

**AN INQUIRY IN TO CHINESE ALUMNI ATTITUDES
TOWARD THEIR UNIVERSITY OF PITTSBURGH EXPERIENCE**

by

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Over 300,000 Chinese students are studying in the U.S., making China the top country of international origin with 31.2 percent of all U.S. international students (IIE, 2015). In addition, 2015 saw a 10 percent increase in international students in the U.S., a statistic that underscores the assumption that globally mobile students regard the U.S. as a destination of choice (IIE, 2015). In the fall of 2015, 1,758 Chinese students were studying at the University of Pittsburgh (Pitt) (University of Pittsburgh Fact Book, 2016).

The number of Chinese alumni will increase as these matriculated students graduate from U.S. universities. However, Chinese alumni university philanthropy has lagged behind domestic and international alumni philanthropy (Zi, 2014). The need for private philanthropy is clear. Higher education in the United States is in a financial crisis. Decreased funding from state and federal governments combined with rising costs have led higher education institutions to enhance efforts to raise funds from private philanthropic sources (Pew Charitable Trust, 2015).

In order to develop a philanthropic relationship between Chinese students and their U.S. host institutions, it is necessary to understand their student experience. Very little is known about this population by university departments that regularly interact with Chinese students, including the Office of International Services (OIS) at Pitt. OIS works closely with all

international students during their tenure at university and is responsible for securing a student's Optional Practical Training (OPT) following graduation. Institutional Advancement (IA), the fundraising arm of a university, also has a vested interest in better understanding Chinese students.

This study employs a mixed-methods research design that employs a survey with Likert-style and open-ended responses. It asks Pitt's Chinese alumni about their experiences as undergraduate or graduate students. The findings may help universities better serve Chinese students and develop strong alumni ties. The two key findings from this study found that predictors of Chinese students' overall satisfaction and thus future engagement potential were (1) tied to students' ability to gain work or career building skills through their classes, a university teaching experience, and/or internships, and (2) students' satisfaction with their interaction with OIS is tied to the amount of time allocated to their appointments.

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LIST OF ACRONYMS

CASE Council for the Advancement of Secondary Education

CEAC Collaborative for Evaluation and Assessment Capacity

CSSA Chinese Student and Scholar Association

ESL English as a Second Language

IA Institutional Advancement

IRB Institutional Review Board

ISS International Student Survey

NSSE National Survey of Student Engagement

OIS Office of International Services

OPT Optional Practical Training

PITT University of Pittsburgh

PoP Problem of Practice

SCT Social Cognitive Career Theory

1.0 STATEMENT OF THE PROBLEM OF PRACTICE

There is a lack of information regarding Chinese graduates' view of their U.S. university student experience. The University of Pittsburgh (Pitt) experiences a similar problem in that they do not have adequate information on their Chinese graduates' opinion of their Pitt student experience. This Dissertation in Practice is designed to provide information regarding Chinese student viewpoints in order to help Pitt better serve this population. Chinese students are often overlooked despite the fast rate of growth this cohort (Institute of International Education, 2015). Chinese students are the most visible international presence of international students in the U.S. It is the leading place of origin for international students in the U.S., representing one in three international students studying in the U.S. (Allen-Ebrahimian, 2015).

There is a critical need for university departments such as the Office of International Services (OIS) and Institutional Advancement (IA) to have a better understanding of the factors that constitute a positive relationship between a Chinese student and the university. With this information, OIS and IA will be able to develop practices to create stronger relationships with Chinese students and alumni.

1.1 PROBLEM AREA

According to the Institute of International Education's Open Doors 2014-15 Report (2015), over 304,040 Chinese students are studying in the U.S., making students from China the number one country of international origin, or 31.2 percent of all international students studying in the U.S. The year 2015 represented an increase of 10 percent of international students choosing to study in the U.S. This data underscores the assumption that globally mobile university students regard the U.S. as a destination of choice for academic degrees (IIE, 2015). As a logical result, the number of U.S. university Chinese alumni will continue to increase as these matriculated students graduate.

Historically, China sent no students to the U.S. from the 1950s through 1974. In the 1980s, the numbers of Chinese students who studied in the United States started to grow dramatically, and in the 1988-89 academic year, mainland China and Taiwan were the leading source of international students at U.S. universities. Within this population, graduate students historically outnumbered undergraduates (Institute of International Education, 2011). Recently, there has been a high rate of growth in the undergraduate Chinese student population in addition to the already established Chinese graduate population. In 2015, 41 percent of Chinese students in the United States were undergraduates, compared with 39.6 percent for graduate students (Allen-Ebrahimian, 2015).

As a logical result, the number of U.S. university Chinese alumni will continue to increase as these matriculated students graduate from U.S. universities. However, Chinese alumni university philanthropy has lagged behind domestic and other international alumni philanthropy. Chinese contributors donated \$60 million to U.S. universities from 2007 to 2013, which accounts for only 3.5 percent of total foreign donations. The countries that rank ahead of

China in terms of alumni donations to American colleges are: U.S., Canada, India, Saudi Arabia, Switzerland, United Arab Emirates (Zi, 2014).

Public funding of higher education has not kept pace with enrollment growth and inflation over the past three decades (Center on Budget and Policy Priorities, 2016). The reductions made during the 2008 recession were particularly devastating in many states. University administrators believe the new normal is that private support—philanthropy—is essential to the quality of public higher education (Worth, 2012). Therefore, it is important to include the increasing number of Chinese graduates as potential prospects for university philanthropy. To that end, a better understanding of Chinese graduates and their relationship to their U.S. host institution is necessary to build the good will that will yield philanthropic relationships (Weerts & Ronca, 2008).

Private fundraising is becoming increasingly necessary to support students, programs, and research at U.S. universities. Most recently, the economic downturn of 2008-2009 exacerbated the fundamental financial problems that face American higher education (Geiger, 2010). Decreased funding from state and federal governments, combined with rising costs to provide education, have led private and public colleges and universities to enhance their efforts to raise funds from private philanthropic sources. State and federal financial assistance to universities falls short of needs, creating increased pressure on universities to raise money from other sources (Pew Charitable Trust, 2015). Most gifts to universities come from individual alumni. Individuals represent approximately 90 percent of all private giving to universities, whereas corporate and foundation giving represents 5 percent (O'Connell, 1989). Throughout the country, individual alumni donated over \$10.85 billion to U.S universities in 2015 (Dollarhide, 2016).

1.2 CONTEXT AND SETTING

State funding for the Pitt is unreliable and decreasing over time. As a state-related institution, Pitt had a FY 2016 operating budget of approximately \$2 billion, with an estimated \$147 million of state aid from the Commonwealth of Pennsylvania (Barlow, 2016). The state allocation represents roughly 7 percent of Pitt's operating budget. Overall, Pennsylvania's higher education funding to Pitt has declined more than 20 percent in nominal dollars from its pre-2008 recession timeframe (Nordenberg, 2014).

Private philanthropy is essential to fill this funding gap. The decreased level of state funding impacts both the affordability of postsecondary education for families, and the ability of higher education institutions like Pitt to maintain a high level of quality while advancing its mission. In addition, the lack of predictability in state funding from one year to the next makes it difficult for the university to plan effectively. Thus, private philanthropy plays an important role at Pitt. As in the national arena, most private philanthropic gifts to Pitt come from individual alumni.

Pitt regularly surveys its students and alumni to gain a better understanding of how it can market itself and appeal to individual donors, yet there is very little known about the attitudes and impressions of its Chinese students. In 2017-2018, Pitt had a total student population of approximately 34,000 with an alumni base of over 300,000 individuals located around the world. While most of Pitt's students are from North American, approximately 3,000 come from outside the U.S. Out of this 3,000, 1,800 are from China. (University of Pittsburgh Fact Book, 2015).

As an example of the institution's surveying efforts, in 2017 the University contracted with the firm Simpson Scarborough to survey over 250,000 Pitt graduates regarding Pitt alumni engagement. (Simpson Scarborough, 2017). Finding that alumni had a desire to be more

connected to one another, Simpson and Scarborough recommended that Pitt focus on offering significant benefits versus appealing to philanthropic generosity or loyalty as a way to get alumni to engage (or give). To that end, they suggested that the university could develop networking events, conferences, education and trainings, professional career coaching, entrepreneurial activities, and an online job portal as potential activities of interest. Although these findings are interesting, the survey did not segment the responses per demographic region. Therefore, in many ways, the survey results are another indicator of the lack of information Pitt has about its Chinese student population.

Similar to other universities, the Office of International Services (OIS) is the department that works closely with international students to assist with their legal, financial, and personal issues. The relationship between OIS and Chinese students is very important in developing an engaged university student and alumnus. A positive relationship can pay dividends to a university

Pitt's department of Institutional Advancement (IA) is responsible for all private philanthropy to the school(s). IA tries to leverage the positive relationships alumni may have had with the university and ask them to make financial donations to support students and the institutional mission. Typically, Pitt's IA secures gifts valuing over \$150 million per year with over 60 percent from individual donors (Pitt IA Report, 2017). In my role at IA, I work with faculty and deans University-wide to raise private financial support for research, teaching, student scholarships, and/or university programs. These gifts are acquired through foundation grants, corporate sponsorships, or individual giving. In addition to domestic support, I have assisted in securing gifts from the Chinese government and Chinese individuals who support Pitt's mission.

1.3 POPULATION STAKEHOLDERS

The participants in this study were Pitt Chinese graduates on an Optional Practical Training (OPT). OPTs are issued to international students from their attending universities following graduation in order to allow them to obtain work experience in the United States. At Pitt, over 70 percent of Chinese students apply for OPT (OIS, 2017). There is no limit to the number of OPTs a university can issue. The number depends on how many international graduates the school has in attendance. The OPT allows for temporary employment that is directly related to an F-1 student's major area of study. Eligible students can apply to receive up to 12 months of OPT employment authorization before completing their academic studies (pre-completion) and/or after completing their academic studies (Stephan, 2010). In STEM fields, this program can be renewed for up to an additional 24 months.

In the United States, while there is no limit on the number of OPT authorized per year, the program requires approval by the student's school and the Department of Homeland Security. The program was designed to be part of the educational process by providing practical work experience for recent graduates with F-1 visas so they could sharpen and add to the skills they learned in school.

In 2008, President George W. Bush extended the period of OPT for STEM students to help bridge the gap between OPT and pending H-1B visa petitions. As of November 2013, there were an estimated 100,000 F-1 students using the OPT program (Brookings Institute, 2014). The annual number of OPT approvals rose from 28,497 in FY 2008 to 136,617 in FY 2014, a nearly fivefold increase as illustrated in the Pew Charitable Trust chart below (Pew Charitable Trust, 2017).

