to 445 in fall 2010 (Fischer, 2010). Because there is very little written about motivation and application process of international Chinese undergraduates, yet the

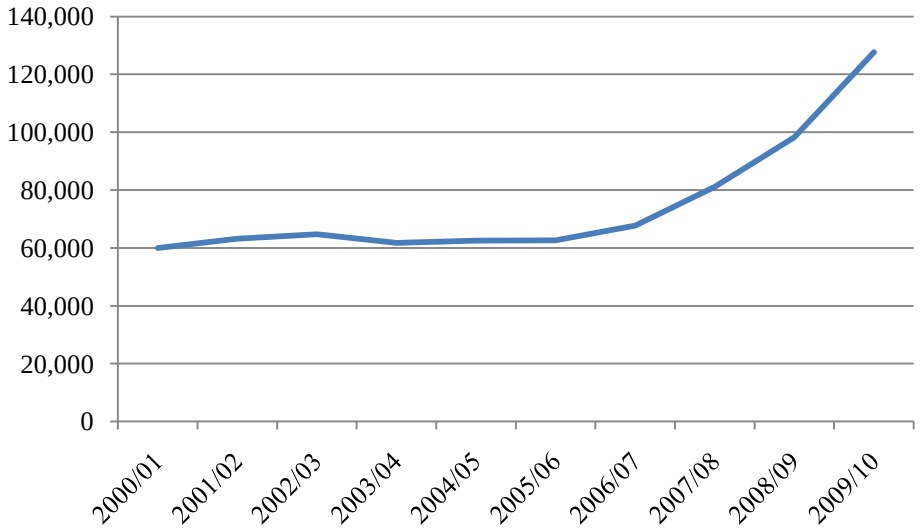

Figure 3. Increasing number of international Chinese students pursuing higher education in the U.S.

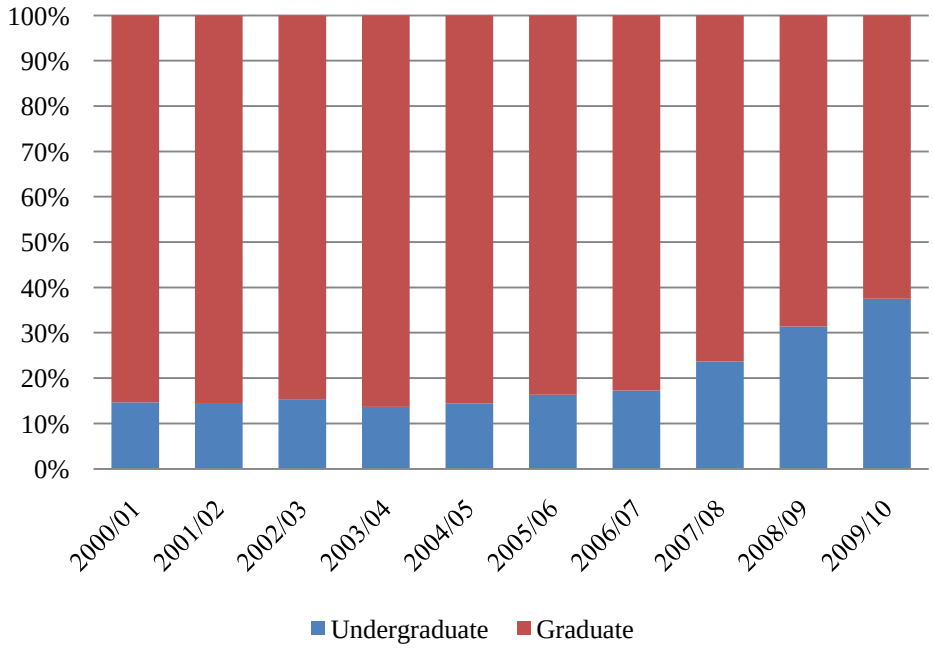

Figure 4. Increasing percentage of international Chinese undergraduate students studying in the U.S.

population of Chinese undergraduates in the U.S. higher education continues to rise annually, research in this area becomes imperative. Thus, this study focuses particularly on the up-rising population of Chinese undergraduate students.

Factors Influencing Country and Institution Choice

Numerous studies (e.g., Agarwal & Winkler, 1985; Daily, Farewell & Kumar, 2010; Lee & Tan, 1984; Mazzarol & Soutar, 2002; McMahon, 1992; Pimpa, 2003b) have been conducted on factors that impact international students' choice of education destination. The decision to study abroad is the most significant and expensive commitment students and their families may ever make (Mazzarol, 1998). In order to make a sound decision, international students consider what is important for them and make a conscious or unconscious trade-off among the attributes (Soutar & Turner, 2002). Unlike domestic students, the factors that influence international students' decision-making extend beyond the typical indicators presented in college access research in the U.S. (gender, race, social class, parents, high school preparation, etc.). International students wanting to pursue higher education in a foreign country have a different process of making decisions as well as a unique set of influencing factors.

Mazzarol and Soutar (2002) indicated that the college choice decision process consists of at least three stages: 1) whether study internationally or domestically; 2) which host country; and 3) which institution. For the procedures, Mazzarol and Soutar explored "push" and "pull" factors that impact students' choice. "Push" factors are the factors that "operate within the source country and initiate a student's decision to undertake international study," and "pull" factors are those "within a host country to make that country relatively

attractive to international students" (p. 82). Other researchers (Bourke, 2000; Srikatanyaoo & Gnoth, 2002) also found evidence that international students tend to choose the country first followed by the institution.

Lee and Tan (1984) studied the international flow from the third level less developed countries (LDCs) to developed countries (DCs) in 1979. Their study identified factors that impacted the flow. When considering U.S. (41% of the flow), France (16%), and U.K. (8%) together, excess demand for tertiary education in the LDCs, relative cost of living in the LDCs compared with the DCs, and the quality of education in the LDCs were found to be significant determinants of the international student flow. Particularly to the U.S., the researchers found that LDCs with English as a first or second language, those with a higher access demand to higher education, and those with better living standards and higher per capita income, had a larger flow to the U.S. On the other hand, LDCs with better science-based training and those with further distance to the U.S. had a lower flow. Focusing on students from 15 developing countries studying in the U.S. in the post-WWII era, Agarwal and Winkler (1985) suggested four principal flow drivers: 1) per capita income in the home country, 2) the price or cost of education in the host country, the education opportunities available in the home country, and 4) the expected benefits of studying abroad. Another study based on students from 18 developing countries during the 1960's and 1970's (McMahon, 1992) suggested that the student flow was greatly influenced by the level of economic wealth, the degree of involvement of developing country in the world economy, the priority placed on education by the government of the developing country and the availability of education opportunities in the home country.

Mazzarol, Kemp, and Savery (1997) studied why international students choose to study in Australia and identified six factors that impacted their selection of a host country, including knowledge and awareness of the host country in the student's home country, cost issues, personal recommendations, environment, geographic proximity, and social links. The institution's capability to assist students in cultural adjustment and transition was found as an influential factor as well. Santovec (2002) pointed out that international students were attracted by a nurturing environment provided by host families as well as a small campus, a secure campus, and local community. In such a nurturing environment, students would take less time to adjust to a new culture and their transition process would be less discomforting. Another factor that attracted students to study in a foreign institution was the outstanding reputation of its academic programs. Mazzarol, Soutar, and Seng (2003) indicated that institutions that are favored by international students are more likely to have "leading edge centers of research and teaching, which cannot be easily duplicated internationally" (p. 36).

Mazzarol and Soutar (2002) studied four separate reports of students from Indonesia, Taiwan, India, and mainland China and found 14 common factors that impacted international students' decision to pursue a degree in Australia. These factors included students' positive perception of education abroad, inclination to a foreign culture, accessibility of information on the host country, students' knowledge of the host country, educational quality in the host country, recognition of a foreign degree in home country, recommendations from family and friends, costs of education in home and host countries, a low-crime rate, a presence of students from the home country, family ties in the host country, etc.

Focusing only on Thai students in Australia, Pimpa (2003b) indentified five major

influences on their decision making process of seeking higher education in other countries. These factors were finance, information, expectation, competition, and persuasion, with finance and expectation having the strongest influence on students' choice. In another study (Daily, Farewell & Kumar, 2010) based on international business majors in the U.S., 17 factors were found important to students' decision. Among them, the three most important factors were career development, financial aid opportunities, and reputation of the institution. Institution's national ranking and prestige was most important for international students, particularly international students from East Asia, in choosing where to study (Lee, Maldonado-Maldonado, Rhoades, 2006).

A study (Maringe & Carter, 2007) of international African students in U.K. pointed out that political instability in many parts of Africa drove students to study overseas. Orleans (1988) found that political changes were an influencing factor among Chinese students in the 1980's shifting policies in China affected students' attitudes towards and action of studying in the U.S. Orleans found Chinese students chose to study in the U.S. for two major reasons: academic and economic gains. In a later study, Wan (1999) agreed that dissatisfaction with political environment in the home country "pushed" some Chinese students to study in the U.S. They were also motivated to obtain a graduate degree, thus pursuing a successful career and a satisfactory life.

In addition to the push-pull framework, information sources were also found important for students when considering studying overseas. Gomes and Murphy (2003) found that more than half of the students used the Internet to help them choose an overseas study destination. They also suggested that institutions should develop "e-business strategies

to target parents" (p. 51) by providing information in a section that is particular for parents, because parents usually have a decisive influence on students' choice. Pimpa (2004) agreed that family had a strong influence on Thai students' choice of studying abroad and studying countries. Another research (Bodycott, 2009) of mainland Chinese students in Hong Kong acknowledged the influence of Confucian values of *filial piety* and confirmed that parents play an integral role in students' decision making process.

The education agent is another important source of information and plays a critical role in students' decision-making process. However, most of the studies regarding students' experiences of using an agent were conducted in New Zealand, Australia, and U.K. Focusing on international Chinese students in New Zealand, researchers (Chung, Holdsworth, Li & Fam, 2009) found that representative agents, followed university open days (offshore campuses in China) and education fairs, was one of the top three communication sources for university choice. Another study conducted based on survey results of 3000 international students in New Zealand indicated that 61% received information from agents and made decisions of studying in New Zealand based on agents' recommendations. Among these students, the vast majority of them (78%) used agents from their own country. On average, students' experience with agents was not high: the most satisfied service, applying for a student visa, was below 3 on a 4-point Likert Scale (1 = poor and 4 = excellent). Only one fourth of the students who used agents were very or extremely satisfied with agents' service. Among African students in U.K., private agencies are one of the key influencers of their choice of education (Maringe & Carter, 2007).

Studying Thai students in Australia, Pimpa (2003a) found evidence that agents were

important sources of information that played an important role in students' decision making process. Agents were reported as the most up-to-date and reliable source of international information. More than half of the information that participants received came from education agents. However, agents were found less persuasive when compared to friends and family members. Although some students heavily relied on agents' recommendations, some only used agents as a part of their information search and expressed concerns of being cheated by agents. Pimpa pointed out that this phenomenon reflects agents' negative commercial image among Thai students.

In sum, it can be concluded that students' choice of their education destination and institution is complex and multi-level decision making process. A wide range of factors involved in this process have been identified, including factors from the home country that "push" and ones in the host country that "pull" a student to study abroad. Both person and non-person factors have an impact on students' final choice of education. There is limited literature regarding international students' choice that was conducted in the U.S. There is also scarce literature analyzing the decision-making process of international Chinese students. This study focuses particularly on the roles of agents play in Chinese students' application to the U.S. colleges and universities.

International Student Recruitment

The motivations for recruiting international students vary and can be a combination of multiple factors. For some countries, international students are sought to increase and maintain scientific, technological, and economic competitiveness; some countries view international students as main source to enrich social-cultural exchanges; and for some

countries the key factor behind recruiting international students is financial awards. International students in Australia were reported to contribute directly and indirectly approximately $12 billion to the Australia economy, which was the third largest merchandise and service export in 2006-07 (Australian Government Department of Foreign Affairs and Trade, 2008). As stated earlier, the U.S. higher education also gains great financial benefits from internationals students and their dependents: $18.8 billion was contributed to the U.S. economy in 2009/10 (NAFSA, 2010).

Challenges for Universities Increasing International Student Enrollment

Although international students bring many positive aspects to U.S. higher education, international education recruitment is easily impacted by the changes of the political environment. An example is the terrorist attacks on September 11, 2001. Concerns of national security led to visa restraints and apprehension towards international students, especially those from Muslim-predominated countries, leading the federal government to tighten up entry for all foreigners (Lee, 2008). As a result, international student processing is now handled through the Student Exchange Visitor Information System (SEVIS), a national database that keeps track of international students and scholars in the U.S. (Rosser, Hermsen, Mamiseishvili, & Wood, 2007). However, greater scrutiny and higher cost of application may have negative impact on international recruitment. Researchers found that international students in the U.S. were not pleased with visa and SEVIS procedures, which may lead to some doubt about studying in the U.S. (Lee & Becskehazy, 2005).

The new rules and regulations for upcoming international students greatly hindered the growth of international education exchange (Lee, Maldonado-Maldonado, & Rhoades,

2006). As a result, the catastrophic event brought 32 consecutive years of international student enrollment increase in the U.S. to an abrupt halt (IIE, 2005).

The U.S.'s predominant status for international higher education student enrollment is now facing serious challenges by other countries. Well aware of benefits that international students could bring, U.K., Australia, New Zealand, Canada, and many other countries have emerged as strong competitors to the U.S. higher education. These countries have taken steps to make their educational programs more attractive to students in the rest of the world. They also improved their services in college application, transition of life, accommodation of learning, and even immigration after graduation. Therefore, U.S. higher education is competing with these emerging international education leaders to gain more students from the extensive global pool (Altbach 1989, 1998, 2004; Lee & Rice, 2007). Colleges and universities in the U.S. do not cater their support services, such as admission and registration, to the unique needs of international students, ignoring the fact that international students may encounter more difficulties as compared to native students (Lee, Maldonado-Maldonado, & Rhoades, 2006).

As a result of the competition, U.S. higher education may confront loss of degree programs, revenues, and enrichment of diversity in classroom and extracurricular activities. To avoid such results, many institutions have developed recruitment policies to encourage international students to choose to pursue a degree in the U.S. and have dedicated staff members to work directly with them.

Recruitment Methods and Venues

In recent years, university recruiters have come to rely heavily on electronic media in

the context of international student recruitment, including, but not limited to, promotional videos and DVDs, commercial websites, and university websites. They also use educational fairs, alumni clubs, newsletters, emails, and advertisement in magazines and other printed literature (Stedman, 2000). Facing an increasing competitive market, many universities are seeking new approaches to prospective students.

The Internet is the most widely used tool by university admission offices to disseminate academic programs and application information to potential applicants (Gray, Fam & Llanes, 2003; Mentz & Whiteside, 2003). Traditional media are gradually replaced by electronic documents. Students in some countries or regions may find it expensive to use the Internet or have limited access to the online information. In some areas, people still rely on the traditional dial-up Internet services, which may not support graphics, pictures, and flash on the institution websites. Thus, applicants in those areas may have a difficult time downloading or reviewing the online information. Educational fairs provide students with great opportunities to learn about various universities via direct conversation with recruiters. The fairs were reported as the most important source of initial information by both mainland Chinese students studying in Hong Kong and their parents (Bodycott, 2009). However, attending such fairs might be challenging for students who live a great distance from the host city. Students who do attend educational fairs may feel overwhelmed or confused with stacks of printed flyers or brochures. Facing severe budget-cuts, many institutions who presented at educational fairs in the past now may have to limit their participation or totally eliminate the overseas recruitment activities. Under such circumstances, online virtual student fairs, such as the Greater China Virtual Student Fair sponsored by the InternationalStudent.com, are

designed to facilitate the communications for both students and institutions with challenges of time, distance, or budgets. Similar problems of using Internet to recruit would potentially occur to virtual education fairs. Open days, similar to education fairs, can be used as vehicles to provide more personalized information, but they only can be applied by institutions which have campuses in the targeting foreign countries (Gray, Fam & Llanes, 2003).

Supported by the Bureau of Education and Cultural Affairs (ECA) at the U.S. Department of State, EducationUSA is a global network of more than 400 advising centers in 170 nations across the world, "offering accurate, unbiased, comprehensive, objective, and timely information about educational institutions in the U.S. and guidance to qualified individuals on how best to access those opportunities" (EducationUSA, 2010). These EducationUSA information centers are often located in certain areas, such as the U.S. embassies and consulates, bi-national centers, IIE offices, American Councils, and are frequently associated with Fulbright programs or other non-profit organizations that promote international education. Restraints of location greatly limit access to information of studying in the U.S. Although rich information is provided on the website or center of EducationUSA, many students are not aware of existence of such assistance. For example, in mainland China, by January 2011, there was only one office of EducationUSA located in Beijing with seven listed advisers (EducationUSA, 2011).

Using Agents to Recruit

Another type of overseas advisement center of particular importance to this study is the third-party education agent. In this study, the education agent refers to a third-party entity, which could be a person or a company who provides services to students seeking to study

abroad (usually intend to pursue a degree) in exchange for a service fee from the students. They may also receive a commission from the foreign intuitions that accepted the students. These agents are often referred to as representatives or education consultants.

Using education agents to recruit international students has become a common practice in many English speaking countries such as Canada, Australia, and New Zealand. However, historically, international recruitment administrators in the U.S. viewed recruitment practice with third-party agents as a symbol of weak recruiting practice and poorly prepared team (McKown, 2009). American leaders and policy makers of higher education pay little attention to the fact that agents' services have been widely used in international students' application or stereotypically regard using education agents to recruit as a negative practice. Although an increasing number of American higher education institutions have begun using agents as part of their international recruitment policies and their attitude towards agents is shifting, admission officers in many colleges and university are still questioning whether it is ethical to recruit through an agent. NAFSA's guide to International Student Recruitment made it clear that utilization of agents in international recruitment practice is ethnical as long as the agent represents the recruiting institution consistently and abides to ethical principles (McKown, 2009).

Using agents to assistant college application is also a well-established practice in Asia. Over the years, the number of Asian students placed by agents has grown considerably (De Luca 2010). Many agents provide "one-stop" type of services, including a full-range of information, counseling, application, and visa-processing (Pimpa, 2003b). Some students heavily depend on agents to guide them through the college selection and application process

while some only use agents as a source of information (Hagedorn & Zhang, 2010).

A rapid growth of agents has been observed in China over the past decade. According to the list provided by the Ministry of Education of China, as of January 2011, there were approximately 400 registered educational agencies in mainland China (The Ministry of Education of China). These agencies are clustered in large cities, with higher standard of living and more active cultural and educational communities. Almost one fifth of the agencies are located in Beijing while only a few were in provinces with lower GDPs, like Qinghai, Xinjiang, and Gansu.

The bias against using agents that is found in many less developed areas of China may be the result of a lack of experience of working with agents combined with the student's lack of knowledge and experience with the application process. The students and parents do not recognize value by the services and assistance the agents can provide. Without a careful examination of international students' rational of using agents, their experiences with agents, and the relationship between students and agents, U.S. colleges and universities will not be able to fully understand roles that education agents play in international students' college application or recruitment of international students in the U.S. Unfortunately, there is virtually no literature exploring international students' application experiences with or without agents' assistance and to what extent agents assist international students' application. Therefore, this study mainly focuses on examining the extent to which education agents assist international students in selecting, applying to, and enrolling in colleges and universities in the U.S.

Ethical Concerns of Using Agents

From an institutional perspective, working with qualified and professional agents can be an effective and efficient means to increase the quality and quantity of international students in the U.S. Responsible agents can provide the U.S. institutions with fast and direct access to local students, reduce cost of recruitment, present timely feedback, and provide a local infrastructure (de Luca, 2010). From a student perspective, a qualified agent who follows ethical standards and codes could benefit international students by helping them with college selecting, filling out application forms, visa interviews, travel arrangements, insurance, examinations, and other necessary services critical to successful application. A trustworthy agent could also help students better adjust to the new learning environment, providing useful information about the campus, local transportation, cost of living, weather, social and cultural life.

Conversely, unethical agents can harm institutions as well as students. Ethical issues can arise when an agent misrepresents host institution, intentionally or by accident. When the agent has too much authority in assisting students, ethnical issues may also occur (Heaney, 2000). Unethical agents could portray inaccurate picture of the universities and colleges in order to maximize their profits, but unfortunately, most of the students have little control over any unethical practices.

To combat unethical practices of agents, the American International Recruitment Council (AIRC) was founded in 2008. Created by accredited U.S. colleges and universities, AIRC is a non-profit organization that intends to "address known deficiencies in the higher education marketplace through the adoption of ethical standards" (AIRC, 2011). By February 2011, 127 institutions in the U.S. and 32 agents mainly from India and China

participate in AIRC. AIRC provides training for agencies and create a certification system for international students to be able to evaluate recruiting agents in a more effective manner.

Theoretical Framework

This study adopts two theoretical frameworks. Cubillo, Sánchez, and Cerviño's (2006) theoretical model of international student college choice and Sharma's (1997) agent theory from a perspective of professions are used to explore the experiences of international Chinese students' application experiences to a U.S. higher education institution and the role that education agents play in students application. The frame work of international student college choice (Cubillo, Sánchez & Cerviño, 2006) provides an overview of factors that influence international students' decision regarding education destination. Sharma (1997) studied agent theory; an evolution of that first evolved in economics from a professional perspective. By using the agent theory from a sociological perspective, relationships between international Chinese students and their agents can be better understood.

Model of International Student College Choice

From a service perspective, Cubillo, Sánchez, and Cerviño (2006) developed a theoretical model of international student college choice to determine prospective international students' purchase intention, which is "used as a predictor for the preferential choices of consumers, and is defined as the intention of the student regarding the destination country as provided of the education service" (p. 104). This model comprises the purchase intention as a dependent variable and summarizes 19 independent variables to four factors: personal reasons, country image, institution image, and program evaluation (Figure 5).

Students' personal reasons include personal improvement, skill development, further

career opportunities, reorganization of the institution and programs, service expectation, and advice from others. Country image can greatly influence the purchase intention of students and their perception of education. It is also the first source that consumers consider in the decision making process because it was found that consumers' attitude towards the products or series are associated with their conceptions of the country of origin. Prospective students tend to hold a higher perceived value of the quality of higher education in countries towards which they hold a positive or favorable attitude. City image also has an influence on students' choice since the city represents the environment where international students will attend college. Institution image, including academic reputation, quality and expertise of faculty, attractiveness of the campus, quality of facilities, students' services and activities, institutional cultures, etc., can strongly impact students' choice of institutions. The last factor, program evaluation, influences students on their selection of a program and a major. Suitability, selection of courses, entry requirements, costs, and opportunities of financial support will be considered before a prospective student decides in which program to enroll.

Agency Theory from a Professional Perspective

Agency theory can be adopted to explain any contractual relationship of two (or more) parties, where one party (principal) engages another party (agent) to perform some service on behalf of the principal. Usually the principal provides a financial payment for the agent's service (Ross, 1973; Jensen & Meckling, 1976). Agency theory originates from the fields of economics and has been applied in the fields of accounting, marketing, public administration, not-for-profit organizations, and politics. However, agency theory is less familiar to researchers in higher education and only a small amount of research has been conducted in

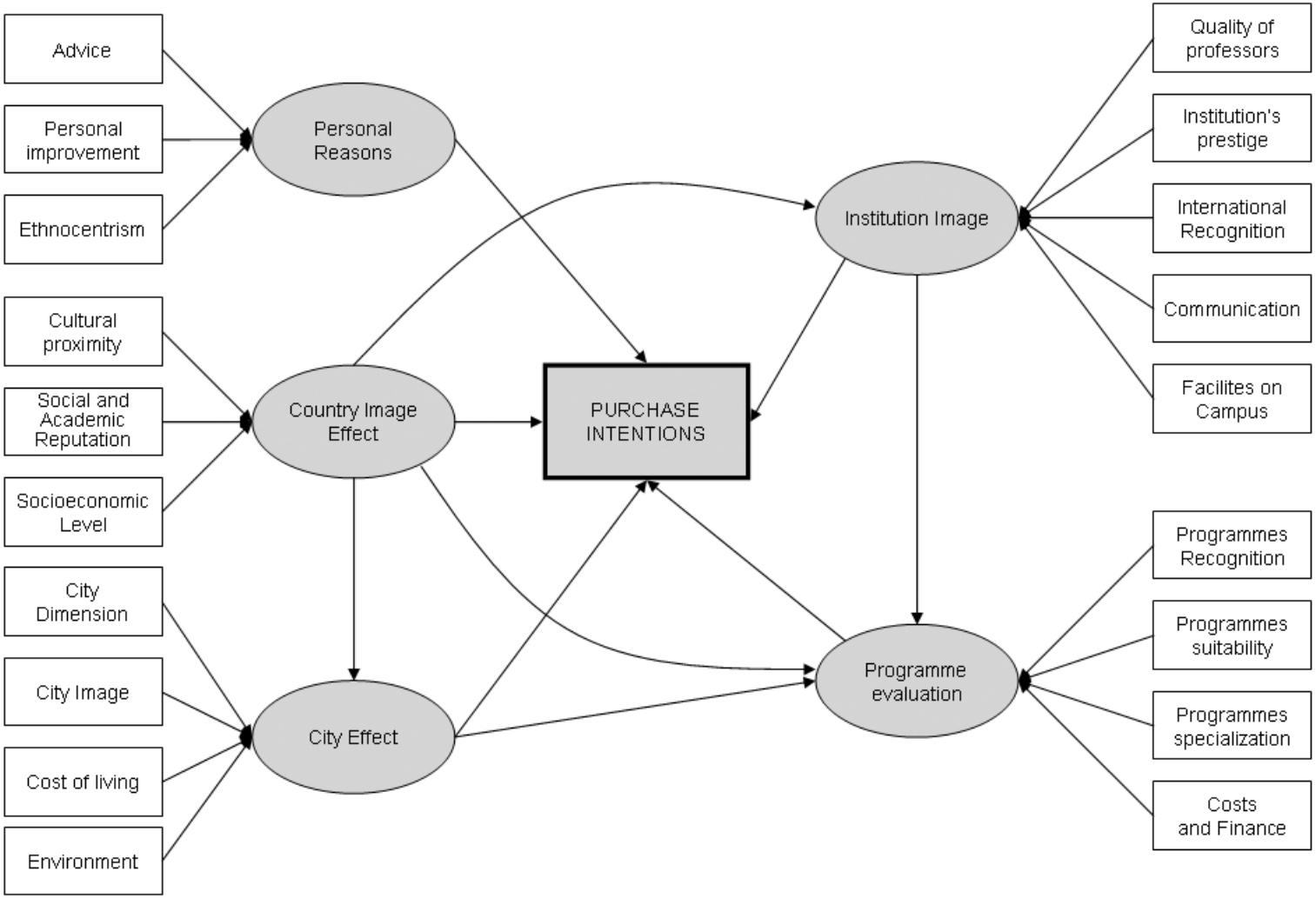

Figure 5. A model of international students' preferences (Cubillo, Sánchez, & Cerviño, 2006, p. 107)

the field. For example, Kivisto (2005) used agency theory to illustrate and examine the inter-organizational relationship between government (principal) and publicly funded higher education institutions (agents). Van der Meulen (1998) examined the field of science policies through the perspective of agency theory.

Specifically focusing on professionals, Sharma (1997) indicated that professionals as agents shared common characteristics with other types of agents (as managers), such as self-interest and bounded rationality, but they form a different relationship with principals in three ways: "(1) power asymmetry favoring professional agents, (2) oversight by the community of peers, and (3) coproduction of an intangible service product" (p. 772).

Power asymmetry

In a principal-professional exchange, professional agents are usually regarded as experts in certain occupations, such as law, accounting, and medicine. Professional agents usually have power over lay principals and have strong influence on the standards of exchange because of their expertise and task-related knowledge. Consequentially, principals usually have difficulties to evaluate the effort invested or the outcome accomplished by professional agents. "Not knowing *how* the agent does a job is distinctly different from and compounds the problem of not knowing *what* the agent does" (p. 768).

Oversight

As mentioned earlier, professionals' behavior can be opaque to nonprofessionals, so their contributions to the observed outcome cannot be measured precisely. As a result, behavior- and outcome-based controls, means recommended by traditional agency theory to restrain agents' opportunist behaviors, are not applicable to professionals (Sharma, 1997).

Coproduction

In the traditional agency theory, principals have a passive relationship with agents. Conversely, in principal-professional relationships, principals are actively involved in the development of the service and they work together to obtain joint outcomes (Sharma, 1997).

To restrain the potential opportunistic inclinations of professionals as agents, Sharma (1997) provided four factors: agent self-control (restrains from agency itself), community control (from knowledgeable peers), bureaucratic control (from the internal structure and systems of the professional firm), and client (Figure 6). Independently or in combination, these four factors are believed to reduce the potentiality of opportunistic behaviors of agents who provide knowledge-intensive intangible series to lay principals (Sharma, 1997).

