DISSERTATION

AN EMPIRICAL STUDY OF THE FACTORS INFLUENCING THE CULTURAL

ADJUSTMENT OF UNDERGRADUATE CHINESE INTERNATIONAL STUDENTS TO THE

UNITED STATES

Submitted by

Gina L. Hurny

School of Education

In partial fulfillment of the requirements for the

Degree of Doctor of Philosophy

Colorado State University

Fort Collins, Colorado

Fall 2014

Doctoral Committee:

    Advisor: Linda Kuk

    Eric Aoki
    Susan Rankin
    Marlene Strathe

ABSTRACT

AN EMPIRICAL STUDY OF THE FACTORS INFLUENCING THE CULTURAL

ADJUSTMENT OF UNDERGRADUATE CHINESE INTERNATIONAL STUDENTS TO THE

UNITED STATES

This quantitative study examined the factors that influence the cultural adjustment of undergraduate Chinese international students to the United States. The ever-increasing Chinese student population has forced colleges and universities to employ new strategies designed to ease the transition of Chinese students to life in the U.S. Chinese students have more difficulties in their adaptation and adjustment to U.S. culture and campus life than any other population of international students.

Astin's (1993) Input-Environment-Output (I-E-O) model was adapted in an effort to provide a visual snapshot of the relationship between the factors and cultural adjustment. Gender, academic major, time in the United States, English language proficiency, and cultural values were measured to determine their influence on three constructs; acculturative stress, social and academic expectations and adjustment, and campus preparedness. Cultural adjustment was measured by intent to persist.

Using an online survey data were collected from undergraduate Chinese international students at a large, public university in the mid-Atlantic region of the United States. Results suggested that English language proficiency is the single-most significant factor influencing the cultural adjustment challenges faced by Chinese international students. Implications for campus preparedness and recommendations for future research are discussed.

ACKNOWLEDGEMENTS

I would like to begin by thanking my advisor, Dr. Linda Kuk. In addition to Dr. Kuk's unwavering commitment and passion for the CUL Distance Cohort she has made a profound, life-long impact on my educational journey. It has been a privilege to work with Dr. Kuk because her support and guidance throughout the dissertation process was instrumental in motivating me to completion. In addition I want to personally thank Dr. Eric Aoki and Dr. Marlene Strathe. Their critical feedback resulted in a more robust study and ultimately a more informed dissertation.

I would be remiss if I did not recognize the role that my colleague, mentor, and friend, Dr. Susan Rankin played in the entire dissertation process. Ten years ago she recognized my full educational potential long before I even believed I had any potential at all. I owe this entire doctoral journey to her as it was her constant encouragement that resulted in my application and ultimately my acceptance to CSU. I will forever be indebted to her belief in me and in her continued support even through the most difficult and challenging parts of this journey.

Thank you to Kadian McIntosh and Dan Merson for providing valuable insight, feedback, and encouragement as I tried to make sense of this thing called quantitative analysis. Thank you to Kristin Thomas, Masume Assaf, and Moses Davis. Without their support for this project and willingness to provide guidance when needed this project would not have been possible. I look forward to future collaborations that will help to enhance the cultural adjustment experiences of Chinese international students.

I owe everything to the *Dream Team*; Erica Milliron, Linda Kyle, Sandi Oberle, Sue Myers, and Terree Michel. Thanks to their friendship and continued support I was able to stay on task

DEDICATION

My life is forever changed as result of this four-year journey. I wanted to prove to myself that anything was possible and for me the success has clearly been found in the process of degree attainment. I dedicate this work to those who have provided me with a lifetime of unconditional love and support; Dr. James J and JoAnn Hurny, Beth Hurny, Shari Hurny, Bethel Alexis Nathan, Terri Gruber, Lora Hine, Julie Draper Davis, and Erica Milliron. In addition, my life-long wish for Amanda and Anna Salce and Audun and Hailyne Gruber-Hine is that they always invest in themselves, because education is everything!

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION

According to the Institute of International Education's *Open Doors 2013 Fast Facts*, the number of international students enrolled in colleges and universities across the United States (U.S.) increased 7% in 2012/13 to a record high of 819,644 students. There were 55, 000 more international students enrolled in U.S. higher education in 2012/13 compared to the previous (2011/12) year. The majority of this growth was driven by China and Saudi Arabia. This marked the seventh consecutive year that an increase in the total number of international students in U.S higher education had been reported.

The *Open Doors Report* also noted that compared to the last ten-year period of the nineties, the most recent ten-year time period of 2000-2010, showed that there were 40% more international students studying at U.S colleges and universities. Beginning in 2011, the rate of increase had risen steadily. Despite the annual increase in enrollment international students comprised less than 4% of the total population in the U.S. higher education system however; they contributed $24 billion to the U.S. economy (International Institute of Education, 2013). In that same year, 2012/13, there was a 21.4% increase, from the prior year, in the total number of students from China (235,597). Chinese students represented 28.7% of all international students enrolled in U.S colleges and universities (Institute of International Education, 2013).

Asian international students face more difficult and stressful challenges adjusting to college than their American counterparts (Xueqin, 2011; Yan & Berliner, 2011). The United States remains the top choice for many international students of means because of the strength of the academic system (Institute of International Education, 2013, McMurtie, 2011). The influx of international students to U.S. colleges and universities remains beyond an institution's control.

Currency fluctuations, national visa policies, and the job market are all factors that contribute to this influx. Colleges and universities within the U.S. are revenue-driven and as a result many of them are investing more heavily in recruiting international students because the domestic market is not as large as the international market. This trend in recruiting was fueled by shrinking state support and in an effort to increase enrollments; international collaborations were established (McMurtrie, 2011; Yan & Berliner, 2013).

Typically research on international students has been conducted by combining all international students together as one single population. International students who come from non-European backgrounds, less developed countries, and/or Eastern countries, tend to suffer more stress in adjusting to U.S. campus life (Andrade, 2006; Sue & Zane, 1985). Chinese students have a much more difficult time adjusting to college and life in the U.S. and as a result they are expected to experience much more anxiety than other international students (Lee, 2010; Sue & Zane, 1985). Chinese students represent the largest number of international students in the U.S. and in turn they encounter a culture very different from their own. It is worth developing a deeper understanding of how these students cope with stress (Yan & Berliner, 2011).

The following section will describe the background and historical context of the factors influencing the cultural adjustment of undergraduate Chinese international students enrolled at a large, public, university located in the Mid-Atlantic region of the United States. The purpose of the study, research problem and central question, assumptions, delimitations, limitations to the study, and glossary of terms will be provided. The chapter concludes with the significance of the study. The perspective and background of the researcher is shared to provide the reader a personal context about the researchers' interest in the population being studied.

Background and Historical Context

Among the international students currently attending U.S. colleges and universities, those from Mainland China constitute one of the largest groups (Institute of International Education, 2013). Chinese students are one of the fastest growing and most influential international student populations on U.S. campuses and they deserve special attention (Wan, 2011; Yan & Berliner, 2013). The more distinct the differences are between the country of origin and the host country, the more stressful the adjustment is likely to be for Asian international students, especially those from China (Abe, Talbot, & Greelhoed, 1998; Yan & Berliner, 2011). Chinese students originate from a country that is fundamentally different in language, culture, social structure, and political ideology. These considerable differences are the reason that Chinese students experience greater challenges, than other international student populations, adapting to college in the U.S. (Abe, Talbot, & Greelhoed, 1998; Lee, 2010).

Many international students arrive unacquainted with American customs and formalities which often results in a tremendous amount of stress as they begin to adapt to a new culture. The social and academic expectations of international students are informed by their English language abilities (Li, Fox & Almarza, 2007). International students may also have certain expectations of their social life on campus. They often arrive on campus expecting to quickly establish friendships with American students as well as students from their own country of origin (Andrade, 2006; Lee, 2010).

American students, often hold a stigma toward international students due to their English language abilities, a stigma that may prevent them from penetrating already established social networks (Hayes & Lin, 1994). Social support is a significant predictor of depression among international students. This depression is further heightened by their inability to socialize with

American students due to their limited English language skills (Sumer, Poyrazli, & Grahame, 2008).

International students also encounter difficulties adjusting to American academic practices, expecting the types of assignments, deliverables, and teaching styles encountered in their home countries (Minchew & Couvillion, 1998). During the early stages of an academic program, difficulties in oral participation may be a source of considerable embarrassment for international students (Wang & Mallinckrodt, 2006). Students who rank at the top of their classes in their home countries may be unprepared for their ranks to be challenged as a result of their English language skills (Heggins & Jackson, 2003).

International students tend to have strong academic backgrounds and come from highly educated families, further highlighting the differences they perceive between themselves and American students (Minchew & Couvillion, 1998). A lack of familiarity with American conversational topics may result in a further eroding of their social and academic expectations (Heggins & Jackson, 2003). The complexities of authorship and authority are directly connected to culture and the political element. For example, Chinese students may come from home or community environments where propaganda against the U.S. contributes to a negative portrayal of the country. When it comes down to who to trust, international students admittedly trust each other far more than they trust American students (Bartlett & Fisher, 2011).

Acculturation implies the occurrence of a mutual influence where elements of two cultures intermingle (Berry, 1977). Factors that arise during acculturation include; length of stay, coping strategies and resources, social support, societal attitudes, prejudice, and discrimination. Acculturation strategies, coping strategies, and social supports show significant influence on individual adaptation. The acculturative experience is considered a major life event that is

characterized by stress. This coping process, combined with other psychological outcomes, is likely to be influenced by both societal and individual variables (Berry, 1977; Church, 1982).

The social and academic expectations and adjustment of international students are informed by their English language proficiency (Li, Fox & Almarza, 2007). Limited English language abilities prolong their cultural adjustment process (Andrade, 2007; Cheng, Leong, & Geist, 1993; Hayes & Lin, 1994). Language deficiency is considered the "most important determinant of international student problems" because it affects every other problem area (Owen, 2008, p. 51). Social support is a significant predictor of depression among international students. This depression is further heightened by their inability to socialize with American students (Sumer, Poyrazli, & Grahame, 2008).

During 2012/13 Chinese students represented 28.7% of all international students enrolled in U.S. colleges and universities, making them the largest group of international students in the United States (Institute of International Education, 2013). Although it is not a new development, the rapid, annual increase in the number of international students attending college in the U.S. has begun to cause angst on those campuses (Bartlett & Fisher, 2011). Despite large, public institutions seemingly being prepared to welcome international students, by offering English language programs, these institutions are still feeling the stress of the significant increase of international students (Bartlett & Fisher, 2011).

The stress, resulting from the annual increase of international students on U.S. college campuses, is forcing the need for increased visibility, a heightened awareness of their cultural needs, and an improvement in the services provided to/for them (Bartlett & Fisher, 2011; Owen, 2008; Yan & Berliner, 2013). Student affairs practitioners play an integral role in the cultural adjustment of international students. These practitioners are responsible for preparing the

5

domestic student body to communicate effectively with the international student population and for providing opportunities for intentional interactions between the two populations (Dalton, 1999; Owen, 2008; Winkelman, 1994).

Statement of the Research Problem

International students who come from non-European backgrounds, less developed countries, and/or Eastern countries, tend to suffer more stress in adjusting to U.S. campus life (Sue & Zane, 1985). Typically research on international students has been conducted by combing international students together as one single population. To date there is limited empirical research focused specifically on understanding the stress and coping processes of Asian international, specifically Chinese, students in the United States (Yan & Berliner, 2013).

Asian international students in general face additional difficulties in addressing their adjustment challenges because they tend to wait longer than other students before seeking professional help (Hayes & Lin, 1994). Challenges with the English language directly affect international students' help-seeking behaviors specifically those related to medical care and counseling services. Chinese students have a much more difficult time adjusting to college and life in the U.S. and as a result they are expected to experience much more anxiety than other international students (Andrade, 2006; Sue & Zane, 1985).

Chinese students may experience difficulties overcoming their discomfort about describing their circumstances in English, restricting their ability to correctly articulate their problems to doctors and counselors (Harju, Long, & Allred, 1998). Chinese students represent the largest number of international students in the U.S. and in turn they encounter a culture very different from their own. According to Berry (1977) both stress and coping are influenced by characteristics of the individual and the situation (society). International students engaging in

6

social activities may experience a tremendous amount of emotional stress, while the loss of social support networks results in tension and confusion (Hayes & Lin, 1994). International students also express concerns about the cultural competence of healthcare professionals and as a result may choose not to seek out their services (Harju, Long, & Allred, 1998). The variety and magnitude of stress these students endure is why it is worth developing a deeper understanding of how they cope with stress (Yan & Berliner, 2011).

Purpose and Research Question(s)

The purpose of the current study is to examine the factors that influence the cultural adjustment of undergraduate Chinese international students enrolled in a large, public, research university located within the Mid-Atlantic region of the United States. Grounded in the literature was a wide-range of variables that can have a direct impact on the cultural adjustment of international students as a single population. Based on the results of the pilot project that is discussed in more detail in Chapter 3, the following variables were examined in this study; gender, academic major, time in the U.S., English language proficiency, and cultural values.

Research Question(s)

What are the factors that influence the cultural adjustment of undergraduate Chinese international students enrolled in a large, public, research university located within the Mid-Atlantic region of the United States? The following research questions were used to answer the overarching research question.

1) What is the relationship between English language proficiency and how English was learned by Chinese international students?

2) What is the relationship between the cultural values of Chinese international students and their cultural adjustment?

7

3) What is the relationship between gender, academic major, time in the U.S and the cultural adjustment of undergraduate Chinese international students?

Definition of Terms

Terms related to international students and cultural adjustment can be defined and interpreted differently. Additionally the context in which the terms are used can alter the meaning and definition. For the purpose of this study the following definitions will be used as they relate specifically to cultural adjustment of international students. Supplementary definitions will be articulated in Chapter 2.

Acculturation: Implies the occurrence of a mutual influence where elements of two cultures intermingle (Berry, 1977).

Acculturative Stress: A stress reaction in response to life events that are rooted in the experiences of acculturation, the psychological difficulties in adapting to a new culture, or psychosocial stressors resulting from unfamiliarity with new customs and social norms (Berry, 1977; Church, 1982; Lin &Yi, 1997)

Chinese International Students: Undergraduate students between 18 and 24 years of age who originate from China and are in the United States on an F1 Visa. (http://www.uscis.gov).