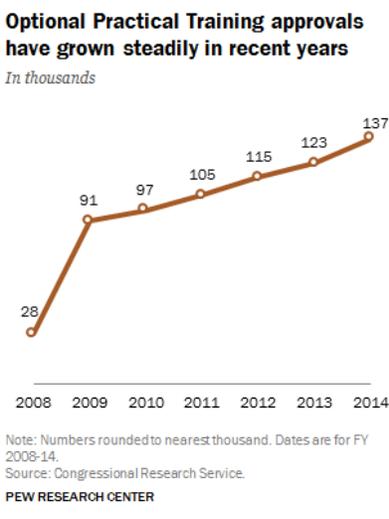


Figure 1. OPT Approvals

For this study, the participants were nationals of either mainland China or Taiwan. The population for this study included the approximately 500 undergraduate and graduate students who graduated from Pitt within the last three years (2015-2017) and were issued an OPT.

The stakeholders are OIS and IA, who will benefit from understanding this population’s student experience. OIS is responsible for providing advice, assistance, and documents for Chinese students. OIS serves as Pitt’s liaison with the U.S. Department of State and the U.S. Department of Homeland Security on matters that concern the Pitt international community; therefore, they have a vested interest in understanding Chinese student experiences in order to inform future practices and policies.

Students from China represent the number one source of international students attending Pitt. Therefore, IA is very interested in understanding their student experience and affinity to the university in order to develop better alumni engagement practices.

According to the Wall Street Journal, *“more of the wealthy are motivated to donate by the benefits from having their names associated with the world’s top education brands, especially*

as they expand their business empires outside China” (Gu, 2014). Pitt, like other universities, is interested in tapping into this relatively new source of university philanthropy.

1.4 PROBLEM OF PRACTICE

This problem of practices (PoP) focuses on the lack of information regarding how Chinese students and graduates view their experience at Pitt. Although often overlooked, this population is increasingly critical to the viability of a university such as Pitt. As more and more Chinese students enroll in and graduate from U.S. universities, it is essential that institutions embrace and foster this group.

The Office of International Services (OIS) and Institutional Advancement (IA) are on the front lines of interacting with this population. Currently, many University policies and practices do not take into consideration the cultural and/or communication challenges of Chinese students. OIS and IA do not know what they don't know. For instance, the university-wide 2017 alumni engagement survey did not have any questions that pertained to an international student's experience as a unique experience. This PoP will highlight Chinese students' experience and provide data to inform the activities of OIS and IA.

1.5 INQUIRY QUESTIONS

The inquiry questions that pertain to this PoP are:

1. To what degree do Chinese graduates believe their University of Pittsburgh education enhanced their academic and English language skills?

2. To what degree are Chinese graduates satisfied with their interactions with the University of Pittsburgh's Office of International Services (OIS)?
3. Did emotional and/or financial support received from family, Pitt faculty, Chinese students, or other Pitt students influence their overall satisfaction with their University of Pittsburgh student experience?
4. What cultural adjustment issues do Chinese students encounter in regards to academic expectations, the English language, and other challenges, and how can this information inform OIS staff to better understand their Chinese clientele?

2.0 REVIEW OF SUPPORTING SCHOLARSHIP AND PROFESSIONAL KNOWLEDGE

Who donates to universities, and why? Are the increasing numbers of Chinese students on U.S. campuses potential donors? What motivates university philanthropy, and how is it tied to the student experience? This literature review examines these questions and more in order to better understand the relationship between Chinese graduates and Pitt.

2.1 ALUMNI ATTACHMENT

What influences giving? According to a September 1, 2016 Gallup Poll, approximately a fifth of college graduates are emotionally tied their alma maters (Lohnes & Nekvasil, 2016). This emotional tie is critical in relation to alumni giving, as illustrated in the Alumni Factor (2014) chart (Figure 2: What Drives Alumni Giving?). The chart below illustrates the importance of emotional ties as the basis for developing a philanthropic relationship between alumni and their university supporters; it also illustrates the correlation between alumni giving with students' overall satisfaction with their experience.

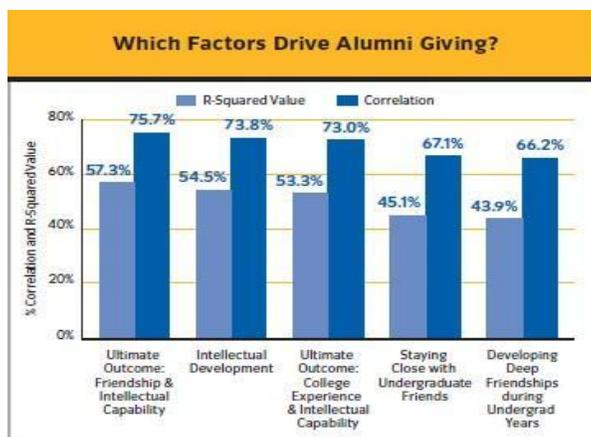


Figure 7.1

Figure 2. What Drives Alumni Giving? (Alumni Factor, 2014)

Although students may vary in their engagement to their host universities, emotional connection is a good baseline to measure potential philanthropic engagement strength. To this end, Burt (2001) studied the emotional connection a student has with his/her alma mater and the role social networks play. He refers to a concept of “network embedding” that is also illustrated in the Alumni Factor chart. (p. 620). Network embedding and career placement considers how many ties a student has to his/her university (e.g., family members and/or friends who also attended the university). Network embedding analyzes one’s core contacts around a person’s workplace, family, and friends, seeking those who have a connection to the university (p. 622). For instance, graduation from an elite university is a cherished attachment because it provides association and access to an elite circle of leaders. This type of attachment is based on the inner circle theory (Bond, 2004).

Certain behavioral indicators provide measures of alumni affinity. Membership in an alumni club is one, along with financial contributions of any amount. The homophily effect, when individuals from similar backgrounds influence the social context and the degree to which friends are made (Boardman, Domingue, & Fletcher, 2012), also plays a role. These indicators help develop a picture of alumni attachment to their alma mater. (Burt, 2001).

Predicting alumni giving can be tied to the interest alumni express in volunteering for their universities through (1) board service, (2) political advocacy, and/or (3) alumni club support (Weerts & Ronca, 2008). Thomas and Smart (2005) suggest that alumni giving can also be predicted by looking at a student's social activities, campus leadership, and academic achievement. Universities are interested in alumni professional and personal connections in order to make connections with corporations, foundations, governments, and/or major gift prospects that may help further the mission of the university (Koral, 1998).

2.2 INTERNATIONAL STUDENTS AND UNIVERSITY ENGAGEMENT

A review of literature highlights many of the challenges international students face at U.S. universities. The literature provides a first step in gaining insight into the factors that may influence a student's persistence and satisfaction at a U.S. host university. As diverse student populations expand in U.S. colleges and universities, administrators will need to think more seriously about how to support these students in a manner that both preserves their cultural integrity and allows them to succeed. Asian students, in particular, will have the greatest impact on U.S. universities as they are on track to account for 70 percent of global demand for higher education by 2025 (Verbik & Lasanowski, 2007). Research has demonstrated that if international students are satisfied with their university experience, they will have a positive host institution affinity (Taylor & Martin, 1995).

Ling's (1997) work on the history of Chinese female students is instructive in understanding the history of Chinese students in the United States. Three distinct periods are described: (1) pioneer Chinese female students, 1881-1930s; (2) wartime and postwar Chinese

female students; and (3) 1940s-the present. The latter group can be divided into two separate timeframes. Starting in 1960 a group came from Taiwan, while a second group from the People's Republic of China (PRC) attended U.S. universities starting in 1979. The desire for modernization and practical considerations or unpractical illusions of studying in America motivated these Chinese students (Ling, 1997).

In the 1960s, pressured by the civil rights movement, American immigration policy became more liberal, and the U.S. attracted more Chinese immigrants than ever before. In fact, students from Taiwan formed the first wave of a large-scale student immigration. In many respects, the "study abroad craze" in Taiwan had its roots in the success of the postwar Taiwan economy. (Ling, 1997). During the late 1970s and early 1980s, the "study abroad craze" in Taiwan spread to the Chinese mainland. Since the establishment of the People's Republic of China, the government, like its predecessors, has relied on foreign countries to train its specialists (Ling, 1997).

The Chinese students who came to the United States in the early twentieth century played, and continue to play, a pivotal role in Chinese intellectual, economic, and diplomatic life upon their return to China. They exemplified key aspects of Chinese "modernity" by introducing new social customs, new kinds of interpersonal relationships, new ways of associating in groups, and a new way of life in general (Weili, 2002). Yet many students experience re-entry struggles when they return to China (Li, 2006). For example, Chinese students may face criticism about arrogance, unreasonable demands, and impractical expectations upon their return to China.

2.3 CONCEPTUAL FRAMEWORKS

Mamiseishvili's (2012) work on the characteristics of international students provide important context for this study. The characteristics analyzed were GPA, degree plans, and remediation in English. She collected data through surveys and interviews at two different points, once in year one and again in year four. She created and employed the Beginning Postsecondary Students Longitudinal Study. Half of the interviews were conducted face to face and half were conducted using computer assisted software. The study findings were analyzed using social exchange theory as embodied through language acquisition, peer relationships, and student-teacher relationships.

Mamiseishvili sought to identify what experiences on campus affect students' ability to be successful at school. One take-away was that institutional conditions such as faculty attitudes can positively or negatively an international student adjustment and success. She found that the universities that acknowledged the unique challenges faced by international students, and that were willing to invest or resources to address these challenges, would directly affect the student's post-graduation attitudes.

Building on Mamiseishvili's groundbreaking work, the theoretical framework for this POP will be based on research on student experience and its impact on alumni feelings and opinions towards their U.S. alma maters (Astin, 1993; Kuh, 1995; Pace, 1979). The conceptual framework will be social exchange theory and its relevance to the perceived value of alumni volunteerism, as well as theories of student persistence within the context of international student engagement and post-graduation affinity.

2.3.1 Social exchange theory

Social exchange theory draws heavily on psychology, sociology, anthropology, and their applications as to how an individual derives value from social situations. This framework provides an informative parallel to understand the reciprocal flow of valued behavior between the participants (Emerson, 1976). Overall, social exchange theory looks at reward, reinforcement, cost, value, utility, resource, and comparison levels a student may derive from their U.S. university experiences.