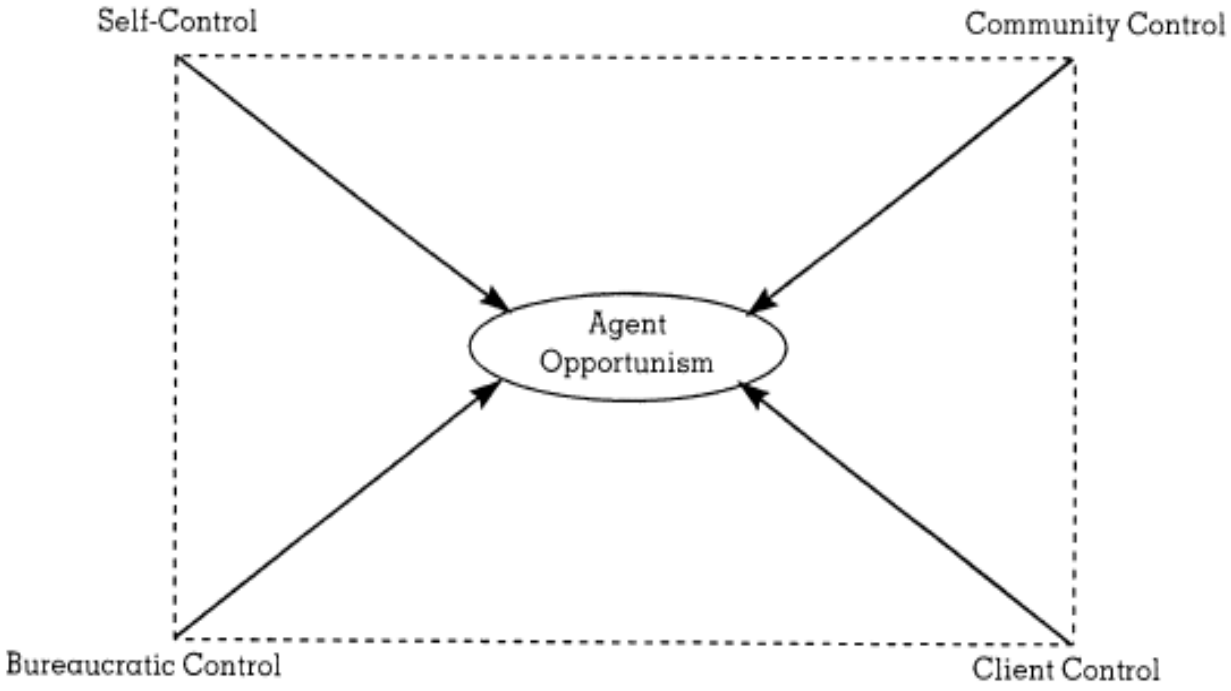

Figure 6. Restrains on agent opportunism (Sharma, 1997, p. 775)

Summary

Divided in four sections, Chapter 2 has presented a review of the literature in relevant topics to serve as a foundation for the study. Literature regarding international students' application experience with or without assistance of agents and using agents to recruit is minimal.

Beginning with a brief introduction to the history of international students in the U.S., the first section depicted a picture of international students' mobility since the nineteenth century. Second, the section summarized the importance of international students to American higher education in three major aspects: academic, social and cultural, and economic. Last, the section highlighted the flow of Chinese students to the U.S. and internationalization of higher education in China.

The second section of this chapter focused on the factors that influence international students' choice of education destination. However, the majority of studies were conducted in Australia, New Zealand, and U.K.

The third section presented a collection of literatures in the field of international student recruitment practice, methods, and venues, and specifically recruiting activities through third-party agents and ethical standards and codes for conduct.

The last section of this chapter introduced two theoretical frameworks: Cubillo, Sánchez, and Cerviño's (2006) theoretical model of international student college choice and Sharma's (1997) agent theory from a perspective of professionals. The model of international student college choice provides an overview of factors that influence international students' decision regarding education destination and the agency theory with a concentration on

principal-professional exchange is essential to understand the relationships between students and third-party education agents.

CHAPTER 3. RESEARCH METHODOLOGY

Overview

The purpose of this study is to investigate the experiences of international Chinese students who are applying to a U.S. college or university and role that agents play in assisting students. It will investigate their rational of using or not using an educational agent to assist in the entire application and challenges and the difficulties they encounter during the process with or without an agent's assistance. This study also intends to identify the differences between students who chose to use an agent and those who do not. To better understand Chinese students' experiences, this study collected data from two groups of international Chinese students: 1) students were at an early stage of preparation of studying in the U.S. and 2) students who have successfully gone through the application procedures and enrolled in the U.S. colleges and universities. The first group of students provided a perspective focusing on expectation, whereas the second group reviewed their experience and shared what they could have done differently.

A different survey was administered to each group. However, the major content of the two surveys was similar, both of which were designed to better understand students' rational of studying in the U.S., their application expectation and/or experiences, and the factors that impacted their choice of using or not using an agent. In addition to the surveys, qualitative interviews were conducted to collect in-depth information of international Chinese students' experience of applying to a U.S. institution with or without assistance of agents. The knowledge gained from this study can assist institutional policymakers and educational institutions in gaining a better understanding of international students, particularly those from

China, about their application experiences and the role of education agents in the international students' application process, thereby improving international student recruitment and providing better services for international applicants.

This chapter provides a detailed description of the methodological approach that was employed in the study. This chapter also outlines the research questions, hypotheses, data set, research design, participants, data collection, instrumentation, variables, data management, and methods of analyses for both quantitative and qualitative data. At the end of the chapter, limitations and delimitations of the study are presented.

Research Questions

Two sets of research questions were developed due to the different states of the participants in the application process: prospective students at the beginning state of the process and students already attending U.S. institutions (Table 1).

Exploration of these research questions provides important information regarding international Chinese students' application experiences and, more specifically, their rational of using or not using an agent to assist their application process. This study also provides essential information on the role of education agents in Chinese students' college application and the relationship between students and the agents.

Hypotheses

Only research question 3A and 3B require a hypothesis because this question in inferential and predictive in nature.

Research question 3A: "What background factors predict prospective Chinese students' choice of using or not using an agent during application to U.S. higher education

Table 1.

Researcher Questions

	Prospective Chinese Students (in China)		International Chinese Undergraduates (in the U.S.)
1A	What are the background characteristics of prospective Chinese students who choose to use an agent and those who choose to apply independently?	1B	What are the background characteristics of international Chinese undergraduate students who used an agent and those who applied independently?
2A	Why do prospective Chinese students choose to use or not to use an agent during application to U.S. higher education institutions?	2B	Why did international Chinese undergraduate students use or not use an agent during application to U.S. higher education institutions?
3A	What background factors predict prospective Chinese students' choice of using or not using an agent during application to U.S. higher education institutions?	3B	What background factors predict international Chinese undergraduate students' choice of using or not using an agent during application to U.S. higher education institutions?
4A	What do prospective Chinese students expect to receive from an agent?	4B	What did international Chinese undergraduates experience with an agent?
5A	How do prospective Chinese students describe their concerns of college application with or without assistance of an agent?	5B	How do international Chinese undergraduate students describe their experiences of college application with or without assistance of an agent?

institutions?"

Hypothesis 1: There is no relationship between background characteristics and prospective Chinese student's choice of using or not using an agent.

Research question 3B: "What background factors predict international Chinese undergraduate students' choice of using or not using an agent during application to U.S. higher education institutions?"

Hypothesis 2: There is no relationship between background characteristics and international Chinese undergraduate students' choice of using or not using an agent.

Data Set

This study employed two original data sets collected by the researcher. The first data collection was funded by the Center for Enrollment Research, Policy, and Practice at the University of Southern California during the spring of 2009. The project collected data from both international Chinese undergraduate students studying at three U.S. institutions in the Midwest and prospective students who were still in high schools in North Central China in summer 2009. The researcher was a co-principal investigator in the project. Additionally, in fall 2010, the researcher collected data from international Chinese students who were newly admitted to two of the U.S. institutions, utilizing the same questionnaire and interview protocols. Altogether, the data were managed in two different sets: 1) data collected from prospective students in North Central China in summer 2009 and 2) data collected from international Chinese undergraduate students at three Midwestern colleges and universities in fall 2009 and fall 2010.

Research Design

This research employed a quantitative research design with a qualitative component. Both surveys and focus group interviews were utilized to gain a better understanding of Chinese students' application experiences with or without assistance of agents. The purpose of conducting the survey was to collect information about the students' demographic characteristics, socioeconomic status, academic background, students' reasons for choosing to use, or not to use, an agent, and their expectation of, and experience with, an agent.

The research design was *ex post facto* and designed to examine outcomes to predictors, rather than from predictors to outcomes (Light, Singer, & Willett, 1990, p. 135). This design allowed the researcher to focus on the outcome groups, students intending to use, or who have used an agent and those who have not. By using surveys, quantitative or numeric data can be collected from the sample and a description of trends, attitudes, or opinions of a population can be generated (Creswell, 2009, p. 145).

Due to the differences between students who were at an early stage of the application process and those who have successfully completed the college application, a separate survey was designed specifically for each group. This design allowed the researcher to evaluate students' experiences from two perspectives: pre- and post-enrollment in the U.S. higher education institutions. This design provided more comprehensive information about the processes of college application and its aftermath.

The survey for students in China was administered in a pencil-and-paper format and was delivered to each student personally in their high school classroom. The survey for international undergraduate students in the U.S. was administered in an electronic format via Qualtrics, an online survey program. Both survey instruments included quantitative and open-ended questions. Since some students struggle with English and may feel intimidated answering questions in English, both surveys were written in Chinese. Corresponding English translations for international Chinese students in the U.S. were provided, because computers on campus may not recognize the Chinese characters and some students may prefer reading in English.

Additionally, semistructured interviews were conducted with both samples to find

additional support and detailed information in the areas covered by the survey. The interviews were conducted in the students' native language, Chinese, to preserve the natural settings of the participants where they can most authentically reflect their thinking (Seidman, 2006).

Settings

This research was conducted in both China and the U.S.

In China, the researchers focused on prospective undergraduate students in Zhengzhou, Henan. Zhengzhou is located in the North Central China with a population of over 6,000,000. It is the capital city of Henan Province, which is the most populous province in China with a population of over 100 million. Compared to large cities like Beijing and Shanghai, Zhengzhou students have fewer educational opportunities and very limited access to international education. Chinese agents reported a substantial increase in the number of students pursuing a bachelor's degree in the U.S come from this city and other North Central cities (Aoji Education Group, 2008). It remains unknown whether the large increase is related to the booming education agent services or other factors. Research in Zhengzhou can represent many cities of similar size and limited access to international education. The results of the research can be useful for other locations and help open international education opportunities across China.

Twenty schools were chosen at random from 63 high schools or equivalent secondary education institutions in Zhengzhou area, reflecting diverse demographics. An invitation letter written in both Chinese and English was faxed or emailed to the principal of each school. Five schools eventually accepted the invitation and agreed to participate in this

research study. These schools includes a key public high school (HS1), a public high school specializing in foreign language education (HS2), a private English training school affiliated with a public university (HS3), a private college preparatory school (HS4), and a private English training school that provides language test preparation (HS5).

In the U.S., the researchers focused on the higher education institutions in the Midwest. Traditionally, universities and colleges located in the east and west coasts attract the majority of international Chinese students and students from other countries. However, it was noted in recent years, there has been a rapid increase in Chinese undergraduate enrollment in the Midwest (Welsh-Huggins, 2008). Three higher education institutions in the Midwestern section of the U.S. were purposefully chosen: a large public research university (HEI1), a public master university (HEI2), and a private not-for-profit liberal arts college (HEI3). According to the Carnegie Classification, HEI1 was identified as a large 4-year research university with very high research activity; HEI2 was a medium 4-year Master's college; and HEI3 was a small 4-year baccalaureate college—Arts & Science. These institutions were purposefully chosen because they are located in the Midwest, differ by institution type, and have a high proportion of international undergraduate students or experienced a fast increase of international Chinese undergraduate enrollment compared to other institutions of the similar type in the Midwest. It must be noted that few liberal arts colleges have large numbers of undergraduate Chinese students.

Population and Sample

The targeted population is international Chinese students who desire to pursue a bachelor's degree through U.S. colleges or universities. The study population consists of two

different groups of Chinese students: students who started the application process in Central China and those who were enrolled at four-year institutions in the Midwestern U.S.

Sample in China

The researchers met 506 students from the five different schools. These students were invited to participate in the study by their principals and teachers. A paper based survey written in Chinese was hand delivered to each student. A total of 471 students completed the survey, with a response rate of 93%. Among all the respondents, 123 indicated that they planned to pursue a bachelor's degree in the U.S., which was 40% of 314 students who were willing to study abroad for postsecondary education (Table 2). The goal of this study is to explore international Chinese students' application experiences, with or without agents' assistance, to a U.S. higher education institution. Only students who indicated they planned to receive a degree in the U.S. were included. Among the 123 students, over 80% were 18 years old or younger, slightly less than half (48%) were female, the majority (91%) were juniors and seniors in high schools, and more than half (56%) had at least one parent with a bachelor's or a more advanced degree. Of the 123 participants, 65% reported that they were using or planned to use an agent.

All students were invited to participate in follow-up focus group interviews. Approximately 60 students were interviewed but only the interviews of the 24 who expressed interests of obtaining a bachelor's degree from a U.S. institution were included in this research.

Sample in the U.S.

In the three Midwestern institutions, 954 international Chinese undergraduates were

contacted via email requesting their participation in this study in fall 2009. Students' email addresses were provided by the Office of Institutional Research or Admissions Office of the institutions. In total, 284 students responded to the online survey link and 210 valid surveys were used in the study. In fall 2010, an addition of 335 Chinese undergraduate students who were newly admitted to HEI1 and HEI2 were invited to participate in the study. A total of 128 students responded to the online survey link and 102 valid surveys were collected. Therefore, a total of 312 Chinese undergraduate students studying at the three Midwestern institutions were included in the study. Of these participants, the average age was 20 years, 63% were female, 48% took the *Gaokao* (the Chinese national college entrance examination), approximately one third (32%) attended college in China, and 70% had at least one parent with a bachelor's degree or higher. Among the participants, 59% indicated that they used an agent while applying to U.S. higher education institutions.

Following-up focus-group interviews and individual interviews were conducted with those who volunteered to speak to the researchers. In total, 33 students were interviewed in a focus group, in person, or through the telephone.

Table 2.

Distribution of Participants by Setting and Students' Choice of Using or Not Using an Agent.

Research Site	Total	Percentage among	
		Agent-Assisted	Non-Agent-Assisted
China	123	65%	35%
U.S.	312	59%	41%

Survey Instrumentation

After an extensive review of previous literature, the researcher was unable to find any instruments that would be useful in this research. Therefore, the researcher designed the questionnaires based on the available literature and findings of numerous previous studies (e.g., Bahandari & Koh, 2007; Bishop, 2005; Dalton, 1999; Franklin, 2008; Heaney, 2000; Hossler, 1999; James, 1992; Lewin; 2008; Liu, 2009; Mazzarol & Soutar, 2002; Sharma; 1997) regarding college choices, international student experiences, and international student recruitment and admission.

Survey Design

Two questionnaire surveys were designed for participants in China and in the U.S., respectively. Survey I was designed for participants in China who were at an early stage of the application process. Survey II was designed for participants in the U.S. who have successfully completed the process and were enrolled at a U.S. higher education institution.

Survey I

In Survey I (see Appendix A) , the background information section included questions regarding students' gender, age, high school academic performance, preparation for studying overseas, parents' highest degree obtained, parents' career, and family income. The study abroad section asked students whether they intend to attend colleges in foreign countries, rational of studying abroad, influencing factors, their favorite destination country, and the reasons of choosing that country. The agent section consists of questions regarding students' choice of using or not using an agent to assist their application, rational for their choices, selecting criteria, expected services, and expenses that they can afford.

Given the fact that the students who started preparation had less training in English as compared to those who have enrolled in the U.S. colleges and universities, Survey I was written in Chinese.

Survey II

Survey II (see Appendix B) starts with questions regarding students' background information, including gender, age, high school academic performance, home province, preparation for studying in the U.S., current college status, parents' highest degree obtained, parents' career, and family income. The second section asks students about their rational of pursuing a degree outside of China and, more specifically, their motivations of studying in the U.S. This section also includes questions regarding influencing factors on students' decision, sources of information, and their primary sponsors of studying in the U.S. The agent section in Survey I was different from Survey II, which focuses more on students' experiences of working with an agent, costs, and the level of satisfaction.

Survey II was written in both English and Chinese with two purposes. First, some Chinese students may still struggle with reading English and prefer answering questions in Chinese. Second, Chinese characters, as other symbolic languages, may not be accurately presented at all computers on the U.S. campuses. To avoid such issues, the online survey was written in both Chinese and English.

Survey Validity Activities

Validity means how well a survey measures "what it sets out to measure" (Litwin, 1995, p. 33). Validity refers to the extent to which the survey items measure constructs. Expert panel review and pilot test were utilized to ensure the validity of the surveys.

Expert Panel Review

An expert panel was used to ensure the content and the design of this instrument sufficiently addressed the questions that the proposed. Two American faculty members, three Chinese school administrators, and a Chinese doctoral student studying in the U.S. were invited to review the survey protocol. These highly qualified panel members had rich research experience and relevant knowledge in the fields of international education. The surveys were revised based on the experts' recommendations.

Pilot Test

The pilot test of the surveys was conducted prior to the delivery of the surveys. The researchers used convenience sampling and snowball sampling methods to select 11 participants. The researchers sent both surveys to the participants via email attachments, with an introduction of the purpose of the pilot test. The participants were asked to complete both surveys, to provide comments, and to report any unclear or confusing statements. After reviewing all of the participants' comments and recommendations, the survey questions were finalized for delivery.

Data Collection

Quantitative data were collected from both participants in China and in the U.S. All data were participant's self-reported responses.

In China

Survey I was paper-based and was hand-delivered to each participant in class in summer 2009 with an assent document for students who were willing to participate in the study. The purpose of the study, the time needed for completing the survey, confidential and

voluntary policy, and researchers' contact information were provided in the consent/assent forms. Parental consent form for students who were younger than 18 was waivered by the Institute Review Board Office for two reasons. Although some participants were minors, they were seniors or juniors in high school and were able to understand the content of consent document. Parental consent for research is not a cultural practice in China and this procedure can impede collecting data from the students. The researchers requested a waiver of parental consent form, but they emailed or faxed an invitation letter (see Appendix C) to each school and had acquired permission from the administrators before approaching to the individual students.

Before taking the survey, students were given opportunities to ask questions regarding the research and decide whether to participate in the study. Students who did not wish to participate merely disposed of the survey.

In the U.S.

Survey II was conducted online during the fall of 2009 and the fall of 2010, respectively. The researchers used Qualtrics, an online survey provider, to house the survey. International Chinese undergraduate students enrolled at three Midwestern institutions were invited to participate in the research via email with a link to the online survey and consent elements (see Appendix D). The same information was emphasized at the beginning of the survey as well. The student email lists were provided by the Registrars' Office or the Office of Institutional Research. Besides the initial email, two reminder emails were sent to the students in order to increase the response rate. Through Qualtrics, the researcher was able to send reminder emails only to those who have not responded or completed the survey.

Students, wishing not to participate, could choose not to respond to the survey link or click on "no" option in the survey instrument that leads to the last page (Thank you page) and exit of the survey website.

Data Analysis

Descriptive, comparative, and inferential statistical analyses were conducted based on the quantitative data collected from Survey I and II in order to gain a better understanding about Chinese students' application experience with or without an agent. Table 3 represents each research question with the statistical analysis that was administered. The quantitative data were explored and analyzed through PASW (SPSS) 18.0 (Leech, Barrett, & Morgan, 2008).

Research Question 1A and 1B

Descriptive statistics were employed to answer the first research question for both Chinese students in China and the U.S. regarding students' background characteristics. Frequencies and percentages provided an overall picture of both samples while 95% confidence intervals show the estimate of the population. The background characteristics includes gender, age, high school classification, high school track, whether plan to take the *Gaokao* and English tests, ranking in high school, English proficiency, parent's education, and family income.

Research Question 2A and 2B

Descriptive analysis was conducted to explain why Chinese students choose to use or not to use an agent during application to a U.S. college or university. A list of reasons was reported with percentages.

Research Question 3A and 3B

Table 3.

Research Questions, Variables, and Method of Analysis

	Research question	Independent variables	Dependent variables	Method of analysis
1A	What are the background characteristics of prospective Chinese students who choose to use an agent and those who choose to apply independently?	Background characteristics		Descriptive
1B	What are the background characteristics of international Chinese undergraduate students who used an agent and those who applied independently?			
2A	Why do prospective Chinese students choose to use or not to use an agent during application to U.S. higher education institutions?	Rational of using or not using an agent		Descriptive
2B	Why did international Chinese undergraduate students use or not use an agent during application to U.S. higher education institutions?			
3A	What background factors predict prospective Chinese students' choice of using or not using an agent during application to U.S. higher education institutions?	Demographic information Educational experience Academic preparation Family background	Students' choice of using or not using an agent for application to U.S. institutions	*t*-test Chi-square Sequential logistic regression
3B	What background factors predict international Chinese undergraduate students' choice of using or not using an agent during application to U.S. higher education institutions?			
4A	What do prospective Chinese students expect to receive from an agent?	Items of agents' services		Descriptive
4B	What did international Chinese undergraduates experience with an agent?			

Sequential logistic regression was conducted to explore the factors that predict Chinese students' choice of using or not using an agent. Prior to the logistic regression,

independent samples *t*-tests were conducted to compare the mean scores of student age, high school ranking, English proficiency, parent's education, and family income. Chi-square tests were also employed to test whether there are relationships between using agent and gender, high school track, and choice of taking the *Gaokao* and the English tests.

The following sequential logistic regression equation was used:

$$\text{logit}(p) = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

where p is the probability of presence of presence of the characteristic of interest. In this study, p indicates the probability of students' using agents to assist their college application to a U.S. institution, X_1 the demographic characteristics of the students, X_2 students' educational experience, X_3 students' academic preparation, and X_4 students' family background information.

The independent variables were entered by blocks in a selected order. This strategy makes it possible to identify to what extent each block of variables contributes to the explanation of variance of the dependent variable. Figure 6 and 7 show the predictive model of predicting choice of students' in China and the U.S., respectively, for using or not using an agent for their college application. In figure 7, the first block represents students' demographic characteristics: gender and age. The second block includes variables of students' educational experiences in China and the third block consists of variables regarding students' academic preparation for studying the U.S. The last block includes family background information. Figure 8 includes four blocks and the variables in each block are the same except for the last one. Considering that students were from different regions in China, GDP of home province was included in the last block.

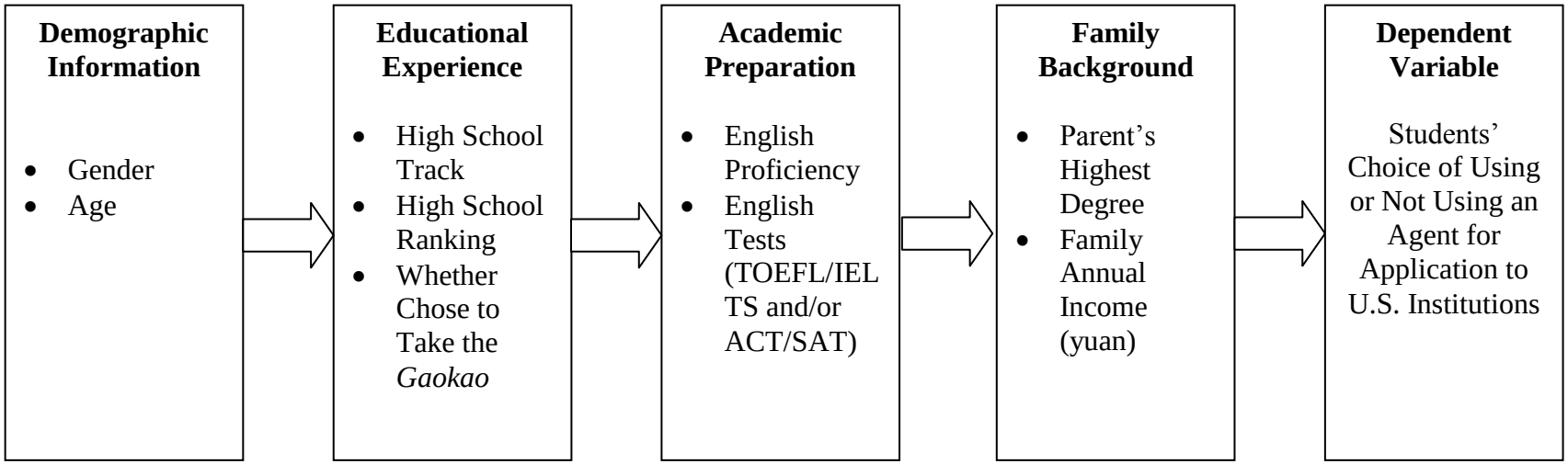

Figure 7. Predictive model of prospective Chinese students' choice of using or not using an agent

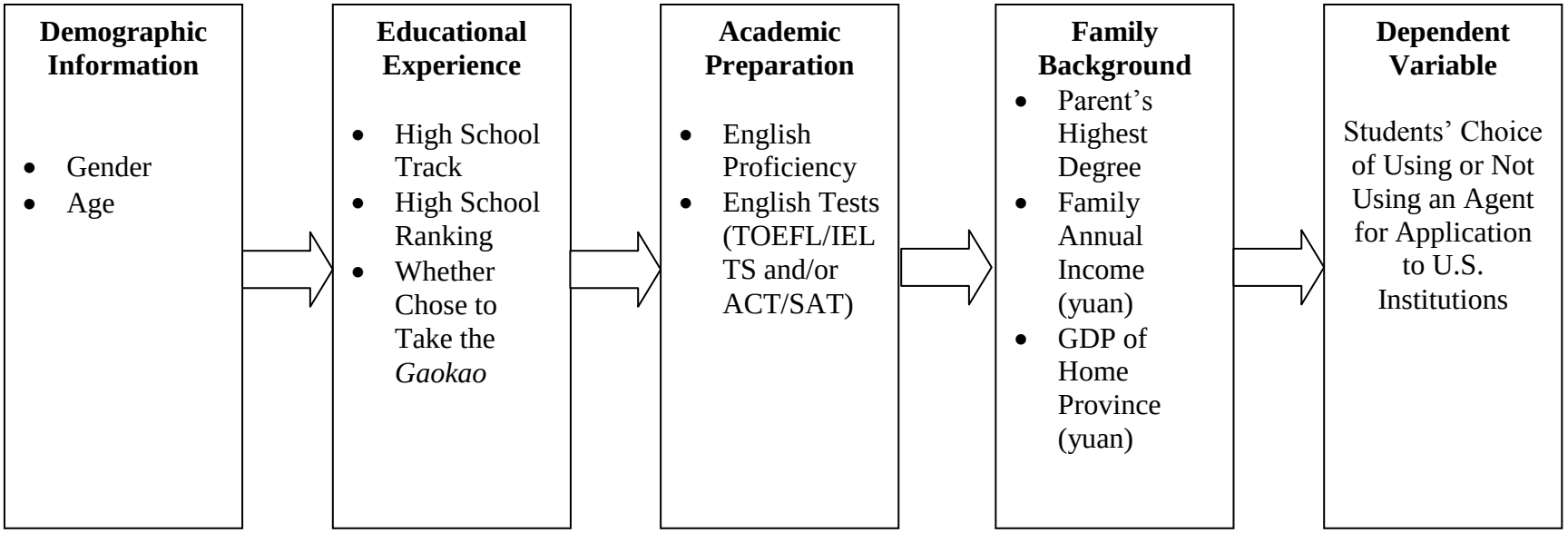

Figure 8. Predictive model of international Chinese students' choice of using or not using an agent

Research Question 4A and 4B

Descriptive statistics were used to analyze services that prospective Chinese students expect to receive from an agent and experiences that Chinese undergraduate students had with an agent.

In-Depth Interviews

The research question 5A and 5B were answered by qualitative data collected from semi-structured interviews with participants from high schools in China and the U.S. institutions, respectively. The in-depth interviews were not administered to obtain answers from the participants or to test the hypotheses; rather, the use of interviewing is "an interest in understanding the past experiences of other people and their interpretation of the meaning they make of that experience (Seidman, 2006, p. 9). In this study, the purpose of interviews was to have the participants reconstruct their experiences of college application preparation with agents' assistance. In so doing, the researcher derived a better understanding of how students view their application process, value of education agents, and challenges during their application.

Focus group interviews were primarily conducted because they can provide "a more natural environment than that of an individual interview" (Krueger & Casey, 2009, p. 7). Focus group interviews are more similar to the real life, where participants are influencing and influenced by others. However, due to the time and location constraints, individual interviews in person or via telephone were conducted to supplement focus group interviews.

A qualitative component was included to explore factors that impact Chinese students' college application experience and to better understand their difficulties and challenges with

or without using agents during the application process. Additionally, this strategy provided an opportunity for the participants to interpret and make meaning of their rational of using or not using an agent to assist their application process and their experiences with an agent, from their own perspective.

Participants

The students who participated in interviews were obtained using purposeful sampling, which is most commonly used when random selection is not an option (Seidman, 2006). According to Patton (1989), purposeful sampling is a thoughtful technique that can include a variety of cases, such as "typical cases," "extreme or deviant cases," "critical cases," "sensitive cases," "convenience" sampling, and "maximum variation" sampling (p. 100-107). In this study, students who planned or used an agent and those who did not plan or did not use an agent during their college application process were purposefully chosen from survey respondents who volunteer to be interviewed.

In China, all students who responded to Survey I were invited to participate in the interview. The participants to be interviewed were selected based on their intent to study in the U.S. and whether they planned to use an agent to assist the college application process. For the purpose of this study, only those who indicated a desire to pursue a degree in a U.S. institution were included. In total, four focus-group interviews were conducted but only the comments of the 24 participants who planned to study in the U.S. were included, with 18 planning to use an agent and 6 planning to apply individually.

In the U.S., Chinese undergraduate students who responded to Survey II were asked to provide their contact information at the end of the survey if they were willing to be

interviewed. Interviewees were chosen from the volunteers based on their choices of using or not using an agent. An email was sent to these students for time and location of the interview. In total, 31 students were interviewed. Due to the time and location constrain, eight out of 31 participants were interviewed individually in person or via telephone. The rest of the students participated in focus group interviews.