Country of Origin: Also referred to as *"citizenship."* The country in which a person is born (and has not renounced or lost citizenship) or naturalized and to which that person owes allegiance and by which they are entitled to be protected (http://www.uscis.gov).

Culture: Geert Hofstede (1980) defined culture as" the collective programming of the mind that distinguishes the members of one category of people from another" (p. 9). The key term in this definition is *collective programming*, which describes a process or processes that each one of us has been exposed to since birth (Lewis, 2006).

Culture Shock: The difficulty people have adjusting to a new culture that differs significantly from their own (Lewis, 2006). Values and unwavering core beliefs can, and do, suffer damage when individuals travel outside of their country of origin. An individual's core beliefs take different paths according to the culture imposed upon them (Lewis, 2006).

Domestic Students: An individual formally engaged in learning and enrolled in a college or university pertaining to one's own country. Throughout the literature all references pertaining to domestic students refer to American college students. American students are defined as U.S. citizens born in the United States and/or as students who coded citizenship as U.S. naturalized (http://www.uscis.gov).

English Language Proficiency: The ability to speak, read and/or write in English. To be considered truly proficient, one should have advanced abilities in all three areas of communication (http://www.uscis.gov).

F1 Visa: Is for academic students. It allows international individuals to enter the United States as a full-time student at an accredited college, university, seminary, conservatory, academic high school, elementary school, or other academic institution or in a language training program. The individual must be enrolled in a program or course of study that culminates in a degree, diploma, or certificate and the school must be authorized by the U.S. government to accept international students (http://www.uscis.gov).

Host Country: A nation in which individuals/representatives or organizations of another state are present because of government invitation and/or international agreement (Institute of International Education, 2011). Throughout this study the United States is referred to as the host country.

Intent to Persist: The ability to pursue a degree to graduation (Astin, 1993b; Pascarella & Terenzini, 1991). For this project intent to persist refers specifically to degree attainment from the current institution of the respondents.

TOEFL Test: The industry standard in English-language assessment. The TOEFL is the most secure, comprehensive and exceedingly reliable measure of English language proficiency (Educational Testing Service, 2014).

Reverse Culture Shock: Results from the psychosomatic and psychological consequences of the readjustment process to the primary culture. The affected person often found this more surprising and difficult to deal with than the original culture shock (Henderson, Milhouse, & Cao, 1993; Li, Foz, & Almarza, 2007). Reverse culture shock may take place when individuals return to their country of origin after growing accustomed to a new culture.

Stress Coping Behaviors: Coping is expending conscious effort to solve personal and interpersonal problems, and seeking to master, minimize or tolerate stress or conflict (Siu & Chang, 2011). Psychological coping mechanisms are commonly termed coping strategies or coping skills. The term coping generally refers to adaptive or constructive coping strategies, i.e., the strategies reduce stress levels. Some coping strategies however, can be considered maladaptive, i.e., stress levels increase. Furthermore, the term coping generally refers to reactive coping, i.e., the coping response follows the stressor. Coping responses are partly controlled by personality (habitual traits), but also partly by the social context, particularly the nature of the stressful environment.

Values: Values are principles, standards, or qualities considered worthwhile or desirable. Values are the beliefs of a person or social group in which they have an emotional investment

either for or against something (Hofstede, 1980). Moran, Harris, and Moran (2007) specifically

defined values, as the norms of behavior for a specific culture.

With-In Group Difference: Within a larger group or society sharing a common majority

there may be sub-groupings of people "possessing characteristic traits that distinguish them from

the others" (Moran, Harris, & Moran, 2007, p. 14).

Delimitations of Study

This study was limited to undergraduate students between the ages of 18-24 who

originate from China and are in the United States on an F1 Visa. In addition, only those students

enrolled, in the spring 2014 semester, at a large, public, research, university located in the Mid-

Atlantic region of the United States were invited to participate in the study.

Limitations to Study

This study focused specifically on the cultural adjustment of undergraduate Chinese

international students enrolled in a large, public, research university located within the Mid-

Atlantic region of the United States. Only the relationships between gender, academic major,

English language proficiency, cultural values, acculturative stress social/academic expectations,

campus preparedness and cultural adjustment were examined. Data collected from respondents

not indicating their gender, their F1 Visa status, and/or indicating 25 or older were not considered

for this study. The participants' understanding of or lack thereof, the English language, may

have resulted in additional stress and confusion when interpreting the intended connotation of the

survey questions.

Significance of Study

To date there is limited empirical research focused specifically on understanding the

stress and coping processes of Asian international students, specifically those of Chinese origin

(Yan & Berliner, 2013). This study was intended to increase campus-wide awareness of the critical factors that influence the cultural adjustment of Chinese international students. This study was intended to serve as a call to action by informing higher education administrators and practitioners about the programs and services needed in order to enhance the cultural adjustment of Chinese students. I will share the key findings in an attempt to provide campus stakeholders with the information needed to help aid in the cultural adjustment of Chinese students. Furthermore, additional research will provide critical insight that will help colleges and universities across the U.S. fully understand, prepare for, and adjust to the needs of the Chinese students inhabiting their campuses.

Researchers' Perspective

Throughout my twenty five years as a student affairs practitioner I have worked with a wide-range of international students in a variety of roles. These roles have included; advisor, supervisor, facilitator, mentor, and coach. Through each encounter I became keenly aware that international students, specifically those originating from China, have a very unique and often misunderstood reputation on U.S college campuses. My daily interactions with Chinese international students lead me to become an advocate, committed to making a difference in their lives by aiding in their cultural adjustment.

As a student affairs professional, I have participated in many diversity and cultural awareness programs designed to prepare individuals to live in a global society by heightening their cultural competence. In an on-going effort to increase my personal cultural competence and to create a community of difference I have attended trainings, workshops, lectures, simulation activities, and classes. While I received many benefits from each learning opportunity, it was not until I started to work directly with Chinese international students that I really began to recognize

the differences between their experiences and those of other international students. These interactions also resulted in my renewed energy as a student affairs practitioner as well as my continued commitment to serve as an advocate for all international students, especially those from China.

My passion for providing guidance and support to Chinese students adjusting to U.S. campus life originally stems from my unwavering admiration for them. I continue to be captivated by their desire to obtain a U.S. college education and while doing so they leave China to come to a country that is unfamiliar to them. They often arrive on campus with only a few suitcases, a long and complicated list of required paperwork that must be completed and submitted, uneasiness about the use of English language, and, because of the expense, often no plans to return home until their degree is completed. I am awestruck by Chinese students because of their grit and determination as it relates to leaving everything they know, (e.g., language, family, friends, and culture), behind. Recognizing that I come to this research because of my own transformational experiences, I bring those experiences to this inquiry, but will employ a sound methodology to ensure that any personal biases are minimized.

The review of literature presented in Chapter 2 demonstrates the array of factors that have a direct effect on the cultural adjustment of international students as a single population. The limited number of studies on Chinese international students made a comprehensive examination challenging however; the information presented in Chapter 2 helps to support the cultural adjustment challenges that Chinese international undergraduate students experience as they try to adjust to life in the United States. In addition, Astin's (1993) Input-Environment-Output (I-E-O) model is introduced as the approach used to examine these factors.

CHAPTER 2: REVIEW OF LITERATURE

The literature examined a broad array of variables that have had a direct effect on the cultural adjustment of international students as a single population. Through the review of the literature, six of most identified variables associated with the cultural adjustment of Chinese students were identified. These factors included; gender, academic major, time in the United States, English language proficiency, student services, and cultural values (Heggins & Jackson, 2003; Henderson, Milhouse & Cao, 1993; Lacina, 2002; Li, Fox & Almarza, 2007; Olivas & Li, 2006). These variables are operationalized in greater detail in Chapter 3.

The following will present a review of the literature describing three mediating constructs; acculturative stress, social/academic expectations and adjustment, and campus preparedness. The review of literature concludes with the introduction of Astin's (1993) Input-Environment-Output (I-E-O) model as the approach used to examine the six most identified variables.

Acculturative Stress

International students arrive in the United States generally unacquainted with American customs and formalities. This unfamiliarity results in a tremendous amount of acculturative stress as they begin to adapt to a new culture (Berry, 1977; Church, 1982). There are varying definitions of acculturative stress. Three of those definitions continued to emerge throughout the literature. Yan and Berliner (2011) defined acculturative stress as the psychological difficulties in adapting to a new culture. Others, like Church (1982), defined acculturative stress as the psychosocial stressors resulting from unfamiliarity with new customs and social norms. Finally,

Berry (1977) defined acculturative stress as a stress reaction in response to life events that are rooted in the experiences of acculturation.

Acculturation implies the occurrence of a mutual influence where elements of two cultures intermingle (Berry, 1977). Factors that arise during acculturation include; length of stay, coping strategies and resources, social support, societal attitudes, prejudice, and discrimination. Acculturation strategies, coping strategies, and social supports show significant influence on individual adaptation. Berry (1977) described four acculturation strategies: assimilation, separation, integration, and marginalization. The acculturative experience is considered a major life event that is characterized by stress. This coping process, combined with other psychological outcomes, is likely to be influenced by both societal and individual variables (Berry, 1977; Church, 1982).

Assimilation usually involves a gradual change and takes place in varying degrees. Assimilation strategy is employed when individuals from non-dominant groups, who do not wish to maintain their cultural identity, seek daily interactions with other cultures (Berry, 1977). Others described cultural assimilation as a socio-political response to a demographic multi-ethnicity that supports or promotes the assimilation of ethnic minorities into the dominant culture (Moran, Harris, & Moran, 2007; Olivas & Li, 2006; Sheehan & Pearson, 1992).

Separation strategy occurs when individuals place value on holding onto their original culture and at the same time wish to avoid interaction with other groups. When there is an interest in maintaining one's original culture while in daily interactions with other groups, integration is the approach (Berry, 1977). Integration has occurred when individuals or populations of people who were formally separated are mixed together.

Marginalization is the result if the individuals fluctuate between their original culture and "new" culture, identifying with neither, nor being accepted in either. Marginalization is the social process of becoming or being made marginal or referred to as an outlier. Marginalization at the individual level results in an individual's exclusion from meaningful participation in society (Berry, 1977). The length of time an individual has been experiencing acculturation significantly affects the type and extent of the problems most-likely experienced (Moran, Harris, & Moran, 2007; Olivas & Li, 2006; Sheehan & Pearson, 1992).

Lazarus and Folkman (1984) identified two major coping strategies related to acculturation strategies. The first, problem-focused coping, attempts to change or solve the problem. The second, emotional-focused coping, attempts to regulate the emotions associated with the problem. Social support is also a key factor linked to an individual's psychological adaptation (Berry, 1997; Lazarus & Folkman, 1984). Further examination of the literature revealed both of these coping strategies are used interchangeably to provide an in-depth understanding about the individual predictors that affect Chinese international students' stress and coping processes (Lazarus & Folkman, 1984; Moran, Harris, & Moran, 2007; Olivas & Li, 2006; Sheehan & Pearson, 1992). The acculturation factors and related effects discussed the most frequently included; age, gender, academic major, time in the United States, English language proficiency, student services, and cultural values.

The one acculturation factor where minimal difference was reported was related to academic major (Moran, Harris, & Moran, 2007; Lazarus & Folkman, 1984; Olivas & Li, 2006; Sheehan & Pearson, 1992). Language barriers and other concerns varied across major among Chinese students as the English language demands vary from major to major. The natural sciences do not require as much or as high a competence in English language skills as do the

students in the social sciences, "which require a better understanding of American culture, values, and social systems" (Yan & Berliner, 2011, p. 530).

With-In Group Difference

"Asian students are diverse in terms of their ethnic group memberships and values and it is important to note that they do share some fundamental cultural similarities that might have implications for addressing their cultural adjustment concerns" (Constantine, Kindaichi, Ozakaki, Gainor, & Baden, 2005, p. 163). Within a larger group or society sharing a common majority there may be subgroupings of people "possessing characteristics traits that distinguish them from the others" (Moran, Harris, & Moran, 2007, p. 14).

<div align="center">

Cultural Adjustment Challenges

</div>

Asian international students attending U.S. colleges and universities who are exposed to and participate in peer programs score significantly higher on the social adjustment scale than those who choose not to participate in a peer program. In addition, Asian students have more difficulty adjusting to campus life than international students from non-Asian countries (Abe, Talbot, & Greelhoed, 1998). Asian students report experiencing academic challenges and difficulties associated with English language acquisition and use but reported as having excellent peer and family networks. Finally, female Asian students also report experiencing some value conflicts between their culture of origin and the U.S. culture related to gender role socialization. Female students also reported that they learned effective ways to become more self-sufficient in attempting to address their cultural difficulties.

In an on-going effort to help Asian students culturally adjust to attending college in the United States, we must continue to provide insight into what programs services need to be provided in an attempt to help them adjust successfully (Constantine, Kindaichi, Ozakaki,

Gainor, & Baden, 2005). The literature on the social and academic expectations of international

students, their help-seeking behaviors, and their social and academic adjustment, from the

perspective of their English language abilities, cultural values and traditions, and institutional

services offered to them on campus is examined.

"Developing intellectual, physical, and interpersonal competence," and learning to

become self-sufficient by "moving through autonomy toward interdependence, international

students must also struggle with adjusting to a new cultural environment (Chickering & Reisser,

1993, p. 45-47). The difficult process of adjusting to a new country and its culture is the

"phenomenon called culture shock" (Owen. 2008, p. 50).

Culture Shock

Cultural integration and the campus climate are "particularly relevant to international

student persistence" (Andrade, 2007, p. 58). International students may experience culture shock

and fatigue upon their arrival in the U.S. (Cheng, Leong, & Geist, 1993). These students, many

of whom have never experienced American culture before their arrival to campus, may feel

alienated by the cultural differences they encounter. In addition to the barriers related to social

interaction, international students encounter difficulties in satisfying basic needs such as

obtaining health insurance, securing affordable housing and becoming familiar with public

transportation (Poyrazli & Lopez, 2007).

"As diverse student populations expand in colleges and universities in the U.S., attention

must be given to preserving students' cultural integrity. Dominant theories of student persistence

contend that integration, not cultural preservation, is necessary to student success" (Andrade,

2007, p. 58). Culture shock has many different effects, time spans, and degrees of severity.

Many people are handicapped by its presence and do not recognize what is bothering them.