2.3.2 Persistence and retention theories

In addition to social exchange theory, theory on student persistence also helps to understand factors of international student engagement at U.S. universities. The three pillars of student persistence theories rely on (1) academic integration, (2) social integration, and (3) institutional commitment (Cabrera et al., 1992). Tinto (1975) formulated a theory that interactions between the student and his/her institution of higher learning indicate if the “match” is appropriate and supports the goals of both entities. Tinto’s theory modeled below in Figure 3 illustrates the sociological stresses that impact student drop-out rates (Tinto, 1975).

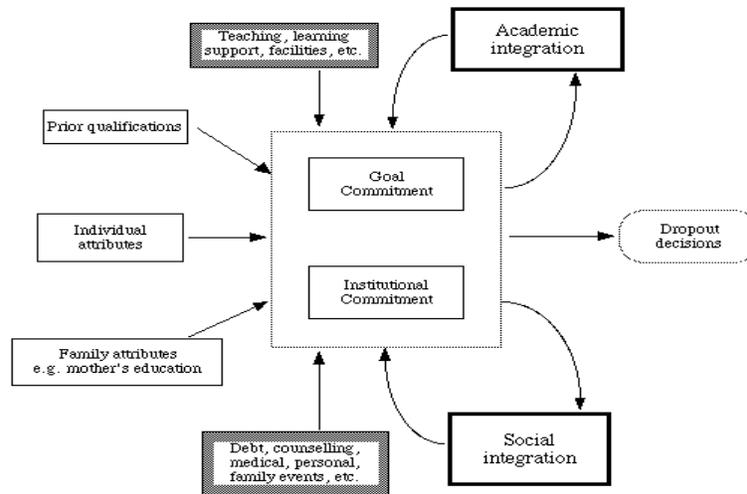


Figure 3. Tinto's Theory

Tinto's conceptual model portrays a number of variables set in a causal sequence: (1) background characteristics and initial commitments to the institution and to the goal of graduation, (2) academic and social integration, (3) subsequent goal and institutional commitments, and (4) voluntary persistence/ withdrawal decision (Pascarella, Terenzini, & Wolfle, 1986).

Behavioral patterns also influence and predict university student persistence. Bean's model, developed in the 1980s, suggests that students' intentions to stay at their institutions are shaped by their beliefs and attitudes (e.g., about the institution, friends, and faculty), which result from their institutional academic and social experiences (Kahn & Nauta, 2001). Therefore, a positive correlation between what students expect from their university and what they receive leads to favorable views of the university. Student expectations will be explored in this Problem of Practice (PoP) with the survey sent to Pitt Chinese alumni.

Another key factor to explore through this PoP is how people react to their environment based on their perceived ability to navigate a situation, and what they believe are the benefits of persisting, or graduating. Intrinsic personal factors include cognitive ability and emotional and

physical attributes. Extrinsic factors include factors in the environment, such as economic and social circumstances (Alexander et al., 2011). This Social Cognitive Career Theory (SCT) emphasizes the bi-directional interactions among three elements: (1) a person, (2) their environment and (3) the actions they undertake. Parental aspirations and expectations can play a key role in this theory and will also be explored in the survey.

Based on the literature review, inquiry questions were designed and this study created in order to gain more nuanced data about Chinese student experiences. This study's information will help U.S. university personnel be better prepared to serve the needs of Chinese students and to develop engagement opportunities that are meaningful to Chinese graduates.

2.4 CONCLUSION

Chinese student numbers have increased drastically in the past few years (Fuchs, 2017). These students provide benefits to universities, including revenue, and to American students, including facilitating global awareness. However, there are limited studies that have examined Chinese student experiences. This literature review highlights that paucity of information and suggests that future research should be performed in order to better understand this cohort and to allow universities to implement strategies that can be used by faculty and administration to help Chinese students who are studying in the United States.

3.0 APPLIED INQUIRY PLAN

The inquiry plan for this Problem of Practice (PoP) includes (1) inquiry questions, (2) survey design and implementation, (3) analysis of survey responses, and (4) reporting on the findings related to the inquiry questions. The survey population was identified as Pitt Chinese alumni on an Optional Practical Training (OPT) program. It was distributed electronically via a link embedded in an invitation to participate email.

3.1 INQUIRY QUESTIONS

Below are the four Inquiry Questions that informed the scope and goal of this PoP:

1. To what degree do Chinese graduates believe their University of Pittsburgh education enhanced their academic and English language skills?
2. To what degree are Chinese graduates satisfied with their interactions with the University of Pittsburgh's Office of International Services (OIS)?
3. Did emotional and/or financial support received from family, Pitt faculty, Chinese students, and/or other Pitt students influence their overall satisfaction with their University of Pittsburgh student experience?
4. What cultural adjustment issues do Chinese students encounter in regards to academic expectations, the English language, and/or other challenges, and how can this information inform OIS staff to better understand their Chinese clientele?

3.2 PARTICIPANT RECRUITMENT AND SELECTION

Study participants were Pitt Chinese alumni currently on a Pitt issued OPT. After being identified, they were recruited to participate through an email sent to their Pitt email addresses (see Appendix B). Overall, 87 individuals out of a potential population of 439 (for a response rate of 19.8 percent) completed the online Qualtrics survey. Forty-four females and 33 males completed the survey; five respondents did not indicate their gender. All individuals completed the survey using an anonymous link provided in the email. The survey responses were completed between November 29, 2017 and January 10, 2018.

In regard to respondent demographics, the majority of Chinese alumni were from major Chinese cities. This result was similar to the represented Chinese population at other U.S. universities (Tea Leaf Nation Staff, 2016). The majority of the respondents were from Beijing, Guangdong, Hubei, and Shandong. Beijing, Guangdong, and Hubei are considered super large-sized cities -with a population above 2,000,000 persons, whereas Shandong is considered an extra-large-sized city - with a population between 1,000,000-2,000,000 persons (China Discovery, 2018). The participants indicated they represented 21 of the 23 Chinese providences.



Figure 4. Chinese Providences

Table 1. Survey Respondents by Province

Chinese province	Number	Chinese province	Number
Anhui	3	Liaoning	3
Beijing	11	Ningxia	1
Chongqing	1	Shaanxi	3
Fujian	1	Shandong	7
Guangdong	7	Shanghai	3
Guangxi	3	Sichuan	4
Harbin	1	Tianjin	2
Henan	6	Yunnan	1
Hubei	11	Zhejiang	5
Inner Mongolia	2		
Jiangxi	1	Not answered	10
Jilin	1	Total	87

All participants indicated that their native language was Chinese and that they lived off campus while at Pitt. Seventy-four respondents indicated they attended Pitt for a graduate degree, with six indicating they received an undergraduate degree. The fact that most of the respondents were graduate rather than undergraduate students is a factor in that graduate students live off rather than on-campus. Thus, there is less social interaction with students who reside on campus in dorms or student housing. Seven did not indicate a degree earned at Pitt. Although not all respondents listed the department or school from which they graduated, below is a list of all the majors reported by the study participants. Please note that a majority of the respondents (40 out of 77 respondents, or 52 percent) reported receiving a science-related degree.

Table 2. Participant Majors

DEGREE	STUDY PARTICIPANTS
Business	4
Engineering	13
Sciences (including Computer Science)	40
Other/Unspecified	20
Not reported	10
Total	87

The male/female respondent split was 53 percent female and 43 percent male. During this study's graduation period, Pitt had a 50/50 split between female and male students, similar to other U.S. universities (Center on Religion and Chinese Society, 2016). All respondents indicated that Chinese was their native language, and all lived off campus during their tenure at Pitt.

The participants indicated the top reason they chose Pitt to further their education was due to Pitt's reputation among U.S. universities (32 percent) followed by their desire to enter a specific course of study or research program (32 percent). Other reasons included Pitt's ranking and personal recommendations. On the following page is a graphic representing respondents' reasons for enrolling at Pitt.

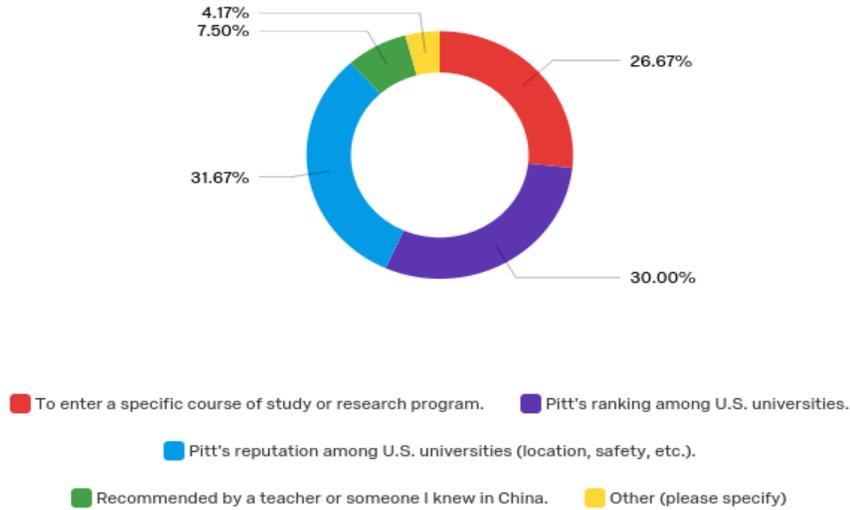


Figure 5. Reasons for Attending Pitt

The respondents noted that Pitt’s national ranking played an important part in their decision to study at Pitt. These responses were in line with the Hobsons Education Advances (2017) International Student Survey (ISS) in which two in 10 respondents (19.6 percent) said that rankings played an important part in their choice of school and 23.5 percent reporting that institutional ranking was the most important factor in their choice of university. Thus, the findings represent a cohort that purposefully decided to enroll at Pitt.

3.3 INSTITUTIONAL REVIEW BOARD

The survey questionnaire was designed and then submitted to the University of Pittsburgh Institutional Review Board (IRB) for Approval. It was approved on November 14, 2017. (See Appendix A.)

3.4 SURVEY DESIGN FRAMEWORK

The design framework was centered on (1) theoretical constructs, (2) the College Student Report Survey, and (3) the University of California's Comprehensive International Student Needs Assessment Survey. These theories and survey instruments influenced the survey design framework and helped the investigator solicit relevant information from Chinese alumni about their Pitt student experience.

Social exchange and persistence theories were key constructs in the survey instrument design. These theories explain an individual's action based on a subjective cost-benefit analysis (Jones, 2010). This social-psychological perspective helped to structure questions pertaining to a Chinese student's experience at Pitt by looking at variables such as faculty and peer relationships.