Interview Protocol and Validity Activities

Protocol questions of interviews with students in China (see Appendix E) and in the U.S. (see Appendix F) were similar but slightly different because these students were at different stages of the application process.

Different from quantitative analysis, validity in qualitative research is "not a companion of reliability (examining stability or consistency of responses…) or generalizability (the external validity of applying results to new settings, people, or samples…)" (Creswell, 2003, p. 195). Validity in qualitative studies is used to provide evidence whether the findings are accurate from perspectives of the researchers, the participants, and the readers (Creswell & Miller, 2000). In this study, the qualitative component was validated through the following approaches:

Expert Panel Review

An expert panel was used to ensure the content and the design of this instrument sufficiently addressed the questions posed by the researchers. Two American faculty members and a Chinese doctoral student studying in the U.S. were invited to review the interview protocols. These experts had rich research experience and relevant knowledge in the fields of international education. The interview protocols were revised based on the

experts' recommendation.

Pilot test

The focus group interview pilot test was conducted prior to delivering the surveys and interviewing students. Eight Chinese undergraduate students participated in the focus group interview. They were invited via email, including information regarding meeting time, location, and interview procedure. After the interview, they were asked to provide feedback in terms of the clarity and order of the questions. They were also encouraged to report any potential problems regarding the interview.

Data Collection

Focus group interviews lasted between 90 and 120 minutes in both China and in the U.S. The length of individual interviews varied from 20 to 40 minutes. To best facilitate students' thinking, Chinese, students' native language, was used as the main language in all of the interviews

Prior to the interview, participants were briefed on the informed consent document and provided opportunities to ask questions regarding the research. At the end the interview, the research verified with interviewees regarding their responses and discussion. The participants were also given opportunities to add any information that they would like to share with the researcher.

The interview questions were semi-structured, which allows the interview to progress naturally (Lincoln & Guba, 1985). Probing questions were used as needed to collect in-depth data regarding students' college experience with or with using an agent. Each interview was audio-recorded and transcribed into Microsoft Word documents.

Data Analysis

The first step of analysis was to transcribe the interview records into Chinese. Then, the researcher read through the transcription and open-coded the interviews. After the themes emerged, descriptions of the coding and supporting quotations were reported in the study. The translation was conducted after the above procedures were completed. Only the quotations used in the study were translated into English and the translation was reviewed by a native Chinese doctoral student with more than 16-year's experience of using English.

Ethical Considerations

The study was conducted after an approval was obtained from the Office of Institutional Review Board at Iowa State University (see Appendix G) and all participating institutions in the U.S. All participants were given information regarding the purpose of the interview, time commitment, confidentiality, and contact information before deciding whether to participate. In China, informed consent/assent documents were reviewed before participants responded to Survey I. In the U.S., consent elements were emphasised in the invitation email as well as at the beginning of the online Survey II. Students' responses to the surveys remained anonymous. For the interviewees, their personal information was kept confidential through the analysis and in the study. No student data were reported without aggregating the results.

Summary

In Chapter 3, the research design and methodology were first presented, including a discussion of the purpose of the study, research questions, hypothesis, a description of the research methodology, a description of the participants, and an explanation of the data

analyses of both quantitative and qualitative data. Chapter 3 concluded with ethical considerations of the study.

CHAPTER 4. PRESENTATION AND ANALYSIS OF DATA-CHINA

Overview

This chapter provides a summary of both the quantitative and qualitative data collected through surveys and interviews in China. The summary of the data collected in the U.S. will be presented in a separate chapter. The first section of this chapter provides a comprehensive analysis of background characteristics of the high school students in China who were willing to pursue a bachelor's degree in the U.S. The descriptive analysis consists of student age, gender, parents' education, classification and ranking in high school, academic background, self-reported English proficiency, family income, and parents' highest degrees obtained. Student demographic characteristics, academic backgrounds, and family information were reported into two groups: students who chose to use an agent (agent-assisted students) and those who chose not to use an agent (non-agent-assisted students). Percentages are reported for all students as well as by specific group. Confident intervals are reported for agent-assisted and non-agent-assisted students respectively. The second section presents students' rational of using or not using agents to assist college application process. This section also provides information regarding motivations of choosing to attend higher education outside of China in general and particularly in the U.S., primary sources of information about college application in the U.S., important influencing factors on the decision and major contributors to their tuition and fees of studying in the U.S. The third section reports the results of a statistical analysis of student demographic characteristics, academic experiences, and family backgrounds presented by group. This section also reports the results of the sequential logistic regression analysis of a dependent variable: whether the

prospective Chinese students chose to use an agent to assist their college application process. The fourth section focuses only on agent-assisted students, summarizing their expected services from agents. The last section highlights the findings from the focus group interviews regarding students' application experiences with or without agents' assistance.

Descriptive Analysis of Overall Sample

In response to the first question "what are the background characteristics of prospective Chinese students who chose to pursue a bachelor's degree in the U.S. with assistance of an agent and those who chose to apply independently?"descriptive statistics are provided. Table 4 presents the number of participants from each school in China.

Table 4.

Participants in China by School

School	Number of Student
HS1	11
HS2	30
HS3	4
HS4	64
HS5	14
Total	123

Demographic Characteristics

The participants were almost equally distributed in gender. Slightly over half (52%) of the participants were male and 48% were female. Most of them (82.2%) were 18 years old or younger. When separating the students by their choice of using or not using an agent, some

interesting patterns were observed. First, over half of non-agent-assisted students (51.2%) were female. Conversely, more than half of agent-assisted students (53.8%) were male. In terms of age, 43.8% of agent-assisted students were younger than 18 years old, while only 37.2% of non-agent-assisted were found in the same age group.

Academic Experiences

The majority of the participants (57.7%) were seniors in high school and more than half of them (54.5%) chose the science track (Table 5). Over half of the participants (55.3%) chose to take the G*aokao* and the majority (85.4%) decided to take either TOEFL/IELTS or ACT/SAT or both. In general, the participants were confident in their academic studies. Almost 60% of the students (57.8%) reported that they were ranked in the first 40th percentile in their cohort. Regarding English proficiency, majority of the students (76.4%) indicated that their overall English ability was "Good" or "Excellent."

When comparing the two groups, differences were identified. A higher percentage of agent-assisted students were male (53.8% vs. 48.8%) and younger than the age of 18 (43.8% vs. 37.2%). The majority of students (79.1%) who decided not to use agents were seniors, while less than half (46.3%) of the agent-assisted students reported their status as a high school senior. The results presented that a higher percentage of non-agent-assisted students chose the track of liberal arts in high school (60.5% vs. 37.5%). Regarding plans to take the *Gaokao* in China, the majority of non-agent-assisted students (81.4%) responded "yes," while only slightly over 40% of agent-assisted students planned to take the examination. Regarding tests that are required for students from non-English speaking countries (TOEFL,

Table 5.

Background Characteristics of Prospective Chinese Students (N=123)

Variable	Total	Non-Agent-Assisted (n = 43)			Agent-Assisted (n = 80)		
	%	%	95% CI		%	95% CI	
			LL	UL		LL	UL
Gender							
Female	48.0	51.2	37.3	67.5	46.3	35.3	57.2
Male	52.0	48.8	32.5	62.7	53.8	42.8	64.7
Age							
Below 18	41.5	37.2	22.8	51.7	43.8	32.9	54.6
18	40.7	41.9	27.1	56.6	40.0	29.3	50.7
19 and above	17.9	20.9	8.8	33.1	15.0	8.2	24.3
HS Classification							
1st year	2.4	0.0	0.0	0.0	3.8	0.0	7.9
2nd year	33.3	14.0	3.6	24.3	43.8	32.9	54.6
3rd year	57.7	79.1	66.9	91.2	46.3	35.3	57.2
Other	6.5	7.0	0.0	14.6	6.3	1.0	11.6
HS Track							
Science	54.5	39.5	24.92	54.14	62.5	51.9	73.1
Liberal Arts	45.5	60.5	45.9	75.1	37.5	26.9	48.1
If Plan to Take the *Gaokao*							
Yes	55.3	81.4	69.8	93.0	41.3	30.5	52.0
No	44.7	18.6	7.0	30.2	58.8	48.0	69.5
If Plan to Take TOEFL/IELTS and/or ACT/SAT							
Yes	85.4	74.4	61.4	87.5	91.3	85.1	97.4
No	14.6	25.6	12.5	38.6	8.8	2.6	14.9

Table 5. (continued)

Variable	Total	Non-Agent-Assisted (n = 43)			Agent-Assisted (n = 80)		
	%	%	95% CI		%	95% CI	
			LL	UL		LL	UL
HS Ranking							
Bottom 20 Percentile	2.5	0.0	0.0	0.0	3.8	0.0	8.0
61-80 Percentile	14.9	14.3	3.7	24.9	15.2	7.3	23.1
41-60 Percentile	24.8	16.7	5.4	27.9	29.1	19.1	39.1
21-40 Percentile	28.9	28.6	14.9	42.2	29.1	19.1	39.1
Top 20 Percentile	28.9	40.5	25.6	55.3	22.8	13.5	32.0
English Proficiency							
Poor	4.9	4.7	0.0	10.9	5.0	0.2	9.8
Fair	18.7	18.6	7.0	30.2	18.8	10.2	27.3
Good	69.9	72.1	58.7	85.5	68.8	58.6	78.9
Excellent	6.5	4.7	0.0	10.9	7.5	1.7	13.3
Father's Highest Degree Obtained							
Less than HS	15.4	20.9	8.8	33.1	12.5	5.3	19.8
HS Graduate	16.3	32.6	18.6	46.6	7.5	1.7	13.3
Associate's	14.6	9.3	0.6	18.0	17.5	9.2	25.8
Bachelor's	33.3	23.3	10.6	35.9	38.8	28.1	49.4
Master's	16.3	9.3	0.6	18.0	20.0	11.2	28.8
Ph.D.	4.1	4.7	0.0	10.9	3.8	0.0	7.9
Mother's Highest Degree Obtained							
Less than HS	16.3	23.3	10.6	35.9	12.5	5.3	19.8
HS Graduate	21.1	37.2	22.8	51.7	12.5	5.3	19.8
Associate's	16.3	9.3	0.6	18.0	20.0	11.2	28.8
Bachelor's	40.7	30.2	16.5	44.0	46.3	35.3	57.2
Master's	5.7	0.0	0.0	0.0	8.8	2.6	14.9
Ph.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 5. (continued)

Variable	Total	Non-Agent-Assisted (n = 43)			Agent-Assisted (n = 80)		
	%	%	95% CI		%	95% CI	
			LL	UL		LL	UL
Family Annual Income (yuan)							
< 20,000	15.9	29.3	15.3	43.2	8.3	2.0	14.7
20,001 - 50,000	15.9	24.4	11.3	37.5	11.1	3.9	18.4
50,001 - 100,000	14.2	9.8	0.7	18.8	16.7	8.1	25.3
100,001 - 300,000	17.7	24.4	11.3	37.5	13.9	5.9	21.9
300,001 - 500,000	12.4	2.4	0.0	7.2	18.1	9.2	27.0
500,001 - 1,000,000	4.4	0.0	0.0	0.0	6.9	1.1	12.8
> 1,000,000	3.5	0.0	0.0	0.0	5.6	0.3	10.9
Not Clear	15.9	9.8	0.7	18.8	19.4	10.3	28.6

IELTS, ACT, or SAT), most of agent-assisted students (91.3%) planed to prepare for at least one of the tests, which was approximately 15% higher than non-agent-assisted students. In terms of ranking in high school, a higher percentage of non-agent- assisted students reported ranked in the first 20th percentile compared to agent-assisted students (40.5% vs. 22.8%). Less than 5% of non-agent-assisted students indicated their overall English level was "Excellent," while the percentage of the agent-assisted students who reported the same level was almost doubled (7.5%).

Family Background

The descriptive analysis revealed students' family background, including their parents' education and family average annual income in the past five years. In total, one-third of the

participants' fathers (33.3%) obtained a bachelor's degree, 16.3% a master's degree, and 4.1% a doctoral degree. A higher percentage of mothers of the participants (40.7%) received a bachelor's degree, but only 5.7% obtained a master's and none gained a doctoral degree. Regarding annual parental income, the highest proportion of the participants (17.7%) reported their family average annual incomes were higher than 100,000 yuan (approximately $15,000) but lower than 300,000 yuan (approximately $45,000) in the past five years.

The results also revealed differences between the two groups. Parents of agent-assisted students reported higher levels of education: 55.1% of the mothers and 62.6% of the fathers obtained a bachelor's degree or a more advanced degree. For non-agent-assisted students, only 30.2% of mothers and 37.3% of fathers earned a bachelor's degree or above. Additionally, the results presented different patterns among students' family annual income. For agent-assisted students, a higher percentage reported that their annual family income was between 300,000 and 500,000 yuan (18.1% vs. 2.4%). None of the non-agent-assisted students reported a family income of more than 500,000 yuan per year, while 12.5% of the agent-assisted-students so reported.

Summary of Background Characteristics

1. A higher percentage of non-agent-assisted were female while a larger proportion of agent-assisted students were male.
2. The majority of the participants in China were 18 years old or younger. Comparing to agent-assisted students, a lower percentage of non-agent-assisted students were younger than 18.
3. A higher percentage of non-agent-assisted students chose the liberal arts track

while more agent-assisted students choose the science track.

4. A higher percentage of non-agent-assisted students decided to take the *Gaokao*, but a higher percentage of agent-assisted students decided to take at least one of the English tests (TOEFL/IELTS or ACT/SAT).
5. The majority of the participants were confident with their English proficiency and the differences between the two groups were trivial.
6. A higher proportion of parents of agent-assisted students obtained bachelor's, master's and doctoral degrees.
7. A higher percentage of non-agent-assisted students reported that their family income was lower than 300,000 yuan per year, while a larger proportion of agent-assisted students indicated the income of their family was above 300,000 yuan per year.

Coming to the U.S. with or without Assistance of an Agent

To gain a better understanding regarding students' choice of using or not using an agent to assist their college application to a U.S. college or university, it is important to understand the motivations of Chinese students who chose to pursue a degree in a foreign country and, more specifically, in the U.S. Therefore, this study explores students' motivations of studying overseas in general and in the U.S. particularly, influencing factors on students' decision making process, primary sources of information, and major financial sponsors for studying in the U.S.

Motivations of Studying Overseas

The prospective international Chinese students who considered receiving higher

education outside of China have various motivations. The participants in China were asked to provide three reasons that greatly motivated them to study in a foreign country. The majority (76.4%) of them intend to enrich personal experiences through studying in a different culture. Seeking a better education is the second prevailing reason of attending a college outside of China, quoted by 69.9% of the participants. Almost half (47.2%) of the students responded that a foreign degree would make them more competitive after they returned to China. Learning a new language or improving a foreign language was also reported by 40.7% of the participants as an important initiative to study overseas. Approximately one fifth (20.3%) of the students indicated that studying overseas might be their only choice of receiving quality higher education due to a severe competition of college admissions in China. Additionally, 19.5% of the students considered studying in a foreign country as a means to work or immigrate to that country after graduation. A small percentage (7.3%) of the students planned to avoid the *Gaokao*, favoring to enroll at a foreign college or university. Only 1.6% of the participants viewed study abroad as a fad to follow.

When comparing agent-assisted with non-agent-assisted students, some different patterns were identified. Approximately 15% greater, non-agent-assisted students reported "to enrich personal experiences" as an important motivation to study in a foreign country (Figure 8).

A higher percentage of agent-assisted students indicated that they were enticed to study overseas because higher education in other countries has perceived better quality (72.5% vs. 65.1%). Also a higher proportion of agent-assisted students thought they had scarce opportunities to attend a desired college in China (22.5% vs. 16.3%). A higher percentage of

non-agent-assisted students wanted to enrich personal experience in a different environment (86.0% vs. 71.3%). Interestingly, none of the students without assistance of agents referred studying abroad as a trend, while 2.5% of agent-assisted students believed so.

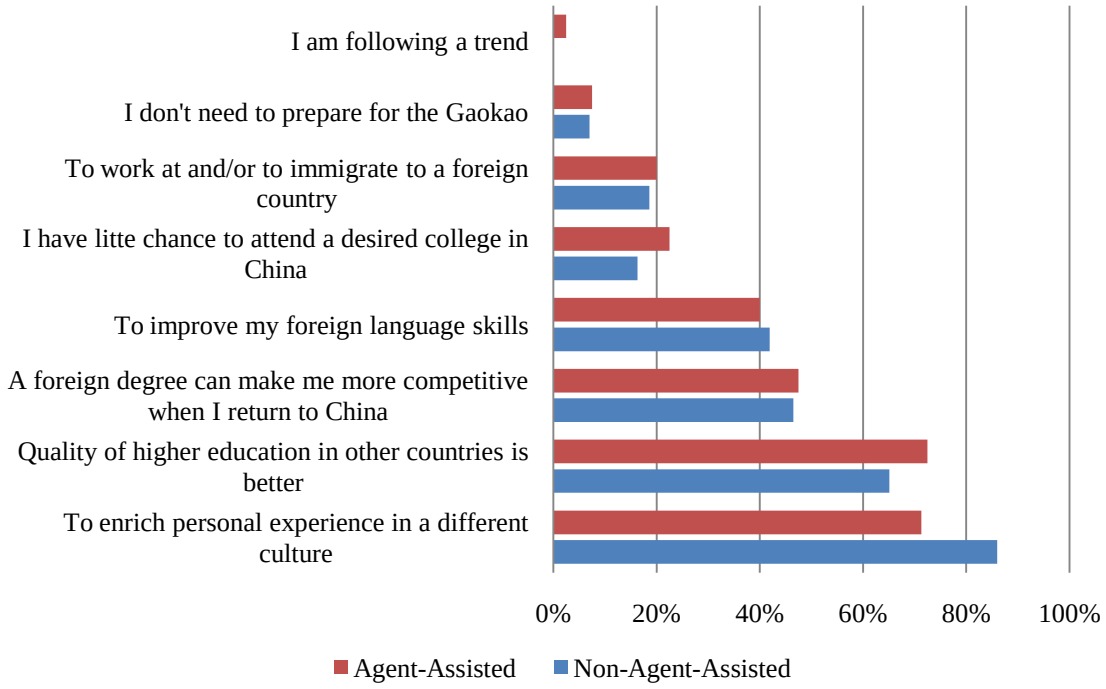

Figure 9. Motivations of study overseas by group-prospective students

Attractions of the U.S. Higher Education

Today, Chinese students who are willing to pursue a degree outside of China have a wide range of choices in terms of destination countries. Compared to other countries, why did these students desire to study in the U.S.? To explore the reasons, all the respondents were asked to provide the most important reason that attracted them to U.S. higher education. This section provided results of the descriptive analyses.

A better quality of higher education was the most important factor that attracted

students to study in the U.S. When asked why planning to study in the U.S. rather than other countries such as Australia, New Zealand, Japan, etc., greater than half (54.5%) of the participants believed that quality of the U.S. higher education was superior to the others. Nearly one-fifth (18.7%) of the participants viewed degrees granted from the U.S. institutions more prestigious compared to degrees from the other countries. Additionally, non-academic factors could impact students' choice of destination country. Some (12.2%) of the students were interested in studying in the U.S. for its natural and cultural environment. These students reported that they admired the U.S. culture more than others. Family ties were reported by 6.5% of the students as the most important reason to study in the U.S. Since English is the most popular foreign language taught in the China's education system, 4.1% of students attributed choosing the U.S. to improve their skills of utilizing English.

The results presented different patterns between agent-assisted and non-agent-assisted students. The majority of agent-assisted students (63.7%) chose "quality of education is better" as the most significant motivation (Figure 10). This was also the top reason chosen by

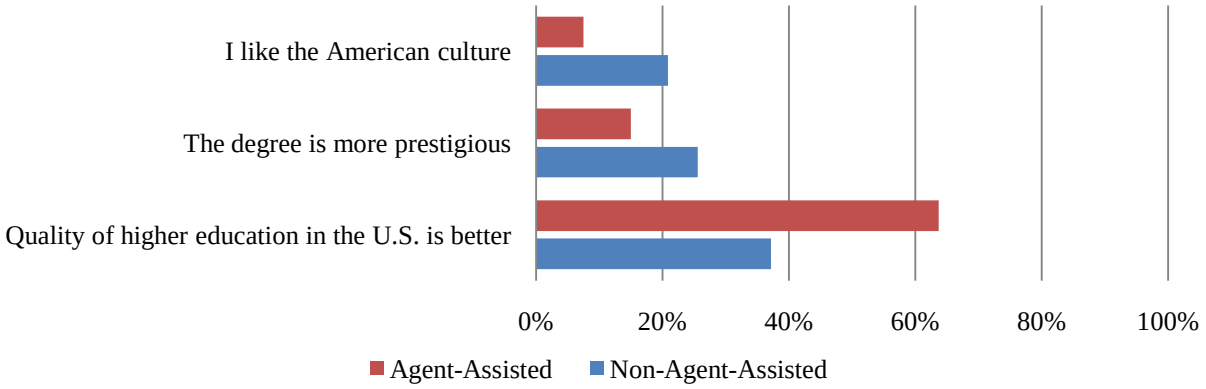

Figure 10. Motivations of study in the U.S. by group-prospective students

non-agent-assisted students as a motivating factor, but the percentage (37.2%) was much lower. Fifteen percent of agent-assisted students viewed American degrees as more prestigious than degrees from other countries and approximately 10 percent more of non-agent-assisted students (25.6%) agreed as well. High regard of the U.S. culture was another motivation to study in the U.S. by both groups, but the proportion of agent-assisted students (7.5%) was only about one-third of their non-agent-assisted counterparts (20.9%).

Primary Source of Information

Regardless of planning to use an agent or not, the Internet was chosen by more than one-third of the participants (35.2%) as their primary source of information regarding college application. The second rated source was parents (23.8%), followed by education agents (18.0%).

Upon examining the two groups of participants separately, slightly less than one-third of agent-assisted students (29.1%) and nearly half of non-agent-assisted students (46.5%) relied on the Internet for information regarding college application (Figure 11). The second most popular information source for students, regardless of using or not using agents, was their parents, which was 25.3% for agent-assisted students and 20.9% for non-agent-assisted students. Interestingly, the results showed that education agents were not the first primary source of information for agent-assisted students while a small percentage of non-agent-assisted students indicated using agents for information.

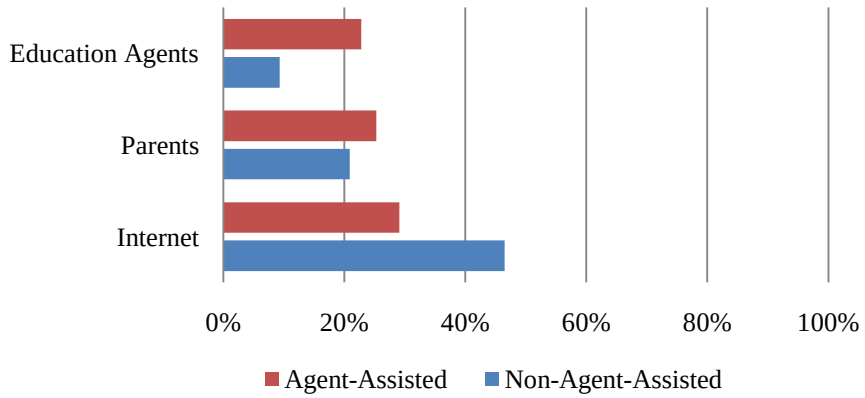

Figure 11. Primary source of information by group-prospective students

Influencing Factors and Primary Sponsors

The majority of students (59.5%) reported that their decision of studying overseas and choice of the U.S. higher education was made primarily based on their own opinions. Over one fourth (28.1%) indicated that their decision to study in the U.S. was significantly impacted by their parents. In terms of financial support, most of the participants (94.3%) indicated that their tuition and fees will be paid by their parents.

Regarding the choice of study in the U.S., the percentage of non-agent-assisted students was slightly higher than those who chose to use an agent (61.9% vs. 58.2%) (Figure 12). Proportion of agent- assisted and non-agent-assisted students who chose parents as the primary influencing factors were similar. Almost all students in each group reported that they largely relied on their parents for their tuition and fees and the percentage of agent-assisted students was higher than their non-agent-assisted counterparts (96.3% vs. 90.7%) (Figure 13).

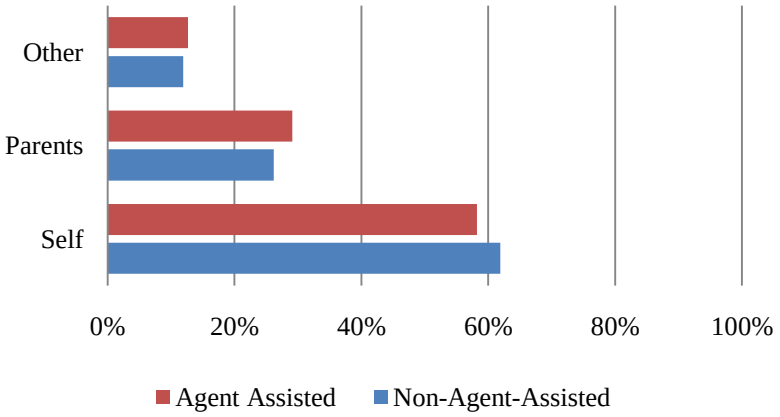

Figure 12. Influencing factors by group-prospective students

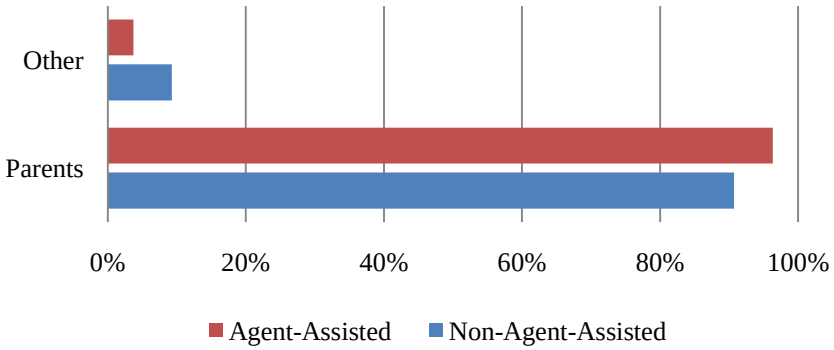

Figure 13. Source of tuition and fees by group-prospective students

Summary of Factors regarding Studying in the U.S.

1. Students who decided to study abroad primarily seek to enrich their personal experiences, to receive a better higher education, and to become more competitive in the job market.
2. Students of both groups were motivated to study in the U.S. rather than other

countries because they perceived that the quality of higher education is better, the prestige of an American degree, and the desire for first-hand experience of the American culture.

3. The Internet was the most popular source of information for both groups of students in searching for information of application.
4. The highest percentage of participants in both groups reported that their own thoughts led to their decision of studying in the U.S. and parents' opinions had significant influence on their decision making process.
5. Almost all the students relied on their parents for tuition and fees for studying in the U.S.

Rational of Using or Not Using an Agent

Regarding the process of applying to a U.S. higher education institution, all of the participants were asked to choose all applied reasons of using or not using an agent from a list of options in Survey I.

Rational of Using an Agent

Among 80 students (65%) who chose to use an agent to assist their college application, more than three-quarters (76.3%) did so because of their limited knowledge about the application process (Figure 14). Lack of knowledge about the U.S. higher education institutions and visa application, chosen by the same percentage of students (55.3%) respectively, were referred as major barriers that forced them to use an agent. Almost half of the participants (46.1%) thought that they would be more likely to be accepted by U.S. colleges or universities if they applied with assistance of an agent. Unfamiliarity with the U.S.

culture and environment (28.9%) and difficulties of utilizing English (23.7%) were reported as important rational to seek for agents' assistance. Approximately 20% of agent-assisted students (19.7%) were influenced by their relatives, friends, or classmates in deciding using an agent for the college application. Additionally, another 19.7% of the students used agents for better opportunities of applying for scholarships. A small proportion of students provided additional reasons. The most prevalent one was to save their time and effort.

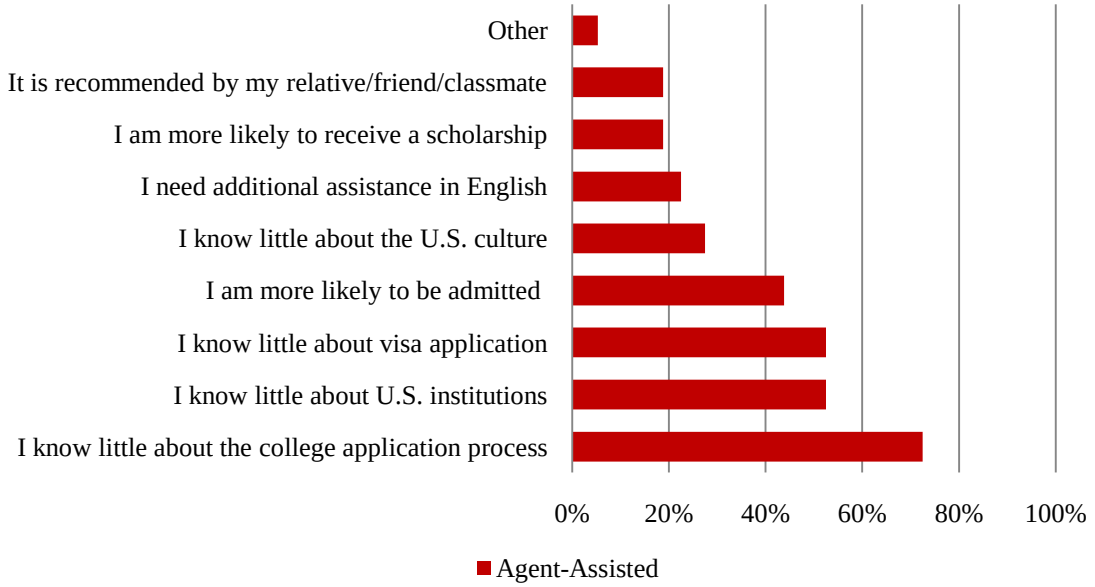

Figure 14. Rational of using an agent-prospective students

Rational of Not Using an Agent

A similar situation occurred for the agent-assisted students. Forty-three students (35%) who did not use an agent were asked to provide the criteria that led them to apply independently (Figure 15). The most popular reason was a lack of trust of agents' assistance, quoted by 32.6% of the students. The second rated reason was "expenses are too high,"

which was chosen by slightly less than one third of the respondents (30.2%). “I am capable of applying on my own” was reported by 25.6% of the students as an important reason why they did not choose to use an agent. Approximately 12% of the students informed that somebody they know could help them with the college application process. Seven percent indicated unpleasant experiences with agents from someone they know influenced them to not use an agent. Additionally, about 5% of the students provided additional reasons, indicating that they did not choose to use an agent merely because they don’t know what an agent is and what an agent can provide.