Financial stress can exacerbate culture shock by creating feelings of "loss, grief, and resentment" as international students also struggle with adjustment (Oropeza, Fitzgibbon, & Baron, 1991). Winkelman (1994) stated, "managing culture shock requires that one maintain or reestablish a network of primary relations (family or friends) who provide positive interpersonal relations for self-esteem and for meeting personal and emotional needs" (p. 124). Henderson, Milhouse, and Cao (1993) studied Chinese students' culture shock at American universities. They concluded that Chinese students' had more difficulties in their adaptation and adjustment to U.S. culture and campus life, than other international students, due to their cultural backgrounds, traditions, and family influence.

International students, many of whom have never visited the U.S. before their arrival on campus, arrive with certain expectations of their new social and academic life. Upon arrival on campus their expectations may be shattered as they enter the initial stages of culture-shock and begin the process of adjusting to their new life (Cheng, Leong, & Geist, 1993; Oropeza, Fitzgibbon, & Baron, 1991)

Stages of Culture Shock

The shock of moving to a foreign country consists of four distinct phases, though not everyone passes through these phases and not everyone is in the new culture long enough to pass through all four. There are no predetermined symptoms attributed to culture shock as each person is affected differently (Adler, 1975; Fritz, Chin, & DeMarinis, 2008; Henderson, Milhouse, & Cao, 1993). The four phases of culture shock are; the honeymoon phase, the negotiation phase, the adjustment phase, and the mastery phase.

Honeymoon Phase. During this phase the differences between the old and the new culture are seen as adoring because it is during the first few weeks in a new society when most

people are fascinated with their new culture. This period is full of observation and new

discoveries. This phase eventually ends as the individuals trying to adjust to their new culture

will invariably experience a variety of difficulties (Henderson, Milhouse, & Cao, 1993).

Negotiation Phase. After approximately three months or so, depending on the individual,

differences between the old and new culture become apparent and may create anxiety. For

example, excitement many eventually give way to frustration and anger as one continues to

experience unfavorable events that may be perceived as strange and offensive to one's cultural

attitude. Language barriers often heighten the sense of disconnection from their surroundings

because there is added pressure on acquiring effective communication skills (Henderson,

Milhouse & Cao, 1993).

The most important change in this phase is communication. People adjusting to a new

culture often feel lonely and homesick because they are not yet used to the new environment and

the language barrier may become a major obstacle in creating new relationships. Some students

develop additional symptoms of loneliness that ultimately affect their lifestyle as a whole

(Henderson, Milhouse, & Cao, 1993; Li, Foz, & Almarza, 2007). Due to the strain of living in a

different country without parental support, international students often feel anxious and feel

more pressure while adjusting to new cultures (Henderson, Milhouse, & Cao, 1993; Li, Foz, &

Almarza, 2007).

Adjustment Phase. After six to twelve months one grows accustomed to the new culture

and develops routines (Henderson, Milhouse, & Cao, 1993). One knows what to expect from the

host country in most situations and as a result the host country no longer feels that new. One

becomes concerned with basic living again, and things become more "normal".   One also starts

to develop problem-solving skills for dealing with the culture and begins to accept the culture's

ways with a positive attitude. The culture begins to make sense, and negative reactions and responses to the culture are reduced (Henderson, Milhouse, & Cao, 1993; Li, Foz, & Almarza, 2007).

There are three basic outcomes of the adjustment phase. Some individuals find it impossible to accept the foreign culture and integrate. They isolate themselves from the host country's environment, which they come to perceive as hostile and as a result withdraw. These individuals are often referred to as "rejectors" because they have the greatest difficulties re-integrating back into their home culture upon their return. There are also some people who manage to integrate fully and take on all parts of the host culture while losing their original identity.

Often this group, referred to as "adopters" remain in the host country permanently. Still others adapt to the aspects of the host culture they see as positive, while keeping some of their own and creating their unique blend. They have no major problems returning home or relocating elsewhere. This group can be thought to be somewhat multinational because they have been able to acquire many different constituent elements from many parts of the world (Henderson, Milhouse, & Cao, 1993; Li, Foz, & Almarza, 2007).

Mastery Phase. In the mastery stage assignees were able to participate fully and comfortably in the host culture. Mastery does not mean total conversion; people often keep many traits from their earlier culture. This phase was often referred to as the biculturalism stage (Henderson, Milhouse, & Cao, 1993).

Reverse Culture Shock

Reverse culture shock may take place when individuals return to their home culture after growing accustomed to a new one. This transition often produces the same effects as described

above. Reverse culture shock results from the psychosomatic and psychological consequences

of the readjustment process to the primary culture. The affected person often found that reverse

culture shock was surprising and even more difficult to deal with than the original culture shock

(Henderson, Milhouse, & Cao, 1993; Li, Foz, & Almarza, 2007).

<div align="center">**Berry's Stress Coping Framework**</div>

Berry's (1977) stress-coping framework considered the cross-cultural experience as a major

life event that was characterized by stress. This framework focused on the identification of the

factors that function as significant stressors and impair sojourners' adaptation to the new

environment. According to Berry both stress and coping are influenced by characteristics of the

individual and the situation (society).

On the macro-level characteristics of the society of settlement and society of origin are

important. Discriminating features included social, political, and ethnic composition, in

combination, with salient attitudes towards ethnic and cultural out-groups. Factors relating to

age, gender, education, and personality may be important. On the micro-level characteristics of

the individual and aspects of the situation exert influences on stress, coping and adaptation.

Coping strategies or social support may be more relevant (Berry, 1977).

Group-Level (Macro-Level) Factors of Berry's Model

Society of Origin. The combination of political, economic, and demographic conditions

faced by individuals in their society of origin need to be studied as a basis for understanding the

migration motivation of immigrated individuals. The cultural characteristics need description to

establish cultural features for comparison with the society of settlement as a basis for estimating

the cultural distance. The United States and China have been cited as an example of two nations

with *maximum cultural distance* and as a result Chinese students' coping experiences are likely to be more difficult than those from European countries (Berry, 1977).

Society of Settlement. The discriminating features of the host society, such as ethnic composition, extent of cultural pluralism, and salient attitudes towards ethnic and cultural out-groups are important. Chinese students expressed that they lack the same kinds of resources that U.S. students' have access to. Their experiences of being subjected to a marginal status and limited resources generated great anxiety about their future in the U.S. (Berry, 1977).

Group - Level Acculturation. Group-Level Acculturation means that migrant groups usually change substantially as a result of living with two sets of cultural influences. America changes the behavior and lifestyle, but not the ethnic identity or ideology, of Chinese students (Berry, 1977).

Individual-Level (Micro-Level) Factors of Berry's Model

Factors Existing Prior to Acculturation. Factors existing prior to acculturation included; age, gender, education, motivation, expectation of length of stay, language proficiency and personality. The age of the individual has a known relationship to the way acculturation proceeds. Age has been studied as it relates to international students' academic performance and adjustment difficulties. The findings have been inconsistent; some show younger students to have more adjustment problems than older students while others show the opposite (Berry, 1977).

Gender has an inconsistent influence on the acculturation process. There is substantial evidence that indicates that women may be more at risk than men. In addition, higher education is a predictive of lower stress, but international students share common experiences of status loss and limited status mobility which increase the risk of stress (Berry, 1977).

23

Push and pull motivators are used to explain what might force someone or what might entice someone to leave their country of origin to leave for a new country. Push factors are those circumstances that may help an individual decide to leave their country. Pull factors are defined as the incentives that attract people away from their country of origin. When there is an extremely intense or excessively high expectation about their life in the new country and these are not met, this leads to a greater stress (Berry, 1997).

Factors Arising During Acculturation. Factors that often arise during acculturation are; length of stay, coping strategies and resources, social support, societal attitudes, prejudice, and discrimination. Acculturation strategies, coping strategies, and social supports show significant influence on individual adaptation. Berry (1997) described four acculturation strategies: assimilation, separation, integration, and marginalization.

Assimilation strategy is employed when individuals from non-dominant groups who do not wish to maintain their cultural identity and seek daily interactions with other cultures (Berry, 1997). Others describe cultural assimilation as a socio-political response to a demographic multi-ethnicity that supports or promotes the assimilation of ethnic minorities into the dominant culture (Moran, Harris, & Moran, 2007; Oliva & Li, 2006; Sheehan & Pearson, 1992). Assimilation usually involves a gradual change and takes place in varying degrees. Full assimilation occurs when new members of a society become indistinguishable from the long-standing members.

To try and ease their cultural adjustment difficulties, international students try to contribute some of their cultural traits and values to their new county. When individuals place value on holding onto their original culture and at the same time wish to avoid interaction with other groups, the separation alternative is operating. When there is an interest in maintaining

one's original culture while in daily interactions with other groups, integration is the approach (Berry, 1977).

Integration has occurred when individuals or populations of people who were formally separated are mixed together. Finally, marginalization is the result if the individuals fluctuate between their original culture and host culture, identifying with neither, nor being accepted in either. Marginalization is the social process of becoming or being made marginal or relegated to the fringe. Marginalization at the individual level results in an individual's exclusion from meaningful participation in society (Berry, 1977). The length of time an individual has been experiencing acculturation strongly affects the kind and extent of problems experienced. Social support was also a key factor linked to an individual's psychological adaptation (Lazarus & Folkman, 1984).

The research conducted by Lazarus and Folkman (1984) specifically focused on micro-level acculturation rather than macro-level acculturation. They conducted a series of face to face interviews because it was expected that this method of inquiry would lend itself well to the individual's ability to reflect on their experiences. Thus providing further understanding about how the individual predictors affect Chinese students' stress and coping process. Their results yielded valuable insights into the effect of many of the acculturation factors including; age, gender, cultural values, and academic majors.

Younger and older students experience very different adjustment problems associated with acculturative stress (Olivas & Li, 2006; Poyrazli & Lopez, 2007; Sheehan & Pearson, 1992). Traditionally-aged undergraduates, between the ages of 18-24, are more prone to homesickness and loneliness because they experience a loss of their social support systems, their friends and family back home. In addition, they lead a less restrained life and are not as

burdened by the language barrier or culture shock. They admit to being more open-minded and

thirsting for adventure (Poyrazli & Lopez, 2007; Sue & Zane, 1985). They also admit to having

far more exposure to Western culture through the internet, television, and music and as a result

they are typically excited by anything new, including a change in cultures (Moran, Harris, &

Moran, 2007; Lazarus & Folkman, 1984; Olivas & Li, 2006; Sheehan & Pearson, 1992).

Older students, those over the age of 25, reported experiencing more culture shock, job

and visa concerns, and immigration pressures. They also reported substantial cross-cultural

challenges because they are often unable to accept the customs, values, behaviors, and systems in

the United States so they avoided Americans. Communication with Americans carries symbolic

meanings of prestige and power which makes older students, women more than men, frustrated,

nervous, and anxious. (Lazarus & Folkman, 1984; Moran, Harris, & Moran, 2007; Olivas & Li,

2006; Sheehan & Pearson, 1992)

Lazarus and Folkman (1984) reported no significant differences were noticed as a

function of gender as it relates to academic pressure. However other stressors and concerns

varied across genders as Chinese women expressed more anxiety and frustration in financial

situations and dating problems. Meanwhile the cultural demands for excellence on Asian men

resulted in them reporting experiencing the stress of future vocational achievement and

immigration issues. Another gender difference worth noting is that female Chinese students

cluster in the humanities and social sciences and are limited in the opportunities for research or

teaching assistantships that often accompany the field of science and technology, where the

Chinese men are concentrated (Lazarus & Folkman, 1984). According to Asian values a good

girlfriend or wife must be at least above average in appearance and caring and virtuous.

Independence, knowledge, and aggressiveness are traits demonstrated by most female Asian

students in the U.S. and these are considered less important or even disadvantageous in their cultures of origin (Yan & Berliner, 2011).

Academic major are another factor where minimal difference was reported. Language barriers and other concerns varied across major among Chinese students. Language demands vary from major to major. The natural sciences do not require as much or as high a competence in English language skills as do the students in the social sciences, "which require a better understanding of American culture, values, and social systems" (Yan & Berliner, 2011, p. 530). The second mediating variable, social/academic expectations and adjustment, is reviewed in the next section.

Social/Academic Expectations and Adjustment

International students arrive in the U.S. unacquainted with American customs and formalities which often results in a tremendous amount of stress as they begin to adapt to a new culture. The social and academic expectations and adjustment of international students are informed by their English language proficiency (Li, Fox & Almarza, 2007). Limited English language abilities prolong their cultural adjustment process (Andrade, 2007; Cheng, Leong, & Geist, 1993; Hayes & Lin, 1994). Language deficiency is considered the "most important determinant of international student problems" because it affects every other problem area (Owen, 2008, p. 51). Social support is a significant predictor of depression among international students. This depression is further heightened by their inability to socialize with American students (Sumer, Poyrazli, & Grahame, 2008).

International students have certain expectations of their social life and often arrive on campus expecting to quickly establish friendships with American students. It is not uncommon however, for American students to show indifference toward international students because they

lack proficiency with the English language (Hayes & Lin, 1994; Li, Fox & Almarza, 2007). Chinese students reported that their lack of English language proficiency resulted in great difficulty penetrating already established social networks (Hayes & Lin, 1994; Sumer, Poyrazli, & Grahame, 2008). Social support is a significant predictor of depression among international students. Depression is further heightened by their inability to socialize with American students due to their limited English skills (Sumer, Poyrazli, & Grahame, 2008).

International students also encountered difficulties understanding American academic practices, expecting the same types of assignments, deliverables, and teaching styles encountered in their home countries (Minchew & Couvillion, 1998). For example, during the early stages of an academic program, difficulties in oral participation may be a source of considerable embarrassment for international students (Wang & Mallinckrodt, 2006). International students tend to have strong academic backgrounds and come from highly educated families, further highlighting the differences they perceive between themselves and American students (Minchew & Couvillion, 1998). Students who found themselves at the top of their classes in their home countries are often unprepared for their academic status to be challenged in the United States (Heggins & Jackson, 2003).

Social/Cultural Adjustment

International students experience a variety of challenges in the process of their cultural adjustment (Westwood & Barker, 1990; Yakushko, Davidson, & Sanford-Martens, 2008). For example, Chinese students are raised on propaganda connected to their culture and political element and as a result the United States is not portrayed very positively. Chinese students admittedly trust each other far more than they trust American students (Bartlett & Fisher, 2011). Social adjustment is positively related to English language ability. English language proficiency

is the most important predictor of social adjustment trouble for international students (Galloway & Jenkins, 2009; Ying, 2002). The social and academic expectations of international students continue to erode as they are not equipped with the familiarity with American conversational topics (Heggins & Jackson, 2003).