The survey design framework was also informed by questions used in the National Survey of Student Engagement (NSSE). The NSSE, commonly referred to as the College Student Report, is a wide-ranging questionnaire that helps universities understand alumni engagement (Kuh, 2001). The College Student Report was designed to measure the degree to which students participate in educational practices that are linked to valued university outcomes. This survey has proven to be a reliable indicator of how to measure alumni attitudes (Chickering & Gamson, 1987; Kuh, 2001).

In the case of this survey design framework, the NSSE was instrumental in designing questions that evaluate the Chinese alumni experience. Per the NSSE, the survey framework addressed: (1) a student's involvement in in-class and out-of-class activities; (2) their perception of the campus environment, including the quality of students' relationships with peers; (3) faculty members and administrators, and (4) their satisfaction with the overall collegiate

experience (Kuh et al., 2001). NSSE has found that a student's relationship with the faculty and university offerings such as clubs and sports are significantly correlated with institutional outcomes such as retention and graduation rates (Pike, 2013).

The University of California's Comprehensive International Student Needs Assessment Survey informed this inquiry's questions regarding Chinese students' satisfaction with the OIS. The California instrument was designed to assess how a university could strengthen ties between international students and student services and academic units in order to promote international student and scholar success (Berkeley International Office, 2011). It helped to guide this inquiry's survey framework in terms of how to look at a student's personal and academic concerns and interactions with faculty, staff, and the OIS.

3.5 QUESTION DESIGN AND TESTING

The survey (see Appendix C: Survey Questions) had 11 questions and was produced on a Qualtrics platform. There were four descriptive demographic questions and one concluding open-ended question. The remaining seven questions were structured to report more nuanced responses through a 6-point Likert-type scale. (i.e., "strongly agree" to "strongly disagree") in order to measure the extent and quality of a student's relationships with the university. Likert-scale questionnaires are used to measure characteristics, attitudes, and opinions (Turner, 1993). All questions were designed to help the investigator gain a better understanding of Pitt's Chinese alumni (Ozanne & Deighton, 2008; Somekh, 2006).

Questions 1-4 were designed to disaggregate the data in order to consider the impact of gender differences, native language, Chinese province of origin, and undergraduate vs. graduate experience. These questions help the investigator profile the respondents.

Question 5 was designed to test the relationship between the expected outcome of attending Pitt as a new student and the student's opinion of the experience once he/she graduated.

Questions 6-8 were designed with input from the National Survey of Student Engagement (NSSE) questionnaire. The variables described in these questions help to gauge how the graduate perceives their Pitt experience.

Questions 5-9 were designed to understand the impact of faculty-student relationships on Chinese students. Positive faculty-student interactions enable teachers to model social-emotional competencies for students as well as promote student engagement (Williford & Wolcott, 2015). These were key questions that helped to answer whether or not the student had a positive or negative experience and its correlation to his/her overall Pitt university satisfaction.

Question 10 measured student satisfaction with their Pitt OIS experience. This question was based on the University of California's Comprehensive international student needs assessment survey, as well as input from Pitt's OIS Director (Berkeley International Office, 2011).

Question 11 was designed as the key question of overall satisfaction. Its function was to allow correlation with the results of the other survey questions. This question identifies who among the students were more satisfied than others. While the other questions were designed to help predict correlation, this question is the one to which the other survey questions are tied.

Question 12 was an open-ended question designed to capture information the participants wished to share about their Pitt student experience. The value of inserting an open-ended question in to the survey was to allow participants to add comments outside of the previous 11 structured questions.

The survey questions were reviewed by several Pitt Chinese School of Education graduate students, members of the OIS staff, and Dr. Cynthia A. Tananis, founder and director of the Collaborative for Evaluation and Assessment Capacity (CEAC) at Pitt. Their recommendations were incorporated in the final wording and format of Questions 1 through 12. The table in Appendix D correlates each survey question with the research and conceptual theory rationale. Please refer to this table for a detailed look at question design rationale.

3.6 DATA COLLECTION

All participants completed the survey online by using an anonymous link provided in the invitation email. The responses were captured by Qualtrics, an online survey tool available to Pitt students. The invitation email was sent November 29, 2018, and the responses were received between November 29, 2017 and January 10, 2018. In the interim, two email reminders were sent to the 439 survey candidates. As noted, 87 (19.8 percent) of the potential population completed the survey. The responses were stored on the secure Qualtrics platform and downloaded to a document stored in this investigator's Pitt Box for further study.

3.7 DATA ANALYSIS

Participant responses were collected in a format Menter et al. (2011) refers to as “reporting.” This type of response required the participant to choose an answer from one provided that best fit their attitude or view of what the question asked. The question offered discrete answer choices. Overall, the survey asked questions that solicited a Chinese graduate’s opinion regarding their student experience. One caveat is that the questions assumed that the respondents began their student experience with a positive attitude toward Pitt based on the fact that they had chosen to enroll.

Two types of statistical tools were used to analyze the findings: descriptive and statistical analysis. Descriptive analysis summarized the findings in a graphic manner while statistical analysis was used to draw conclusions based on regression analysis (Driessen & Derbyshire, 1966). These illustrations demonstrated the participant responses in a comparative manner to all the potential answers for the specific question.

The statistical analysis involved analyzing several variables, both dependent and independent. It tested the answers provided and their correlation to the overall question of student satisfaction. The dependent variable was a student overall satisfaction with their Pitt experience while the variable factors were their academic and extra-curricular experiences.

The goal of the statistical analysis was to find the sub-questions that affected student satisfaction. The analysis was divided into two parts. The first part found the key questions that were most related to the dissatisfaction of the student dissatisfaction, and the second part included responses that indicated that students were satisfied and why some were more satisfied than others.

The data came from a .csv file generated by Qualtrics. The data was put into several data frames. The dependent response was Q11, and the variable predictors were Q5 to Q10, and gender (Q1). The participant answers were transformed from factors to numbers with 1 as the most dissatisfied and 6 as the most satisfied. As noted, the variable predictors were in Q5 to Q10. Since Q5 was a multiple choice question, it was divided into five yes-or-no questions in order that each answer could be analyzed separately. The answers to Q6, Q7, Q9, and Q10 were categorized in levels from 1 to 6. The answers to Q5 and Q8 were yes or no. In addition, there were several sub-questions that required further delineation.

After the responses were coded, the effects that made students unsatisfied were analyzed. In this part, the analysis was done with Excel. The analysis combined the dissatisfied (satisfaction = 1, 2, 3) as group one and the satisfied (satisfaction = 4, 5, 6) as group two. The mean for each question was calculated and analyzed within the two groups separately and then compared to the means in different groups. The means of the significant questions (Q6 and Q9) were different in two groups. The findings indicated that lack of abilities (Q6) and lack of emotional support (Q9) are significant reasons for student dissatisfaction with their Pitt student experience. Having said that, the majority of participants were satisfied with their experience.

The effects that indicated students were satisfied with their Pitt experience were analyzed in this fashion: First, the responses that were coded 1, 2, and 3 were discarded, and then coded answers 4 (slightly satisfied) and 5 (moderately satisfied) were combined as one group, with 6 (extremely satisfied) as the second group. The objective was to identify what differentiates the students and made some more satisfied than others. A two-sample t test on each sub-question was performed to see whether means of the answer to the sub questions in two groups are the same.

In the t test, six sub-questions were significant; however, the regression revealed only three. Statistically speaking, the answers to the six sub-questions were all linearly related to satisfaction. However, in addition to the six sub-questions, Q8_1, whose p-value was slightly greater than 0.05, could also be considered; the analysis indicated that some of the answers (especially under the same significant questions) were related to each other. Thus, the answers were similar. In the Excel file, the correlation matrix under each significant question and some correlations were about 0.5 or higher, which indicated a high correlation of the answers.

Overall, the data analysis concluded that lack of abilities (Q6) and lack of emotional support (Q9) contributed to student dissatisfaction. The ability of a student to master critical and analytical thinking skills (Q6_2), gain work and career skills (Q6_5), and have adequate time allocated for an OIS appointment (Q7_2) were mostly correlated to a student's satisfaction at the Pitt. Q6_1, Q6_6, Q7_3, and Q8_1 were also significant, however slightly.

The statistical raw data results for this analysis are attached in Appendix D. The green color indicated very significant ($p < 0.001$), and the red color indicated moderate significance. ($p < 0.05$) Q5 was not listed due to the fact that neither of its sub-questions were significant to satisfaction. For these six sub-questions, the data analysis rejected the answers for students with different levels of satisfaction at the same level. On the other hand, multiple linear regression was used to choose the best subsets of variables (sub-questions). The raw data analysis indicates that the statistician chose three variables, Q6_2, Q6_5, and Q7_2. These results were in accord with the results of two-sample t test.

Descriptive analysis was used to analyze the findings of each question, and simple graphics were used to summarize the question responses. These graphics provided an overview

of the trends relevant to the question. The themes that emerged helped to illustrate the general tendencies of the respondents (Saldana, 2012).

4.0 FINDINGS

The inquiry found key findings that supported the tenets of social integration and persistence theories, as well as demonstrated value for the Office of International Services. Chinese alumni responses indicated that a lack of emotional support contributed to lack of satisfaction with their Pitt experience, and, in turn, a positive emotional and academic experience from family and university agents contributed to a positive connection between the graduate and Pitt.

The potential influence of financial support on overall satisfaction was null since the majority of students did not receive financial support while they were students at Pitt. However, there was a high correlation with the benefit students gained from work or internships and their overall Pitt satisfaction. A positive internship experience correlated with a positive view of Pitt. The relationship between a student and OIS was critical in determining student satisfaction. As previously described, OIS is the first point of contact for Chinese students, and their relationship with OIS continues throughout their school years and OPT experience.