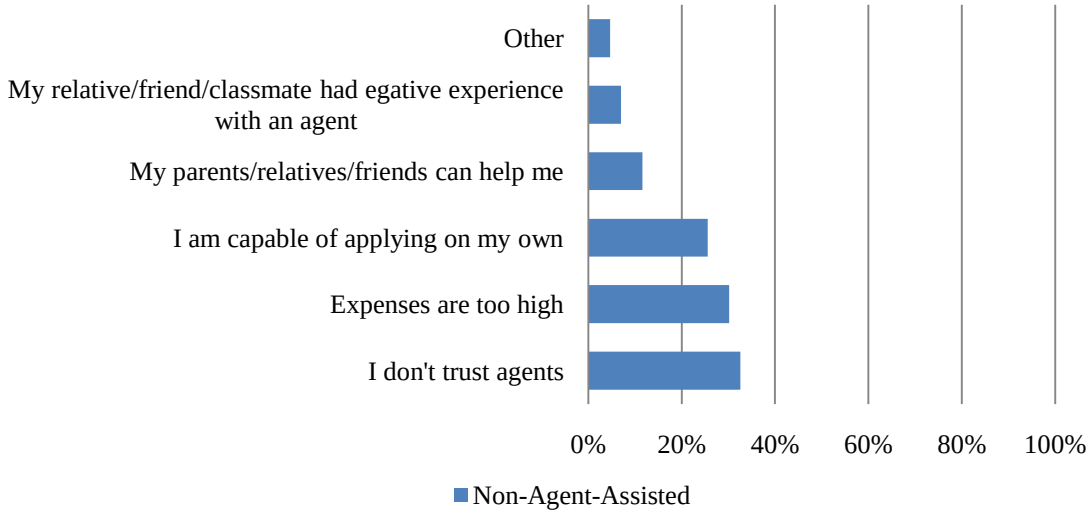

Figure 15. Rational of NOT using an agent-prospective students

Summary of Rational of Using or Not Using an Agent

1. Sixty-five percent of the participants in China indicated that they used or planned to use an agent to assist in applying to a U.S. college and 35% indicated that they did not use or plan to use an agent.

2. The top three reasons of using an agent:
    a. I know little about the college application process
    b. I know little about the U.S. colleges and universities
    c. I am more likely to be accepted
3. The top three reasons of not using an agent:
    a. I do not trust agents' service.
    b. Expense of using an agent is too high
    c. I am capable of applying to U.S. institutions on my own

Statistical Analysis of Choice of Using or Not Using an Agent-Prospective Students

To answer research question 3, which asks predictors for students' choice of using or not using an agent, inferential statistics were conducted. Independent samples *t*-tests were conducted first to compare the means of the two groups (agent-assisted vs. non-agent-assisted students) on age, academic backgrounds, English proficiency, parents' education, and family income level. Additionally, Pearson Chi-Square tests were administered to test for differences across categorical and dichotomous variables such as gender, high school classification, high school track, choices of taking TOEFL/IELTS and/or ACT/SAT, and choices of taking the *Gaokao*. The grouping variable, whether a student has used or decided to use an agent to assist college application process, was coded as "0 = students who decided not to use any assistance of agents, or non-agent-assisted students," and "1 = students who decided to use an agent, or agent-assisted students." Tables 6 and 7 provide a summary of the mean scores of the independent samples *t*-tests on students' background characteristics, academic preparation, parental income, and highest degree obtained.

Results of Independent Samples t-Tests

As shown in Table 6, the mean age of non-agent-assisted students (18.07) and agent-assisted students (17.60) had a difference of 0.47, which was statistically significant between the two groups (t = 3.471, df = 121, p = 0.001) at the p = .05 level. The scale was continuous.

The mean score of high school ranking of non-agent-assisted students and agent-assisted students were 3.95 and 3.52, respectively. The difference (0.43) was statistically significant between the two groups (t = 2.05, df = 119, p = 0.042) at the p = .05 level. Regardless of using or not using an agent, students from both groups reported their ranking in their cohort in high schools or equivalent schools. The scale for this question was 1 = bottom 20^{th} percentile, 2 = 60^{th}-80^{th} percentile, 3 = 40^{th}-60^{th} percentile, 4 = 20^{th}-40^{th} percentile, and 5 = top 20^{th} percentile.

The mean score of self-reported English proficiency was 2.77 for non-agent-assisted students and 2.79 for agent-assisted students with a difference of 0.20. The difference was not statistically significant between the two groups (t = -0.17, df = 121, p = 0.868) at the p = .05 level. The scales of this question were 1 = poor, 2 = fair, 3 = good, and 4 = excellent.

The mean score of father's highest degree obtained was 2.81 for non-agent-assisted students and 3.58 for agent-assisted students. The difference between the two groups was 0.77, which was statistically significant (t = -2.89, df = 121, p = 0.005) at the p =.05 level. The scales of this question were 1 = less than high school, 2 = high school graduate, 3 = associate degree, 4 = bachelor's degree, 5 = master's degree, and 6 = doctoral degree.

The mean score of mother's highest degree obtained was 2.47for non-agent-assisted students and 3.26 for agent-assisted students with a difference of 0.79. The difference was

Table 6.

Means, Standard Deviations, and Independent Samples t-Test Results-Prospective Students

Variable	Non-Agent-Assisted		Agent-Assisted		*t*	*df*	*p*		95% CI	
	M	*SD*	*M*	*SD*					LL	UL
Age	18.07	0.74	17.60	0.70	3.471	121	.001	**	0.20	0.74
HS Rank	3.95	1.08	3.52	1.12	2.052	119	.042	*	0.02	0.85
English Proficiency	2.77	0.61	2.79	0.65	-0.167	121	.868		-0.26	0.22
Father's Education	2.81	1.48	3.58	1.34	-2.894	121	.005	**	-1.28	-0.24
Mother's Education	2.47	1.16	3.26	1.18	-3.598	121	.000	***	-1.24	-0.36
Family Income	2.95	2.07	4.63	2.26	-3.898	111	.000	***	-2.52	-0.82

* $p < .05$, ** $p < .005$, *** $p < .001$

Table 7.

Chi-Square Test Results-Prospective Students

Variable	Percentage among		*Chi-Square*	*df*	*p*	
	Non-Agent-Assisted	Agent-Assisted				
Gender (Female)	51.2	46.3	0.27	1	.603	
HS Track (Science)	39.5	62.5	5.95	1	.015	*
Chose to Take the *Gaokao*	81.4	41.3	18.23	1	.000	***
Chose to Take English Tests	74.4	91.3	6.34	1	.012	**

* $p < .05$, ** $p < .005$, *** $p < .001$

statistically significant (t = -3.60, df = 121, p < 0.001) at the p = .05 level. The scales were the same with the scales used for father's highest degree obtained.

The mean score of family annual income was 2.95 for non-agent-assisted students and 4.63 for agent-assisted students with a difference of 1.68. The difference was statistically significant (t = -3.90, df = 111, p < 0.001) at the p = .05 level. The scales were 1 = lower than 20,000 yuan, 2 = 20,001 to 50,000 yuan, 3 = 50,001 to 100,000 yuan, 4 = 100,001 to 300,000 yuan, 5 = 300,001 to 500,000 yuan, 6 = 500,001 to 1,000,000 yuan, and 7 = higher than 1,000,000 yuan.

Results of Independent Chi-Square Tests

As shown in Table 6, students' choice of using agents did not have a significant relationship with students' gender. However, the results indicated that students' choice of using an agent differed by students' high school track, χ^2 (1, n = 123) = 5.95, p < .05. It was found that students who used agents had a significant relationship with students' choice of taking the *Gaokao*, χ^2 (1, n = 123) = 18.23, p < .001, and choice of taking TOEFL/IELTS and/or ACT/SAT, χ^2 (1, n = 123) = 6.34, p < .05.

Results of Sequential Logistic Regression

Descriptive statistics provided information on background characteristics, academic preparation, social status, and parents' education on both agent-assisted and non-agent-assisted students regarding their background information. It is also important to examine the effects of these variables on students' choice of using or not using agent after controlling for the effects of other variables, which can provide a better understanding about the students' decision. A sequential logistic regression was conducted on the dependent variable whether

students used or planned to use agents for their college application. Figure 7 (in chapter 3) illustrates the predictive model and Table 8 shows the detailed information of the predictors.

Demographic Characteristics (Model 1)

The demographic block consists of two variables: gender and age. The simple correlations revealed relationships between independent and dependent variables. In particular, being female had positive relationships with students' choice of using an agent, while age had a negative association with the students' choice. For both variables, neither of the variables remained a significant predictor to the dependent variable. The combination of these two demographic variables only account for 0.9% of the variance of the dependent variable.

Educational Experiences (Model 2)

This model included both demographic characteristics and students' educational experiences in high school in China, including whether they were in a science or a liberal arts track, how well the student was ranked in his/her current cohort in high school, and whether they plan to take the *Gaokao* (the China's national college entrance examination) after they graduate from high school. In model 2, both gender and age were non-significant predicators of the dependent variable. High school track and plans to take the *Gaokao* remained significant predictors to the students' choice of using or not using an agent at $p < .05$ and $p < .001$, respectively. The high school track had a positive relationship with students' choice of using an agent, while plan to take the *Gaokao* had a negative association. In other words, students who were in science track and those who did not plan to take the *Gaokao* were more likely to use an agent. After adding the second block "educational experience," the value of

R square had a large increase. Together, all the variables in Model 2 explained 32.1% of the variance in students' choice of using an agent.

Academic Preparation (Model 3)

Another block "academic preparation" was added to Model 3. "Academic preparation" included two variables that were related directly to study in the U.S.: students' self-reported English proficiency and their plans to take the TOEFL/IELTS and/or ACT/SAT. Both of the variables had positive associations with the dependent variable, but neither of them were significant predictors to the dependent variable. Variables in the first two blocks, high school track ($p < .05$), high school ranking ($p < .05$), and status of *Gaokao* ($p < .001$) remained significant predictors to the dependent variable. The R square value increased to 0.334 after the third block entered.

Family Background (Model 4)

Model 4 (full model) included additional two variables indicating students' family background to the equation. The two variables were mother's highest degree obtained and average annual family income. Both variables had positive associations with students' choice of using an agent. By the final step in the equation, three variables remained significant predictors to the student's choice of using an agent, including high school ranking ($p < .05$), choice of taking the *Gaokao* ($p < .01$), and mother's highest degree obtained ($p < .001$). High school ranking and choice of taking the *Gaokao* had negative relationships with the dependent variable but mother's education had a positive association. That is, students who ranked lower in their high school cohort, who did not plan to take the *Gaokao*, and whose mothers had higher degrees were more likely to use an agent. The *R* square value increased

Table 8.

Logistic Regression Predicting Students' Choice of Using or Not Using an Agent by Model-Prospective Students

Variable	Odds Ratio				95% CI	
	Model 1	Mode 2	Model 3	Model 4	LL	UL
Demographics (block 1)						
Gender (Female)	0.762	1.561	1.558	1.340	0.445	4.032
Age	0.842	0.891	0.973	0.953	0.453	2.004
Educational Experience (block 2)						
HS Track (Science)		3.718 *	3.508 *	2.871	0.923	8.933
HS Ranking		0.677	0.648 *	0.553 *	0.339	0.901
Gaokao		0.133 ***	0.139 ***	0.151 **	0.043	0.528
Academic Preparation (block 3)						
English Proficiency			1.434	1.750	0.692	4.425
English Tests (TOEFL/IELTS and/or ACT/SAT)			1.422	0.617	0.137	2.786
Family Background (block 4)						
Mother's Highest Degree				1.857 **	1.216	2.835
Parental Annual Income				1.177	0.908	1.524
Nagelkerke *R* Square	0.009	0.321	0.334	0.432		

* $p < .05$, ** $p < .005$, *** $p < .001$

to 0.432 when all the variables entered, indicating that 43.2% of the variance in the dependent variable was explained by the full model.

Overall Model Prediction

Overall, 77.5% of students who did not use an agent to assist their college application process and 74.6% of those who used one were predicted correctly with this model. The overall predication rate was 75.7% (Table 9).

Table 9.

Overall Prediction of the Logistic Regression Model-Prospective Students

Observed		Predicted		
		Did you use an education agent for your application		Percentage Correct
		0 No	1 Yes	
Did you use an education agent for your application	0 No	31	9	77.5
	1 Yes	18	53	74.6
Overall Percentage				75.7

The cut value is .650

Summary

The following results were observed from the full model analyses.

1. Among demographic characteristics, neither gender nor age was a statistically significant predictor to students' choice of using an agent.
2. Among variables regarding students' educational experiences in China, high school

ranking and choice of taking the *Gaokao* remained significant predictors to students' choice of using an agent.

3. Regarding variables of students' academic preparation for studying in the U.S., English proficiency and choice of taking TOEFL/IELTS and/or ACT/SAT were not significant predictors to students' choice of using an agent.
4. Mother's highest degree obtained remained a significant predictor to students' choice of using an agent.

Expectation of Using an Agent

Students who participated in this study in China were exploring opportunities of study overseas since they were at an early stage of preparation for pursuing higher education in the U.S. As a result, their understanding about and experiences with agents' services was limited. To better understand students' choice of using an agent, the researcher asked those who decided to use an agent to identify the most important criteria in selecting the "right" agent, the most important services that they expected to receive, and an estimated cost that they were willing to pay for agents' services. Results of descriptive analyses about students' expectation were presented below.

Selecting Criteria

Reputation was reported by 60.5% of the agent-assisted students as the most important selecting criteria (Figure 16). More than one-fifth (21.1%) thought what agents have done or how much experience they have was the most important factor when selecting an agent. Approximately one out of ten (9.2%) indicated that their choice made primarily based on the types of services an agent can provide. A small percentage of students (2.6%)

reported cost was the most significant factor and the same percentage would use an agent if their friends or relatives recommended.

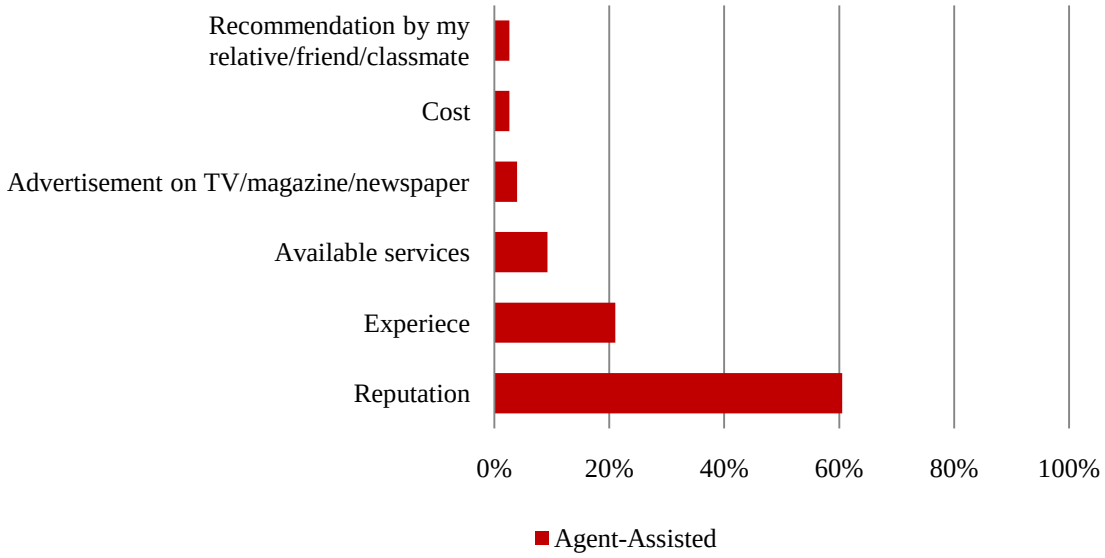

Figure 16. Selecting criteria of agent-assisted students-prospective students

Expected Services

Nearly 30% of agent-assisted participants (28.0%) expected the agents to provide advice on choosing a best-fit country and college based on an overall evaluation of students' academic preparation, financial capacity, and personal interests (Figure 17). The same percentage of the students (28.0%) believed that contacting all necessary personnel at the destination institution was the most important service for their application. One-fifth (20%) expected agents to assist them in choosing a major and provide information about future career opportunities. Preparation for college application (5.3%), continuous service in the U.S. (4.0%), and assistance in scholarship application (2.7%) were also reported by the

students as the most important services to students' application to a U.S. institution.

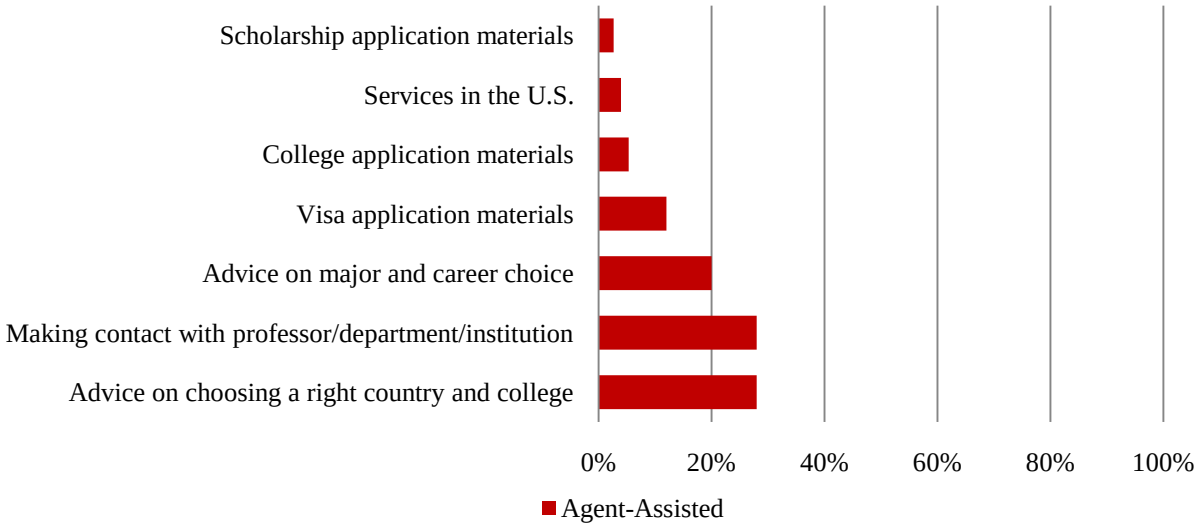

Figure 17. Expected services of agent-assisted students-prospective students

Expected Cost

Approximately one-fourth of the students who were using or planned to use an agent believed that agents should charge less than 2,000 yuan (approximate $300) (Figure 18). About 20% of the students (19.4%) thought the cost should be in the range of 5,000 to 10,000 yuan ($750 to $1,500) and another 19.4% thought cost between 20,001 and 50,000 yuan ($3,000 to $7,500) was acceptable. Those who believed that agents could charge over 2,000 yuan ($300) but no more than 5,000 ($750) consisted of 17.9% of all agent-assisted students. The same percentage of the students could afford a cost higher than 10,000 ($1,500) but no more than 20,000 yuan ($3,000). Only 1.5% students indicated that over 50,000 yuan ($7,500) was a reasonable price to pay for agents' services.

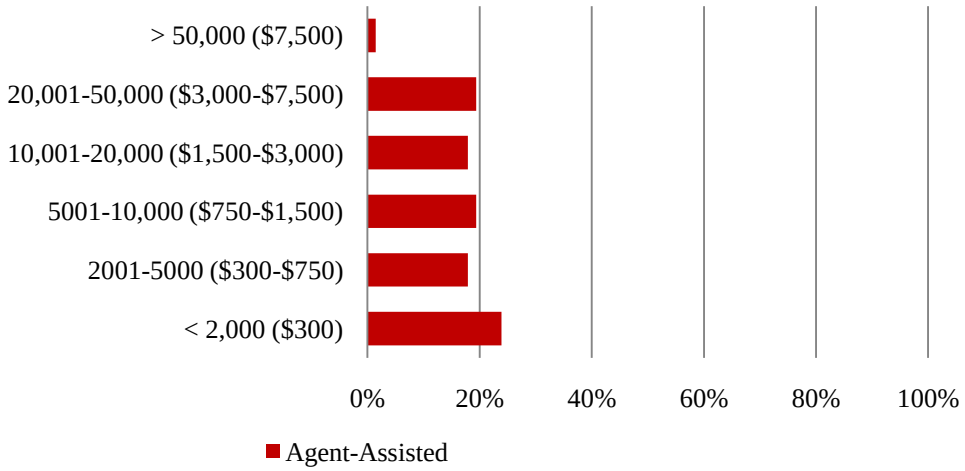

Figure 18. Expected cost for using an agent-prospective students

Summary

1. Agents' reputation, experience, and types of services were reported by the agent-assisted students as the top three criteria when they were considering using an agent.
2. The top three services that agent-assisted students expected to receive was advice on choosing a destination country and institution, contacting personnel at the institution, and advice on choosing a major and information related to future career.
3. The highest percentage of agent-assisted students believed that agents should charge less than 2,000 yuan (approximately $300).

Findings from Follow-up Interviews

A goal of this study was to understand why Chinese undergraduate students decided to use or not to use an agent when they were applying for a U.S. college or university. To understand students' rational of using or not using an agent, their college preparation experiences need to be studied. Semistructured face-to-face focus group interviews were

conducted with prospective Chinese students from four of the five research sites in China. The researcher talked with 60 students and 24 students who planned to study in the U.S. were included in the study. This section is divided into two parts. First, background information of participants is provided. Second, the themes that emerged from the interviews are presented with supporting quotations from the students.

Participants

At four of the five research sites in China, students who volunteered to share their application experiences participated in a focus group interview after they completed the survey (Table 10). Among 24 students who planned to study in the U.S., 15 were female and nine male. Eleven Eighteen students indicated that they would seek for agents' assistance while six reported that they would rely on their own efforts. Regarding female participants, 11 planned to use an agent while four decided not to do so. Seven out of nine male participants reported that they would use an agent but two denied. All of the participants were at an early stage of preparation. Although all of them had decided to study in the U.S., three indicated that they were interested in studying in Canada or Australia and they would apply to colleges in these two countries as well. These students were still exploring potential areas of study and destination institutions. Among those who inclined to use an agent had started working with one yet.

Table 10.

Interviewees in China by School

School	Total No. of Interviewees	Interviewees planning to study in the U.S. (n=24)				
		No.	Non-Agent-Assisted (n=6)		Agent-Assisted (n=18)	
			Female	Male	Female	Male
HS1	N/A	N/A	N/A	N/A	N/A	N/A
HS2	10	2	0	0	2	0
HS3	25	4	1	0	1	2
HS4	13	10	2	2	4	2
HS5	13	8	1	0	4	3
Total	61	24	4	2	11	7

Findings

The qualitative data collected from interviews were utilized to explore the prospective Chinese students' responses to the research question 5A: "How do prospective Chinese students describe their concerns of college application with or without assistance of an agent?" The following challenges were reported by students as major fears and anxieties about the application process.

English Tests

No matter if an agent was involved in the application process, students indicated the most challenging part of the application process was preparing for the standardized English language tests typically required of all international applicants to universities in the U.S. (e.g.,

TOEFL, IELTS, ACT, or SAT). Interviews with students indicated that many students did not engage in long-range planning and many of them planned to attend a U.S. institution in the following semester. In such a short time significant English improvements would be difficult to achieve. A female student expressed her concerns regarding preparing TOEFL.

> "I took TOEFL once last year but my score was not high enough. I plan to take it again but I worried if the results will be greatly improved."

Students complained that the English classes in high school in China were not necessarily helpful to these standard tests. In order to gain better scores, many of the students felt it necessary to transfer to a private English training school to prepare for these tests. However, it is important to note that many students who attend the English training schools are not being prepared for the *Gaokao*, meaning that they must cast all of their hopes on admission to a U.S. university.

> "I heard from my friends that ACT questions are not hard at all as long as you understand the questions. My friends told me that they lost points mainly because they didn't understand the questions. I hope that I will achieve a large improvement in English at this [HS5] school and have a good ACT score."

Visa Application

Visa application was another prevalent concern of students regardless of agents' involvements. Although students with valid, completed materials are supposedly to be awarded a student visa (F-1 or J-1 visas), almost all participants were anxious to some degree about visa application preparation and interview. A male student stated that,

> "I don't understand why getting a visa is so difficult. I feel this part is totally out of

my own control."

With the same concern, students, who did not plan to use an agent, indicated that they may only use an agent to assist with preparing the visa application forms and practicing the interview questions.

"I am afraid that I have everything ready but still won't be issued a visa to study in the U.S. It is just so unpredictable."

College Application Procedure and Materials

Preparation of application forms and documents was reported particularly by non-agent-assisted applicants as a difficult and complex part in the process. Writing a personal statement was new to most Chinese students. Many of them felt they had little to write about because they had limited opportunities to explore their personal interests and few chances to participate in extracurricular activities in schools in China.

"[Chinese] high schools focused heavily on examinations; I have nothing to talk about myself except for my scores. In high school we are not given much time to participate in activities or clubs. I don't want to make up my experiences, but I really don't know what to write about."

It appeared that completing the application forms was a more frustrating procedure for those students who did not utilize the services of an agent. Students questioned the repetitiveness of information collection in the forms and wished the forms could be designed in a simpler and easier fashion. A male student wished the application forms of different universities could be identical to each other, thus he can easily apply for many universities in the U.S.

Choice of University and/or Major

In addition to the above challenges, students expressed their concerns regarding choosing a university and/or a major. It only requests comparison of institutions in China if they plan to attend college in China, while the comparison extends to an international realm of higher education for students who decided to study in the U.S. They were cautious about their decision and hoped to receive professional advice from a knowledgeable source since they were less familiar with American higher education institutions. A student who just started her application process shared her anxiety with the researchers.

> "I am very anxious about decision that I made is not the best for me. I prefer to have an expert to guide me through the process and tell me when I make a bad choice."

Selecting an Agent

Although it appeared that students planned to use an agent had less concerns and worries towards application to U.S. institutions, they reported finding a responsible agent as a challenging and significant step in their application process. A female student indicated,

> "My parents and I both think that I should go to an agent for assistance. We haven't decided yet which one we should use because we want to learn more about each agent."

These students and their parents usually chose an agent based on experiences or suggestions of someone they trust, such as friends, relatives, or coworkers. Their positive feedback and successful cases were the most important criteria in engaging the services of an agent.

> "My parents just decided to use the West agency, because their friends' daughter was

admitted by a reputable U.S. college through their assistance. They told us that they had a satisfactory experience…you know, you cannot only trust what agents' say."

Many interviewees attributed their preference of applying without assistance of an agent to their distrust about what agents can provide. Many non-agent-assisted interviewees had a negative attitude towards agents and their services. A male student simply stated that "they [agents] were just trying to get money out of your pocket." A female student expressed her concerns about evaluation of agents' service,

"They [agents] all say that they can provide the best services for you and they care very much about your future, but it is difficult to know if they will keep their promises or it will be too late by the time you find out. I'd rather focus on my application than finding a honest agent."

Cost of using an agent was considered "very high" in many students' eyes. Some of them thought it was not worthy of "paying for an agent" and some were willing to cut down the expenses for study abroad by apply independently. A female student expressed,

"My parents have paid so much for my study here [at HS4] and will pay even more for my study in the U.S. I feel I can deal with all the application materials and I don't want my parents to spend more on my study."

Summary of Qualitative Findings

This section presented the qualitative findings of the study based on analysis of focus group interviews with prospective Chinese students. Five major themes emerged from the interviews: English tests, visa application, college application materials, choice of university and/or major, and selecting an agent. The findings of the interviews provided richer

information regarding students' fears and concerns about application to U.S. institutions.

Summary

Chapter 4 presented a summary of quantitative and qualitative data collected from surveys and focus-group interviews in China. This chapter first provided descriptive analyses of prospective Chinese students regarding their background information and academic preparation and discussed differences between agent-assisted and non-agent-assisted students. This chapter also analyzed rational of using or not using an agent, examined influencing factors on students' decisions, and explored predictors of students' choice. Focusing on agent-assisted students, this chapter provided expectations of these students to agents' service. The last section of the chapter presented findings from focus group interviews regarding students' concerns and worries towards application to U.S. higher education institutions.

CHAPTER 5. PRESENTATION AND ANALYSIS OF DATA-U.S.