An additional cultural adjustment problem faced by international students from Asia includes their desire to develop relationships with professors and peers while maintaining a need to become more independent (Cheng, Leong, & Geist, 1993). Their cultural integration is further influenced by the challenges of comprehending lectures and reading assignments (Andrade, 2008). Asian international students credit their lack of English competence for hindering their interactions with their professors and peers (Abe, Talbot, & Greelhoed, 1998; Brien & David, 1971; Owen, 2008). Asian international students' struggle with their unfamiliarity of colloquial English and as a result fear being embarrassed because they are misunderstood by others. The fear of embarrassment poses a major obstacle to communication between them and American professors and students (Hull, 1978).

International students, like their American counterparts, experience intense financial pressure. The restrictions imposed on the F-1 visas of international students add to their financial pressures, which in turn, hinders their ability to adjust (Sumer, Poyrazli , & Grahame, 2008; Wang & Mallinckrodt, 2006). These financial pressures are further exacerbated by the guilt that many international students experience as a result of the exorbitant expenses that their families undertake in order to send them to the United States (Owen, 2008).

Researchers have examined, from a social perspective, the adjustment difficulties experienced by international students to American student life (Poyrazli & Lopez, 2007; Rose-Redwood, 2010; Tseng & Newton, 2002; Ying, 2002). International students face greater

adjustment difficulties and require more help during their initial transition to U.S. campus life (Poyrazli & Lopez, 2007; Tseng & Newton, 2002). Researchers suggested that international students retain their cultural identities even after spending considerable time in the United States. Their respective backgrounds influence their ability to understand and adjust to American culture (Lacina, 2002; Yan & Berliner, 2009; Yang, Harlow, Maddux & Smaby, 2006).

While other researchers indicated; the existence of a positive relationship between the length of time spent with the host culture and successful cultural adaptation for international students (Heikinheimo & Shute, 1986; Hull, 1978; Surdam & Collens, 1984). Intercultural communication contributes to cultural adjustment and decreases the level of culture shock (Berry, 1977). If international students do not embrace the new culture in which they study, they immediately withdraw from cultural interchange and therefore leave very much the same way they arrived (Xueqin, 2011).

Once students with limited English reach the American classroom they labor to keep up with discussions. As a result, some professors have significantly altered their teaching practices to accommodate these students. It is important to note that international Asian students excel, struggle and fail academically at the same rate as their American counterparts. Frustration communicating is experienced by both American and international students. American students admit to not understanding what is being said by international students and international students admit to not understanding the questions being asked, not because they do not know the material, but because they do not understand the language (Bartlett & Fisher, 2011).

Heikinheimo and Shute (1986) state that as international students' use of the English language improves "their social and academic adjustments become less of a problem" (p. 405). Research indicated that international students who spend more time with the host culture are "better adapted" and more likely to be satisfied with their international experience (Hull, 1978;

Surdam & Collens, 1984, p. 243). International students are interested in exploring a new culture and society and for them engaging in extracurricular activities are considered a valuable opportunity to meet domestic students (Xueqin, 2011).

Cultural adjustment is only one of the problems international students face. According to the literature, the two major problems are financial stress and problems associated with lack of language proficiency, "which include but are not limited to academic difficulties" (Owen, 2008, p. 50).

Academic Adjustment

The main motivation for international study is academic achievement (Owen, 2008). Maslow (1954) described academic achievement as a self-actualization activity which is a higher need in the hierarchy of needs. Maslow (1954) also asserted that in order to achieve academic success basic needs, such as food, physical safety, love, and self-esteem must be satisfied first. Many of the essential services provided for international students are designed to specifically address their basic needs. As a result these services play an integral part in helping internal students ultimately achieve academic success (Maslow, 1954; Owen, 2008).

Researchers have shown that "international students generally are more engaged in educationally purposeful activities than their American counterparts are, especially in the first year of college" (Zhao, Kuh, & Carini, 2005, p. 226). Heikinheimo and Shute (1986) agreed saying that "academic achievement is the highest priority for international students" (p. 405). There are obvious academic contrasts between Asian countries and the United States.

Asian international students demonstrate an impressive academic work ethic which often results in academic excellence. There is a serious lack of vigorous give-a-take discussions prevalent in American classrooms. To Asian students Americans seem like chatterboxes that

speak at such a rapid pace it is often hard, even those with a mastery of the English language, to fully grasp exactly what is being said. Despite the unfamiliar learning style the average grades of Asian students are nearly identical to those of their American counterparts (Bartlett & Fisher, 2011).

Authorship and Authority

The complexities of authorship and authority are directly related to culture (Barlett & Fisher, 2011). Barriers to adjustment may be found in the classroom, where academic expectations international students encounter may differ from those is their home countries (Liu, Liu, Lee, & Magjuka, 2010; Minchew & Couvillion, 1998; Poyrazli & Lopez, 2007; Tseng & Newton, 2002; Yan & Berliner, 2009; Yang, Harlow, Maddux, & Smaby, 2006). Unfamiliarity with U.S academic expectations, compounded with language barriers, result in adjustment difficulties for international students (Mitchell, Greenwood, & Guglielmi, 2007).

Lack of English language proficiency continues to be a challenge for international students regardless of their length of stay in the United States. This is especially true on campuses where other than writing workshops, little to no attention is paid to the academic needs of these students (Wang & Mallinckrodt, 2006). International students often replace direct communication with the use of technology in order to alleviate the embarrassment caused by their unfamiliarity of spoken English language (Zhao, Kuh, & Carini, 2005).

Asian international students come to America for a college degree because they believe that American education is the best and because American colleges want their money. However, this marriage of convenience results in both parties suffering while trying to negotiate this delicate relationship. Much of the suffering results from the American college admissions process. Admission officers typically rely only on the hard numbers from standardized test

scores to evaluate Asian students and as a result discount soft skills. The hard numbers may help to determine if an Asian student will excel as a student, but it's the soft skills that will determine if they have the ability to thrive as a member of the campus community (Xueqin, 2011).

American admission officers select students based almost exclusively on hard numbers and though this strategy benefits rote learners who thrive in the Asian education system, it definitely hurts those students who have the potential to be "transformed by a rigorous American liberal-arts education." These students may actually transform the lives of their fellow students and professors (Xueqin, 2011, p. 2). Long-term, negative impact on the mutual cultural understanding if the admission of Asian students is primarily financial driven and not compensated by a responsible selection of the admitted students (Xueqin, 2011).

The Asian, particularly the Chinese, education system of obedience and conformity often results in the squelching of individual intellectual blossoming. In addition, empathy, imagination and silence are strangled at an early age in China. The toughest question you can ask a Chinese student is also the easiest one you can ask an American: "What do you think?" (Xueqin, 2011).

The Chinese education does not prepare students well to study in the United States. The Chinese education system "alienates students from each other, from the world in which they live, and ultimately from themselves." Because they are unable to construct a self-narrative, they can live comfortably in their bubble but have problems overcoming challenges (Xueqin, 2011). Finally, if international students do not embrace the new culture in which they study, they immediately withdraw from cultural interchange and therefore leave very much the same way they arrived (Xueqin, 2011). The third mediating variable, campus preparedness, is discussed next.

Campus Preparedness

The number of Chinese undergraduates in the United States continues to rise dramatically. This annual increase has made them the largest group of international students attending U.S. colleges. Other Asian countries like Korea and India have for many years sent many undergraduates to the U.S., it is the sudden and startling increase has caused angst at universities – many of them, big, public institutions with special English-language programs that are particularly welcoming to international students (Bartlett & Fisher, 2011).

International students often come from middle to upper class families and can afford to pay full tuition. This socio-economic status is often considered a financial windfall for U.S. institutions that have faced drastic budget cuts in recent years. At first glance this situation seems to be mutually beneficial to both, international students and the institutions they choose to attend. This relationship however, is tricky at best (Bartlett & Fisher, 2011). If campuses across the United States continue to be saturated with Asian international students there is an inherent risk that domestic students may interpret "internationalization" as meaning from Asia (McMurtrie, 2011).

The recruitment and enrollment of international students has great significance on the of the United States economy (Owen, 2008). International students are an integral part of an institution's enrollment and development strategy (Dalton, 1999). According to the Association of International Educators (NAFSA) international students' are a $20-billion industry. However, it is important to note that the federal government has taken a much more aggressive approach in all facets of international education since the September 11 terrorist attacks (McMurtrie, 2011).

Admission Process

American institutions of higher education have been slow to adjust to the acclimation and application challenges they face as they continue to recruit international Asian students. American colleges eager to expand their diversity efforts and expand their international appeal have rushed to recruit in China, "where fierce competition for seats at Chinese universities and an aggressive admissions-agent industry feed a frenzy to land spots on U.S. campuses (Bartlett & Fisher, 2011).

A few of the challenges Chinese students face when applying to American colleges included; application materials printed only in English, the emphasis on extracurricular activities, the need for a personal essay, requiring letters of recommendations from guidance counselors as most Chinese high schools only have one staff, and finally the assumption that the *U.S. News &World Report* college rankings issue is an official government publication (Bartlett & Fisher, 2011).

American college recruiters feel overwhelmed by the explosion of cheating, lying and fraud. It has been suggested that they improve the admissions process by adding depth to their application process. In order to achieve the suggested enhancement to the admissions process, some colleges and universities have added an oral interview between recruiter and potential student to the process. The interview is designed to focus on the international students' understanding of what it might be like to attend an American college and to gain a better sense of a students' readiness for an American classroom (Bartlett & Fisher, 2011). In addition, the Council on International Education Exchange, a nonprofit group, has started to offer an interview service for U.S. colleges and universities (Bartlett & Fisher, 2011).

By implementing this strategy American recruiters will discover that even though Asian students' test scores may suggest limited mastery of the English language, these students with a clearer understanding of the expectations of the American higher education system will quickly adapt to a culture of critical thinking and intellectual inquiry. American colleges get the most out of their recruiting efforts and dollars by recruiting students from Asia particularly China. However, some colleges, particularly private institutions, have taken a slower approach to international recruitment. Meanwhile, providing American undergraduate students contact with a more international student body has also been important to state universities where campus diversity has been lacking (Xueqin, 2011).

There is a wide-spread trend to fabricate applications in order to secure acceptance into an American college. Personal essays are often written by an agent for hire or an English-proficiency score is submitted that does not match the student's speaking ability and mastery of the English language. According to a study by researchers at Iowa State University and published in the *Journal of College Admission,* a large number of international Chinese students enrolled in American colleges hired agents or intermediaries to guide them through the admissions process (Bartlett & Fisher, 2011).

The *gao kao* is the Chinese entrance exam that is the sole means used to determine whether students win a coveted spot at one of China's oversubscribed universities. As a result of China's test-centric culture, Chinese students spend most of their high-school years studying for this exam. As a result, it is not uncommon for those who want to study in the United States to cram for the required admissions tests like the SAT or TOEFL (Bartlett & Fisher, 2011).

Asian students do not see the intense test-prepping as problematic because they think that the goal is to pass the test. So they study to pass the test not to study/learn English. Confronting

36

plagiarism by international students is at the top of the list of classroom challenges faced by college professors. American concepts of intellectual property do not translate easily to students

International students, studying in the United States, pay full tuition. Their economic status is considered a financial windfall for U.S. institutions that have faced drastic budget cuts in recent years (Bartlett & Fisher, 2011). At first glance this situation might seem to be mutually beneficial to both, international students and the institutions where they choose to enroll, this relationship however, is tricky at best. If campuses across the United States continue to be saturated with Asian international students there is an inherent risk that domestic students may interpret "internationalization" as meaning from Asia (Bartlett & Fisher, 2011; McMurtrie, 2011).

International students are an integral part of an institution's enrollment and development strategy (Dalton, 1999). NAFSA: Association of International Educators (2012) estimated that international students contribute approximately $21.81 billion to the United States economy. This financial contribution helps to create and support nearly 295,000 jobs across the United States. Despite the financial gains to the U.S. economy, it is important to note that the federal government has taken a much more aggressive approach in all facets of international education since the September 11 terrorist attacks (McMurtrie, 2011). As a result of the events on September 11, international students report experiencing new levels of difficulty trying to return to the United States in time for the start of a new academic semester (Bartlett & Fisher, 2011; McMurtrie, 2011). These travel difficulties have placed new burdens on the faculty and staff at U.S. colleges and universities who are responsible for managing the international student population on their campus (Owen, 2008).

Supporting International Students

Due to the increasing Asian international student population, American colleges and universities have started to employ new strategies designed to ease international students' transition to American academic life. One of these strategies is the creation of peer mentoring programs that are specifically designed to help international students adjust to the cultural and academic differences they are likely to experience. Peer mentoring programs create a relationship between international and domestic students that allows both populations to engage in educational opportunities outside of the classroom as well as to develop a foundation for effective, intercultural communication.

Canisius College (www.canisius.edu), Indiana University-Purdue University Indianapolis (www.iupui.edu), Salem State University (www.salemstate.edu), and the University of North Dakota (www.und.edu), and are just four examples of colleges and universities that have created an International Student Peer Mentoring Program. Though each of these mentoring programs differs slightly from one another, each was designed to focus specifically on the facilitation of international students' academic and cultural transitions.

In addition to peer mentoring programs, some universities have started to offer workshops for faculty members who have a large number of Asian international students in their classrooms. Still other institutions offer special courses to give international students on academic probation extra help with English and study skills (Bartlett & Fisher, 2011; Owen, 2008.; Dalton, 1999; Winkelman, 1994).

The role of student affairs professionals in the United States is to foster the growth and development of students so they become successful in a society of globally connected community (Dalton, 1999; Owen, 2008). According to Owen (2008) "one major educational

resource available to domestic students is the international student population on their campus"
(p. 49).   Villalpando (2002) indicated that "institutional diversity emphasis has a positive effect
on most students' overall level of satisfaction with college" (p. 141).

International students are invaluable resources for American students because they bring
diversity to the campus environment. International students provide an opportunity for the
cultivation of cross-cultural curricular and co-curricular relationships (Owen, 2008). Many
colleges rely heavily on international students to increase their enrollment. In addition to reaping
the benefits of their higher tuition requirements this recruitment strategy "carries with it a
responsibility to provide proper support services to help these students succeed and to reduce
retention" (Owen, 2008, p. 49).