4.1 CHINESE ALUMNI DESCRIBE HOW A PITT EDUCATION IMPROVED THEIR ACADEMIC AND ENGLISH LANGUAGE SKILLS

In terms of academic improvement, over 75 percent of the Chinese alumni respondents indicated that learning how to think critically and analytically and learning how to work collaboratively

with others were the highest rated outcomes of their Pitt education (scored with either a very or extremely effective rating). These results are in line with what one would expect from a Chinese student studying at a U.S. school (Neuby, 2012). To put in context the different pre-college skills embraced by Chinese and American educators, the table below presents a comparison of the Chinese vs. American educational model (Neuby, 2012):

Table 3. Chinese versus American Educational Model (Neuby, 2012)

Chinese Educational Model	American Education Model
Memorization	Abstract, situational problem solving
Passivity, low participation	Activity, self-direction, raising quest
Strict discipline	Unspecified, varied discipline level
Teacher-Directed	Self-Discovery
Teacher/Text as source	Investigative/Inquiry learning
Respect and courtesy	Respect and courtesy
Conflict Avoidance/Harmony	Conflict as method to advance

Table 3 illustrates the strengths and weaknesses of both the American and Chinese educational systems. This knowledge helps to inform U.S. higher education institutions of the type of preparation Chinese students had prior to entering school in the U.S. Seventy percent of the Chinese alumni respondents indicated that their Pitt education helped them improve their ability to work collaboratively with others with a ranking of a 5 or 6. On the other hand, only half of the respondents indicated that their Pitt education improved their ability to analyze numerical and statistical information. This is not surprising, as the Chinese middle and high school math curriculum in China is very robust (Wei & Eisenhart, 2011).

Overall there was a general consensus that Pitt’s academic instruction was effective in improving the Chinese respondents’ skills in the following areas: (1) thinking critically and analytically, (2) understanding and speaking in English, (3) writing in English, (4) gaining work

and career skills, and (5) working collaboratively. The graph below illustrates that most Chinese respondents rated these categories a 5 out of a scale of 1 through 6.

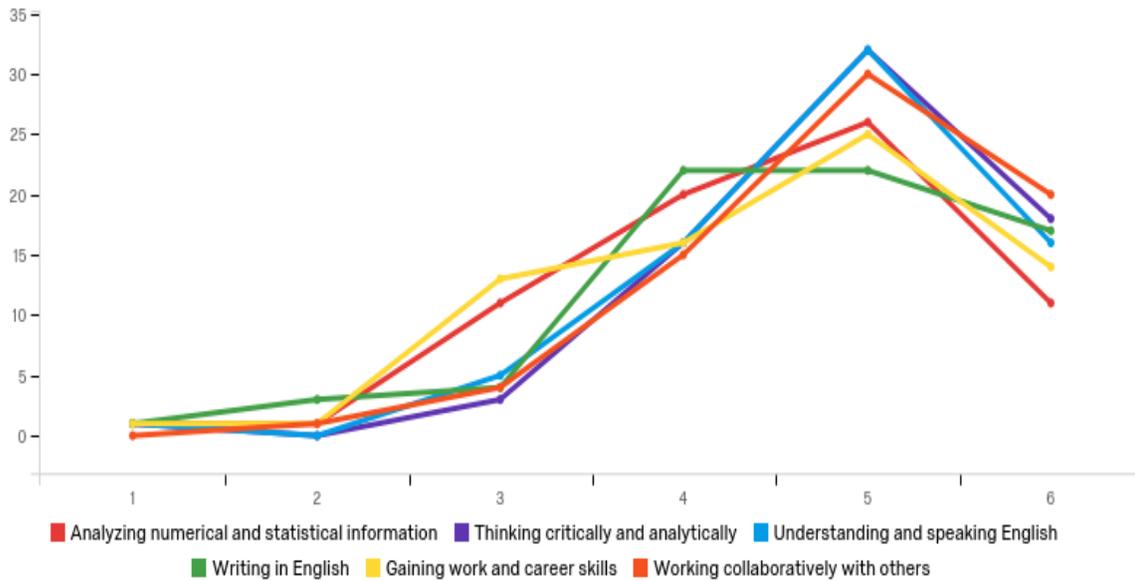


Figure 6. Education Effectiveness

Y = Percentage of Respondents
X = Effectiveness Rating 1=low, 6 = high

Based on the survey responses, the participants were generally satisfied with their Pitt education in all six areas surveyed. Typically, Chinese students have strong academic and analytical skills when entering university but struggle with how to work collaboratively with other students. This is compounded when a Chinese student does not assimilate with non-Chinese students, often due to uncertainty with speaking English. As the responses indicated, Chinese students were eager to improve their English language skills (Yihong, Yuan, Ying, & Yan, 2007). To this end, over 69 percent of the respondents indicated that their Pitt education was highly or extremely effective in helping them to understand and speak English. Fifty-seven percent of the respondents indicated that their Pitt education was highly or extremely effective in helping them to write in English. Only one respondent stated that their Pitt education did not

enhance either their English speaking or writing skills. Respondents indicated that they were satisfied with the impact Pitt's education experience had on their ability to gain work and career skills. The responses showed that English language ability was correlated with academic success and social interactions (working collaboratively). The participants' comments noted below were retrieved from the open comment section of the survey:

- *Many of the foreign classmates whose native language are not Chinese are very welcome. They helped me adjust to new culture with warmth and explanation.*

Faculty and mentors being extremely supportive to the academic and career development.

4.2 CHINESE ALUMNI DESCRIBE THEIR INTERACTIONS WITH PITT'S OFFICE OF INTERNATIONAL SERVICES (OIS)

All respondents had a relationship with Pitt's OIS during their tenure as students and graduates. This relationship began upon their acceptance to Pitt and continued throughout their student years and post- graduation OPT experience.

According to the OIS website, the office's mission is to: 1) Serve the University and its international student and scholar populations with high quality, comprehensive immigration services; 2) Ensure compliance with federal requirements related to immigration; 3) Welcome and orient new international students and scholars to the University and community; 4) Provide cultural programming for international students, postdoctoral fellows and scholars and cross-cultural training for members of the University community; and 5) Develop the next generation of international education professionals and leaders.

Based on the survey feedback, the respondents rated the OIS very highly. The respondents felt the OIS adviser was always helpful in addressing their individual issues and concerns during their appointments. In addition, the majority of respondents found the location of the office to be convenient. Figure 7 illustrates the levels of satisfaction the respondents correlated to their experience with the Office of International Services: 1) The OIS adviser was helpful in addressing the issues (red), 2) The time allocated for OIS appointment was adequate to address issues (purple), 3) The location of the OIS office was convenient (blue), 4) The OIS emails provided useful information (green), and 5) The OIS website provided useful information (yellow).

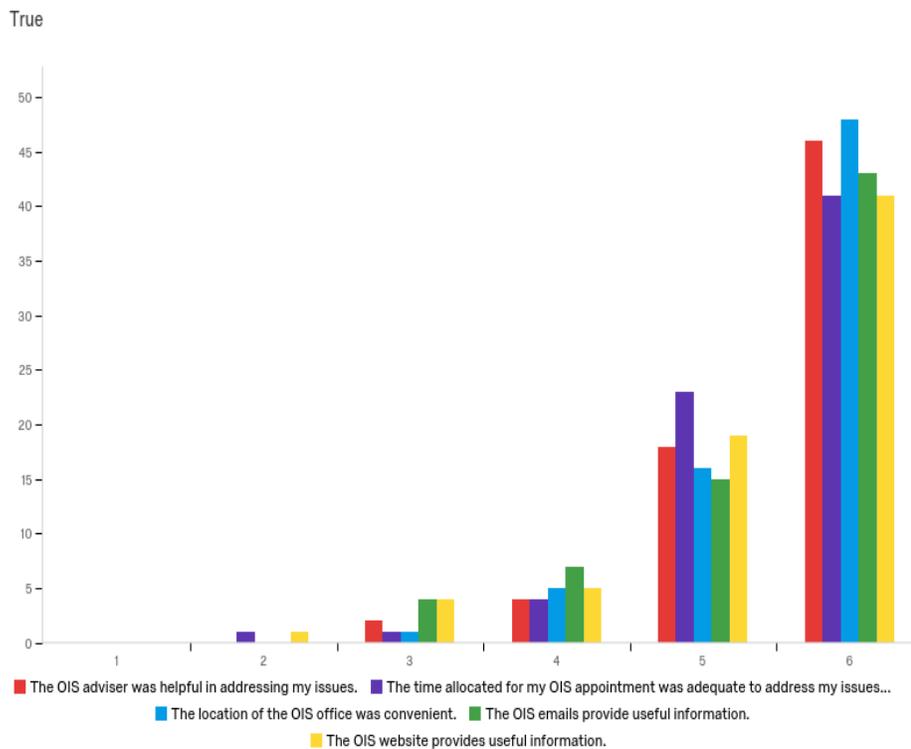


Figure 7. OIS Services

Y=Percentage of Respondents,
X=Satisfaction Rating 1=Low 6=High

4.3 CHINESE ALUMNI DESCRIBE THE EMOTIONAL AND/OR FINANCIAL SUPPORT RECEIVED FROM FAMILY, PITT FACULTY, CHINESE STUDENTS, OR OTHER PITT STUDENTS

The study found a strong correlation between peer emotional support and a respondent's satisfaction with the Pitt experience. Emotional/social support was a key indicator of overall Pitt satisfaction. Overwhelmingly, the Chinese alumni indicated that those who supported them most were other Chinese students. Seventy-two percent of the respondents rated Chinese peer support as either very or extremely high. This finding was in line with Weidman's research. Dr. Weidman was one of the first scholars in the world to develop a socialization model that recognized characteristics of one's upbringing (e.g., connection to Chinese friends) as a component to help researchers better understand college success and satisfaction (Padgett et al., 2010).

To a lesser but still significant extent, the respondents indicated that other Pitt students provided them with emotional support. This positive peer interaction comprised of Chinese and non-Chinese students was critical to the Chinese alumni sense of well-being. Peer social transition theories support that there is a positive relationship between peer interactions and student performance (Hall, 1969).

The inquiry question pertaining to the type of financial support the Chinese alumni received had minimum impact on the student's satisfaction. This is primarily due to the finding that Chinese alumni financial support was overwhelmingly generated by students' families. Those respondents who indicated that they received some financial support through a Pitt-sponsored teaching or research activity indicated that this support had little impact on their

overall Pitt financial obligation. In addition, there was not a statistical correlation between Pitt-facilitated financial support and respondent student experience satisfaction.

4.4 CULTURAL ADJUSTMENT ISSUES CHINESE STUDENTS COUNTER IN REGARDS TO ACADEMIC EXPECTATIONS, THE ENGLISH LANGUAGE, AND OTHER CHALLENGES, AND HOW THIS INFORMATION CAN INFORM OIS STAFF TO BETTER UNDERSTAND THEIR CHINESE CLIENTELE

Cultural adjustment issues were explored in various ways, ranging from peer and family support to institutional practices that fostered opportunities for students to become academically and socially engaged with their Pitt experience. The responses demonstrated the importance of OIS, Pitt faculty, and non-Chinese peers in helping students develop engagement opportunities that resulted in a positive student experience for Chinese students.