Overview

The purpose of this chapter is to provide a summary of both quantitative and qualitative data collected from international Chinese undergraduate students enrolled at U.S. colleges and universities. The first section summarizes results generated from descriptive statistics regarding students' demographic characteristics, academic experiences, and family backgrounds. Frequencies and percentages are reported for each of the above variables. All the descriptive statistics are presented as aggregated totals as well as disaggregated into two groups: students who used agents and those who did not. The second section presents the rational for using agents or not using agents to assist with the college application process. This section also reports information regarding factors that motivated students to choose to study in the U.S., important figures who influenced their decisions, primary sources through which they gained information of applying to U.S. colleges and universities, and major contributors who pay for their tuition and fees. The third section provides the results of a statistical analysis of students' demographic characteristics, academic experiences, and family backgrounds by group (agent-assisted vs. non-agent-assisted). Results of a sequential logistic regression analysis are also presented in this section. The dependent variable is whether students were assisted with an agent when they were applying for a U.S. institution. The following two sections are specific to students who used agents to assist their college application. The forth section summarizes the services that agent-assisted students expected to receive and services that were actually provided by agents. The fifth section presents level of satisfaction with agents. The results of descriptive analysis are reported in this section. The

sixth, and last, section reports the findings from the interviews with students.

Descriptive Analysis of Overall Sample

Descriptive statistic analysis were administered to answer the first question regarding background of international Chinese undergraduate students studying in the U.S. Table 11 presents numbers and percentages of students at each of the four higher education institutions in the U.S. by group and time when data were collected.

A comprehensive description of background characteristics is provided for an overall understanding of Chinese undergraduate students who enrolled at American colleges and universities.

Table 11.

Participants in the U.S. by Institution

Institution	Year of Data Collected		Total
	2009	2010	
HEI1	184	97	281
HEI2	15	5	20
HEI3	11	N/A	11
Total	210	102	312

Demographic Characteristics

In total, 37.3% of the participants in the U.S. colleges and universities were male and 62.7% were female (Table 12). The largest percentage of them (29.2%) were 19 years old, followed by the group of 20 years old (25.6%). Comparing agent-assisted students with their non-agent-assisted counterparts, a much higher percentage of male were found in the agent-

Table 12.

Background Characteristics of International Chinese Students in the U.S. (N=312)

Variable	Total	Non-Agent-Assisted (n = 128)			Agent-Assisted (n = 184)		
	%	%	95% CI		%	95% CI	
			LL	UL		LL	UL
Gender							
Female	62.7	70.4	62.4	78.4	57.1	49.8	64.5
Male	37.3	29.6	21.6	37.6	42.9	35.5	50.2
Age							
18 and below	20.8	16.0	9.6	22.4	24.0	17.9	30.2
19	29.2	29.6	21.6	37.6	29.0	22.4	35.5
20	25.6	27.2	19.4	35.0	24.6	18.4	30.8
21	15.3	16.0	9.6	22.4	14.8	9.6	19.9
22 and above	9.1	11.2	5.7	16.7	7.7	3.8	11.5
HS Track							
Science	59.5	57.0	48.5	65.6	62.0	55.0	69.0
Liberal Arts	40.1	43.0	34.4	51.6	38.0	31.0	45.1
HS Ranking							
Bottom 20th Percentile	0.6	0.8	0.0	2.4	0.5	0.0	1.6
61-80th Percentile	5.2	0.8	0.0	2.4	8.2	4.2	12.1
41-60th Percentile	18.4	16.0	9.6	22.4	20.1	14.3	25.9
21-40th Percentile	31.7	26.4	18.7	34.1	35.3	28.4	42.2
Top 20th Percentile	44.0	56.0	47.3	64.7	35.9	28.9	42.8
If took the *Gaokao*							
Yes	48.1	71.1	63.2	78.9	32.1	25.3	38.8
No	51.9	28.9	21.1	36.8	67.9	61.2	74.7

Table 12. (continued)

Variable	Total	Non-Agent-Assisted (n = 128)			Agent-Assisted (n = 184)		
	%	%	95% CI		%	95% CI	
			LL	UL		LL	UL
If took TOEFL/IELTS or ACT/SAT							
Yes	93.6	93.8	89.6	97.9	93.5	89.9	97.1
No	6.4	6.3	2.1	10.4	6.5	3.0	10.1
College Attendance in China							
Yes	32.8	23.6	16.2	31.0	39.1	32.1	46.2
No	67.2	76.4	69.0	83.8	60.9	53.8	67.9
English Proficiency							
Poor	2.6	1.6	0.0	3.7	3.3	0.7	5.8
Fair	15.4	7.8	3.2	12.5	20.7	14.8	26.5
Good	67.6	66.4	58.2	74.6	68.5	61.8	75.2
Excellent	14.1	24.2	16.8	31.6	7.6	3.8	11.4
College Classification in the U.S.							
Freshman	57.9	44.1	34.0	54.2	65.7	58.4	72.9
Sophomore	23.9	26.9	17.9	35.9	22.3	16.0	28.6
Junior	13.5	23.7	15.0	32.3	7.8	3.7	11.9
Senior	4.6	5.4	0.8	10.0	4.2	1.2	7.3
Father's Highest Degree Obtained							
Less than HS	8.3	9.4	4.3	14.4	7.6	3.8	11.4
HS Graduate	15.7	17.2	10.7	23.7	14.7	9.6	19.8
Associate's	14.7	19.5	12.7	26.4	11.4	6.8	16.0
Bachelor's	37.8	28.9	21.1	36.8	44.0	36.9	51.2
Master's	15.7	14.8	8.7	21.0	16.3	11.0	21.6
Ph.D.	7.7	10.2	4.9	15.4	6.0	2.6	9.4

Table 12. (continued)

Variable	Total	Non-Agent-Assisted (n = 128)			Agent-Assisted (n = 184)		
	%	%	95% CI		%	95% CI	
			LL	UL		LL	UL
Mother's Highest Degree Obtained							
Less than HS	6.4	9.4	4.3	14.4	4.3	1.4	7.3
HS Graduate	18.6	25.8	18.2	33.4	13.6	8.6	18.5
Associate's	26.3	28.9	21.1	36.8	24.5	18.3	30.7
Bachelor's	31.7	22.7	15.4	29.9	38.0	31.0	45.1
Master's	12.5	8.6	3.7	13.4	15.2	10.0	20.4
Ph.D.	4.5	4.7	1.0	8.4	4.3	1.4	7.3
Family Annual Income (yuan)							
< 20,000	2.5	0.0	0.0	0.0	4.2	1.2	7.2
20,001 - 50,000	6.4	2.6	0.0	5.5	8.9	4.6	13.2
50,001 - 100,000	11.7	12.2	6.2	18.2	11.3	6.5	16.1
100,001 - 300,000	30.0	18.3	11.2	25.3	38.1	30.8	45.4
300,001 - 500,000	25.8	40.9	31.9	49.9	15.5	10.0	21.0
500,001 - 1,000,000	13.8	14.8	8.3	21.3	13.1	8.0	18.2
> 1,000,000	9.9	11.3	5.5	17.1	8.9	4.6	13.2
Home Province GDP (100 million yuan)							
<10,000	2.6	4.1	0.6	7.6	1.7	0.0	3.5
10,000-15,000	23.2	25.4	17.7	33.1	21.7	15.7	27.7
15,000-20,000	13.6	7.4	2.7	12.0	17.8	12.2	23.4
20,000-30,000	14.9	12.3	6.5	18.1	16.7	11.2	22.1
30,000-40,000	27.8	23.8	16.2	31.3	30.6	23.8	37.3
>40,000	17.9	27.0	19.2	34.9	11.7	7.0	16.4

assisted student group (42.9% vs.29.6%). While a lower percentage of agent-assisted students were 19 or older, a higher percentage of them were18 and younger.

Academic Experiences

For all of the participants in the U.S., the majority of them (59.5%) chose the science track in high school. The largest group (44.0%) reported their high school academic skills were in the top 20th percentile and only 0.6% indicated that they belonged to the bottom 20%. Less than half of the participants (48.1%) took the *Gaokao* in China and almost all of them (93.6%) took at least one of the standard tests for studying in the U.S. (TOEFL, IELTS, ACT, or SAT). In general, these students were confident with their English ability. Slightly over 80% believed that they were "Good" or "Excellent" in English listening, speaking, reading, and writing skills.

When comparing the two groups of students who used or did not use an agent, unique patterns were identified. A higher percentage of agent-assisted students were found in the high school science track when compared to non-agent-assisted students (62.0% vs. 57.0%). Over half (56.0%) of non-agent-assisted students indicated that they were in the top 20 percentile in high school, but only 35.9% of agent-assisted students reported so. More than 70% of agent-assisted students took the *Gaokao* in China while less than one-third of non-agent-assisted students chose to do so. Additionally, Almost one-fourth (24.2%) of non-agent-assisted students reported "Excellent" for their English skills, while only 7.6% of agent-assisted students reported the same level.

Family Background

In general, the participants at the three U.S. higher education institutions were from middle-class families in China and had well-educated parents. Almost half (48.7%) of the mothers and 61.2% of the fathers of the participants obtained at least a bachelor's degree.

The highest proportion (30.0%) of the students reported that their family annual income was between 100,001 and 300,000 yuan (approximately between $15,000 and $45,000) and approximately one-fourth indicated that their family income was higher than 300,000 yuan but less than 500,000 yuan (approximately Between $45,000 and $75,000). Slightly over 60% of the participants were from more economically developed provinces in China.

When comparing students between the two different groups, a higher percentage of mothers of agent-assisted students received a bachelor's or a master's degree, but the proportion of doctoral degree recipients of the mothers was similar. Forty-four percent of fathers of agent-assisted students obtained a bachelor's degree, while that was true of only 28.9% of fathers of non-agent-assisted students. However, 10.2% of non-agent-assisted students reported that their fathers received a doctoral degree, while the percentage of agent-assisted students was only 6.0%. A higher percentage of agent-assisted students reported that their family income was no more than 300,000 yuan per year, but a larger proportion of non-agent-assisted students indicated that their family income was higher than 300,000 yuan..

Summary of Background Characteristics

1. More than 60% the participants in the U.S. were female. A higher percentage of agent-assisted students were male compared to non-agent-assisted students.
2. The majority of the participants were 20 years old or younger and a larger proportion was found in agent-assisted students.
3. The majority of the students were in the science track and agent-assisted students had a higher proportion.
4. Nearly half of the students ranked at the top 20th percentile in high school and a

higher percentage of non-agent-assisted students ranked at the top 20th percentile.

5. Slightly less than half of the participants took the *Gaokao* prior to study in the U.S. and a higher percentage was found in the group of students who were not assisted by agents.
6. Almost all students took at least one of the English tests (TOEFL, IELTS, ACT or SAT) for studying in the U.S.
7. The majority of the students were confident at their English proficiency and the percentage of level of "Excellent" in non-agent-assisted students was much higher.
8. Fathers of non-agent-assisted students had a lower percentage of bachelor's and master's degrees but had a higher percentage of doctoral degrees. Mothers of both groups of students had similar proportions of doctoral degrees, but mothers of non-agent-assisted students had lower percentages of bachelor's and master's degrees.
9. A higher percentage of non-agent-assisted students reported that their family income was higher than 300,000 yuan. Conversely, a higher percentage of agent-assisted students reported that their family's annual income was 300,000 or lower.

Coming to the U.S. with or without Assistance of an Agent

To better understand why students chose to use or not to use an agent to help with their application to U.S. institutions, it is important to understand their rational of studying in the U.S. and factors influencing their decisions. The following section reports results of analyses of all students as well as results by group (agent-assisted vs. non-agent-assisted students) regarding their motivations for studying overseas in general and in the U.S. in particular. The primary influencing factors in their decision making process for studying in

the U.S. included primary sources of information, and major financial sponsors.

Motivations of Studying Overseas

When asked about what factors motivated them to study overseas, 70.5% of the international Chinese undergraduate students desired to enrich their personal experiences in a different culture. The second motivation was to seek a better quality of higher education. The majority of students (68.9%) believed that they could receive better higher education outside of China. Learning a foreign language was reported as another factor that motivated students to attend college outside of China. Almost 40% of the students (39.1%) indicated that studying overseas could improve their foreign language skills. More than one-third (35.6%) of the students believed a foreign degree could make them more competitive in the Chinese job market when they return and about one-fifth (20.2%) reported that they intended to study overseas because they had little chance of attending their desired colleges in China. In addition, students were motivated by opportunities of working and/or immigrating to the foreign country (12.8%). A small number of students intended to avoid preparation for the *Gaokao* (3.8%) or just followed other people (0.6%).

When comparing agent-assisted with non-agent-assisted, differences were found between the two groups. A higher proportion of agent-assisted students regarded studying overseas a significant opportunity to be exposed in different cultures to gain richer experiences (75% vs. 64.1%) (Figure 19). Also, a higher proportion of agent-assisted students expressed that studying overseas could provide them with better higher education (77.2% vs. 57.0%), improve their foreign language skills (45.1% vs. 30.5%), and offer additional opportunities to attend college (27.2% vs. 10.2%). A lower proportion of agent-

assisted students regarded studying abroad as a way to avoid the *Gaokao* (2.7% vs. 5.5%) and none of them thought they were merely following a trend.

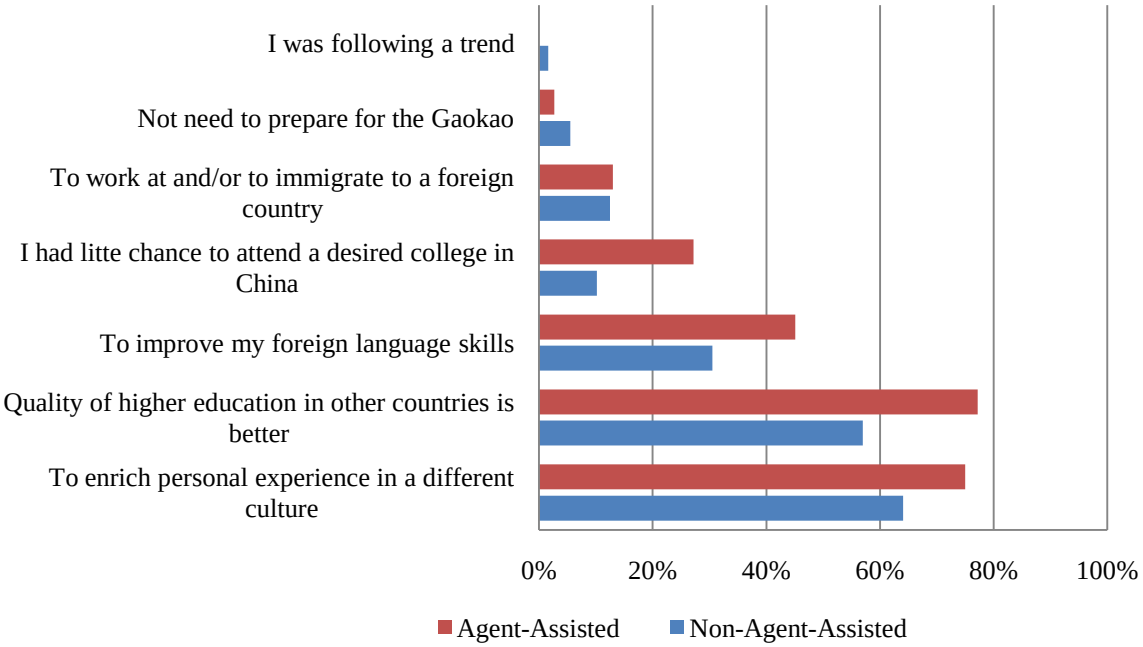

Figure 19. Motivations of study abroad by group-undergraduate students

Attractions of the U.S. Higher Education

Over half (55.9%) of the participants in the U.S. reported that they gravitated towards the U.S., rather than other countries, because they believed that they can receive a better quality of higher education. The second most reported reason was that a U.S. degree is more prestigious than degrees from other countries (17.2%). Additionally, 12.5% students reported that their interest in American culture was a significant influence for them to study in the U.S.

Different patterns were identified by examining the individual results of each group. A larger percentage of non-agent-assisted students believed that quality of the U.S. higher

education is better when compared to their agent-assisted counterparts (60.8% vs. 53.3%), while nine percent more agent-assisted students viewed U.S. degrees more prestigious (20.3% vs. 11.3%) (Figure 20).

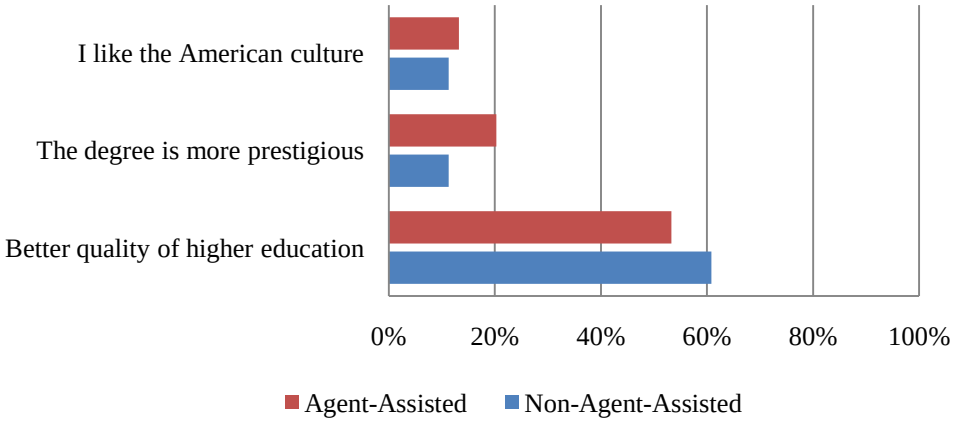

Figure 20. Motivations of study in the U.S. by group-undergraduate students

Primary Source of Information

Regardless of using or not using an agent, the Internet was chosen by almost half of the participants (49.1%) as the most important source of information for their application to a U.S. college or university. Education agents were reported by nearly one-fourth (22.8%) and 8.2% reported that their teachers were a primarily source of information.

When looking at the two groups separately, the results showed that a much higher percentage of non-agent-assisted students relied on the Internet for application information (67.3% vs. 39.3%) (Figure 21). A large proportion of agent-assisted students also reported the Internet as their primary source of information. Approximately one-third of agent-assisted students reported education agents as their most important source of information, while a

small percentage of non-agent-assisted students used agents for information only. The third most important source for agent-assisted students was teachers while for non-agent-assisted students, friends ranked the third.

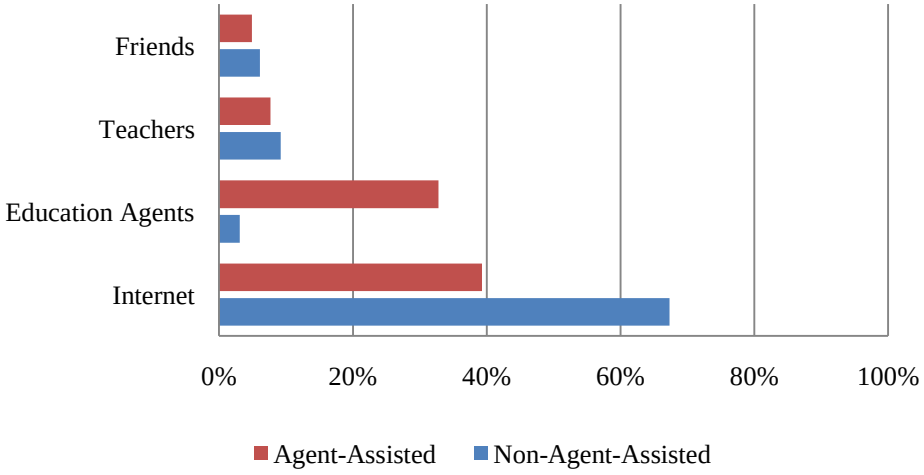

Figure 21. Primary source of information by group-undergraduate students

Influencing Factors and Primary Sponsors

In deciding whether to study overseas and in which country, the majority of the participants (59.1%) reported that their own opinion was the most important factor. Twenty-seven and a half percent (27.5%) of students reported that parents also played a major role in the decision making process. Parents were also reported as the most important source of financial support. Almost all of the students (96.8%) indicated that their parents paid the tuition and fees for their education.

The results reported that a higher percentage of agent-assisted students were influenced by their parents regarding studying in the U.S. (33.1% vs. 17.2%), while a larger proportion of non-agent-assisted students decided to study in the U.S. on their own (64.6% vs.

56.4%) (Figure 22). The patterns of financial support were similar between the two groups, while a slightly higher percentage of agent-assisted students reported parents as their major sponsors of tuition and fees (98.9% vs. 92.8%) (Figure 23).

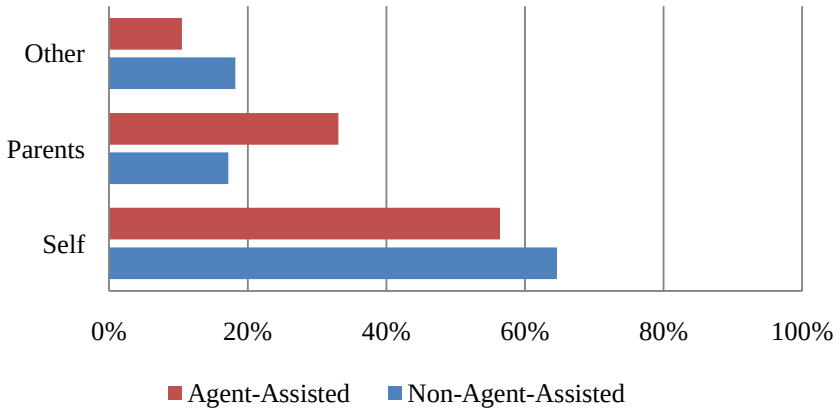

Figure 22. Influencing factors by group-undergraduate students

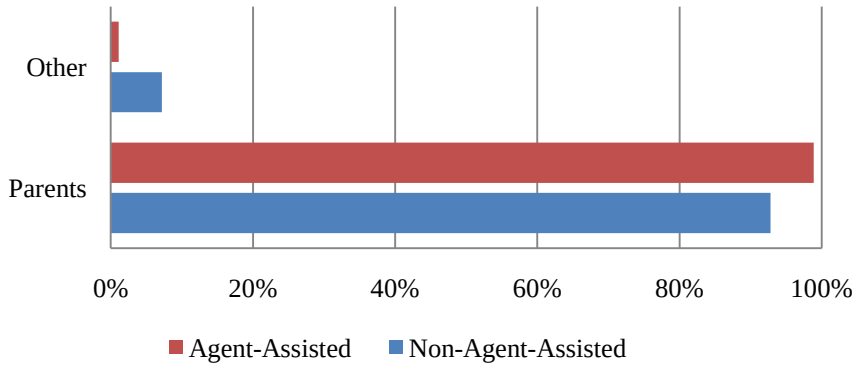

Figure 23. Source of tuition and fees by group-undergraduate students

Summary of Factors regarding Studying in the U.S.

1. International Chinese undergraduate students viewed studying abroad as an opportunity to enrich personal experiences in a different culture, to receive a better higher education, and to improve their foreign language skills.
2. Students of both groups were motivated to study in the U.S. rather than other countries for a better quality of higher education, a more prestigious degree, and first-hand experience of the American culture.
3. The Internet was the primary source of information for both groups, while a much higher percentage of non-agent-assisted students relied on the Internet.
4. Personal decision guided the majority of the students to study in the U.S. and parents' options played a significant role.
5. Almost all of the students depended on their parents for tuition and fees for studying in the U.S.

Rational of Using or Not Using an Agent

All of the participants were asked to choose any reasons of using or not using an agent from a list of options in the online survey.

Rational of Using an Agent

Among 184 students (59%) who indicated using an agent to assist college application, three quarters (75.0%) chose "I know little about the college application process" (Figure 24). Limited knowledge about the U.S. higher education institutions and lack of knowledge in visa application were reported respectively as the second and the third most important reasons as reported by 58.9% and 56.7% of participants in the U.S. Forty percent indicated

that they felt more likely to be accepted by the university if they applied with the assistance of an agent. The results also demonstrated that unfamiliarity with the foreign culture and environment (21.1%) and barriers of language (18.3%) could motivate students to seek an agent's assistance. More than 10% of the agent-assisted students (13.3%) were influenced by their relatives, friends, or classmates in deciding to use an agent for college application. Additionally, a small amount of the students (2.8%) turned to agents for better opportunities to apply for use an agent. Ten percent of the participants provided supplementary reasons why they chose to use an agent, indicating that using an agent was a part of an exchange program between Chinese and U.S. institutions, in which an agent was designated to students in the program. Some indicated that they chose to work with an agent because of their limited time for preparation.

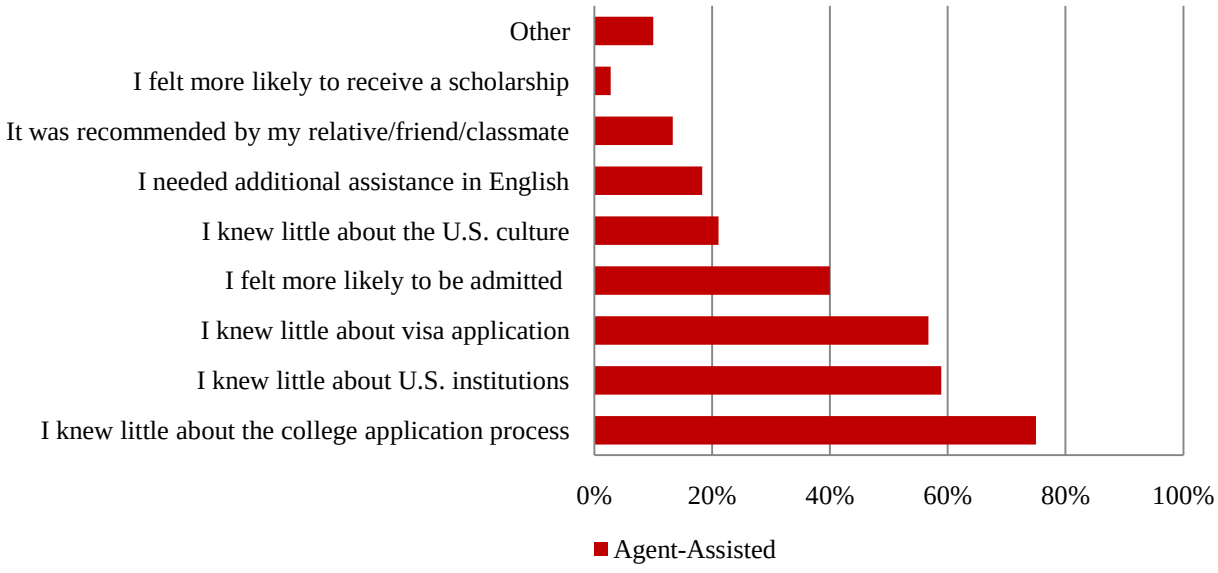

Figure 24. Rational of using an agent-undergraduate students

Rational of Not Using an Agent

In the same fashion non-agent-assisted students (128 students; 41%) were asked to provide reasons for their decision. The most popular reason was "I was capable of applying on my own," which was chosen by 73.4% of the students (Figure 25). More than one-third of the students (36.2%) did not use an agent because of a lack of trust. "Expenses were too high" was selected by 22.3% of non-agent-assisted students and "my parents/relatives/friends were able help me" by 19.1%. Nearly 10% of students mentioned that people around them had unpleasant experiences of working with agents which discouraged them from using an agent. Lastly, a small proportion (7.4%) of the non-agent-assisted students provided supplementary reasons. A few mentioned that they went through exchange programs thus had no need of an agent. Also, a couple of students indicated that they were not familiar with agents' services.

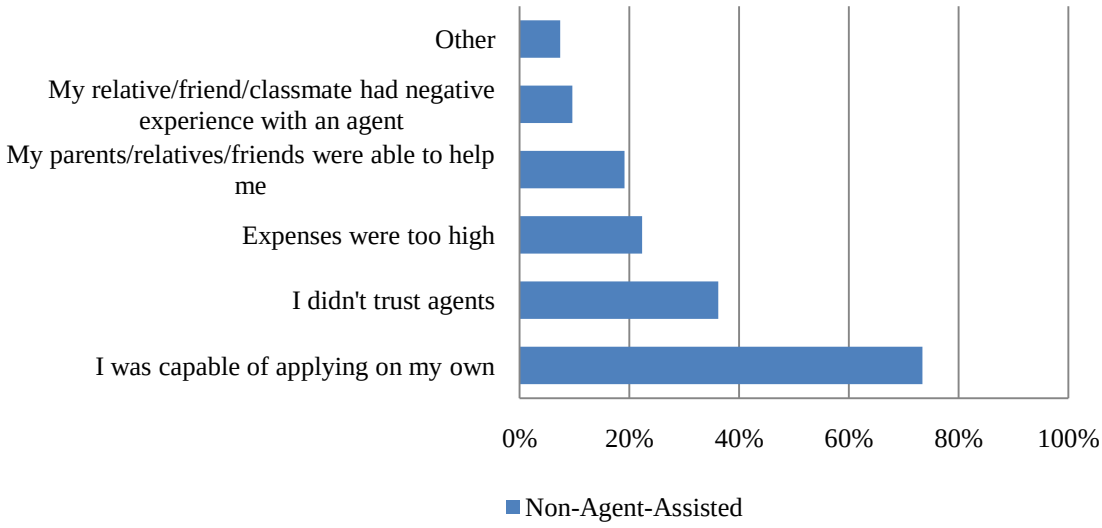

Figure 25. Rational of NOT using an agent-undergraduate students

Summary of Rational of Using or Not Using an Agent

1. Fifty-nine percent of the participants in the U.S. expressed that they used an agent to assist in applying to the U.S. institution and 41% indicated that they did not use an agent.
2. The top three reasons of using an agent:
    a. I knew little about the college application process
    b. I knew little about U.S. colleges and universities
    c. I knew little about visa application
3. The top three reasons of not using an agent:
    a. I was capable of applying to the U.S. institution on my own
    b. I did not trust agents' service
    c. Expense of using an agent was too high

Statistical Analysis of Choice for Using or Not Using an Agent-Undergraduate Students

To explore predictors of students' choice for using or not using an agent, inferential statistics were conducted. Similar to the analyses that were applied to the Chinese prospective students, independent samples *t*-tests, Pearson Chi-Square tests, and sequential logistic regression were conducted.