Student affairs professionals are significant stakeholders in the relationship building
efforts between the university and the international student population because they are charged
with the responsibility to provide effective support services (Owen, 2008). The international
reputation of an institution is dependent on its standard of international service. Satisfied
international students and alumni will recruit relatives and friends to the United States (Dalton,
1999; Owen, 2008).

Student affairs practitioners and administrators along with faculty and staff are
responsible for providing appropriate services to the international student population. There is a
critical need to understand the motivation associated with studying in the United States, the basic
process of culture shock, and the major problems facing international students (Dalton, 1999;
Owen, 2008; Villalpando, 2002).

Communication is the key to success in cross-cultural adjustment for international
students. It is imperative that the institution's faculty, staff, domestic students, and international

students have training opportunities to improve their cross-cultural communication skills. In addition, interactions between domestic and international students can be very educational for domestic students but only if they are able to successfully communicate with the international student population (Dalton, 1999; Owen, 2008).

All services provided for international students must constantly be evaluated for quality assurance. In order to offer the best quality of service to international students, student affairs professionals must be intentional in their efforts to continually seek out improvements to the services offered (Owens, 2008). The American colleges and universities that currently offer the most outstanding services for international students are able to do so because they have established a shared commitment among all campus stakeholders (Owens, 2008). Serving international students is a complex, multi-faceted function but becoming knowledgeable about the complicated process of culture shock and cultural adaptation student affairs professionals will be able to understand the critical importance of supplying superior services to international students (Owen, 2008).

Traumatic Events

Traumatic events like political upheavals, natural disasters, wars, and other tragedies that often occur in the home countries of international students increase drastically increase their anxiety levels, particularly because they are far from home. It is especially critical during these traumatic events that faculty, staff, and students at American colleges and university provide the necessary support to international students as they are often unable to reach their families, resulting in additional stress relating to health, financial, and legal issues (Dessoff, 2011).

Because international students from countries suffering from these traumas have different issues than those from countries not experiencing trauma they bring stressful and cultural baggage with them and as a result they face tougher challenges adjusting to their new university. Students from countries that have been through trauma do not have the ability to resolve their issues by going home and this adds an extra layer of complexity to the challenges they face (Dessoff, 2011). These students also feel a "persuasive sense of guilt" during and after the trauma because they are in the United States while their families and communities are suffering.

It then becomes the responsibility of their domestic peers to help provide them in a positive direction. Due to the stigma of help-seeking behaviors this effort is often a daunting task. This is where a college's counseling staff can provide group and individual counseling and where mentors from the host country are critical in the adjustment process as they are crucial to helping ease the anxieties of students so far from home (Dessoff, 2011). Depression is an issue that frequently develops with students from trauma-stricken countries.

In order to be able to easily intervene and/or reach out to these students, staff at American colleges and universities must be proactive and have initiatives, programmatic functions, and outreach efforts in place before these students arrive on campus (Dessoff, 2011). Students from countries suffering from trauma often see a change in their financial circumstances which ultimately becomes a significant issue as they may no longer be able to afford the costs associated with their American college or university. This results in additional stress on these students because international students must remain enrolled and maintain a specific number of credits in order to maintain their immigration status (Dessoff, 2011).

Help-Seeking Behaviors

International students face difficulties in addressing their challenges because they tend to wait longer than American students before seeking professional help (Hayes & Lin, 1994). Challenges with the English language directly affect international students' help-seeking behaviors specifically those related to medical care and counseling services. International students may experience difficulties overcoming their discomfort about describing their circumstances in English, restricting their ability to correctly articulate their problems to doctors and counselors (Harju, Long, & Allred, 1998).

Asian international students face emotional problems to a greater degree than do American students. Asian students are more reluctant to seek emotional help but may seek help for academic and career problems as a means for masking their emotional problems (Cheng, Leong, & Geist, 1993). These findings complement findings that Japanese students tend to hold unfavorable attitudes toward the use of mental healthcare services and are therefore less likely to turn toward professional help as a means of easing their adjustment difficulties (Mitchell, Greenwood, & Guglielmi, 2007). International students engaging in social activities may experience a tremendous amount of emotional stress, while the loss of social support networks results in tension and confusion (Hayes & Lin, 1994).

International students also express concerns about the cultural competence of healthcare professionals and as a result may choose not to seek out their services (Harju, Long, & Allred, 1998). There is still much work to do as it relates to exploring the cultural adjustment of Asian international students who are attending American college and universities. The influx of international students on American college campuses creates ample opportunity for curricular and co-curricular initiatives that promote intercultural dialogue and understanding between

domestic and international students. American colleges and universities have a critical task of

identifying opportunities for cultural immersion, which serve as a pathway for greater

intercultural sensitivity between students (Deardoff, 2006). An increased understanding of

American culture, values, and social system combined with a heightened awareness of cultural

sensitivity may influence an international students' intent to persist.

Intent to Persist

Intent to persist is defined across higher education as the ability to pursue a degree to

graduation (Astin, 1993a; Pascarella & Terenzini, 1991). Retention on the other hand is defined

differently across various institutions of higher education. The common denominator however,

is the fact that retention focuses on post-enrollment decision processes while recruitment focuses

on pre-enrollment decision processes (Williams, 1999; Wilson, Coulter, Lunnen, Mallory).

Completing college can be a complex process involving many factors. According to Tinto (1993

& 1998) four of the most influential factors included; personal and institutional characteristics,

precollege educational achievement, family background, and student motivation. Tinto (1998)

also argued that if students are to be successful in achieving degree attainment they must be

"integrated academically and socially into the campus culture" (p. 167).

Previous research has implied that successful college students are at ease with the

academic and social cultures of their respective campuses. Their previous knowledge and

experiences are valued and in some cases highly sought after (Padilla, 1999). In order for new

knowledge to be acquired, a positive learning environment on campus is needed. A positive

learning environment can be created by successfully combining the students' wide range of

background characteristics, interests and goals with the type of institution, choice of major, and

the academic and social cultures (Padilla, 1999). Understanding the cultural adjustment of

international students is a complex undertaking. In an effort to comprehend the cultural adjustment of Chinese international students a conceptual framework was created. That framework is discussed in greater detail in the following section.

Conceptual Framework

Based on the review of literature several themes were identified that should be considered when examining the factors that influence the cultural adjustment of undergraduate Chinese international students. Astin's (1993) Input-Environments-Output (I-E-O) model offered a means to examine these factors. Astin's (1993) rationale for the creation of the I-E-O model was to allow for the adjustment of the input differences in an effort to "get a less biased estimate of the comparative effects of different environments on outputs" (p.19). This model was specifically designed to "enlighten the educator about the comparative effectiveness of different educational policies and practices" (p. 37). Astin's (1993) model is considered a conceptual guide for assessment activities in higher education. This model is used "to control for initial input differences among the students by means of multivariate analysis" (Astin, 1993, p. 28).

According to Pascarella and Terrnzini (1991) college students grow and change during their college years. This change can be attributed to the student's experiences and institutional effects and the I-E-O model can be a valuable tool for identifying and estimating those effects. The college experiences that institutions have some control over, like programming or policy implementation, are easily identifiable using the I-E-O model.

Astin's (1993) model was developed primarily for use in natural experiments. Astin (1993) defined natural experiments as those that "study the real world rather than an artificial one created by experimentation" (p.28). Two primary advantages of natural experiments were identified. First, they avoid the artificial conditions of true experiments that are created by the

44

establishment of experimental and control groups and the random assignment of students to these groups. Second, natural experiments make it possible to study the effects of many different environmental variables at the same time (Astin (1993a).

The American higher education system encompasses a variety of educational approaches and practices and natural experiments permit us to compare and contrast them. Natural experiments also help us to "understand which educational environments and practices are most effective and under what conditions" (Astin, 1993, p. 28). There are three informational components of the model; the inputs, the environment, and the outputs (Figure 2.2). This study focused on the development (input to output) of a specific group of students and in a deeper understanding about the factors (environments) that influence that development (Astin, 1993). A summary of the input, environmental, and output variables is provided in the following sections. The operationalization of these variables is presented in greater detail in Chapter 3.
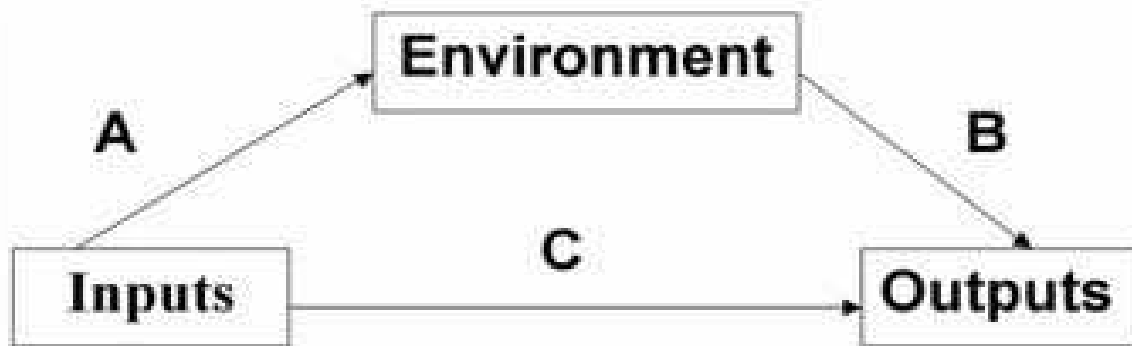
FIGURE 2.1 *The I-E-O Model. This figure illustrates the relationship of the I-E-O model developed by Astin (1993).*

Input Variables

Inputs (I) represented the personal qualities and skills that the student possesses and brings into the assessment environment (Astin, 1993). Church (1992) found that the most

common problems reported by international students were language difficulties, adjustment to a

new educational system, and failure to adjust to the host country's social customs and norms.

For this study the input variables represent the control variables. The input variables were;

gender, academic major, time in U.S., English language proficiency, services provided, and

cultural values.

Environmental Variables

Environments (E) represented the students' actual experiences (Astin, 1993). For this

project the environmental variables are the treatments and experiences. There were three

environmental variables; acculturative stress, social/academic expectations and adjustment, and

campus preparedness.

Output Variables

Outputs (O) represent the skills/knowledge to be developed through exposure to the

assessment environment (Astin, 1993). The output variables were the dependent variables.

Astin (1993) maintained that "outputs must always be evaluated in terms of inputs" (p. 17). For

this study the outcome variable is cultural adjustment, measured by intent to persist. Student

persistence has become the primary focus for researchers studying higher education (Robinson,

1996; Tinto, 2006). The environment at a particular institution, the relationship between

individuals and society, plays a significant role in a student's decision to stay or leave their

current institution (Robinson, 1996; Tinto, 2006). Figure 2 provides the conceptual framework

designed for this study using the variables reviewed in the literature. These variables are

operationalized in the next chapter.

By applying the understanding of interdependence between the I-E-O components, the

complex nature of interactions with the cultural adjustment on the factors of English Language

Proficiency time in the U.S., and cultural values may be more fully comprehended. More

definitively, this model acknowledges the fundamental aspects of environments/experiences on

Chinese international students' cultural adjustment/intent to persist. It is important to recognize

and understand the relationships between these environmental factors and how they influence

cultural adjustment.
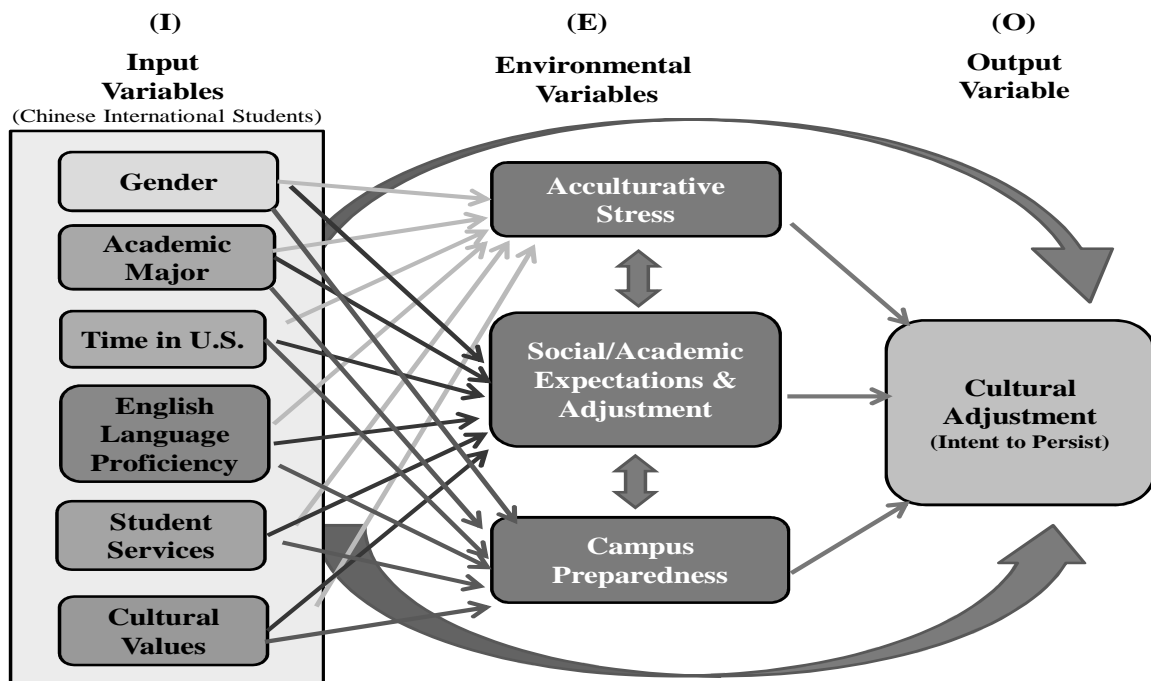
Figure 2.2 *Conceptual Framework (Hurny, 2013; Adapted from Astin, 1993)*

Based on the review of literature Astin's (1993) I-E-O model was adapted in an effort to

provide a visual snapshot of the factors that influence the cultural adjustment of Chinese

international undergraduate students. The input variables; gender, academic major, time in U.S.,

English language proficiency, services provided and cultural values, influence the environmental

variables; acculturative stress, social/academic expectations and adjustment, and campus

preparedness. The environmental variables in turn influence cultural adjustment of Chinese

international students as measured by intent to persist. The model presented in Figure 2 was

used as the conceptual framework for the pilot study which is discussed in the following chapter.