Responses indicate that academic expectations were met to the satisfaction of most of the participants. The results demonstrated that Chinese students' perception of quality of school life and the level of satisfaction towards school were strongly related to the classroom learning environment (Kong, 2008; Leonard, Bourke, & Schofield, 2002). In spite of experiencing different educational systems in China, Pitt students were persistent in overcoming these differences in order to learn and have a positive experience at Pitt. These results point to what Pitt is doing right in the classroom to make cultural adjustment easier for Chinese students. For example, Pitt's Center for Diversity in the Curriculum holds several workshops each year entitled "Teaching International Students," which educate faculty on the challenges and cultural expectations of teaching Chinese students.

In addition, there is English as a Second Language (ESL) support available to Pitt students through the English Language Institute (ELI) at Pitt. The ELI has an assortment of courses that are tailored to help Chinese students reach their educational goals. The findings from this inquiry indicate that the respondents were mostly satisfied with their ability to speak and read English but struggled a bit in writing in English. There are a number of campus resources that Chinese students could access in order to improve their writing skills, such as the Writing Center, but it is conceivable that Chinese students did not know of this resource, thus the potential for an expanded OIS role to connect the students with appropriate resources.

There may also be a cultural behavior that presents a barrier to Chinese students seeking help. Confucian culture, which is practiced in China, emphasizes the importance of managing one's hardship without complaining (Taylor, 2011). Therefore, emotional strength is emphasized and demonstrated when one is able to control their personal struggles. Chinese students may feel they are troubling the OIS when seeking information outside of their defined role with visa processing. In an effort to be polite and save face, Chinese students may feel an obligation to resolve issues themselves.

- *I wish I would have more working experiences like co-ops or internships during the graduate study, and more activities associated with American local students. But many factors that not only the school or any organization's attributes that may affect the experience of studying and living in U.S. It may because the policies, laws and people's attitudes of alien labors limit our career development during study. It may because of the culture difference, stereotype, and language barriers that creates the distance between international students and American local students. It may because that I have been only studied and living in the U.S for two years, that I haven't been here long enough to blend in. Or it may because I was a graduate student and I had to live outside of school that limits the access to local students. I would like to be treated as a Pitt student instead of a Chinese international student. I would to see a more open minded and diverse atmosphere in future for international students to live or study in, instead of feeling a invisible barrier in between us and Americans.*

- *I guess in many situations it depends on individual's efforts. I never saw a Pitt professor or staff member refused to help an international student harshly. I got a lot of help from people around. The students need to figure out how to take advantage of the University's resources offered. I would suggest the career office or professors could invite more guest speakers who possess working experiences overseas to talk on the campus. I feel like in most cases, the guest speakers are the people serving in the Federal government. Anyway, thank you, Elise, your research would help a lot of Chinese students. I hope you will have amazing findings. A doctoral program is never easy, may you enjoy your study. Again, Thank you.*
- *I was an exchange student at Troy University at Troy, Alabama. That university has an organization called International Student Culture Organization. We got a lot of support and we got really involved. I think Pitt can do a better job to get international students involved.*
- *Invest more on research seminars and talks, strengthen the cooperation among different faculties/groups/departments/schools.*
- *There were so many Chinese students in the major that sometimes in the class we even discussed in Chinese, not in English.*

4.5 SUMMARY

Most Chinese alumni were moderately (45 out of 87, or 52 percent) or extremely (16 out of /87, or 18 percent) satisfied with their overall Pitt experience. Peer support from Chinese and other Pitt students as well as Pitt-organized career-focused internships were key elements that predicted Chinese alumni satisfaction with their Pitt student experiences. The respondents' career-focused internships were organized with Seagate, Pitt's Graduate School of Public and International Affairs, ANSYS, Pitt's Asian Studies Center, the YMCA, Pitt's Hillman Library, the Carrick Community Council, and McKees Rocks High School.

In addition, over 50 percent of the respondents joined a Pitt student organization. The most popular student organization was the Chinese Student and Scholar Association (CSSA); 64 out of 87 respondents, or 74 percent, indicated that they were active with CSSA. The CSSA offered a unique opportunity for fellow Chinese students to gain support from their peer group.

5.0 CONCLUSIONS AND IMPLICATIONS

The inquiry's findings were similar to and supported by other studies that found the implications of compromising international student support were a short-term gain at the cost of long-term reputational damage to the university (Forbes-Mewett & Nyland, 2013). This inquiry found that it is necessary to understand what contributes to a Chinese student's satisfaction with the U.S. university student experience in order to develop long-term relationships with graduates. Chinese student satisfaction influencers are similar to non-Chinese students, yet delivering student services and opportunities to this cohort requires an understanding of access points such as the OIS and institutional buy-in in order to better understand potential cultural barriers when serving this population.

5.1 CONCLUSIONS AND KEY FINDINGS

This inquiry looked at Chinese alumni attitudes toward their Pitt experience; to that end, several key findings were identified. One key finding was that Chinese graduates value experience in career-related opportunities, either through an internship or research/teaching opportunity. The survey responses demonstrated a correlation between graduates' level of satisfaction with their student experience and the opportunities they had through internship or research/teaching opportunities.

The survey responses indicated a relationship between graduates' ratings of their satisfaction with Pitt and their rating of academic courses that were applicable to their career aspirations. These results are in line with other research studies that indicate the positive effect of internships in student university satisfaction (Neapolitan, 1992).

Another key finding was that students would like to have more opportunities to connect socially with non-Chinese students, and have more teaching and/or research opportunities with faculty. In particular, the students were interested in learning how to better access career workshops and internship opportunities. The respondent comment below underscores this result:

- *More guidance from graduated international students about job hunting experience. Since we are facing much more challenging situation in job market.*

The inquiry results demonstrated a collinearity between gaining work and career skills through either academic courses or internships and satisfaction with the Pitt student experience. A collinearity is a phenomenon in which one predictor variable in a multiple regression model can be linearly predicted from the others with a substantial degree of accuracy. This type of result had been found in other studies whereby students' service learning experiences reflected positively on their overall student learning experience (Cooper, 2013).

The inquiry results supported continuing and possibly expanding the internship placement program at Pitt. In reviewing the responses and using regression analysis, it was determined that if respondents had Pitt internships and/or were satisfied with their academic classes, they were more likely to score their overall student satisfaction high. (The regression and statistical analysis for the inquiry was done by Pitt graduate student, Zhexuan Li, a Pitt doctoral candidate in applied statistics.)

Another key finding was the value the Chinese graduates placed on their relationships with the OIS. This relationship was very influential in predicting Chinese alumni overall satisfaction and engagement with Pitt. Thus, the inquiry found that the OIS is the University department with the most potential to direct Chinese students in how to attain social connections and seek out academic resources.

In terms of the impact OIS has on Chinese students, it was found that if students felt they were allocated adequate OIS appointment time, they were more likely to be satisfied overall with Pitt. The results relevant to OIS were shared with the leadership of Pitt's Office of International Services (Director Genevieve Cook and Associate Director Sara Jones). The career-related and internship findings were shared with the leadership of the Career Development and Placement Assistance (CDPA) office in the University Center for International Studies (Associate Director, Ryan Sweeney, PhD).

The findings did not indicate that gender nor alumni Chinese home province were significant factors in determining student experience satisfaction. However, over 90 percent of the males indicated they were "moderately satisfied" with their overall student experience, whereas females were equally divided among "moderately" and "extremely" satisfied. This result contrasts with other studies that suggest that women are more satisfied with their university student experience than men (Moro-Egido & Panades, 2010).

The overall Chinese alumni satisfaction with their Pitt student experience was reported as 45 out of 87 respondents being moderately satisfied and 16 out of 87 being extremely satisfied. Thus, 70 percent of the respondents rated their satisfaction level above the mid-point of "satisfied."

5.2 IMPLICATIONS FOR PRACTICE

As noted, the Chinese respondents had a very positive view of Pitt's OIS. This suggests that OIS is in a unique position to address some of the emotional and social challenges Chinese students have while attending Pitt. However, OIS's role is often limited by financial and human resources. It is the recommendation of this inquiry to validate that OIS's work is both meaningful and fruitful in developing engagement and university affinity between Chinese students and Pitt; OIS's role in this endeavor should be recognized and supported. The findings underscore the importance of investing in resources to properly staff and support the OIS. The office plays a critical role in terms of serving Chinese students and cultivating engaged alumni.

In addition, the findings point to the value of career connections Chinese students can cultivate while attending Pitt. The comments below demonstrated the desire of the participants to have better engagement with the University Center for International Studies Career Development and Placement Assistance (CDPA) office:

- *More career planning classes*
- *More internship opportunity for students*
- *Career service placement after graduation*

The findings were shared with the CDPA office, and they responded that the main program they offer for international students is International Week. International Week is a venture with Pitt's OIS, CDPA, and UCIS (the University Center for International Studies). It offers networking events for international students, a panel of professionals who speak about their careers, and an immigration attorney presentation to share how an international graduate can legally attain work in the U.S. Overall, it is meant to expose international students to career opportunities and the services Pitt's CDPA provides. CDPA will continue international week but,

based on the findings of this inquiry, they plan to reach the students who do not participate in International Week as they speculated they may be the ones with the comments noted in the survey. The challenge is getting the information to the student. Therefore, CDPA is considering working with student advisors to advertise this event to their international advisees. Currently, International Week advertising is general to the whole Pitt population through the Pitt portal.

5.3 LIMITATIONS AND FUTURE RESEARCH

As with most surveys, this inquiry drew its conclusions from a sample of the students who were sent the survey. The 87 responses do not fully represent the 449 identified Chinese graduates who were sent the survey. Although surveys are a popular data collection tool for research and practice, very little is known about the factors that drive compliance with requests for survey participation (Thompson, Zhang, & Arvey, 2011). In presenting the findings, I want to be clear that this is a limited study, and a follow-up with a new class of Chinese graduates would assist in seeking patterns in how Chinese students viewed their experiences at Pitt.

While this study was limited in scope, the findings were clear in 1) identifying the influence the university's OIS had in developing a positive student experience for Chinese graduates and 2) underscoring the value Chinese students found in internships and teaching/research activities.

In recognizing the critical role of the OIS, further research is needed to help identify what new and/or improved resource would help Chinese students navigate their U.S. university surroundings. For instance:

1. What type of OIS programs/services help Chinese students face university challenges?
2. What are the culturally rooted challenges faced by Chinese students?
3. What OIS strategies support the diversity Chinese students bring to campus and promote cross-cultural communication across campus?