Independent samples *t*-tests were first conducted to compare the means of the two groups on age, academic backgrounds, English proficiency, family income, and home province GDP level. Second, Pearson Chi-Square tests were administered to examine categorical and dichotomous variables including gender, classification in college, high school track, parent's education, if TOEFL/IELTS and/or ACT/SAT were taken, if they took the

Gaokao, and if they had attended college in China. The grouping variable, whether a student has used or decided to use an agent to assist college application process, was 0 = students who did not pay for any assistance of agents, or non-agent-assisted students, and 1 = students who paid an agent, or agent-assisted students. Tables 13 and 14 provide a summary of the mean scores of the independent samples *t*-tests on students' background characteristics, academic preparation, parental income, and highest degree obtained.

Results of Independent Samples t-Tests

As shown in Table 13, the mean age of non-agent-assisted students (19.82) and agent-assisted students (19.51) had a small difference of 0.31, which was not statistically significant between the two groups (t = 1.81, df = 306, p = .072) at the p = .05 level.

The mean score of ranking in high school in China for agent-assisted students was 3.98 and 4.36 for non-agent-assisted students. The difference between the two groups was 0.38 and it was statistically significant (t =3.59, df = 307, p < .001) at the p = .05 level. The scale for this question was a 5-level scale including 1 = bottom 20th percentile, 2 = 60th to 80th percentile, 3 = 40th to 60th percentile, 4 = 20th to 40th percentile, and 5 = top 20th percentile.

The mean score of self-reported English proficiency for agent-assisted students was 2.80 and 3.13 for non-agent-assisted students. The difference in mean was 0.33, which was statistically significant between the two groups (t = 4.67, df = 310, p < .001) at p = .05 level. The scale was a 4-likert type scale, ranking from 1 = poor to 4 = excellent.

The mean score of the father's education for agent-assisted students was 3.65 and 3.53 for non-agent-assisted students with a difference of 0.12, which was not statistically

significant (t = - 0.73, df = 254, p = .460) at p = .005 level. The scale includes1 = less than high school, 2 = high school graduate, 3 = associate's degree, 4 = bachelor's degree, 5 = master's degree, and 6 = doctoral degree.

The mean score of the mother's education was 3.59 for agent-assisted students and 3.09 for non-agent-assisted students. The difference (0.50) was statistically significant (t = - 3.58, df = 310, p < .001) at p = .005 level. The scale was the same with father's education and it varies from 1 = less than high school to 6 = doctoral degree.

Regarding family annual income, the mean score of non-agent-assisted students (4.82) was higher than agent-assisted students (4.29). The difference between the two groups was 0.53, which was statistically significant (t = 3.26, df = 273, p < .001) at p = .005 level. The scale included seven levels ranging from 1 = less than 20,000 yuan to 7 = more than 1,000,000 yuan.

The mean score of home province GDP of non-agent-assisted students (4.07) had a small difference (0.19) with agent-assisted students (3.88). The difference was not statistically significant (t = 1.07, df = 229, p = .288) at p = 0.05 level. The scale had six levels ranging from 1 = less than 10,000 to 6 = more than 40,000 (unit: 100 million yuan).

Results of Independent Chi-Square Tests

As shown in Table 14, students' choice of using agents did not differ by the students' high school track in China or if they took TOEFL/IELTS and/or ACT/SAT. However, the results demonstrated that there was a significant relationship between students' choice of using or not using an agent and gender, χ^2 (1, n = 300) = 5.478, p < .05. It was found whether students used an agent was significantly associated with students' choice of taking the

Table 13.

Means, Standard Deviations, and Independent Samples t-Test Results-Undergraduate Students

Variable	Non-Agent-Assisted		Agent-Assisted		*t*	*df*	*p*		95% CI	
	M	*SD*	*M*	*SD*					LL	UL
Age	19.82	1.47	19.51	1.47	1.808	306	.072		-0.03	0.64
HS Rank	4.36	0.84	3.98	0.97	3.588	307	.000	***	0.17	0.59
English Proficiency	3.13	0.61	2.80	0.61	4.671	310	.000	***	0.19	0.47
Father's Education	3.53	1.44	3.65	1.29	-0.726	254	.460		-0.42	0.19
Mother's Education	3.09	1.28	3.59	1.16	-3.583	310	.000	***	-0.77	-0.22
Family Income	4.82	1.22	4.29	1.50	3.259	273	.001	**	0.21	0.85
Province GDP	4.07	1.67	3.88	1.40	1.066	229	.288		-0.17	0.56

* $p < .05$, ** $p < .005$, *** $p < .001$

Table 14.

Chi-Square Test Results-Undergraduate Students

Variable	Percentage among		*Chi-Square*	*df*	*p*	
	Non-Agent-Assisted	Agent-Assisted				
Gender (Female)	70.4	57.1	5.478	1	.019	*
HS Track (Science)	57.0	62.0	0.763	1	.383	
Chose to Take the *Gaokao*	71.1	32.1	46.062	1	.000	***
Chose to Take English Tests	93.8	93.5	0.009	1	.923	
College Attendance in China	23.6	39.1	8.199	1	.004	**

* $p < .05$, ** $p < .005$, *** $p < .001$

Gaokao, χ^2 (1, n = 312) = 46.062, p < .001. In addition, the results of analyses indicated that there was a significant relationship between whether attending a college in China and students' choice of using education agents, χ^2 (1, n = 311) = 8.199, p < .005.

Results of Sequential Logistic Regression

The results of descriptive analyses provided background characteristics, academic preparation, and socioeconomic status. However, it remained unclear what factors predict students' choice of using or not using an agent when the analyses only relied on descriptive results. Thus, the effects of these variables on students' decision were examined by a sequential logistic regression. Figure 8 (in chapter 3) illustrates the predictive model and Table 15 shows the detailed information of the predictors. Whether students took the *Gaokao* and whether they attended college in China were highly correlated and they had a positive relationship. Therefore, only the variable indicating whether a student took the *Gaokao* was included in the predictive model.

Demographic Characteristics (Model 1)

The demographic block consists of two variables: gender and age. The simple correlations revealed relationships between independent and dependent variables. Gender and age had negative relationships with students' choice of using an agent and gender was identified as a significant predictor (p < .05) to the dependent variable. That is, male students were more likely to use an agent. The combination of these two demographic variables only accounted for 3% of the variance of the dependent variable.

Educational Experiences (Model 2)

This model included both demographic characteristics and students' educational

experiences in high school in China, including whether a student chose the track of science or liberal arts, how well the student ranked in his/her high school cohort, and whether he/she took the *Gaokao*. In this model, both demographic variables had negative relationships with the dependent variable and neither of them remained a significant predictor of the dependent variable.

For variables in the second block, high school track ($p < .05$), high school ranking ($p < .005$) and whether the student took the *Gaokao* ($p < .001$) remained significant predictors to the students' choice of using an agent. High school track had a positive relationship with the dependent variable, while the other two variables had negative relationships. More specifically, students of the science track, those who ranked lower in their high school cohort, and those who did not take the *Gaokao* were more likely to use an agent.

After adding the second block "educational experience in China," the value of *R* square had a large increase. Together, all of the five variables in Model 2 explained 28.0% of the variance in students' choice of using an agent.

Academic Preparation (Model 3)

Another block "academic preparation" was added to Model 3. "Academic preparation" included two variables that were directly related to study in the U.S.: students' self-reported English proficiency and whether they took TOEFL/IELTS and/or ACT/SAT. Both of the variables in block 3 had negative associations with the dependent variable. English proficiency remained as a significant predictor to the dependent variable. That is, students who reported lower level of English proficiency were more likely to rely on an agent's assistance.

Regarding variables in the first two blocks, students' ranking in high school ($p < .005$) and whether taking the *Gaokao* ($p < .001$) remained significant predictors to the dependent variable and both had negative associations with the dependent variable. The *R* square vale increased to 0.334 after the third block was entered.

Family Background (Model 4)

Model 4 (full model) included an additional three variables indicating students' family background to the equation. The three variables were mother's highest degree , average annual family income, and the students' home province GDP. Except for the mother's education, family income and home province GDP had negative relationships with the dependent variable.

By the final step in the equation, four variables remained significant predictors to the student's choice of using an agent, including high school ranking ($p < .005$), whether taking the *Gaokao* ($p < .001$), English proficiency ($p < .005$), and mother's highest degree obtained ($p < .05$).

The results indicated that students who ranked lower in their high school cohort, who did not take the *Gaokao* prior to studying in the U.S., who were less proficient in English, and whose mothers had higher degrees, were more likely to use an agent. The *R* square value increased to 0.367 when all the variables entered, indicating that 36.7% of the variance in the dependent variable was explained by Model 4 (full model).

Table 15.

Logistic Regression Predicting Students' Choice of Using or Not Using an Agent by Model-Undergraduate Students

Variable	Odds Ratio								95% CI	
	Model 1		Mode 2		Model 3		Model 4		LL	UL
Demographics (block 1)										
Gender (Female)	0.556	*	0.721		0.738		0.762		0.395	1.473
Age	0.864		0.847		0.872		0.921		0.740	1.148
Educational Experience (block 2)										
HS Track (Science)			1.890	*	1.879		1.837		0.957	3.523
HS Ranking			0.574	**	0.628	**	0.595	**	0.415	0.854
Gaokao			0.172	***	0.160	***	0.176	***	0.095	0.326
Academic Preparation (block 3)										
English Proficiency					0.424	**	0.396	**	0.239	0.657
English Tests (TOEFL/IELTS and/or ACT/SAT)					0.985		0.971		0.314	3.010
Family Background (block 4)										
Mother's Highest Degree							1.338	*	1.045	1.711
Parental Annual Income							0.878		0.707	1.091
GDP of Home Province							0.941		0.770	1.148
Nagelkerke *R* Square	0.030		0.280		0.334		0.367			

* $p < .05$, ** $p < .005$, *** $p < .001$

Overall Model Prediction

Overall, 74.0% of students who did not use an agent to assist their college application process and 74.0% of those who used one were predicted correctly with this model. The overall predication rate was 74.0% (Table 16).

Table 16.

Overall Prediction of the Logistic Regression Model-Undergraduate Students

Observed		Predicted		
		Did you use an education agent for your application		Percentage Correct
		0 No	1 Yes	
Did you use an education agent for your application	0 No	77	27	74.0
	1 Yes	40	114	74.0
Overall Percentage				74.0

The cut value is .580

Summary

The following results were observed from the full model analyses.

1. Comparing to agent-assisted students, non-agent-assisted students ranked higher in their high school cohort, had higher level of English proficiency, and their parents had higher income when compared with agent-assisted students, but their mothers obtained a lower degrees.
2. Student's choice of using or not using an agent was associated with students' gender,

choice of taking the *Gaokao*, and college attendance in China.

3. High school ranking, choice of taking the *Gaokao*, English proficiency, and mother's education remained significant predictors to students' choice of using an agent.

Experiences of Using an Agent

International Chinese undergraduates at the U.S. research sites have completed their college application process with or without assistance of an agent. Students who indicated using an agent were asked to review their experiences with the agent. Students who have completed the process may provide a different perspective compared to the participants in China, who were still at an early stage of college application preparation.

Selecting Criteria

Experience, reputation, and services were the top three criteria that reported by the Chinese students in the U.S. (Figure 26). More than one-third of the international Chinese undergraduates (33.9%) in the U.S. reported that extensive experience was the most important fact that should be considered in selecting an agent. A good reputation, chosen by 27.7% was the second most selected criterion. Whether an agent could provide services that can meet students' needs was also reported as an important criterion (23.2%).

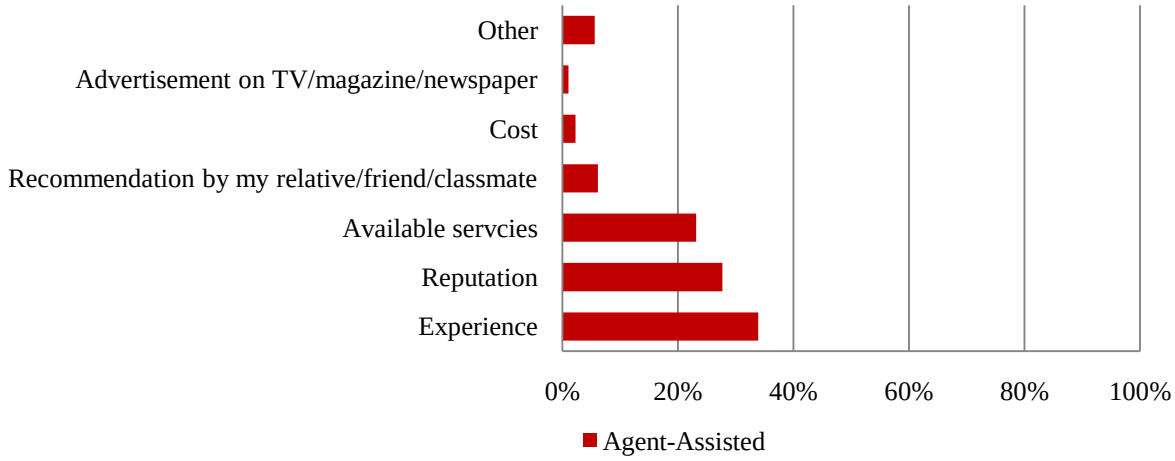

Figure 26. Selecting criteria of agent-assisted students-undergraduate students

Services Provided by Agents

The participants in the U.S. were asked to report all the services that they received from agents who assisted their application to U.S. colleges or universities (Figure 27). The majority (75.5%) indicated that agents helped them with the student visa application. Most agents provided guidance on choosing a destination country and/or institution, quoted by 71.2% of the agent-assisted participants. Approximately two-thirds of the students (66.8%) expressed that their agents prepared college application materials for them and 66.4% indicated the agents contacted personnel on their behalf. In addition, about one-third of the students (33.2%) used agents to overcome English barriers. One-fifth (20.1%) claimed that the agents provided continuous services after they landed in the U.S. Only a small proportion of students reported that agents helped them to choose choosing a major (14.7%) or applying to a scholarship (5.4%).

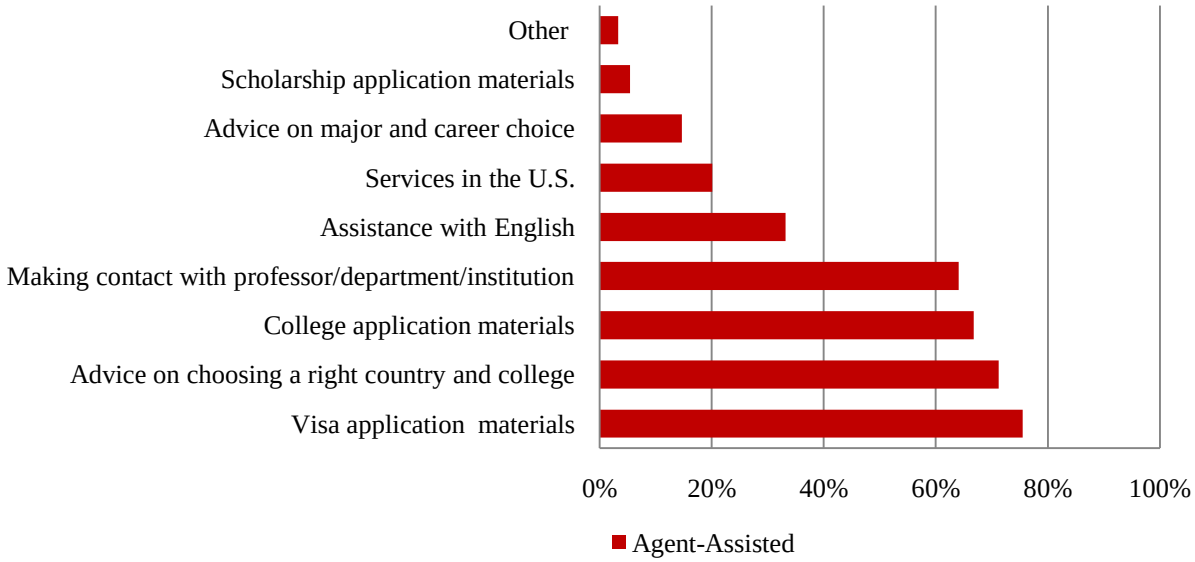

Figure 27. Services provided by agents-undergraduate students

Payments for Agents

Additionally, the international Chinese undergraduate students at the U.S. sites reviewed the amount that they (their parents) paid for the agents' services.

The largest group of students (46.5%) claimed that they paid more than 20,000 yuan (approximately $3,000) but less than 50,000 yuan ($7,500) to their agents (Figure 27). More than one-fourth (27.1%) indicated that it cost them between 10,000 yuan ($1,500) and 20,000 ($3,000) yuan to use an agent. Only a small proportion of students indicated that they paid either less than 2,000 yuan ($300) or higher than 50,000 yuan ($7,500) for agents' services.

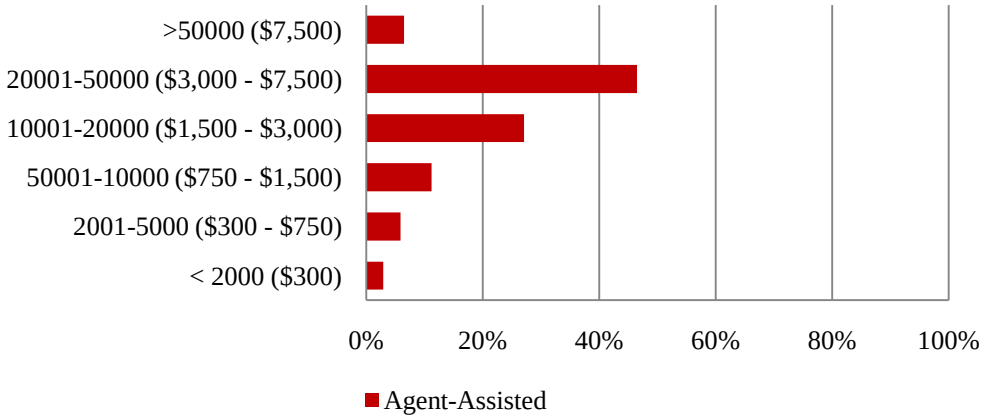

Figure 28. Cost of using an agents-undergraduate students

Satisfaction with Agents

Agent-assisted students were asked to report to what degree they were satisfied with the agents' services (Table 17). Regarding the cost of using an agent, nearly half of the students (44.10%) disagreed or strongly disagreed that the agents charged a reasonable price. Over 60% of the students agreed or strongly agreed that they would recommend the same agent to their friends, relatives, or others. Overall, the majority of the students (71.50%) were satisfied with their experiences with the agent.

Summary

1. Agent's experience, reputation, and types of services were reported by the agent-assisted students as the top three criteria when they were considered using an agent.
2. Top three services that agents provided were visa application, choice of destination country and/or institution, and college application materials.
3. Nearly half of agent-assisted students paid more than 20,000 yuan ($3,000) but less

Table 17.

Undergraduate Students' Satisfaction with Agents

Survey Question	Percentage among			
	Strongly Disagree	Disagree	Agree	Strongly Agree
The cost was reasonable	11.90	32.20	52.00	4.00
I will recommend the same agent to others	9.70	27.30	55.70	7.40
I was overall satisfied with the service provided by the agent	8.00	20.60	64.60	6.90

than 50,000 yuan ($7,500) for agents' services.

4. Overall, the majority of the agent-assisted students were satisfied with the agent, while nearly half disagreed that the agent charged a reasonable price.

Findings from Follow-up Interviews

Besides quantitative data collected via online surveys, qualitative data were also collected from semistructured interviews with participants. The purpose of the interviews was to gain more in-depth information about students' choice of using or not using an agent and their experiences of college application with or without agents' assistance. In total, the researcher interviewed 31 international Chinese students who were pursuing a bachelor's degree at three Midwestern institutions in the fall of 2009 and 2010.

This section consists of two parts: 1) background information of interviewees and 2) themes that emerged from the interviews with supporting quotations from the students.

Participants

In total, 31 international Chinese undergraduate students in the three U.S. institutions

volunteered to talk with the researcher regarding their choices of using or not using an agent, challenges of applying to a U.S. institution, and experiences of working with an agent. Twenty-one were interviewed in the fall of 2009 and 10 in the fall of 2010 (Table 18). Six students were interviewed via telephone and two participated in a face-to-face interview individually due to constrain of location and time. In addition to the individual interviews, four focus-group interviews were conducted. Among the 31 interviewees, 18 were female and 13 were male. Twenty students used agents and 11 did not.

Table 18.

Interviewees in the U.S. by Institution

Institution	Total	2009					2010				
		Non-Agent-Assisted (n=8)		Agent-Assisted (n=13)		Total	Non-Agent-Assisted (n=3)		Agent-Assisted (n=7)		Total
		Female	Male	Female	Male		Female	Male	Female	Male	
HEI1	20	3	2	5	3	13	1	0	3	3	7
HEI2	6	1	0	1	1	3	1	1	1	0	3
HEI3	5	0	2	2	1	5	N/A	N/A	N/A	N/A	N/A
Total	31	4	4	8	5	21	2	1	4	3	10

Findings

Findings from the qualitative data collected from follow-up interviews echoed the results of the survey data. Understanding of U.S. college application procedures, preparing college application documents and visa interviews were identified as the biggest barriers for

application. It appears that students assisted by agents encountered less difficulties, however using an agent may lead to a new set of challenges and concerns.

College Application Procedure and Materials

When they were asked to review their experiences of application to U.S. institutions, the interviewees indicated that not knowing the U.S. college application procedure was the most difficult part of the process. This was also reported as a factor that directly led students to working with an agent. After at least a few months of studying at a U.S. institution, the Chinese students gained more knowledge about U.S. education and felt the application less challenging and intimidating. A male junior referred U.S. college application an "easy piece" after spending about one year in the U.S., but he was not confident with his application when he first decided to study in the U.S.

> "Now I can say the application process is not bad…but if you don't know about it…you just don't know where to start with. My agent walked me though the process, which saved me a lot of time and effort."

Some students mentioned that if they knew exactly what they needed to prepare, they would not use an agent. A female junior thought the application process "was not easy but definitely doable." She also indicated that the application was not as difficult as what her agent described to her.

> "If I had more information about the application process before I came to the U.S., I would definitely not pay for someone else to do it. I can do it by myself."

Another female student regarded her application experience as a learning process. She gathered most of the information on the Internet and studied the U.S. college application with

her parents. At the time she was interviewed, she had helped two of her cousins with the application procedure and guided them through the preparation process. She agreed that understanding the U.S. college application procedure was the first step and the most important one.

> "The process is not as difficult as I was told. The process might be challenging, but it was worth of going through it. I am glad that I figured out the application procedure myself, so now I am able to help others."

Knowing the procedure was only the first step. Preparation of application materials including writing a personal statement, ordering transcripts, and filling out financial support documents could be a complex, time-consuming experience. Even completing the application form may be a formidable task for some Chinese students. Many students turn to an agent for his/her professional advice to assist them in these application-related tasks. A freshman reported that he decided to pay for the expertise of an agent to make sure that his documents met the college requirements.

> "My English was poor when I applied to the Midwestern University. It took me a couple of weeks to figure out how to complete the online application form…I am serious. I finally gave up and found an agent to assist my application."

Visa Applications

Visa interview preparation was another prevalent barrier that drove students to work with an agent. To receive a student visa (F-1 or J-1), Chinese students must make an appointment with the U.S. Embassy office by using a specific pre-paid telephone card. They have to travel to one of the five U.S. Embassy or Consulate Offices in China and to be

interviewed individually. As most hopeful students can attest, there is no guarantee that students who present valid admissions documents from an accredited U.S. institution will be issued a student visa. Visa application is the last obstacle that students have to overcome in order to study in the U.S. Almost all interviewees expressed their worries and concerns related to this final step. Although the number of student visas issued to Chinese students going to the U.S. has been increasing, students often regard the application and interview a mysterious process and feel they have little to no control over the result. For example, a junior acknowledged that one of her major criteria in the choice of an agent was whether the agent had a high success rating of securing visas.

> "My biggest concern was the rate of successful visa applications. The agency I chose to use was known as the best in my home city. I was told that its rate of successful visa application was 100%."

With the same concern, some students who did not use an agent in college application preparation, employed agents for the sole purpose of helping them with visa application and interview. For example, a senior female student expressed,

> "My cousin was in a U.S. university while I was preparing my application. He taught me how to apply to American universities and how to prepare visa interviews as well. But my parents thought I should use an agent, since without a visa all other efforts will go into vain."

Challenges of Using an Agent

Students who were assisted with agents reported fewer problems with preparation of application materials and many of them indicated that using an agent was beneficial to them.

Students mentioned they could focus on preparing English tests while agents were helping with college application materials. However, using an agent may cause new concerns and challenges and sometimes, agents' unethical practices can be hazardous and have negative impact on students' future.

Limited Services. Quantitative data revealed that many agents provided thorough services, but interviews with students noted that agents' services, in many cases, ended after successfully sending students to U.S. Some agents helped students with their visa renewal and airplane ticket purchase during their college years. A couple of agents arranged for former students who used their services to help the new cohorts. However, it was very rare to have an agent provide students with information regarding their life transition. None of the students indicated that agents better prepared them for adjusting to a new living and studying environment. A senior female student recommended to new students that they should be aware that using an agent is not a panacea. Agents may help you with basic application materials but using their services not necessarily mean one is better prepared for study in the U.S.

> "I didn't think I was better prepared for studying in the U.S. compared to those who didn't use an agent. My agent did what they promised, but the service only included college and visa application. They did not have services available after I landed in the U.S."

Unethical Practices. Additionally, cases where agents crossed the line of ethical practice were uncovered. A couple of students mentioned that their agents wrote personal statements or recommendation letters for them. A male freshman said,

> "My agent wrote the recommendation letters for me. I just need to provide three names of my high school teachers or college instructors, and he took care of the rest…I don't know what's in the letter!"

Another female student reported that her agent used others' pictures as evidence of her participation in extracurricular activities, thus strengthening her competitiveness for a scholarship.

> "I found some of photos in the [scholarship] application materials not mine! They said that these photos will enhance my possibilities of winning."

Cases where agents did not provide what they promised were also revealed through the interviews. Few students reported that their agents did not provide services as what they promised, the agents changed their terms without a notification, or charged more than what they anticipated. These agents not only put students and parents at great risks of monetary loss, but also wasted their time and effort. A female senior shared her own story before traveling to the U.S.:

> "With about 20 students, I was introduced by the agent to a Singapore college preparatory school, which is similar to a high school, and I was told that I could be admitted by the top universities in Singapore as long as I maintain good scores. However, about 2 years later, I learned that transcription from the school was not valid for four-year institution application at all; at the most I can be admitted by a three year college."

Summary of Qualitative Findings

This section presented the qualitative findings of the study through analyses of

interviews with international Chinese students in the U.S. Three major themes emerged from the interviews: college application procedure and materials, visa applications, and challenges of using an agent. The findings of the interviews reinforced the quantitative results and provided in-depth understanding about Chinese students' experience of applying to U.S. higher education institutions.

Summary

Chapter 5 provided a summary of quantitative and qualitative data collected from surveys and follow-up interviews in the U.S. This chapter provided descriptive analyses of international Chinese students regarding their background information and academic preparation. Then, it presented differences between agent-assisted and non-agent-assisted students. This chapter also analyzed the rational of using or not using an agent, examined influencing factors on students' decisions, and explored predictors of students' choice. Additionally, this chapter presented services that agents' provided. The last section of the chapter exhibited themes from focus-group interviews about challenges and difficulties of application and their experiences with agents' services.

CHAPTER 6. DISCUSSION OF FINDINGS, IMPLICATIONS FOR POLICY AND PRACTICE, AND CONCLUSION

This chapter summarizes and discusses both of the quantitative and qualitative findings of the study. Starting with a summary of the study, this chapter consists of six sections. The second section discusses the results and findings from prospective Chinese students in China as well as Chinese undergraduate students in the U.S. A conclusion is provided at the end of the discussion. Moreover, this chapter provides implications for policy and practice, application of the study, and recommendations for future research.

Summary of the Study

Chapter 1 provided an overview of the international student application and recruitment process from both a student and institution perspective. It pointed out that education agents play a significant role in Chinese students' application to U.S. colleges and universities. This chapter also previewed the research questions, methodology, research sites, participants, and a layout of this study.

Chapter 2 reviewed previous literature regarding international students, including the history of international students in the U.S., factors influencing students' choice of country and institution, and more specifically Chinese students in the U.S. Chapter 2 also provided analyses and synthesis of the research regarding international student recruitment, including challenges of recruiting international students, recruitment with agents, and ethical standards and codes of recruitment. This chapter also presented theoretical frameworks of students' choice and utilizing a third-party agent. Agent theory originates from economics and has been applied in a variety of fields outside of economics. This research utilized Agent theory

to explain the relationships between students and the education agents.

Chapter 3 illustrated the research methodology and methods that were utilized in designing and conducting this study. More specifically, this chapter presented the research design, research questions, research settings, population and sample, instrumentation, data management, and methods of data analysis.