CHAPTER 3: METHODOLOGY

The purpose this study was to examine the factors that influence the cultural adjustment of undergraduate Chinese international students enrolled in a large, public, research university located within the Mid-Atlantic region of the United States. The literature offered a wide-range of variables that have an influence on the cultural adjustment of international students as a single population. This study however, focused exclusively on undergraduate Chinese international students. Supported by the literature, and offered in Figure 2.2, the following variables were examined; gender, academic major, time in U.S, English language proficiency, student services, and cultural values. These variables were examined using the following mediating constructs; acculturative stress, social/academic expectations and adjustment, and campus preparedness. These three constructs were used as the basis of a 24-item instrument that was intended to identify which variables influenced the cultural adjustment of Chinese international students as measured by intent to persist. A pilot study was conducted between May and June, 2013 and is discussed in the following section.

The Pilot Study

In an effort to synthesize the pilot study it will be reviewed in four sections. Section one will provide the reader with a general overview of the study. Section two focuses on the data collection. Section three describes the methodology. Section four reviews the data analysis and highlights the key findings, including a modified conceptual framework. A pilot study was used to test procedures and make the necessary adjustments in the creation of a new cultural adjustment scale (Johanson & Brooks, 2010).

The pilot study was conducted between May and June, 2013 to examine which variables identified in the literature influenced the cultural adjustment of Chinese international students. The National Survey of Student Engagement (NSSE), the Acculturative Stress Scale for International Students (ASSIS), the Student Adjustment to College Questionnaire (SACQ), and the Collectivist Coping Style Inventory (CCS) served as the primary sources for the development of a Chinese Cultural Adjustment Survey (CCAS). The CCAS (Appendix E) was a 50-item; 5-point Likert-type, self-administered questionnaire intended to identify multiple factors influencing the cultural adjustment of Chinese students. The CCAS questions were grounded in the literature and supported by over twenty five years of personal interactions with Chinese students.

Data Collection

The pilot study was conducted using a convenience sample. With the support of the University's Office of Global Programs, 200 undergraduate Chinese international students enrolled for the summer 2013 semester were targeted for the pilot study. Participants had two weeks to complete the on-line survey and were not offered any type of incentive for completion. Data were collected using Qualtrics, downloaded into a Microsoft Excel spreadsheet, and then imported into SPSS Statistics 20 for subsequent analysis. Descriptive data analyses and data cleaning were completed were completed using SPSS.

Methodology

Exploratory factor analysis was conducted to assist in the examination of cultural adjustment. Factor analysis serves as an introduction to more widespread investigations of constructs (Cattell, 1966; Nunally, 1978). Factor analysis seeks to study the pattern of relationship among many dependent variables. The goal is to discover something about the

nature of the independent variables, even those not measured directly, that affect the dependent variables (Cattell, 1966; Darlington, 2013; Nunally, 1978). Factor analysis provided clarification of the constructs by focusing on the relationships among variables. The output was used in subsequent analyses (Koostra, 2004; Field 2000; Rietveld & Van Hout, 1993; Nunnally, 1978). The purpose of the pilot study was to create a new scale that would be used to examine the factors that influence the cultural adjustment of Chinese international students.

Data Analysis

A response rate of 19% was achieved as participants *(*N = 38) completed a single-stage, 50-item questionnaire. A majority of participants were women (60.5%). Their ages ranged from 18-24 years, with an average of 21 years at the time of initial assessment. The sample was balanced in terms of academic major (17 Stem, 16 Non-Stem). The results of the pilot study suggested that important relationships exist between cultural adjustment and acculturative stress, social/academic expectations and adjustment, and campus preparedness. The results summary can be found in Appendix D.

The unexpected result was the contradiction between the English language proficiency factors. Respondents reported feeling nervous, confident, and intimidated when using English in both social and academic settings. This factor needed additional examination before it was added to the new scale. Further examination involved interviews with current undergraduate Chinese students, to examine the survey questions related to English proficiency. These students were asked to read the survey questions to determine if the word choice and word order might have unintentionally caused confusion for potential respondents. Additional clarity was suggested and implemented before the English language proficiency questions were added to the revised instrument (Appendix A). Supported by the literature and the analyses from the pilot

study, a modified conceptual framework was developed for the current study (Figure 3.1). The

next section will provide an overview of the research design and rationale for this study.
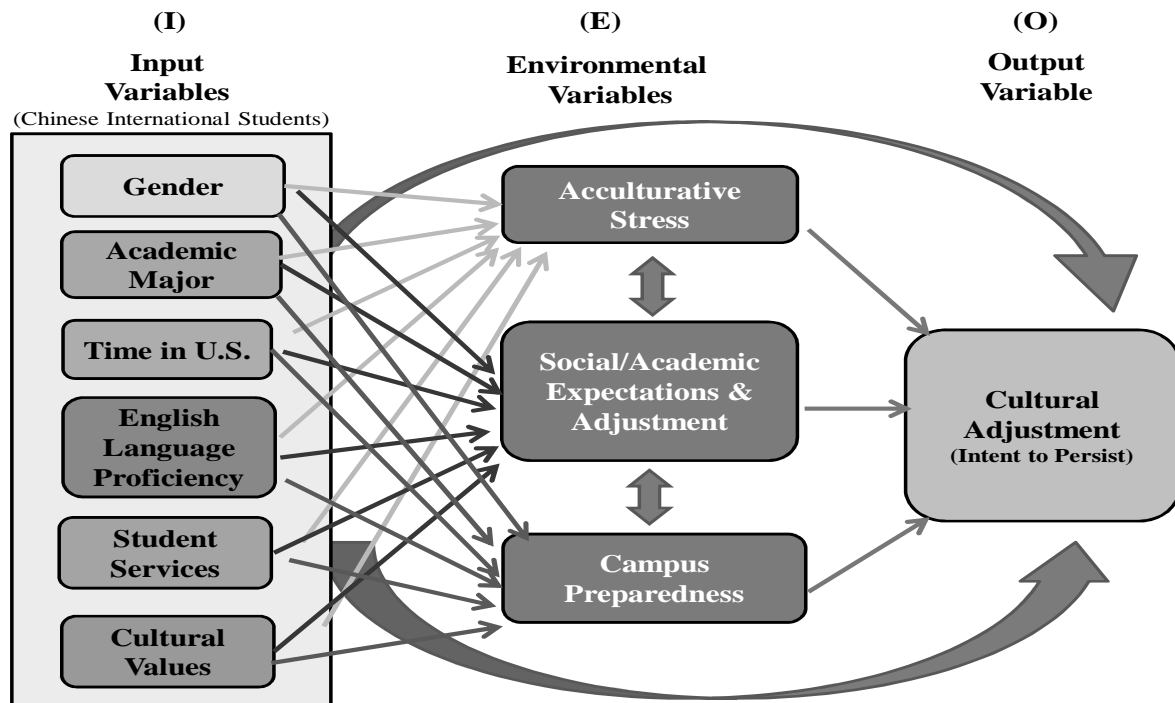
Figure 3.1 *Modified Conceptual Framework (Hurny, 2013; Adapted from Astin, 1993)*

Research Design and Rationale

Quantitative research is used as a process for testing objective theories by examining the

relationship among variables (Cresswell, 2009). This study focused on the relationship between

the identified variables and the level of cultural adjustment experienced by undergraduate

Chinese international students. Astin's (1993) I-E-O model lent itself well to this quantitative

study because it "involves quantifiable measures of inputs, environments, and outputs and

statistical analysis of the data" (p. 21).

Chinese Cultural Adjustment Survey (CCAS)

This study utilized a 24-item, Likert-type questionnaire. The use of a survey as a method

of data collection is supported by Creswell (2009) and Vogt (2005) as a survey research design is

a numeric description of trends, attitudes, or opinions of a population. Survey design is

appropriate when a sample of subjects is drawn from a population and studied in order to make

inferences about the population. Creswell (2009) used the term "worldview" to describe a basic

set of beliefs that guide action (p. 6). The research question that guided this study offered a

pragmatic worldview. Creswell (2009) defined pragmatism as "a worldview that arises out of

actions, situations, and consequences" (p.10). Researchers using a pragmatic worldview focus

on the research problem and have the freedom to choose the research methods, techniques, and

procures that best meet their needs (Creswell, 2009). The complete Chinese Cultural Adjustment

Survey can be reviewed in Appendix A. The measures and variables are discussed in the

following sections.

<div align="center">**Measures**</div>

This non-Experimental study was intended to make predictions about the relationship

between variables (Gliner, Morgan, Leech, 2009). Based on the results of the pilot study, only

the relationships between gender, academic major, time in the United States, English language

proficiency, cultural values, acculturative stress social/academic expectations, campus

preparedness and cultural adjustment were examined. The relationship between student services

and cultural adjustment was not considered statistically significant in the pilot study and

therefore was not examined in the current study. Data collected from respondents not indicating

their gender, their F1 Visa status, and/or indicating less than 18 years of age or 25 and older were

not considered for this study.

Variables

As noted earlier, an adaptation of Astin's (1993) Input-Environment-Output (I-E-O)

model was used as the conceptual framework for this study. Astin's (1993) rationale for the

creation of the I-E-O model was to allow for the adjustment of the input differences in an effort to "get a less biased estimate of the comparative effects of different environments on outputs" (p.19). This model was specifically designed to "enlighten the educator about the comparative effectiveness of different educational policies and practices" (p. 37). Astin's (1993) model is considered a conceptual guide for assessment practices in higher education (Pascerlla & Terenzini, 2005).

The I-E-O model is used "to control for initial input differences among the students by means of multivariate analysis" (Astin, 1993, p. 28). Of the twenty four survey questions, I identified nine variables to examine as a part of this study. The nine variables connected with Astin's (1993) I-E-O Model that was reviewed in Figure 3.1

Input Variables. The first five variables are independent and represent the Input (I) variables. The input variables included; gender, academic major, time in U.S., English language proficiency, and cultural values. Survey participants were asked to indicate how they identify *"male"*, *"female"* or *"other"*. Next they were asked where in China they are from, their age at the time of the survey, how long they have been in the U.S., and finally, their current academic standing.

Participants were also asked to select from a list which of the 16 colleges within the University their primary major was associated with. Using a 5-point, Likert-metric of 1 (*Strongly Disagree*) to 5 (*Strongly Agree*) participants were asked to self-report their responses to the questions that focused on English language proficiency and cultural values. The input variables and the corresponding sample items from the Chinese Cultural Adjustment Survey are identified in Table 3.1.

Table 3.1 *Input Variables and Sample Items of the Chinese Cultural Adjustment Survey*

Input Variables	Sample Items
1. Gender	I identify as…
2. Academic Major	Which college is your primary major is associated with?
3. Time in U.S.	How long have you been in the U.S.?
4. English Language Proficiency	I feel nervous when communicating in English. I am confident in my used of English in social settings. I feel confident speaking English when meeting people who are not from China..
5. Cultural Values	I feel uncomfortable adjusting to new surroundings where the values are different from those in China.
	I feel a strong sense of belonging (community) at this University.
	I would feel comfortable seeking psychological Counseling and Psychological Services (CAPS) to help me cope with the stress associated with being an international student from China.

Environmental Variables. The environmental variables (E) reflect students' perceptions about their actual experiences at the University that served as the foundation for this study. There were three environmental variables; acculturative stress, social/academic expectations and campus preparedness. The environmental variables and the corresponding sample items from the Chinese Cultural Adjustment Survey are identified in Table 3.2.

Table 3.2 *Environmental Variables and Sample Items of the Chinese Cultural Adjustment Survey*

Environmental Variables	Sample Items
1. Acculturative Stress	Select the response that best represents the extent that this University has helped you to cope with the cultural stress associated with being an international student from China.
2. Social/Academic Expectations	How often do you try to befriend American students?
	Select the response that best represents the extent that this University has helped you to cope with the **academic stress** associated with being an international student from China.
	Select the response that best represents the extent that this University has helped you to cope with the **social stress** associated with being an international student from China.
3. Campus Preparedness	Select the response that best represents the extent that this University has helped you in your adjustment **to college**.
	Select the response that best represents the extent that this University has helped you in your adjustment **to the United States**.

Output Variable. The dependent variable (O) for this study was cultural adjustment which will be measured by intent to persist. Robinson's (2003) Intent to Persist Scale was be used, in part, to examine the cultural adjustment variable. Robinson's (2003) scale is a 2-question, 5-point Likert-metric of 1 (*Definitely Not*) to 5 (*Definitely Yes*). Supported by the literature and the results of the pilot study additional questions were used in combination with Robinson's (2003) scale. The output variable and the corresponding sample items from the Chinese Cultural Adjustment Survey are identified in Table 3.3.

Table 3.3 *Output Variable and Sample Items of the Chinese Cultural Adjustment Survey*

Output Variable	Sample Items
	I intend to graduate from this University.
1. Cultural Adjustment	I am planning on dropping out of this University and not finishing college anywhere.
	I am considering transferring to another U.S. college or university because I have not been able to culturally adjust to this University.

Validity

Validity refers to evidence that a test measures what it is intended to measure and that the researcher can extract meaningful insights and valuable implications from the data collected (Creswell, 2014; Krathwohl, 2009; Vogt, 2005). According to Creswell (2009) both internal threats to validity and external threats to validity need to be identified so that the experiment can be designed to minimize the threats.

Internal validity threats are "the degree to which the researcher can draw valid conclusions about the causal effects of one variable on another (Vogt, 2005, p. 157). Internal validity is influenced by the extent to which extraneous variables have been controlled by the researcher. The internal validity threat that warranted the most attention during this study was the experiences of the participants that threaten the researcher's ability to draw correct inferences from the data about the population (Creswell, 2014). In an effort to minimize the internal threats to validity the researcher conducted the study over a three-week period. The brief data collection phase helped to eliminate the maturation of the participants.

External validity threats focus on the "extent to which the findings of a study are relevant to subjects and settings beyond those in the study (Vogt, 2005, p. 114). External validity is often used interchangeably with generalizability and is about the numbers and objective hard data.