The survey responses noted below indicated that Chinese graduates were interested in opportunities to socially integrate with other Pitt students.

- *A socializing activity to connect international students with U.S. students*
- *English Corner activities*
- *Various activities for Chinese student, such as Chinese New Year Celebration*

5.4 DEMONSTRATION OF PRACTICE

The findings from this study were shared in person with the leadership of two offices, the Office of International Services (OIS) and Career Development and Placement Assistance (CDPA). This study is already influencing practice; upon review and discussion of the findings, the directors decided to internally implement practices based on this inquiry's data. Arguably there are other university departments that could benefit from these findings, so the results will be presented at a regional conference of CASE (Council for the Advancement of Secondary Education).

In conversation with this researcher, the OIS leadership stated that their primary and essential mission is to provide immigration services for international students. This role is a

legal responsibility assigned to them by Pitt, and practically it must be fulfilled in order to allow Chinese students to earn degrees at Pitt. Upon reviewing the findings of this inquiry, the leadership responded positively to developing a broader and more integrated role with Chinese students. They recognized that not all OIS issues require the same amount of appointment time. Thus, following an in-house discussion, Pitt's OIS re-worked how they schedule immigration-related appointments in order to allocate the appropriate amount of time for different issues. The office created drop-in times three times a week for simple visa procedures and for students to get travel signatures and other processing services that do not take longer than ten minutes to complete.

In addition, the OIS leadership noted that as the first point of contact with Chinese students, it would be useful if their office could direct Chinese students to other student support services such as the Writing Center and/or ELI. However, they shared that from their experience, the challenge is how to suggest services to a receptive Chinese student. They reported that their interaction with Chinese students is intermittent and often they are not seen as a broader university resource, or perhaps there is culturally related hesitance to receiving such suggestions.

This inquiry's findings demonstrated to the OIS Director the desire Chinese students have to gain more career-related opportunities. Therefore, she recommended that her staff explore partnerships both with Career Services and Alumni Association in order to build a better, more informed career network for Chinese students. The OIS Director recognized that international alumni connections are important for both internships and post-graduation job prospects in China.

The CDPA office was the second department to review the inquiry findings with this researcher. Based on the findings, CDPA considered what programs they would continue and what programs or policies they would change in order to better their serve international students. As noted earlier, CDPA is reviewing its marketing materials for International Week in order to better inform international students of its purpose and potential value to them. CDPA realized that they were assuming that the international students who sought their assistance wanted to work in the U.S. However, the findings from this inquiry, and this researcher's input based on discussions with OIS, suggested that many Chinese students want to use Pitt's alumni network and career services to find internships and jobs in China.

This information shifted how CDPA viewed their relationship with international students and, as a result, they will not assume international students are only looking for stateside opportunities. Interestingly, a partnership between the Alumni Association and CDPA was in development due to the symbiotic roles they both play in internship and career placements. The partnership will help incorporate China-based alumni as potential contacts in CDPA's internship and career database. Thus, the findings from this inquiry helped to inform the breath and scope that such partnerships could attain. Below are respondent comments that underscored the help Chinese students would like to receive from Pitt.

- *Job searching help for international students*
- *Because we could not get teacher certificate in PA and we found more internship and teaching practice chances are for undergraduate students, as graduate students we seldom could get it. And teachers did not introduce some internship experiences for us.*

- *More of our classmates we find the job information online rather than from career fair or career office in our Education Department.*
- *We hope instructor not only helping on choosing course, but also could care more about our career development.*

5.5 CONCLUSION

This inquiry validated the concepts of social and academic integration as keys to predicting a correlation between Chinese alumni satisfaction and their Pitt experience. The two concrete indicators of student satisfaction in this study were the student's relationship with OIS and whether or not they had student internship opportunities.

The inquiry found that the pillars of student persistence theory were related to Chinese alumni overall satisfaction with Pitt. The three pillars of student persistence theory include 1) academic integration, 2) social integration, and 3) institutional commitment (Porter & Umbach, 2006).

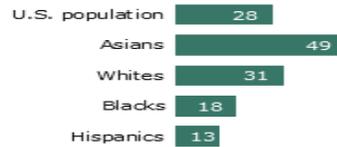
The inquiry found that the central concept of Tinto's (1975) social and academic model, which stated the importance of a student's integration into the systems of a university, is true for non-American, or Chinese students. A successful integration led to positive traits of student persistence and overall satisfaction and commitment to Pitt (Jones, 2010). Tinto stated that students enter into universities with a variety of attributes and cultural backgrounds, and these characteristics are critical to the student's ability to achieve educational expectations. In the case of this inquiry's cohort, the students were Chinese nationals, and thus it was important to recognize which University departments impact their student experience.

The findings indicated that the OIS acted as a bridge between Chinese students and their academic and social integration. As members of the Pitt community, Chinese students need to learn how to interact with Pitt's academic and social systems. This inquiry illustrated that social and academic navigation was gained through peer relationships and OIS counsellors. The higher degree of integration Chinese students have with the university, the higher the levels of satisfaction the Chinese alumni had with Pitt. The relationship between academic and social integration was critical to developing alumni with positive student experiences and who would like to engage with their alma maters throughout their lives.

Why is it important to look closely at Chinese students' experience? According to a comprehensive nationwide survey by the Pew Charitable Trust (2012), Asian-Americans are the highest-income, best-educated, and fastest-growing racial group in the United States. As a group, they are more satisfied than the general public with their lives, finances, and the direction of the country, and they place more value than other Americans do on education, marriage, parenthood, hard work, and career success (Pew Charitable Trust, 2012). Asian-Americans lead other populations' wealth as indicated in Figure 8 below; thus, their potential philanthropy is significant.

Asian Americans Lead Others In Education, Income

*% with a bachelor's degree or more,
among ages 25 and older, 2010*



Median household income, 2010



Note: Asians include mixed-race Asian population, regardless of Hispanic origin. Whites and blacks include only non-Hispanics. Hispanics are of any race. Household income is based on householders ages 18 and older; race and ethnicity are based on those of household head.

Source: Pew Research Center analysis of 2010 American Community Survey, Integrated Public Use Microdata Sample (IPUMS) files

PEW RESEARCH CENTER

Figure 8. Asian American Education and Wealth

The increasing Chinese alumni population should not be overlooked. The Asian-American wealth capacity and the cohort studied in this inquiry are likely to become an economically prosperous population with both the ability and inclination to support charitable causes.

An example of Chinese alumni potential is Richard Liu, a Taiwan-born Chinese American with strong ties to Texas. He donated \$1 million to the College of Business at the University of Texas at San Antonio (UTSA) to create the U.S.-China Business Education Initiative. This donation was the largest single donation at UTSA's history. The initiative supported research collaborations and joint programs between the College of Business and five top universities in China: People's University, the University of International Business and Economics at Beijing, Fudan University, Shanghai Jiaotong University, and Tongji University (Yin, 2004).

The potential for student satisfaction, engagement, and philanthropy is limitless, and this inquiry identified ways universities can better connect, engage, and make Chinese alumni feel

valued at their U.S. host institutions. It connected the dots between Chinese students' academic experiences and university organized internships, as well as the role of OIS. The steady stream of Chinese enrollments at U. S. universities is both a challenge and an opportunity to build strong connections for the benefit of both the students and the institutions. It is the opinion of this researcher that both university international student professionals and university development and fundraising professionals benefit from better understanding their Chinese students and alumni.

APPENDIX A

IRB APPROVAL

The IRB is requesting your assistance in helping us improve our service to the research community. Please take a few minutes and complete the Satisfaction Survey by [clicking here](#).

Note: You can download a version of the approval letter without the survey link from the approved study workspace



University of Pittsburgh
Institutional Review Board

3500 Fifth Avenue
Pittsburgh, PA 15213
(412) 383-1480
(412) 383-1508 (fax)
<http://www.irb.pitt.edu>

Memorandum

To: Elise Moersch
From: IRB Office
Date: 11/14/2017
IRB#: PRO17110012
Subject: Chinese graduate attitudes towards their U.S. host institution:
A University of Pittsburgh Case Study

The above-referenced project has been reviewed by the Institutional Review Board. Based on the information provided, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section

45 CFR 46.101(b)(2)

Please note the following information:

- Investigators should consult with the IRB whenever questions arise about whether planned changes to an exempt study might alter the exempt status. Use the "**Send Comments to IRB Staff**" link displayed on study workspace to request a review to ensure it continues to meet the exempt category.
- It is important to close your study when finished by using the "**Study Completed**" link displayed on the study workspace.
- Exempt studies will be archived after 3 years unless you choose to extend the study. If your study is archived, you can continue conducting research activities as the IRB has made the determination that your project met one of the required exempt categories. The only caveat is that no changes can be made to the application. If a change is needed, you will need to submit a NEW Exempt application.

Please be advised that your research study may be audited periodically by the University of Pittsburgh Research Conduct and Compliance Office.

APPENDIX B

STUDY PARTICIPANT INVITATION

Dear Pitt Chinese graduate,

Below is a link to a short survey regarding your experience at the University of Pittsburgh (Pitt). It is 12 questions.

The reason you are receiving this email is that as a doctoral student, the research interest is to try to better understand Chinese students' experience (both undergraduate and graduate).

Thank you in advance for completing the survey. Your responses will be anonymous and kept strictly confidential. All data will be reported in summary form to protect your personal responses, so that you can feel comfortable providing honest answers to the questions.

*I am happy to share the summary results of the survey. I will send you an email to a link to the analysis of the results upon completion of the project.
With warm regards, Elise*

https://pitt.col.qualtrics.com/jfe/form/SV_1Zcd1IoWOuChabH

Sara

Sara E. Jones | Associate Director

Office of International Services | University of Pittsburgh | 708 William Pitt Union | 3959
Fifth Avenue | Pittsburgh, PA 15260

APPENDIX C

SURVEY QUESTIONS

Q1 What is your gender?

Female

Male

Q2 What is your native language?

Chinese

Other (please specify)

Q3 What is your hometown province in China?

Q4 What degree/s did you receive from the University of Pittsburgh? Please select all that apply and specify (e.g., B.A. in History).

Undergraduate degree

Graduate degree

Q4a Did you live on campus?

Yes, if yes, where

No

Q5 Why did you choose to study at the University of Pittsburgh?

Please select all that apply:

To enter a specific course of study or research program

Pitt's ranking among U.S. universities

Pitt's reputation among U.S. universities (location, safety, etc.).