Chapter 4 provided a comprehensive report of quantitative and qualitative analysis based on data collected from Chinese students in high school in Central China. This chapter presented demographic characteristics of participants in the research sites in China, their motivations of pursing a bachelor's degree in the U.S., rational for using or not using an education agent to assist their college application, and factors predicting their choice. This chapter also included findings from follow-up focus group interviews. Students' experiences were reported by themes with supporting quotations.

Chapter 5 analyzed quantitative and qualitative data that collected from Chinese undergraduate students enrolled in three Midwestern institutions in the fall of 2009 and 2010 respectively. Different from participants in China, these students have successfully completed the college application process and were able to evaluate their application experiences with or without an agent and provide recommendations to future students. This chapter presented demographic characteristics of the participants in the U.S., their motivations of studying in the U.S., reasons of using or not using an agent, and predictors to their choice. Qualitative data were presented at the end of this chapter by theme.

Chapter 6 summarizes the research and provides a discussion and conclusion. This chapter also includes implications for policy and practice, application of the findings, and

recommendations for future results.

Discussion of Findings

This section highlights the major findings of the study from three aspects: coming to the U.S., choice of using an agent, and working with an agent. Since the samples used in this study were not a result of randomization, the results cannot be projected onto the population as a whole. However, the results can be a first step in increasing understanding of Chinese undergraduates' application experiences with or without assistance of an education agent, factors that predict their choice of working with an agent, the roles that education agents play in students' application process, and pros and cons of using or not using an agent in the college application process.

Coming to the U.S.

Of the prospective students in central China included in the study, over half were male, most were 18 years of age or younger, the majority were high school seniors, and more than 50% chose the science track in high school. In the U.S, A higher proportion of the respondents were female. Most of the respondents in the U.S. were between the age of 19 and 20. Science-track students in the U.S. were also over represented.

Similar patterns were found regarding the decision to take standardized tests across both the China and the U.S samples. Although most of the participants planned to take, or had already taken, at least one of the English tests (TOEFL/IELTS and/or ACT/SAT) to better prepare themselves for college admissions in the U.S., approximately half indicated that they chose to take or have taken the *Gaokao* prior to studying in the U.S. This may suggest that many students regarded studying in the U.S. as an additional opportunity to

receive higher education and did not want to limit their choices only to universities in the U.S. This may also indicate that the decision of studying in the U.S. might not be finalized until they receive scores from both English tests and the *Gaokao.*

The majority of the students hoping to study in the U.S. or enrolled at U.S. institutions had good academic performance in high school and were confident with their English skills, which are no doubt positive influences on their study in the U.S. It was not surprising that the majority of the students were from middle or upper-middle income families and had well-educated parents. Although it has become more affordable, pursuing a bachelor's degree in the U.S.is still a luxury for many families in China compared to attending a local college in China.

Similar to what has been discussed in previous literature (e.g., Daily, Farewell & Kumar, 2010; Lee, Maldonado-Maldonado, Rhoades, 2006; Mazzarol, Soutar & Seng, 2003), the Chinese students in this study intended to enrich their personal experiences, receive a better education, become more competitive in the job market, and learn a new language through study abroad opportunities. Lack of opportunities in higher education institutions in China was also reported by the participants as a factor that "pushed" them to seek additional opportunities outside of the country.

It was evident that the U.S. was the most preferred education destination for Chinese students. Two-thirds of the prospective Chinese students who had hopes to study overseas intended to pursue higher education in the U.S. Chinese students were attracted to the U.S. rather than other countries because they perceived that U.S. higher education has better quality and the degrees are more prestigious. These students were also attracted to the U.S.

for its cultural environment. This reinforced that the country image has a strong influence on students' choice of education destination and international students tend to associate country image with the quality of education (Cubillo, Sanchez & Cervino, 2006; Srikatanyoo & Gnoth, 2002).

For sources of information about the application process, the Internet was identified as the most important means of gathering information about studying in the U.S., regardless of being assisted by an agent or not. A high percentage of non-agent-assisted students relied on the Internet since they applied independently. Interestingly, a considerable number of agent-assisted students also reported using the Internet as a primary means of inquiring information for applying to U.S. colleges and universities. Although assisted by agents, these students did not exclusively depend on one source; instead, they investigated multiple approaches. The prevalent use of the Internet among both agent-assisted and non-agent-assisted Chinese students supported findings from an earlier study (Gomes & Murphy, 2003). This may also suggest that the Internet served as a tool to validate information that agents provide.

Those students who were not paying for the services of agents indicated that they received information from agents for their college application. This may suggest that agents do not only influence students who paid for their services, but also affect a broader range of students hoping to study overseas. These students may have gained knowledge of the U.S. higher education or college application process through agents' open seminars, free consulting, public presentations, or websites. This supported findings from earlier literature that agents served as a major source of knowledge and they have a strong influence on

students' college choice (Chung, Holdsworth, Li, & Fam, 2009; Maringe & Carter, 2007; Pimpa, 2003a).

In the decision making process, a majority of the students made independent decisions to study in the U.S. However, results of the study confirmed the significance of parents' influence on students' decision (Bodycott, 2009; Pimpa, 2004). A significant number of students reported that they decided to study in the U.S. based on their parents' recommendations.

Choice of Using an Agent

The decision to use or not to use an agent was made largely based on the level of students' knowledge of the U.S. college admission process, access to information, financial resources, and their attitude towards agents.

Chinese students who chose to use an agent mainly because they possessed limited knowledge regarding college application process in the U.S., were not familiar with the U.S. higher education system, and felt obscure about the student visa application. These three major factors motivated students to seek assistance from external resources.

For both prospective students in China and Chinese students in the U.S., the results demonstrated that students, who ranked lower in their high school cohorts, who did not choose to take the *Gaokao*, and whose mothers had obtained higher degrees were more likely to use an agent to assist their college application to U.S. institutions. This may suggest that students who had better academic performance in high school were more confident with preparing the application without the assistance of an agent. The U.S. college application process might be considered as a research project for most of the Chinese students since it

requires students' dedication to the task and research of a wide range of information. Those who gave up preparing for the *Gaokao* may demonstrate their commitment to attending college in the U.S. Working with an agent may be seen as a means that can greatly increase the likelihood of being admitted by U.S. institutions. Mothers who had higher degrees may have higher expectations for their child and possess more knowledge about the difference between higher education in China and the U.S., thereby preferring a professional to assist in the application process. This may also signify that higher education experience in China is not necessarily helpful when applying to U.S higher education institutions.

An additional predictor identified for Chinese students in the U.S. was students' self-reported English proficiency. Students who had lower scores in English skills were more likely to ask an agent to help with the application process. This may suggest that strong English language skills are not only important to academic success in American colleges; it is also significant to preparation of application materials. Students with lower level of English proficiency were more likely to encounter difficulties in completing application and may need added assistance in English language and communication.

Selecting a "right" agent was reported as a critical step, but it might be a hard one for students and parents who do not know what needs to be done and how to do it. Agents' reputation, their experiences, and services that they can provide were reported as the top three criteria by prospective students in China and undergraduates in the U.S., although the order was slightly different. This may indicate that word-of-mouth feedback plays an important role for students and parents in selecting an agent. In the principal-agent exchange, much of the power of students and parents have rests on the feedback they give to the

services and recommendation they give to friends or relatives whether to use or not to use an agent and if so, which one to use. Thus, reputation becomes a significant predictor to the quality of an agent's services. It should be noted that negative feedback from students could have an adverse effect on the agent's reputation, but it could take a long time and it might be very difficult to spread the word of the unethical practice of the agent when relying solely on word-of-mouth. Evaluation on the basis of the agents' experience and services may provide parents and students with more solid information regarding the agents' performance. However, parents and students could be misled when they are not clear on the criteria of focus.

Working with an Agent

Findings of this study reinforced the point that using education agents to assist college application is a prevalent practice in China. Students and parents seek out agents for their specialized knowledge of college application processes. Education agents are regarded as experts in international education, who possess rich resources of information regarding quality of higher education institutions in foreign countries, college application procedures, costs of education, and other facts. Based on the analysis of quantitative and qualitative data, the researchers identified six most common and desired services that an agent could provide:

1. Choosing a designated country, institution, and/or major..
2. Preparing college application materials (e.g. providing a flowchart of application process, filling out the forms for clients, writing or editing any necessary English documents, etc.).
3. Initiating contact with any necessary personnel (e.g. admission officer, department

secretary, program director, etc.) at target universities.

4. Translating Chinese documents (e.g. support letters from high school teachers, parents' income statement, high school transcript, etc.) to English and translating English documents (University webpage, emails from the contact person in the U.S. University, admissions requirements, etc) to Chinese.
5. Preparing all necessary documents for student visa applications and/or training for the face-to-face interviews with U.S. embassy officers (This is particular to the agents who are specialized in U.S. college application). Some agencies have English speaking consultants to help students practice interview questions.
6. Comprehensive agencies offer training for TOEFL/IELTS and/or ACT/SAT.

Among the services listed above, some students chose to use all while some only asked for assistance in one or two areas. Three forms of using agents were identified mainly through analyses of the qualitative data collected from both prospective students in China and undergraduate students in the U.S.

1. Use of the entire service package. Many interviewees indicated that agents helped them with their entire college application process, from selecting an institution to preparing visa interview questions. They agreed that using an agent made their application process easier and faster. In general, students who used the entire service package tended to have a tight schedule. Some students focused on preparing for language tests while having agents help them with preparing other application materials. Some students used every service available because of changes in their plans for college. They had not thought about coming to the U.S. until they learned

their *Gaokao* scores. These students expressed a concern of limited time since studying in the U.S. was not in their original plan.

2. Use of partial services. Some interviewees indicated that they used an agent's services for only the most challenging parts in the application process. Preparing for the visa interview and writing the personal statement emerged as the most difficult procedures according to the conversations with the students. To obtain a student visa to study in the U.S., in addition to college admission, Chinese students must go to a designated U.S. Embassy Office in China for a face-to-face interview. This is significant because a student's application efforts could be totally in vain if he/she failed to obtain a visa. Since it is more subjective than a test, many students viewed the interview as mysterious and preparation for it was stressful.
3. Self preparation but using agents as a safeguard. Students who claimed that they applied to universities individually but it was discovered, upon deeper probing, that they had in fact consulted with one or multiple agents. A major reason for these students to use agents was to increase the likelihood of being admitted. The students or their parents wanted to ensure that at the end of process, the students at least could receive one admission letter. These students worked on the application process for universities that they were most interested in; meanwhile, they or their parents asked agents to find quality universities with a greater chance of being accepted.

It would appear that the majority of agents are responsible and provide satisfactory services; however, some agents may be viewed as an untruthful source of information. As noted earlier, "do not trust agents' services" was reported as an important reason why

students decided to apply independently or turn to their parents or friends for help. This mistrust may be caused by the asymmetric relationship of power between students and agents. In principal-professional exchanges, students and parents (as principals) often times feel agents' services are opaque. Students and parents found it difficult to evaluate the skills, knowledge, and services of the agent due to the very nature of professional work. They may also have difficulties understanding every item on the contract, what procedures they have to follow, and what specific services they need from the agent. Sharma (1997) claimed that not knowing what the agent does is aggravated by not knowing how the agent does the job.

Concerns for using agents may also be the result of unsatisfactory or unethical service provided by agents. Agents not only provide services but also recommend what type and to what extent services the principal needs. This asymmetry of information places the professional agent in a more powerful position than the information-seeking principal (Sharma, 1997). However, agents' decisions are made mainly based on the amount of the fees promised by principal, thereby, the agents may not provide service as initially agreed. They may also attempt to give inaccurate information or exaggerate the outcomes (Eisenhardt, 1989). Not surprisingly, in this study, students who have made it to the U.S. reported that some services that the agent suggested they use were not necessary or they realized the institution that agent chose for them was not the best choice. The study identified three major problems associated with the services of some.

1. Unethical practice by educational agents in assisting students in application process;
2. Lack of consideration of students' needs; and
3. Prices that may be higher than anticipated.

To prevent using an irresponsible agent, students and parents could do research on the ability and knowledge of a prospective agent, but this task could be difficult to accomplish when they do not know exactly what the agent has done and what need to be done. As a result, regulations of agents' service may rest on controls of agents themselves, other agents, and the internal structure and systems of professional firms.

Conclusion

The purpose of this study is to better understand Chinese students' experience of applying to U.S. institutions, to explore their rational of using or not using an agent during the application process, and to examine to what extent agents facilitate students' application.

This study contributes to the existing body of literature on the international students' experience of application and use of agents in applying to foreign higher education institutions. This study has extended the body of knowledge to specifically examine Chinese undergraduate students' experiences of application with or without using an agent at stages of pre- and post-college admissions. The information gathered on students' application experience with or without agents and function of agents should be relevant to both Chinese students and U.S. higher education institutions as an impetus to improve the international students' application experience or U.S. institutions' recruitment practices.

Major barriers for Chinese students to pursue a bachelor's degree in the U.S. lie in their lack of knowledge about the U.S. education system and limited information about the college application process. These factors largely drove students to seek professional consulting services from agents. Using agents to assist college application to U.S. higher education institutions has become a prevalent practice in China. Agents play an important

role in students' preparation to studying in the U.S. Ethical and professional agents do provide useful services to students and benefit their application. However, it has to be noted that unethical practices were identified among agents.

Implications and Applications for Policy and Practice

Understanding the Chinese students' experiences of application to U.S. colleges and universities, their rational of using or not using an agent to assist their application, and roles that agents play in international students' college application is essential to enhance international students' application experience to U.S. higher education institutions and to improve international student recruitment practice in the U.S. The findings of this study provide various implications for policy and practice.

For Chinese students, this study provides insightful knowledge of what agents can and cannot provide. Understanding other students' application process to a U.S. institution could help students better prepare for difficulties and challenges that they may encounter during the application process. Knowledge of pros and cons of using or not using an agent can better assist Chinese students making decisions whether they should rely on an agent for their college application preparation.

This study encourages U.S. institutions to reach out to prospective students regardless their choice of using or not using an agent. With the involvement of U.S. institutions, the linear relationship between students and agents (Figure 29) could be extended into a three-way interaction, thus helping to prevent one party from having too much control over the other (Figure 30). In the linear relationship, students heavily depended on the agents and have limited resources and knowledge to prevent unethical practice.

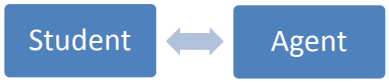

Figure 29. Linear relationship between students and agents

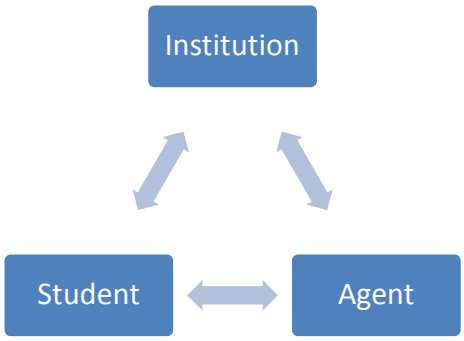

Figure 30. Interaction between institution, student, and agent

This study shows that approximately two thirds of the students intending to study in the U.S. or have enrolled in U.S. institutions used an agent. If those who did not pay for an agent but received information indirectly from agents were included, the influence of the agent is seen to be even more prevalent. This study suggests that U.S. institutions' recruiters, admissions officers, and administrators should rethink and reevaluate the relationships between U.S. higher education institutions and agents.

This study found evidence that agents do provide the students with services in helping them choose an appropriate university based on their personal preferences (e.g., expenses, academic programs, location, and diversity) and academic backgrounds, although some

potential problems were identified. As long as the agent operates in the best interests of the students, demonstrating an ethical practice, the agent's goal, in fact, is essentially the same with the institution's: to provide satisfactory experiences for students and to gain monetary benefits . Then, perhaps, the question the U.S. colleges would not ask "is the practice of using a paid third-party agent ethical?" but, rather, "how can the use of a third-party agent be supervised so that students' interests, as well as the accountability of the institution, are central to the agreement and all stages of the recruitment process?" Further research will be needed to conduct to explore specific approaches.

Recommendations for Future Research

Understanding the role of agents in the college application process of international students can greatly contribute to a better understanding of the agent's function in international recruitment, thus assisting international student recruiters, administrators, and policy makers to work better with agents. This study addressed issues and concerns of using agents from a student's perspective. Future studies can be done from an administrative perspective focusing on the institutional experience with agents. Future studies also can be done with the involvement of agents. Information regarding their interactions with students and institutions, challenges in assisting clients, and ethical dilemmas they encounter, will benefit international recruiters as well as students and parents to better understand the role that agents play in applying to U.S. higher education institutions.

This study does not explore the differences among students who favor different countries or identify the impact of a specific destination country on students' use of agents. Future rsearchers could extend this study into a larger international student population. In so

doing, different patterns and issues of using agents to apply to a foreign institution could be identified. Questions like "To what extent international students who desire to study in the U.S. differ from those who are willing to go to Australia regarding college application process?" "Are students who prefer to pursuing bachelor's degree in the U.S. more likely to use an agent?" and "Do students who intend to study in different countries expect different services from agents?" may be explored by future studies.

Future researchers can take a qualitative approach, following a group of students from when they first decide to study overseas to when they are admitted. A series of in-depth interviews can be conducted that can enable the researchers to identify changes over time and identify factors that contributed to the changes. Future studies are also needed to explore roles that agents play in other types of international recruitment (e.g., community colleges, professional schools, graduate college, etc.).

Additionally, future studies should be conducted to examine college access issues in an international context. Questions like "Should all international students be provided similar services or only those who can afford an agent have access to the application information?" "What strategies should U.S. institutions use to better assist international students' application?" and "what is the most effective way to use agents to facilitate the international students' application?" need to be addressed in future research.

APPENDIX A. SURVEY INSTRUMENT-SURVEY I

中国学生出国留学状况问卷调查

此课题的研究目的是为了调查中国学生出国留学的心态，动因，影响因素等相关问题。我们诚挚邀请你认真填写此问卷。完成问卷大概需要15分钟。我们还将邀请一些志愿者参加面谈，时间为30 到50 分钟。
如果你有意参加面谈，
请在调查问卷最后一页下方，签名并留下个人联系方式。如果你在问卷调查或面谈中发现任何不愿回答的问题，你可以随时跳过此题或者终止参与。你的个人信息将会被严格保密，只有研究者海格顿博士及其博士学

参与者姓名（正楷） _____ **参与者签名** _____ **(日期)** _____

1 性别
A 男 B 女

2 年龄
A 18 岁以下 B 18 C 19 D 20 E 21 F 22岁及以上

3 分科情况
A 文科 B 理科 C 不确定

4 所在年级
A 高一 B 高二 C 高三 D 其他:_____

5 是否打算参加高考
A 打算 B 不打算 C 还没决定 D 已经参加

6 你在班级的排名？
A 前 20% B 中上 C 中等 D 中下 E 后20%

7 是否参加过SAT或者ACT 考试？
A 如果参加过，成绩多少？ SAT: _____ 和/或 ACT:_____
B 如果没有，是否打算参加？ a 打算 b 不打算

8 是否参加过TOEFL 或者 IELTS 考试？
A 如果参加过，成绩多少？ TOEFL: _____ 和/或 IELTS:_____
B 如果没有，是否打算参加？ a 打算 b 不打算

9 你的英语水平如何？

	很好	较好	较差	很差
A 听	a	b	c	d
B 说	a	b	c	d
C 读	a	b	c	d
D 写	a	b	c	d

10 父母最高学历

	博士	硕士	本科	专科	高中	其他	不清楚
A 父亲	a	b	c	d	e	f	g
B 母亲	a	b	c	d	e	f	g

11 父母职业

A 父亲 _____ B 母亲 _____

12 最近五年家庭年均总收入(??币)

A <2万 B 2.1-5万 C 5.1-10万 D 10.1-30万 E 30.1-50万 F 50.1-100万 G >100万

13 自己及父母旅行情况

		自己	父亲	母亲
A	到过国内本省以外地区	a	b	c
B	到过港澳台或其他国家	a	b	c

14 是否考虑出国留学?

A 是（请继续作答） **B 否 （请直接回答第27 和 28 两题）**

15 你**考虑**出国留学的主要原因是： （请选择最重要的三个原因)

A 提高外语能力 B 不用参加高考，挤"独木桥"

C 在国内进入理想院校学习的机会渺茫 D 国外高校教学、科研质量高，师资力量雄厚

E 开阔眼界，接触不同文化 F 毕业后，回国更有竞争力

G 毕业后，在国外就业、定居 H 出国是一种新潮流、新时尚

I 其他:_____

16 影响你出国留学决定的最主要因素是（单选）：

A 个人 B 父母 C 老师 D 同学

E 朋友 F 教育中介 G 媒体 H 其他:_____

17 你最向往或者即将前往的留学国家是（单选）：

A 日本 B 韩国 C ??? D ???亚 E 新西兰 F ?国 G 德国

H 英国 I 荷兰 J 俄罗斯 K ?国 L 加拿大 M 其他:_____

18 你选择该国的最主要原因是 （单选）：

A 该国留学费用相对低廉 B 该国教育质量相对更好

C 该国学位在国内认可度更高 D 该国就业环境更好

E 申请该国高校过程更简洁 F 更容易被录取

G 语言障碍小 H 更喜欢该国的自然、人文环境

I 社会安全稳定 J 更容易移民

K 有家人、亲戚、或者朋友在该国 L 更容易获得签证

M 其他:_____

19 关于出国留学，你最主要的信息来源是 （单选）：

A 网络 B 报刊 C 杂志 D 书籍 E 电视 F 留学中介

G 父母 H 老师 I 同学 J 朋友 K 其他:_____

20 留学学费、生活费的主要来源是（单选）：

A 父母 B 亲戚朋友 C 奖学金 D 其他:_____

21 你打算或者正在使用留学中介服务吗?

A 是（请回答22a） B 否（请回答22b）

22a 你**选择**使用留学中介的主要原因是(多选)：

A 对国外院校不了解
B 语言有障碍
C 通过中介，出国留学成功率更高
D 对国外生活环境不了解
E 对申请流程不了解
F 对签证过程不了解
G 通过中介，申请奖学金成功率更高
H 亲戚/朋友/同学推荐我使用中介
I 其他:_____

22b 你**不选择**使用留学中介的主要原因是(多选)：

A 费用太高
B 我有能力自己申请
C 父母、亲戚、朋友有能力帮助我申请
D 对留学中介不信任
E 亲戚/朋友/同学选用了中介，但经历很糟糕
F 其他:_____

23 你选择留学中介的最主要依据是（单选）：

A 服务项目 B 信誉 C 经验 D 收费 E 朋友推荐 F 电视/杂志/报刊广告

24 中介对你最重要的一项留学服务是（单选）：

A 选择留学国家、院校
B 准备留学文书
C 与留学院校之间交流、联系
D 准备签证资料
E 提供职业发展方向的专业指导
F 准备奖学金申请资料
G 提供出国后的接待与安排
H 其他:_____

25 你能承受的中介收费是 （人民币）：

A <2,000 B 2,001-5,000 C 5,001-10,000
D 10,001-20,000 E 20,001-50,000 F >50,000

26 如果你已经开始使用留学中介，你对服务的满意度是：

A 非常满意 B 满意 C 不太满意 D 非常不满意 E 还没有使用中介

（问卷到此结束， 如愿意参加面谈，请在问卷末尾处签名并留下个人信息）

27 你**不考虑**出国留学的主要原因是 （请选择最重要的三个原因）：

A 不感兴趣
B 英语（外语）掌握不好
C 自理能力差，无法独立照顾自己
D 出国费用太高
E 不愿远离亲人、朋友
F 不喜欢国外的人文环境
G 国外社会环境不稳定、不安全
H 其他:_____

28 影响你出国留学决定的最主要因素是（单选）：

A 个人 B 父母 C 老师 D 同学
E 朋友 F 教育中介 G 媒体 H 其他:_____

（问卷到此结束， 如愿意参加面谈，请在问卷末尾处签名并留下个人信息）

如愿意参加面谈，请在此处签名:_____ **日期：**_____

电话：_____ **电子邮件：**_____

English Translation of Survey I

Use of Agents in Recruiting Chinese Undergraduates

The purpose of this study is to explore the reasons Chinese students use or decide not to use an agent during the college application process. We are intersted in your experience and/or expectation of using an agent and your satisfaction or dissatisfaction. We ask you to take about 15 minutes to complete this survey. In addition you are invited to participate in a face-to-face interview to be scheduled at a later time. If you are interested, please provide your contact information and your preferred schedule at the end of the survey and someone will contact you to provide detailed information. An audio recorder will be used during the interview only for the use of this research. After transcribing all the interviews, the records will be destroyed permanently.

As to questions listed on the survey or being asked at the interview, you may skip any questions that you do not wish to answer or that makes you feel uncomfortable. Your responses and your contact information will remain completely confidential and secured and your personal information will never be associated with the answers you provide. Only Dr. Linda Hagedorn and Yi Zhang have access to the data. The data will be kept until the research is completed.

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered.

_____	_____	_____
Participant's Name (printed)	**(Participant's Signature)**	**(Date)**

1 your gender
A male B Female

2 your age
A under 18 B 18 C 19 D 20 E 21 F 22 and above

3 are you a science or liberal arts student
A liberal arts B science

4 class
A freshmen in high school B junior C senior D other

5 do you plan to take the Chinese National College Entrance Examination?
A yes B no C haven't decided D have taken

6 where are you ranked in your class?
A top 20% B 21-40% C 41-60% D 61-80% E Bottom 20%

7 did you take SAT or ACT?
A If Yes, what was your score? SAT: _____ ACT:_____
B If No, do you plan to take SAT or ACT? a yes b no

8 did you take TOEFL or IELTS?
A If yes, what was your score? TOEFL: _____ IELTS:_____
B If No, do you plan to take TOEFL or IELTS? a yes b no

9 how do you rate your English language proficiency?

		Excellent	good	fair	poor
A	listening	a	b	c	d
B	speaking	a	b	c	d
C	reading	a	b	c	d
D	writing	a	b	c	d

10 what is the highest degree that your parents have obtained?

		doctoral	master's	bachelor's	Associate	High School	other:	not sure
A	father	a	b	c	d	e	f	g
B	mother	a	b	c	d	e	f	g

11 what are your parents' careers?

A father_____ B Mother_____

12 what is the average annual family income in the past five years (yuan)?

A <20,000 B 20,001-50,000 C 50,001-100,000 D 100,001-300,000
E 300,001-500,000 F 500,001- 1,000,000 G >1,000,000

13 Have you or your parents ever traveled outside of the province or outside of China?

		Self	Father	Mother
A	outside of the province	a	b	c
B	outside of Mainland China	a	b	c

14 Are you planning to attend college in a foreign country?

A Yes B No (please go to question 27)

15 what are your primary reasons for planning to attend college in a foreign country (please choose three)?

A to improve my language skills B I prefer not to prepare for the entrance exam in China
C have little chance to go to college in Chin D to receive a better education
E enrich my experiences F a foreign degree can make me more competitive when I return
G to immigrant to a foreign country H to follow a fashion
I others:_____

16 what is your biggest influence in deciding to, or not to, apply to a foreign university

A personal B parents C teachers D peers
E friends F educational agents G media H others:_____

17 What is your first choice country for college?

A Japan B S. Korea C Singapore D Australia E France F Germany G U.K.
H Holland I Russia J U.S. K Canada L New Zealand M Others:_____

18 what is your primary reason for study in this country?

A expenses are lower B to receive a better education
C the degree is more prestigious D it is easier to find a job in the country after I graduate
E the application process is simpler F I am more likely to be admitted

G I know the language
H I like the culture
I society is stable and safe
J it is easier to immigrate to the country after I graduate
K I have family/relatives in this country
L I am more likely to receive a visa
M others:_____

19 what is your primary source of information regarding applying for a university in a foreign country?
A internet B newspaper C magazine D books E TV F Educational Agents
G parents H teachers I classmates J friends K Others:_____

20 what is your primary source of your tuition and fees?
A parents B friends/relatives C scholarships D Others:_____

21 are you currently or planning to use an educational agent for your application?
A yes (please answer question 22a) B no (please answer question 22b)

22a why do you chose to use an agent?
(check all that apply)
A I know little about college application
B I need additional assistance in English/other languages
C I am more kely to be accepted
D I know little about the foreign culture
E I know little about the foreign country & institutions
F I know little about visa application
G I am more likely to receive a scholarship
H a friend or relative used an agent successfully.
I Others:_____

22b why do you chose not to use an agent ?
(check all that apply)
A expenses are too high
B I am capable of applying on my own
C my parents/relatives/friends can help me
D do not trust agent's service
E A friend or relative had a negative experience
F Others:_____

23 if you were to use an educational agent, what would be the most important criteria?
A service B reputation C experience D cost E recommendations from someone I know
F Advertised on radio, TV, or newspaper

24 what is the most important service an agent should provide for you? (check one)
A college application materials
B advice on destination country and institution
C visa preparation
D making contact with the professor/department/institution
E advice on my major choice
F scholarship application
G services in the destination country
H Others:_____

25 how muchwould you be willing to pay an educational agent (in yuan)?
A <2000 B 2,001-5,000 C 5,001-10,000
D 10,001-20,000 E 20,001-50,000 F >50,000

26 if you are using an agent now, how satisfied are you with the service so far?
A very satisfied B satisfied C unsatisfied D very unsatisfied
E not using an agent

Thank you very much for your comments!

27 what is your primary reason for not wanting to attend a college in a foreign country?

A not interested
B language barriers
C I am not able to live on my own
D expenses are too high
E don't want to be far away from my family
F I do not like foreign cultures
G safety issues
H Others:_____

28 what is your biggest influence in deciding to, or not to, apply to a foreign university

A personal B parents C teachers D peers
E friends F educational agents G media H others:_____

If you are interested in the following-up interview, which will be conducted in Chinese, please provide your contact infromation here:

Name:_____ **Date: _____**

cellphone: _____ **Email: _____**

Thank you very much for your comments!