The larger the sample size the more generalizable the findings are (Creswell, 2014; Krathwohl, 2009). According to Krathwohl (2009) the standard error decreases with a larger sample size and the larger the sample size the more likely it is to be representative of the population. To ensure that the results may be generalized an estimated response rate 30% is suggested (Pascarella & Terenzini, 2005). A response rate less than 30% may lower the quality of the sample and therefore the results may not be generalizable (Gliner, Morgan, & Leech, 2009). The current study achieved a 10% response rate and suggestions for obtaining a greater response rate will be discussed in greater detail in the limitations section of this chapter.

Additional threats to validity include; statistical conclusion validity and construct validity. Statistical conclusion validity occurs when researchers "draw inaccurate inferences from the data because of inadequate statistical power or the violation of statistical assumptions (Creswell, 2014, p. 248). In an effort to ensure the effective use of statistical power and assumptions a statistician will be utilized as a part of this study. Construct validity refers to "the extent to which variables accurately measure the constructs of interest" (Vogt, 2005, p. 58). Construct validity examines whether or not there is agreement between the theoretical concepts and the instrument being used.

The Chinese Cultural Adjustment Survey (CCAS) responds to construct validity through the use of previously validated surveys including; the National Survey of Student Engagement (NSSE), the Acculturative Stress Scale for International Students (ASSIS), the Student Adjustment to College Questionnaire (SACQ), the Collectivist Coping Style Inventory (CCS), and Robinson's (2003) Intent to Persist Scale. Questions were tested for bias including; non-leading and non-judgmental wording of the questions asked and the response choices given. Furthermore, questions were structured in a manner that allowed for respondents to accurately

reflect on their true perceptions (Creswell, 2014; DeLeeuw, Hox, & Dillman, 2008; Krathwohl, 2009; Vogt, 2005).

The validity and reliability of the CCAS was examined during the pilot study and the items where validity and reliability was not established were eliminated from the instrument. In an effort to minimize the threats to validity and to establish that the revised CCAS is a well-designed instrument, external reviewers, outside of the primary researcher, along with members from the University Office of Global Programs (UOGP) and the Directorate of International Student & Scholar Advising (DISSA) reviewed, assessed and substantiated the survey instrument as valid (Gliner, Morgan, & Leech, 2009).

Reliability

Reliability focuses on the consistency of measurement. Evidence of reliability is established when a measure, test, or observation is repeated consistently over time and achieves highly similar results (Creswell, 2014; Krathwohl, 2009; Vogt, 2005). There are three formulas that measure internal reliability; Spearman-Brown, Kuder-Richardson, and Cronbach's Alpha (Morgan, Leech, Gloeckner, & Barrett, 2011). Cronbach' Alpha is considered more versatile than the other two formulas and is generally used when testing items that have more than two answers (Vogt, 2005). For this study, Cronbach's Alpha was the only formula used to assess the internal consistency of the instrument (internal reliability).

<div align="center">

Data Collection

</div>

Participants were identified and recruited with the help of the University's Office of Global Programs (UGOP) and the Directorate of International Student & Scholar Advising Office at the institution (DISSA). Using a population sample, students were sent an electronic letter inviting them to complete the survey (Appendix B). The invitation letter was sent on behalf

of the UGOP, DISSA and the Division of Student Affairs and contained the criteria for

participation in the study as well as the electronic link to the survey.

Data was collected between April and May, 2014. Participants were emailed the

invitation to participate reminder on three different occasions between April and May, 2014.

Participants had three weeks to complete the survey and were not offered any type of incentive

for completion. Data was collected using Qualtrics, an on-line survey tool, downloaded into a

Microsoft Excel spreadsheet, and imported into SPSS Statistics 22 for analysis.

Consideration of Human Subjects

Prior to initiating this study, an application and summary of the research design was

submitted to the Institutional Review Board (IRB) at Colorado State University and at The

Pennsylvania State University. All participants were informed of their rights and voluntary

nature of their involvement in the study. In addition all participants were informed of their

confidentiality, data security, and anonymity.

Data Cleaning

Initial data cleaning/coding. Cleaning of the original data set resulted in a reduction of

the sample size from the initial 167 to the final 133 respondents. The data cleaning was done in

three stages. In the first stage a search for duplicate cases was conducted. Based on the analysis

no duplicate cases were identified. The second phase consisted of removing those who had not

given consent and those who identified as less than 18 years of age at the time of the survey, 8

cases were removed. The last phase included removing 26 incomplete surveys because no

valuable information was collected.

The responses were also initially recoded to address write-in options. Write-in responses

were examined and where possible recoded into existing categories or categories were created to

include responses. Recoding was also done to address skip logic errors. The survey used the following skip logic. Respondents were automatically skipped past questions that did not pertain to them based on their answer to a specific question. Recodes were created to collapse variables, put variable categories into larger groups, and to remove missing responses and skipped questions.

Additional data cleaning/coding. Additional data recoding was needed for the purpose of this study. In the secondary recoding, the first recode was the creation of a new *Major* variable called *Stem/Non-Stem*. The new variable was created by recoding the variable from the original 16 responses of what college your major is housed into a two variable response of *Stem/Non-Stem*. This created a variable where all participants would be described as *Stem/Non-Stem* for the purposes of this study.

The second recode created a new *Cultural Adjustment* variable called *Adjusted/Not Adjusted*. This new variable was created by recoding Cultural Adjustment from five possible responses into two. The next variable recoded in this phase was *Where Learned*. This new variable was created by recoding *Where Learned* write-in responses into two categories; *China* or *United States*. The last variable recoded in this phase was *How Learned.* This new variable was created by recoding *How Learned from* six possible responses into two; *West or Non-West*. The final recoding was a reverse coding process to ensure that the responses for the Likert-type questions were all in the same direction, with 1 representing the least desired or negative response while 5 represented the most desired or positive response.

Data Analysis

Statistical techniques are methods that enable the investigator to answer questions about possible patterns in empirical data (Krathwohl, 2009). The statistical techniques used for this

study were Factor Analysis, Analysis of Variance (ANOVA) and Logistic Regression Analysis. Prior to reviewing the process of analysis it is important to fully understand the purpose of each analysis. Each analysis is explained in greater depth in the following sections.

Factor Analysis

Factor analysis served as an introduction to more widespread investigations of constructs (Cattell, 1966; Nunally, 1978). Factor analysis is a method of analysis that allows researchers to reduce a larger number of variables to a smaller number of variables (Vogt, 2005). This variable reduction is facilitated by studying the pattern of relationship among many dependent variables. The goal is to discover something about the nature of the independent variables, even those not measured directly, that affect the dependent variables (Cattell, 1966, Darlington, 2013; Nunally, 1978).

Factor analysis is a technique used to determine how well a set of survey questions combines to measure an underlying construct by measuring how similarly respondents answer them. It is used to determine the number of constructs described by the items in question and examine or verify their meaning, as well as reduce the number of items necessary to adequately measure those constructs (DeVellis, 2003; Garson, 2010).

Factor analysis also provides clarification of the constructs by focusing on the relationships among variables and the output can be used in subsequent analyses (Field 2000; Koostra, 2004; Nunnally, 1978). For this project exploratory factor analysis and confirmatory factor analysis was conducted to assist in the examination of cultural adjustment as measured by intent to persist. English language proficiency, cultural values, and campus preparedness were the variables that were used for both the exploratory and confirmatory analyses.

Exploratory factor analysis was conducted to discover what underlying variables (factors) were behind a set of variables (Vogt, 2005). The exploratory analysis for each of the three variables used *r* Factor Loadings with an Eigen plot, an extraction of Principal Axis Factoring (PAF), an Oblimin (0) rotation, and a method of Correlation.

Confirmatory factor analysis was then conducted to test the hypothesis about the factors in question (Vogt, 2005). The confirmatory analysis used the same *r* Factor Loadings except the method was Covariance. Correlation is used to determine the extent to which two or more things are related to one another. The change in one variable effects change in another. It is important to note however, that correlation does not necessarily mean causation (Vogt, 2005). Covariance, on the other hand, means that each variable changes in the same manner (Vogt, 2005). The analysis was standardized (.0) with a mean (0) and a standard deviation (.1). The results of the exploratory and confirmatory factor analyses can be found in Chapter 4.

Analysis of Variance (ANOVA)

Analysis of Variance (ANOVA) is a test of the statistical significance of the differences among mean scores of two or more groups on one or more variables. More specifically, ANOVA is used to "assess the statistical significance between categorical/independent variables and a continuous/dependent variable" (Vogt, 2005, p. 9). ANOVA allowed the researcher to separate the variance (distribution of scores) of the study to find the part that is attributable to each of the variables (Krathwohl, 2009). If the ANOVA is statistically significant, the researcher will know that there is a difference somewhere but not know which pairs of means were significantly different (Morgan, Leech, Gloeckner, & Barrett, 2011).

Research questions 1 and 2 used an independent variable as the predictor, so a One-Way ANOVA was used to answer each question. Prior to conducting the ANOVA's the data was

adjusted (weighted) using a Chi-Squared test. This process allowed for the data to reflect the differences in the number of population units that each case represented (Vogt, 2005). Question #1 had an assumption of equal variance so a Tukey Post Hoc test was used to determine which means were significantly different. Question #2 had an assumption of unequal variance so a Tamhane's (T2) Post Hoc test was used. The results of the ANOVA's can be found in Chapter 4.

Regression Analysis

Regression analysis is the most widely used non-experimental data analysis technique. It is an examination of the relationship between two quantitative variables that allows for the recognition that some relationships might be more predictable than others (Allen, 1997; Creswell, 2009; DesJardins, 2001; Garson, 2009; Gliner, Morgan, & Leech, 2009; Karthwohl, 2009; Menard, 2002). Logistic regression analysis however, is typically used for predicting whether something will happen or not, in this case, cultural adjustment. Cultural adjustment was operationalized cultural adjustment by intent to persist.

Regression analysis allows an estimation of this relationship between two variables by allowing assessment of how accurately an independent variable predicts a dependent variable. Regression analysis enables the researcher to "determine the proportion of the variation in the dependent variable that can be accounted for by the variation in the independent variable" (Allen, 1997, p. 3). Finally, regression analysis can determine whether or not a particular relationship is statistically significant (Allen, 1997; Creswell, 2009; Gliner, Morgan, & Leech, 2009).

Allen (1997) stated that regression analysis is often considered one of the most useful and powerful statistical techniques. Regression analysis can assess the probability that the observed relationship between two variables, in a given sample, will also be applicable to the population

as a whole. Simply put, regression analysis is a mathematical model used to describe and analyze distinct types of patterns in empirical data.

Logistic Regression Analysis. Logistic regression is an alternative to linear regression because it is based on the ratio of the odds of success to the odds of failure. Logistic regression is the analytic method used most often in higher education research studies because researchers typically study outcomes that are dichotomous (DesJardins, 2001; Garson, 2009; Vogt, 2005). Logistic regression is designed to estimate the odds of a certain event occurring (Garson, 2009; Vogt, 2005). This type of analysis is based on transforming the dependent variable data which "yields a probability of an event; that probability is then transformed into a coefficient that represents the effect of a one-unit change in an independent variable on a dependent variable" (Vogt, 2005, p.179).

Logistic regression analysis is becoming a preferred method of analysis because it requires fewer assumptions than other types of analyses (Menard, 2002, Vogt, 2005). For example, logistic regression does not assume a linear relationship between the independent variables and the dependent variables. It does not require normally distributed variables, does not assume homogeneity of variances, and has less stringent requirements than other types of regression (DesJardins, 2001; Garson, 2009).

Based on research question #3, the predictor variables used for the logistic regression included; sex (male/female) major (stem/non stem), and time in the U.S. In an effort to ensure that the predictor variables correlated with the outcome, additional predictor variables were added to the regression. These included; academic standing, friendship, adjustment to the University, and English language proficiency. The unstandardized coefficients listed in the table may be interpreted similarly to those produced by linear regression methods, but because of the

nature of the logistic regression equation, the results are in terms of log odds. The results of the

logistic regression analysis can be found in the following chapter.

Limitations

The limitations of this study are related to the population being studied and the method of

exploration. This study was limited to undergraduate students between the ages of 18-24 who

originated from China and were in the United States on an F1 Visa. In addition, only those

students enrolled, in the spring 2014 semester, at a large, public, research, university located in

the Mid-Atlantic region of the United States were invited to participate in the study. Only the

relationships between gender, academic major, English language proficiency, cultural values,

acculturative stress social/academic expectations, campus preparedness and cultural adjustment

were examined.

Data collected from respondents not indicating their gender, their F1 Visa status, and/or

indicating less than 18 years of age or 25 and older were not considered for this study. The

participants' understanding of or lack thereof, the English language, may have resulted in

additional stress and confusion when interpreting the intended connotation of the survey

questions. Additional limitations related to survey methodology are discussed in the next

section.

Instrumentation

When using survey methodology, there are three significant limitations that should be

addressed. These limitations include; the applicability of generalized responses, authentic

reporting of experience, and instrumentation. Surveys do not provide strong evidence of cause

and effect because they are typically used to collect data at a single point in time, making it

difficult to measure changes in the population (Creswell, 2009). Surveys in general use an

unbiased approach employ statistical procedures (Creswell, 2009). Surveys however, do not allow for participants to share their lived experiences in a manner that provided an in-depth understanding of their cultural adjustment challenges (Yan & Berliner, 2013, Creswell, 2009).

The response rate was 10% and while seemingly low is consistent with the expected response rate for a web-based survey (Dillman, 2000). In addition, this study used a relatively homogeneous and convenient sample and may not accurately represent the population being studied. This may lead to biased estimates (Johanson & Brooks, 2010). The results of this study are not generalizable across the entire population of Chinese international students because of the small sample size (N=133) and because only one type of institution was measured. Finally, the researcher must believe that the respondents provided honest and accurate responses to the survey questions. A more robust study is needed to provide ample evidence for generalization. There are also limitations associated with the data analysis techniques used for this study and they are discussed in the next section.

Data Analysis

The data analysis techniques used also present potential limitations. One of those limitations is related to factor analysis. According to Darlington (2013) factor analysis is unlike other statistical methods and does not study the relationship between independent and dependent variables. The other limitations are directly related to regression analysis. When choosing to use regression analysis the investigator is forced to impose a specific set of assumptions on the data. These assumptions may not be particularly rigorous or appropriate for all problems being examined (Allen, 1997).