Pitt's reputation among U.S. universities (location, safety, etc.).

Recommended by a teacher or someone I knew in China.

Other (please specify)

Q6 How effective was your education at the University of Pittsburgh in improving your following abilities? Please rate the level of effectiveness with "1" indicating very low and "6" indicating very high. Please determine your rating based on your knowledge or ability in the following areas BEFORE you were a Pitt student and use your judgement as to how effective the courses you took at Pitt were in improving your skill(s) in these areas:

Analyzing numerical and statistical information
Thinking critically and analytically
Understanding and speaking English
Writing in English
Gaining work and career skills
Working collaboratively with others

Q7 In thinking about your experience with the University of Pittsburgh's Office of International Services (OIS), please rate the following statements with "1" indicating 'not agree at all' and "6" indicating 'highly agree'.

The OIS adviser was helpful in addressing the issues.
The time allocated for the OIS appointment was adequate to address the issues.
The location of the IS office was convenient.
The OIS emails provide useful information.
The OIS website provides useful information.

Q8 While a student at Pitt, were you involved in any of the following activities? Please specify if you select "Yes".

Internship
Community Service- On campus
Community Service- Off campus
Intramural/Collegiate Athletics
Student Organizations (please specify names)

Q9 While you were a student at the University of Pittsburgh, please rate the level of emotional support you received from the following sources, with "1" indicating "very low" and "6" indicating "very high".

Research Activities with Faculty Members
Teaching Activities with Faculty Members
Other Chinese students
Other Pitt students

Q10 While you were a student at the University of Pittsburgh, please rate the level of financial support you received from the following sources, with "1" indicating "very low" and "6" indicating "very high".

Through research activities at Pitt
Through teaching activities at Pitt
Chinese Family
Other

Q11 How would you rate your overall satisfaction with your student experience at the University of Pittsburgh?

Extremely satisfied
Moderately satisfied
Slightly satisfied
Moderately dissatisfied
Extremely dissatisfied

Q12 In thinking about your student experience, can you name anything that may have made the experience better? For instance, an orientation before classes started, better food options at the cafeteria, etc.

APPENDIX D

DATA ANALYSIS

D.1 STATISTICAL ANALYSIS OF THE SURVEY QUESTIONS BY ZHEXUAN, LI, UNIVERSITY OF PITTSBURGH DATA PRE-PROCESSING

```
rawdata <- read.csv('C:/Users/Zhexuan/OneDrive - University of
Pittsburgh/Pitt Stat/STAT 2381 Supervised Statistical Consulting/Elise
Moersch/All survey response data Moersch.csv', header = TRUE)

data <- rawdata[rawdata$Progress == 100, c(26:61, 18)]

data <- data[data$Q11 != '', ]

data$Q11 <- as.numeric(factor(data$Q11, levels = c('Moderately
dissatisfied', 'Slightly dissatisfied', 'Neither satisfied nor
dissatisfied', 'Slightly satisfied', 'Moderately satisfied', 'Extremely
satisfied'))))

gender <- factor(data$Q1)

satisfaction <- data$Q11

table(gender, satisfaction)

##          satisfaction
## gender    1  2  3  4  5  6
## Female   1  1  1  2 24 12
## Male     0  1  0  2 21  4

q5 <- data$Q5

q6 <- data[,c(3:8)]
```

```

q7 <- data[,c(9:13)]
q8 <- data[,c(seq(14,22,2))]
q9 <- data[,c(24:27)]
q10 <- data[,c(28:31)]
dataq5 <- data.frame(q5)
dataq5$program <- as.numeric(grepl('program', dataq5$q5, fixed = TRUE))
dataq5$rank <- as.numeric(grepl('ranking', dataq5$q5, fixed = TRUE))
dataq5$reputation <- as.numeric(grepl('reputation', dataq5$q5, fixed =
TRUE))
dataq5$recommend <- as.numeric(grepl('Recommend', dataq5$q5, fixed =
TRUE))
dataq5$other <- as.numeric(grepl('Other', dataq5$q5, fixed = TRUE))
q5 <- dataq5[,c(2:6)]

```

The Effects that make students unsatisfied or satisfied

```

data11 = cbind(satisfaction,q5,q6,q7,q9,q10)
data11 <- data11[data11$satisfaction >=4, ]
data11$satisfaction[data11$satisfaction <= 5] = 1
data11$satisfaction[data11$satisfaction == 6] = 2
library(leaps)
10)) ss <- summary(reg<-regsubsets(satisfaction~., data = data11, nvmax =
ss
## Subset selection object
## Call: regsubsets.formula(satisfaction ~ ., data = data11, nvmax =
10)
## 24 Variables (and intercept)
##           Forced in Forced out
## program      FALSE      FALSE
## rank          FALSE      FALSE
## reputation    FALSE      FALSE
## recommend     FALSE      FALSE
## other         FALSE      FALSE
## Q6_1          FALSE      FALSE
## Q6_2          FALSE      FALSE
## Q6_3          FALSE      FALSE

```

```

## Q6_4          FALSE      FALSE
## Q6_5          FALSE      FALSE
## Q6_6          FALSE      FALSE
## Q7_1          FALSE      FALSE
## Q7_2          FALSE      FALSE
## Q7_3          FALSE      FALSE
## Q7_4          FALSE      FALSE
## Q7_5          FALSE      FALSE
## Q9_1          FALSE      FALSE
## Q9_2          FALSE      FALSE
## Q9_3          FALSE      FALSE
## Q9_4          FALSE      FALSE
## Q10_1         FALSE      FALSE
## Q10_2         FALSE      FALSE
## Q10_3         FALSE      FALSE
## Q10_4         FALSE      FALSE

## 1 subsets of each size up to 10
## Selection Algorithm: exhaustive

##                program rank reputation recommend other Q6_1 Q6_2 Q6_3
Q6_4 Q6_5
## 1 ( 1 ) " " " " " " " " " " " " " "
" * "
## 2 ( 1 ) " " " " " " " " " " " " " "
" * "
## 3 ( 1 ) " " " " " " " " " " " * " " " "
" * "
## 4 ( 1 ) " * " " " " * " " " " " " * " " " " "
" * "
## 5 ( 1 ) " * " " " " * " " " " " " * " " " " "
" * "
## 6 ( 1 ) " * " " " " * " " " " " " * " " " " "
" * "
## 7 ( 1 ) " * " " " " * " " " " " " * " " " " * "
" * "
## 8 ( 1 ) " * " " " " * " " " " * " " " " * "
" * "
## 9 ( 1 ) " * " " " " * " " " " * " " " " * "
" * "

```

```

**" ## 10 ( 1 ) "*" " " "*" " " "*" "*" "*" " " "*"
**"
Q10_2 ##          Q6_6 Q7_1 Q7_2 Q7_3 Q7_4 Q7_5 Q9_1 Q9_2 Q9_3 Q9_4 Q10_1
** 1 ( 1 ) " " " " " " " " " " " " " " " " " " " " " "
"
** 2 ( 1 ) " " " " "*" " " " " " " " " " " " " " " " "
"
** 3 ( 1 ) " " " " "*" " " " " " " " " " " " " " " " "
"
** 4 ( 1 ) " " " " "*" " " " " " " " " " " " " " " " "
"
** 5 ( 1 ) " " " " "*" " " " " " " " " " " " " " " " "
"
** 6 ( 1 ) " " " " "*" " " " " " " " " " " " " " " " "
**"
** 7 ( 1 ) " " " " "*" " " " " " " " " " " " " " " " "
**"
** 8 ( 1 ) " " " " "*" " " " " " " " " " " " " " " " "
**"
** 9 ( 1 ) " " " " "*" " " " " " " " " "*" " " " " " " " "
**"
** 10 ( 1 ) " " " " "*" " " " " " " " " "*" " " " " " " " "
**"

##          Q10_3 Q10_4
## 1 ( 1 ) " " " "
## 2 ( 1 ) " " " "
## 3 ( 1 ) " " " "
## 4 ( 1 ) " " " "
## 5 ( 1 ) " " " "
## 6 ( 1 ) " " " "
## 7 ( 1 ) " " " "
## 8 ( 1 ) " " " "
## 9 ( 1 ) " " " "
## 10 ( 1 ) " " " "

ss$bic
## [1] -10.046565 -14.845193 -14.985406 -14.128703 -13.773711 -
12.131210
## [7] -10.556293 -7.804857 -5.721483 -3.001885

```

D.2 SURVEY QUESTION RATIONALE

Table 4. Overview of Survey Question Rationale

Survey Question	Question Rationale Research Question (RQ)	Conceptual Rationale
Q1 What is your gender?	Male vs. female influence?	Demographic consideration
Q2 What is your native language?	Looking for Chinese as native language participants only.	Demographic consideration
Q3 What is your hometown province in China?	Does hometown province matter?	Demographic consideration
Q4 What degree(s) did you receive from the University of Pittsburgh?	Does degree matter?	Demographic consideration
Q5 Why did you choose to study at the University of Pittsburgh?	Does reason for going to Pitt matter?	Understanding interest
Q6 How effective was your education at the University of Pittsburgh in improving your Academic following abilities?	<i>RQ1 To what degree do Chinese graduates believe their University of Pittsburgh education enhanced their academic and English language skills?</i>	Persistence and Retention Theories
Q7 In thinking about your experience with the University of Pittsburgh's Office of International Services (OIS), please rate the following statements with "1" indicating 'not agree at all' and "6" indicating 'highly agree.'	<i>RQ2 To what degree, are Chinese graduates satisfied with their interactions with the University of Pittsburgh's Office of International Services (OIS)?</i>	Social Exchange Theories
Q8 While a student at Pitt, what activities were you involved in ?	<i>RQ3 Did emotional and/or financial support received from family, Pitt faculty, Chinese students, or other Pitt students influence their overall satisfaction with their University of Pittsburgh student experience?</i>	Persistence and Retention Theories
Q9 While a student at Pitt, please describe the Emotional support you received.	RQ3	Persistence and Retention Theories
Q10 While a student at Pitt, please describe the Financial support you received.	RQ1 and RQ2	Persistence and Retention Theories
Q11 How would you rate your overall satisfaction with your student experience at Pitt.	RQ 1-4	
Q12 In thinking about your student experience, can you name anything that may have made the experience better?	<i>RQ4 What cultural adjustment issues do Chinese students encounter in regards to academic expectations, the English language and/or other challenges, and how can this information inform OIS staff to better understand their Chinese clientele?</i>	

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