APPENDIX B. SURVEY INSTRUMENT-SURVEY II

Default Question Block

Chinese Undergraduate Students Studying Abroad and Use of Educational Agencies
中国学生出国留学状况调查问卷

The purpose of this study is to explore the rationales of Chinese students regarding using, or not using, an agent for their college application, their experience and/or expectation of using an agent, and the main areas of dis/satisfaction.
我们诚挚邀请你认真填写此问卷。此课题的研究目的是为了调查中国学生出国留学的心态，动因，影响因素等相关问题.

We ask that you take about 10 minutes to complete this survey. You are also invited to participate in a phone interview following the on-line survey. If you are interested, please provide your contact information at the end of the survey and we will contact you later for more detailed information.
完成问卷大概需要10分钟。我们还将邀请你参加电话访问。访谈用汉语进行，时间为30 到50分钟。如果你有意参加电话访问，请在调查问卷最后一页下方，留下你的个人联系方式.

You may skip any questions that you do not wish to answer or that makes you feel uncomfortable. Your responses and your contact information will remain completely confidential and secured and your personal information will never be associated with the answers you provide. Only Dr. Linda Hagedorn (lindah@iastate.edu) and Yi Zhang (lyzhang@iastate.edu) have access to the data. The data will be kept until the research is completed.
如果你在问卷调查或面谈中发现任何不愿回答的问题，你可以随时跳过此题或者终止参与。你的个人信息将会被严格保密，只有研究者海格顿博士及其博士学生张毅可以浏览并使用这些数据。问卷回答及面谈内容将会在课题完成后永久销毁.

Thank you very much for your participation!
我们非常感谢你的参与!

I am willing to take this survey. 我愿意完成此问卷

- ○ Yes 是的
- ○ No 不是

What is your gender? 性别

- ○ Male 男
- ○ Female 女

How old are you? 年龄

Under 18 18岁以下	18	19	20	21	22	23	24	25	26 and above 26岁及以上
○	○	○	○	○	○	○	○	○	○

Where is your hometown (for example, Hubei, Wuhan)? 你的家乡在哪里（例如：湖北，武汉）？

	Type your answers in English or Chinese 输入英文或者汉字均可
Province/municipality/autonomous region/ special autonomous region 省/直辖市/ 自治区/特别行政区	
City 城市	

Where did you go to high school (or other equivalent school)？你在什么地区上的高中(或者同等学力的其他学校）？

- ○ In an urban area 城市地区
- ○ In a suburban area 郊区/县城/乡镇
- ○ In a rural area 农村地区

Were you a science or liberal arts student in high school? 高中时候的分科情况？

○ Science 理科　○ Liberal arts 文科　○ Did not choose 没有分科

Where were you ranked in your class in your senior year at high school (or other equivalent school) before you came to the US? 你在高中（或者同等学力的其他学校）班级里的排名如何？

Top 20% 前列	20% to 40% 中上	40%-60% 中等	60%-80% 中下	Bottom 20% 末尾
○	○	○	○	○

Did you take the National College Entrance Examination in China? 是否参加了高考？

○ Yes 是的　○ No 没有

How did you score? 成绩如何？

- ○ My score was enough for a 4-year university 我的分数达到本科院校录取线
- ○ My score was not enough for a 4-year university but enough for a 2 or 3-year college 我的分数没有达到本科录取线，但是足以让我到2或3年制大专院校学习
- ○ My score was too low for any types of college or university 我分数没有达到本科或者专科录取线
- ○ Other 其他 （请输入具体答案，中英文皆可）

Have you attended a college in China before you came to the US? 到美国来之前，是否在国内上了大学？

○ Yes 是的　○ No 没有

What year of college were you in before you came to the US? 赴美留学之前，你在国内大学读到哪一年？

○ Freshman 大一　○ Junior 大三

○ Sophomore 大二 ○ Senior 大四

Did you take the SAT or ACT? 是否参加了SAT 或者ACT 考试？

○ Yes, I took the SAT 是的，我考了SAT
○ Yes, I took the ACT 是的，我考了ACT
○ No 没有参加

What was your SAT score? SAT成绩是：

What was your ACT score? ACT 成绩是：

Did you take the TOEFL or IELTS? 是否参加了托福或者雅思的考试？

○ Yes, I took the TOEFL 是的，我考了托福
○ Yes, I took the IELTS 是的，我考了雅思
○ No 没有参加

What was your TOEFL score? 托福成绩是:

What was your IELTS score? 雅思成绩是：

What year of college are you in? 你目前所在的年级？

Freshman 大一	Sophomore 大二	Junior 大三	Senior 大四
○	○	○	○

How do you rate your English language proficiency? 你认为自己的英语水平如何？

		Excellent 很好	Good 较好	Fair 较差	Poor 很差
Listening 听		○	○	○	○
Speaking 说		○	○	○	○
Reading 读		○	○	○	○
Writing 写		○	○	○	○

What college/school is your major in? 你目前的专业是？

What is the highest degree that your parents have obtained? 父母的最高学历是：

	PhD 博士	Master's 研究生	Bachelor's 本科	Associate 大专	High School 高中	Other 其他	Not Clear 不清楚
Father 父亲	○	○	○	○	○	○	○
Mother 母亲	○	○	○	○	○	○	○

What are your parents' careers? 父母的职业是：

	Career 职业 （type in English or Chinese 输入英文或者汉字均可）
Father 父亲	
Mother 母亲	

Please estimate the average annual income of your family in the past five years (yuan). 最近5年家庭年均收入是：（单位：元）

- ○ <20,000 yuan
- ○ 20,000 to 50,000 yuan
- ○ 50,001 to 100,000 yuan
- ○ 100,001 to 300,000 yuan
- ○ 300,001 to 500,000 yuan
- ○ 500,001 to 1,000,000 yuan
- ○ >1,000,000 yuan

Have you and your parents ever traveled outside of your province or outside of China before you came to the US （Please choose all that apply)? 请选择在你赴美留学之前，自己及父母的旅行情况 (请选择所有符合条件的选项）：

	Myself 自己	Father 父亲	Mother 母亲
Traveled outside of my province 到过国内本省以外的地方	☐	☐	☐
Travel outside of Mainland China 到过港澳台或者其他国家	☐	☐	☐

What are the top 3 reasons you chose to attend college outside of China (Check 3 boxes)? 请选择你考虑出国留学最主要的3个原因：

- ☐ To improve my foreign language skills 提高外语能力
- ☐ Don't need to prepare for the entrance exam in China 不用参加高考，挤"独木桥"
- ☐ Have little chance to go to a desired college in China 在国内进入理想院校学习的机会渺茫
- ☐

Quality of education and research is better in foreign countries 国外高校教学、科研质量高，师资力量雄厚

- [ ] Enrich my experiences in a different culture 开阔视野，接触不同文化
- [ ] A foreign degree can make me more competitive when I return to China 毕业后，回国更有竞争力
- [ ] To work at and immigrate to the foreign country 毕业后定居国外工作生活
- [ ] It is a fashion to go to a foreign country to study 出国留学是一种新潮流、新时尚
- [ ] Other 其他 （请输入具体答案，中英文皆可）

What was your biggest influence in deciding to apply to a US university? 影响你出国留学决定的最主要因素是：

- ○ Myself 个人
- ○ Friends 朋友
- ○ Parents 父母
- ○ Educational agents 教育中介
- ○ Teachers 老师
- ○ Media 媒体
- ○ Peers 同学
- ○ Other 其他 （请输入具体答案，中英文皆可）

What was your first choice of country for university study? 请选择你最向往的留学国家：

- ○ U.S. 美国
- ○ U.K.英国
- ○ Japan 日本
- ○ Holland 荷兰
- ○ South Korea 韩国
- ○ Russia 俄罗斯
- ○ Singapore 新加坡
- ○ Canada 加拿大
- ○ Australia 澳大利亚
- ○ New Zealand 新西兰
- ○ France 法国
- ○ Other 其他 （请输入具体答案，中英文皆可）
- ○ Germany 德国

What is the primary reason you came to the U.S. rather than another country? 与其他国家相比，你选择来美国留学的最主要原因是：

- ○ Expenses are lower 留学费用较低
- ○ Quality of education is better 教育质量相对更好
- ○ The degree from a US university is more prestigious 美国学位在国内认可度更高
- ○ It is easier to find a job in the U.S. after I graduate 美国就业环境更好
- ○ The application process is simpler 申请美国院校过程更简洁
- ○ I am more likely to be admitted 更容易被美国高校录取
- ○ I am more likely to receive assistantship and/or scholarship 更容易获取助理研究或者奖学金
- ○ I understand English better than other foreign languages 语言障碍较小
- ○ I like the American culture better than others 更喜欢美国的自然、人文环境
- ○ The society is stable and safe 社会安全稳定
- ○

It is easier to immigrant to the US after I graduate 毕业后更容易移民

- I have family/ relatives/ friends in the US 有家人、亲戚、朋友在美国
- It is easier to receive a VISA to come to the US 更容易获得签证
- Other 其他 （请输入具体答案，中英文皆可）

What was your primary source of information regarding applying for universities outside of China? 关于出国留学，你最主要的信息来源是:

- Internet 网络
- Newspaper 报纸
- Magazine 杂志
- Book 书籍
- TV 电视
- Educational agency 留学中介
- Parents 父母
- Teachers 老师
- Peers 同学
- Friends 朋友
- Other 其他 （请输入具体答案，中英文皆可）

What is your primary source of your tuition and fees? 留学学费、生活费的最主要来源是：

- Parents 父母
- Relatives/Friends 亲戚朋友
- Assistantship/Scholarship 研究助理/ 奖学金
- Other 其他 （请输入具体答案，中英文皆可）

Did you use an educational agency for your application (The educational agency refers to organizations which provide facilities and services for those who plan to receive education in a foreign country) ? 你是否使用了教育中介帮助你申请出国留学?

- Yes 是的
- No 没有

Why did you use an educational agency (Choose all that apply) ? 你选择使用留学中介的主要原因是 (请选择所有适合选项) :

- [ ] I know little about foreign colleges and universities 对国外院校不了解
- [ ] I need additional assistance in English (foreign language) 语言有障碍
- [ ] It is more likely to be accepted 通过中介，出国留学成功率更高
- [ ] I know little about the foreign culture 对国外文化、环境不了解
- [ ] I know little about the college application process 对申请流程不了解
- [ ] I know little about Visa application 对签证过程不了解
- [ ] It is more likely to receive a scholarship 通过中介，申请奖学金成功率更高
- [ ] It was recommended by a relative/friend/classmate 亲戚/朋友/同学推荐我使用中介
- [ ] Other 其他 （请输入具体答案，中英文皆可）

What services were provided by your agency (Choose all that apply)? 中介为你提供了哪些服务（请选择所有适合选项）？

- [ ] Advice on choosing a right country and college 选择留学国家和院校
- [ ] College application materials 准备留学文书
- [ ] Making contact with the professor/department/institution 与留学院校之间进行交流、联系
- [ ] Help with English language (or other foreign language) 提供英语（或其他外语）的帮助
- [ ] Visa application materials 准备签证资料
- [ ] Advice on major and career choice 提供专业、职业发展方向的指导
- [ ] Scholarship application materials 准备奖学金申请资料
- [ ] Services in the foreign country 提供出国后的接待与安排
- [ ] Other 其他 （请输入具体答案，中英文皆可）

Why did NOT you use an educational agency (Choose all that apply)? 你不选择使用留学中介的主要原因是（请选择所有适合选项）：

- [ ] Expenses are too high 费用太高
- [ ] I am capable of applying on my own 我有能力自己申请
- [ ] My parents/ relatives/ friends can help me 父母/亲戚/朋友有能力帮助我申请
- [ ] I don't trust agency's service 对留学中介不信任
- [ ] My relative/friend/classmate had a terrible experience working with an agency 亲戚/朋友/同学选用了留学中介，但经历很糟糕
- [ ] Other 其他 （请输入具体答案，中英文皆可）

How much did you pay for the services that were provided by your educational agency (yuan)? 你为中介支付的费用是(元)：

- ○ <2,000 yuan
- ○ 2,001 to 5,000 yuan
- ○ 500,1 to 10,000 yuan
- ○ 10,001 to 20,000 yuan
- ○ 20,001 to 50,000 yuan
- ○ > 50,000 yuan

What was the most important criteria for you to choose the educational agency? 你选择该中介的最主要依据是：

- ○ The service meet my needs 服务项目是否满足我的需要
- ○ The agency has a good reputation 是否有良好的信誉
- ○

The agency has rich experience 留学中介是否有经验

- The cost is reasonable 留学中介收费是否合理
- It was recommended by someone I know 是否有朋友推荐
- TV/ magazine/ newspaper advertisement 电视/杂志/报刊广告介绍
- Other 其他 （请输入具体答案，中英文皆可）

Please choose the answers that best suits your situation regarding your satisfaction with the educational agency's service. 请根据你使用中介的实际经历，选择最佳的答案：

	Strongly Agree 非常同意	Agree 同意	Disagree 不同意	Strongly Disagree 非常不同意
The cost was reasonable 该中介收费合理	○	○	○	○
I would recommend this agent to my friends. 我会向朋友推荐该中介。	○	○	○	○
I was overall satisfied with the service provided by the agent. 总的来说，我对该中介所提供的服务满意。	○	○	○	○

What is the most important service you believe an educational agency should provide? 你认为中介应该提供的最重要的服务是:

- Advice on choosing the right country and college 选择留学国家和院校
- College application materials 准备留学文书
- Making contact with the professor/department/institution 与留学院校之间交流、联系
- Help with English language (or other foreign language) 提供英语（或其他外语）的帮助
- Visa application materials 准备签证资料
- Advice on major and career choice 提供专业、职业发展方向的指导
- Scholarship application materials 准备奖学金申请资料
- Services in the foreign country 提供出国后的接待与安排
- Other 其他 （请输入具体答案，中英文皆可）

How much do you think should an educational agency charge (Yuan)? 你认为教育中介应该收取的费用是(单位：元）：

- <2,000 yuan
- 2,001 to 5,000 yuan
- 500,1 to 10,000 yuan
- 10,001 to 20,000 yuan
- 20,001 to 50,000 yuan
-

> 50,000 yuan

If you don't like to receive a reminder of the survey, please provide your USC email address (we will remove your email from the reminder list. Your email address will not be used for any other purposes. Thank you!)
如果你不愿意收到关于提醒填写问卷调查的邮件，请输入你的USC邮箱地址 （我们将会把你的邮件从名单中删除，确保你不会接收到提醒邮件。你的邮箱地址不会被用于其它任何用途。谢谢！）

If you are willing to participate in a face-to-face interview, conducted in Chinese, please provide your contact information. Free food and drink will be provided during the interview. If you have any questions, please don't hesitate to contact Yi Zhang at lyzhang@iastate.edu or 515-509-3520. Thank you!

如果你愿意参加电话访谈（访谈将用汉语进行）请留下你的姓名及联系方式。如果有任何问题，请及时通过邮件lyzhang@iastate.edu 或者电话515-509-3520 联系张毅。非常感谢你的参与！

☐ Name 姓名

☐ Email 电子邮件

☐ Cell phone 联系电话

Iowa State University

APPENDIX C. INVITATION LETTER TO CHINESE HIGH SCHOOLS

To whom it may concern,

I am Dr. Linda Serra Hagedorn, professor at the Department of Educational Leadership and Policy Studies, and Director of Research Institute for Studies in Education, Iowa State University. I am currently working on a research project regarding Chinese undergraduate recruitment in the U.S. higher education institutions. The results of this research will help American educators gain a better understanding about issues regarding Chinese student recruitment and provide practitioners an updated guidance to the admission practice. This research project not only received great support from Iowa State University, but also was selected as one of the four funded projects for 2009 by the Center for Enrollment Research, Policy, and Practice, University of Southern California.

The purpose of this research is to identify the rationals of international Chinese undergraduate students' choice to work, or not work with an agency, to identify the main areas of satisfaction and dissatisfaction among International Chinese undergraduate students regarding the application process, as well as the factors contributing to these impressions, e.g. social economic status, level of English efficiency, geographic location, etc., and to assess the experiences of international Chinese undergraduate students in relation to a range of issues, including: pre-arrival information received through the agency, financial circumstances, accommodation, administrative procedures (e.g. immigration and visas), classroom and academic experience, social and academic integration.

In order to achive the goal of the study and collect the most valid data, we decided to travel to China to interview Chinese high schools students and explore their attitudes and expereinces towards working with edcuational agents. Based on our careful examination on education quality, reputation, and international exchange programs, your school was selected as an important research site for this project. We would appreicate if you could provide us with access to the students and help us successfully conduct this research.

We will survey and interview your students in their senior year. The students shall spend about 15 minutes to complete a survey, which is written in Chinese. After the survey, we will interview students who agree to an interview, which is about 30 to 50 minutes. Interviews will be conducted individually and will be audio recorded for the purpose of the study. All identifiers and audio records will be permanently deleted at the time when we complete the research. The results of the study may be published or presented at professional meetings, but identity of your school and your students will not be revealed.

We would be appreciative if you could provide necessary assistance for our research project. We hope that our project can also help your school, your students, and their parents to gain more information about studying in the U.S., to assist students who are willing to attend an American college or university, and to strengthen the cooperation between Chinese high schools and American postsecondary education.

Best Regards,

Linda Serra Hagedorn, Ph.D.
Professor and Director
Educational Leadership and Policy Studies
Research Institute for Studies in Education
Iowa State University
lindah@iastate.edu
515-294-5746

Chinese Translation of the Invitation Letter

尊敬的中学负责人，

我是美国爱荷华州立大学 教育研究所*所长*兼教育领导及政策研究系教授，博士生导师 琳达· 萨拉·海格 顿博士。目前正在着手研究一项关于中国学生留学美国的课题。因研究结果将对未来美国招收中国学生的政策法规制定及招生实践起到重大的指导作用，此课题不但获得爱荷华州立大学的大力支持, 更被美国南加州大学招生政策研究中心选中，成为全美 2009 年度仅有的四项立项课题之一，并提供专项研究经费。

此课题的研究目的是为了探讨影响和决定中国高中生留学美国高校的因素，中介在申请过程中起到的作用，以及使用教育中介的利和弊。具体研究问题包括：中国高中生对出国留学，尤其是留学美国的态度及看法，影响中国学生出国留学的相关因素，学生对留学中介的认识，与中介合作中的个人经历及感受，出国留学申请的个人经历与感受，等等。

为了能够最真实的了解到中国学生的想法及感受，此课题决定深入中国高中，对中国高中生进行面对面的调查访问。此调查将逐步在中国各大中城市逐步展开。经过对郑州地区高中的反复甄选，因贵校的生源质量，社会声望，以及对外交流开展程度，贵校被我们课题组选为重点研究中学。希望贵校能够提供相关帮助，组织学生参加问卷调查及面谈。

此课题将采取问卷调查以及面谈的方式收集数据。调查对象为高三学生。调查问卷用汉语印制，需要大约 15 分钟左右时间完成。调查采用匿名制，学生完全自愿参加。问卷集中发放，待学生答完之后，统一收回。有意参加进一步面谈的学生，可以留下联系方式，视其学习日程确定面谈时间。在最后的研究报告中，数据会以百分比的形式给出，并且严格遵守美国研究法规，保密相关学校及学生个人信息。

我们衷心地希望贵校能够提供相关支持。我们也希望通过此次调查，能够帮助贵校、在校学生及其家长，对出国留学尤其是赴美留学有进一步的了解，为有志于留学美国的学生申请美国院校提供帮助，并起到促进中国高中与美国高校之间合作的积极作用。

致谢！

盼复！

琳达·萨拉·海格顿博士（Dr. Linda Serra Hagedorn）

美国爱荷华州立大学（Iowa State University）

教育研究所所长（Director, Research Institute for Studies in Education）

教育领导及政策研究系 教授，博士生导师（Professor, Department of Educational Leadership & Policy Studies）

APPENDIX D. INVITATION EMAIL FOR CHINESE UNDERGRADUATE STUDENTS IN THE U.S.

Dear Student,

We are conducting a study exploring the rationales of students from China regarding using, or not using, an educational agent or agency to assist with the college application process. This research also seeks to discover whether the students represented by agents are better prepared than those who were independent. To study this important issue we are seeking both Chinese students who have and have not used agencies.

As a current enrolled undergraduate student from China at ISU (or USC, FHSU, GC), you have been selected to participate in this study. I know this a busy time of year, but we request about 15 minutes to answer the questions on an online survey. This is your opportunity to help future students from China.

To gain more in-depth information about your experiences of application, you are also invited to participate in a face-to-face interview following the online survey. If you are interested, please provide your contact information and your preferred schedule at the end of the survey and we will contact you later for more detailed information.

As to questions listed on the survey or being asked at the interview, you may skip any questions that you do not wish to answer or that makes you feel uncomfortable. An audio recorder will be used during the interview only for the use of this research. After transcribing all the interviews, the records will be destroyed permanently.

There are no foreseeable risks at this time from participating in this study. Your participation in this study is voluntary, and your willingness to participate will have no effect on your ISU (or USC, FHSU, GC) status. Your responses and your contact information will remain completely confidential and secured and your email will never be associated with the answers you provide.

Only Dr. Linda Hagedorn and Yi Zhang (Leaf) have access to the data. The data will be kept until the research is completed. Also, to ensure confidentiality, the data collected from the research study will be stored on a password protected computer and in a locked office.

To access the survey, please click on the following link:

If you would like more information about this research project, please feel free to contact Dr. Linda Hagedorn at lindah@iastate.edu, 515-294-5746, or Yi Zhang at lyzhang@iastate.edu, 515-509-3520.

Thank you very much for your time and attention.

Sincerely,

Linda Serra Hagedorn, Ph.D.
Professor and Director
Educational Leadership and Policy Studies
Research Institute for Studies in Education
Iowa State University
lindah@iastate.edu
515-294-5746

Yi (Leaf) Zhang
Doctoral Research Associate
Educational Leadership and Policy Studies
Office of Community College Research and Policy
Iowa State University
lyzhang@iastate.edu
515-509-3520

Chinese Translation of the Invitation Email

___, 你好！

此课题研究的目的在于探查中国学生在申请美国本科院校时使用留学中介的理性因素。此研究将涵盖影响中国学生选择留学中介的重要因素，学生通过中介申请学院的理性原因，申请院校的切身经历，以及他们所面临的挑战和困难。此研究还将比较在申请美国本科院校过程中选择留学中介的学生与未选择的学生之间存在的异同。我们诚挚邀请你参加此项调研，因为我们相信作为一名即将毕业的高中生，你的想法和经历会为此次研究提供非常有价值的信息，并使我们更好的了解相关问题。

我们诚挚邀请你参加此项调研，因为我们相信作为一名来自中国的学生，你的想法和经历会为此次研究提供非常有价值的信息，并使我们更好的了解相关问题。如果你同意参与此项调研，你将需要花费大约 15 分钟完成一份调查问卷。

你也将会被邀请参加进一步的深 入 调查。 调查形式为 30 到 50 分钟的面谈。如果你有意参加, 请你在问卷末提供联系信息 以及被采访日期。我们会进一步联系你。

如果在面谈过程中有任何疑问，请随时提出。因为个人需要，你可随时退出此项研究并有权拒绝回答任何你不愿意回答的问题。为了在后期数据分析中更准确地引用记录，面谈 将会全程录音。录音记录会在课题完成之后，永久销毁。

参与此项研究没有任何可预测风险。你的参与是完全自愿的行为。你有权拒绝参与或者中途退出此次调研。如果你选择拒绝参与或中途退出，你的选择将不会对你今后的学习、工作、生活及其他任何方面产生负面影响。问卷调查记录，面谈录音记录，以及个人信息都将严格保密。

只有琳达.海格顿博士以及张毅可以浏览并使用这些记录及数据。所有相关信息都将被保存在密码保护的电脑里。如果出版发行研究成 果，所有参与者的个人信息也会持续保密，不会公布于众。

完成问卷调查，请点击如下链接：

如果你有意参与此项调研或者仍然存有疑问，欢迎随时联系琳达.海格顿博士 Email:lindah@iastate.edu 电话：515-294-5746） 或者张毅（Email：lyzhang@iastate.edu；电话：515-509-3520）。

非常感谢你的参与和支持！

Linda Serra Hagedorn, Ph.D.
Professor and Director
Educational Leadership and Policy Studies
Research Institute for Studies in Education
Iowa State University
lindah@iastate.edu
515-294-5746

Yi (Leaf) Zhang
Doctoral Research Associate
Educational Leadership and Policy Studies
Office of Community College Research and Policy
Iowa State University
lyzhang@iastate.edu
515-509-3520

APPENDIX E. INTERVIEW QUESTIONS FOR PROSPECTIVE STUDENTS IN CHINA

1. Do you plan to come to study in a foreign country? 你打算到国外留学么?
2. Do you plan to come to study the U.S.? 你打算到美国留学么
3. How do you receive information about foreign colleges and universities? 你通过何种途径获取留学信息?
4. Are you aware of educational agencies when you are applying to American universities? 你知道留学中介么?
5. Do you utilize or do you plan to utilize an educational agency? 你打算通过留学中介准备留学申请么?
    a. (to question 5) If yes, what are the reasons that you asked for their help? 如果是，那么你的原因是什么?
    b. How do you learn about the agent? (from the Internet, TV, newspapers, magazines, friends, etc.) 你是通过何种途径了解留学中介相关信息的?（比如，网络，电视，报纸，杂志，朋友，等等）
    c. What specifically do you expect the agent to provide? 你期待留学中介提供何种服务?
    d. If you have started to use their services, are you satisfied with the services? 如果你已经开始使用留学中介的服务，你对它提供的服务满意么?
    e. Do you think you will be better prepared for your study in the U.S. through working with the agency? 你觉得使用留学中介会让你为将来的留学生活有更好的准备么?

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    f. (to question 5) If no, what are the reasons that made you not choose to work with an agency? 如果你没有打算使用留学中介，你的原因是什么?
6. What are the difficulties that you encounter in your application? 你觉得你在留学申请中已经面临、或者将要面临的最大困难是什么?
7. Do you receive any help from your parents, friends, teachers, etc? 你留学的想法是否得到了父母、老师、及朋友的支持?

APPENDIX F. INTERVIEW QUESTIONS FOR UNDERGRADUATE STUDENTS IN THE U.S.

1. When did you decide to come to study in the U.S.? 你何时准备到美国留学的？
2. How did you receive information about American colleges and universities? 你是通过何种途径获取美国高校的信息的？
3. Were you aware of education agencies when you were applying to American universities? 你在申请美国高校的时候，你知道留学中介么？
4. Did you utilize an educational agency? 你是否用留学中介帮助你申请美国高校？
    a. (to question 4) If yes, what were the reasons that you asked for their help?如果是，你的原因是什么？
    a. How did you learn about the agent? (from the Internet, TV, newspapers, magazines, friends, etc.) 你是通过何种途径了解留学中介相关信息的？（比如，网络，电视，报纸，杂志，朋友，等等）
    b. What specifically did the agent provide? 留学中介提供了哪些服务？
    c. Were you satisfied with the agent services? 你读留学中介的服务满意么？
    d. Do you think you are better prepared for your study in the U.S. through working with the agent? 你觉得使用留学中介让你为留学生活作出了更好的准备么？
    e. Were there any discrepancies between what the agent promised and what you actually experienced? 留学中介的承诺和留学中介所提供的服务是否一致？

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    f. (to question 4) If no, what were the reasons that made you not choose to work with an agent? 如果没有使用留学中介，你的原因是什么？
5. What were the difficulties that you encountered? Do you think an agent or other support could have helped you? 你觉得你在留学申请中面临的最大困难是什么？
6. Did you receive any help from your parents, friends, teachers, etc? 你的父母，朋友，老师是否帮助了你的申请？
7. What recommendations would you offer future students? 对未来的留学生，你们有什么建议么？

APPENDIX G. INSTITUTIONAL REVIEW BOARD APPROVAL

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office of Research Assurances
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

DATE: 19 May 2009

TO: Linda Serra Hagedorn
N012 Lagomarcino

CC: Yi Zhang
N227 Lagomarcino

FROM: Jan Canny, IRB Administrator
Office of Research Assurances

TITLE: **The Use of Agents in Recruiting Chinese Undergraduates (Part I China)**

IRB ID: **09-153**

Approval Date: 19 May 2009
Date for Continuing Review: 18 May 2010

The Chair of the Institutional Review Board of Iowa State University has reviewed and approved this project. Please refer to the IRB ID number shown above in all correspondence regarding this study.

Your study has been approved according to the dates shown above. To ensure compliance with federal regulations (45 CFR 46 & 21 CFR 56), please be sure to:

- **Use the documents with the IRB approval stamp** in your research.
- **Obtain IRB approval prior to implementing any changes** to the study by completing the "Continuing Review and/or Modification" form.
- **Immediately inform the IRB of** (1) **all serious and/or unexpected adverse experiences** involving risks to subjects or others; and (2) **any other unanticipated problems involving risks** to subjects or others.
- **Stop all research activity if IRB approval lapses**, unless continuation is necessary to prevent harm to research participants. Research activity can resume once IRB approval is reestablished.
- **Complete a new continuing review form** at least three to four weeks prior to the **date for continuing review** as noted above to provide sufficient time for the IRB to review and approve continuation of the study. We will send a courtesy reminder as this date approaches.

Research investigators are expected to comply with the principles of the Belmont Report, and state and federal regulations regarding the involvement of humans in research. These documents are located on the Office of Research Assurances website [www.compliance.iastate.edu] or available by calling (515) 294-4566.

Upon completion of the project, please submit a Project Closure Form to the Office of Research Assurances, 1138 Pearson Hall, to officially close the project.

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