One of the limitations associated with using logistic regression is interpreting the results of this technique (DesJardins, 2001). For example, the effects of the independent variables can

be interpreted a number of different ways and this can be problematic when there is a negative

relationship between the independent and dependent variable (DesJardins, 2001). The methods

used for the data analysis are driven by the data and the researcher will make every effort to use

analyses that do not violate any of the assumptions. Information that resulted from the data

collection and analysis is presented in greater detail in Chapter 4.

CHAPTER 4: RESULTS

The purpose of this study was to examine the factors that influence the cultural adjustment of undergraduate Chinese international students enrolled in a large, public, research university located within the Mid-Atlantic region of the United States. The Chinese Cultural Adjustment Survey (CCAS) was designed to elicit answers to the following questions:

1) What is the relationship between English language proficiency and how English was learned by Chinese international students?

2) What is the relationship between the cultural values of Chinese international students and their cultural adjustment?

3) What is the relationship between gender, academic major, time in the U.S and the cultural adjustment of undergraduate Chinese international students?

As described in Chapter 3, data were gathered from undergraduate Chinese international students 18-24 years of age and enrolled in a large, public, research university. Data collected were cleaned, summarized, and analyzed using SPSS 22 for Windows. This chapter is organized by (1) descriptive statistics, (2) factor analysis, (3) bivariate relationships, and (4) binary logistic regression.

Description of the Sample

During the 2013/14 academic year, the University that served as the foundation for this current study had a total enrollment of 45,518 with 6,076 international graduate and undergraduate students. Approximately 2,375 (39%) of the 6,076 international student population were from China. The total undergraduate Chinese student population was 1,310;

725 women and 585 men. The final response rate was 10% (N = 133). The response rate is discussed in greater detail in the limitations section of Chapter 5.

The respondents included 50 men (37.6%) and 83 woman (62.4%); 116 (87%) were between 18 and 21 years of age. By academic standing 23% (n = 31) of the respondents were first-year students, 28.6% (n = 38) were sophomores, 23.3% (n = 31) were juniors, and 20.3% (n = 27) were seniors. When examining the respondents by academic major 38.1% *(n = 45)* of the participants identified as STEM majors, while 61% (n = 72) identified as Non-STEM majors. In an effort to provide a more robust description of the sample, additional demographic data were collected and presented in Table 4.1.

Additional demographic data collected included TOEFL scores. The average TOEFL score for, first-year, Chinese international students admitted to the University in the fall 2013 semester was 98 (Office of Undergraduate Admissions). The participants in this study reported TOEFL scores in the following ranges; 21.1%, 80-90 (n = 28), 48.1%, 91-100, (n = 64), and 21.1%, 101-110, (n = 28). It is also important to note that 97.7% (n = 120) of the study's participants indicated that English was not their native language and that 97.4.7% (N = 133) have been in the United State between 1 and 5 years. Demographic details are provided in Table 4.1.

Table 4.1

Demographic Characteristics of Participants (N =133)

Characteristic	N	%
Sex		
Male	50	37.6
Female	83	62.4
Age		
18	26	19.5
19	39	29.3
20	27	20.3
21	24	18.0
22	8	6.0
23	6	4.5
24	3	2.3
Time in U.S.		
< 6 Months	3	2.3
6 Months-1 Year	27	20.3
1-2 Years	38	28.6
2-3 Years	22	16.5
3-4 Years	24	18.0
4-5 Years	16	12.0
5 or More Years	3	2.3
Academic Standing		
First-Year	31	23.3
Sophomore	38	28.6
Junior	31	23.3
Senior	27	20.3
5th Year Senior	3	2.3
Graduate Student	3	2.3
TOEFL Score		
80-90	28	21.1
91-100	64	48.1
101-110	28	21.1
111-120	1	.8
Don't Remember	12	9.0
English is Native Language		
Yes	1	.8
No	111	99.1
Major		
STEM	45	38.1
Non-STEM	72	61.0

Note. Totals of percentages are not 100 for every characteristic because of rounding. Totals do not add to total sample because of respondent option not to answer every question.

Factor Analysis

As previously mentioned, a factor analysis was conducted to provide clarification of the constructs by focusing on the relationships among variables. Factor analysis is used to determine how well a set of survey questions combine to measure an underlying construct by measuring how similarly respondents answer them (Cattell, 1966; Darlington, 2013; DeVellis, 2003; Garson, 2010; Nunally, 1978). Exploratory and confirmatory factor analysis were performed on the following variables; English Language Proficiency, Cultural Values, and Campus Preparedness. The next sections provide an overview of the factor analysis for each variable.

English Language Proficiency

Through exploratory and confirmatory factor analysis I was able to reduce the number of variables used to represent the construct of "English Language Proficiency" from ten to one. This variable was derived from four question sections. The first question asked participants to describe their experience with English. Respondents were asked to answer "*Yes*" or "*No*" to each of the following statements:

- English is my native language
- I learned English at the same time as my native language
- I learned English as a second language

The second question asked participants to select the response that best represented how they learned English. Respondents were asked to select the best response from the following list:

- A Chinese teacher teaching English
- Watching Western television shows
- A native English speaker teaching English
- Enrolling in ESL classes
- Family Taught
- Attending high school in the United States

Prior to performing the exploratory analysis the "How Learned" variable was regrouped into two categories indicating whether the English language instruction was clearly Western-based (from

72

watching Western television, a native English speaker, or attending high school in the U.S.) or not (a Chinese teacher, family taught, or ESL classes).

The third question consisted of nine statements that related to the participant's comfort with the English language. Respondents were asked to mark their response on a Likert-metric of 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). The statements were:

- I feel nervous when communicating in English
- I am confident in my ability to work successfully with American students on a group project
- I am confident when asking questions in class
- I am confident contributing to class discussions
- I am confident in my ability to speak English in front of groups of non-Chinese students
- I am confident in my use of English in social settings
- I feel confident speaking English in my classes
- I feel confident speaking English when meeting people who are not from China

The fourth and final English Language question was one statement that asked respondents to select the response that best described their English language proficiency. Respondents were asked to mark their response on a ranked order metric of 1 (*No Proficiency*) to 5 (*Extremely Proficient*).

The Kaiser Criterion and Scree Plot from the exploratory factor analysis indicated the existence of one factor that explained 64.1 % of the variance. The variable related to how English was learned (Western or nonwestern sources) did not load onto the factor (loading = .047) and was removed from the subsequent confirmatory factory analysis.   Figure 4.1 represents the Scree Plot from the confirmatory factor analysis for English Language Proficiency.
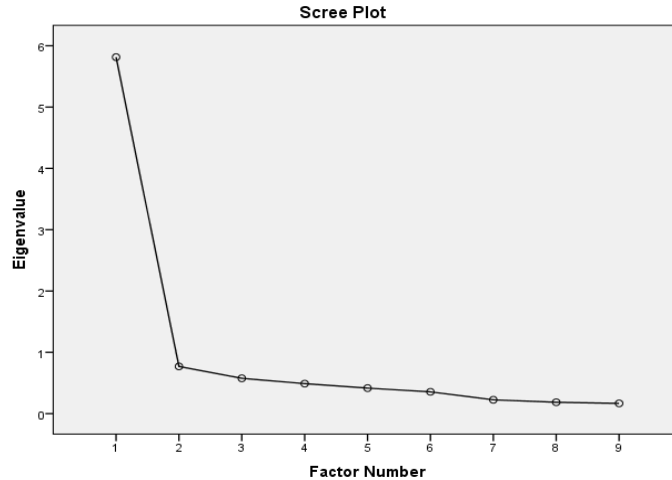
Figure 4.1 *Plot of Eigenvalues From Confirmatory Factor Analysis of the English Language Proficiency Variables*

The results of the confirmatory factor analysis confirmed the existence of a single factor representing all nine variables that explained 64.6% of the variance (Table 4.2). The internal consistency reliability (Cronbach's alpha) of the factor was high at .930. The reliability does not substantially increase if any additional items are deleted from the factor.

Table 4.2 *Confirmatory Factor Analysis of English Language Proficiency*

Factor	% Variance		Cronbach's α
English Language Proficiency	64.6		.930
Variables	Factor Loading	Mean	Std. Deviation
Asking questions in class	.928	3.35	1.06
Nervous communicating in English	.878	3.42	1.06
Working on a group project	.861	3.50	.990
English in social settings	.843	3.59	.993
Contributing to class discussions	.804	3.46	1.00
Speaking English with people not from China	.737	3.83	.917
Speak English in front of non-Chinese students	.727	3.47	1.11
Speaking English in class	.723	3.62	.975
Level of proficiency	.489	2.84	.860

As a result of the factor analysis a new variable was created that was entitled English Language Proficiency Factor. The variable was fully standardized to produce a mean of zero and a standard deviation of one. A histogram of the English Language Proficiency Factor variable is

provided in Figure 4.2. This new variable represented the students' level of English Language

Proficiency in the ANOVA and Logistic Regression analysis. The results of which are

summarized later in this chapter.
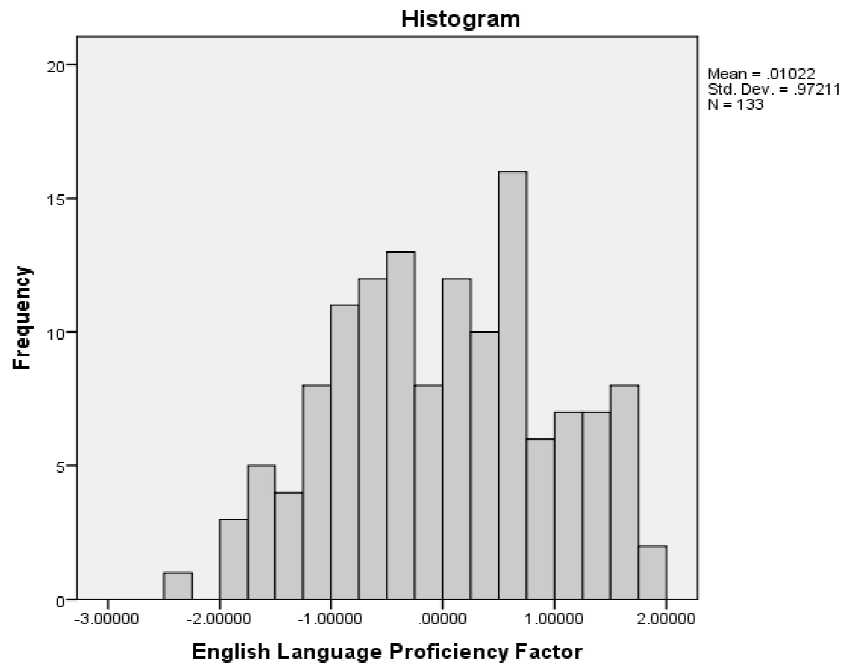
Figure 4.2 *Histogram of English Language Proficiency Factor Variable*

Cultural Values

Exploratory factor analysis was performed on the 15 cultural value variables.

Four of these variables were derived from a series of statements:

- I feel uncomfortable adjusting to new surroundings where the cultural values are different from those in China
- I feel a strong sense of belonging (community) as a student at this University
- I feel some people do not want to befriend me because I am from China
- I would feel comfortable seeking assistance from Counseling & Psychological Services (CAPS) to help me cope with the stresses associated with being an international student from China

The participants were asked to mark their response on a Likert-metric of 1 (*Strongly Disagree*) to

5 (*Strongly Agree*). The remaining 11 variables were derived from a single, stand-alone question

75

followed by a series of ten statements relating to the respondents reasons for not interacting with American students. The stand-alone question was "How often do you try to befriend American students?" and was measured on a ranked order metric of 1 (*Never*) to 5 (*Always*). The respondents were asked to rank ten reasons for not befriending Americans in order of highest (1) to lowest (10). The statements included:

- I am afraid of being made fun of
- I am not comfortable with my proficiency of the English language
- I am only comfortable interacting socially with other Chinese students
- I think American students are disrespectful
- I do not understand the social behaviors of American students
- I devote all my time to my academics
- I feel disliked by American students – like I do not belong here
- I feel American students are not interested in getting to know me
- I am unsure what social settings typically attract American students
- I have no desire to interact with American students

The exploratory factor analysis halted with an error that the Matrix was not positively defined. This was most likely because of the linear combination of ten variables reporting students' reasons for not befriending Americans (Barratt & Huba, 1994; Yan & Berliner, 2013). Any one question could be predicted once responses to the other nine were known. The follow-up action was to remove one of those variables.

The "Comfort with the English language" variable was removed because it was already addressed in the English Language Proficiency Factor. This time the factor analysis stopped with an ultra-Heywood error (resulting from the communality of a variable exceeding its variance) (SAS Institute Inc, 1999).

In an effort to address the ultra-Heywood error, I consulted a colleague, Dr. Dan Merson, who had previously encountered this error and suggested that I run an image factor analysis. Instead of using the variable correlation or covariance matrix, an image analysis is based on the

correlation matrix of variables predicted from the others using multiple regression (Garson, 2010; Merson, 2011).

The exploratory factor analysis completed with the Kaiser Criterion indicated nine factors however, the Scree plot showed only seven. Those seven factors were extracted and rotated which resulted in many low factor loadings, and single-item factors. Items that loaded <.4 were removed (NoCounsel=.126, ValuesDifferent=.375, CAPS=-.304, Belonging=.271, NoBefriend=.289, Afraid=-.388, SocialBehaviors=-.280, Unsure=.388) and the factor analysis was re-run.

The new Kaiser criterion indicated six factors and the Scree plot five. The Structure matrix showed five factors, but the Pattern matrix had no factors with two items loading at less than .4. In order for a factor to make sense there needs to be two or more items. The conclusion from this analysis was that no factor solution is possible. Confirmatory factory analysis, a test for reliability and the creation of a Cultural Values Factor were not run because it was not possible given the result of the exploratory analysis. Instead, the single variable "Values" was used in subsequent analysis pertaining to cultural values.

Campus Preparedness

Exploratory factor analysis was performed on the six campus preparedness variables. These variables were derived from the following statements which represented students' beliefs about the extent that this University had helped them to:

- Adjust to college
- Adjust to the United States
- Cope with the academic stress associated with being an international student
- Cope with the cultural stress associated with being an international student
- Cope with the social stress associated with being an international student
- Gain confidence in your ability to speak English

Respondents were asked to mark their response on a rank order metric of 1 *(Not at All Helpful)*

to 5 *(Extremely Helpful)*. The Kaiser Criterion and Scree Plot indicated the existence of one

factor with six items that explained 73.4% of the variance (Figure 4.3).
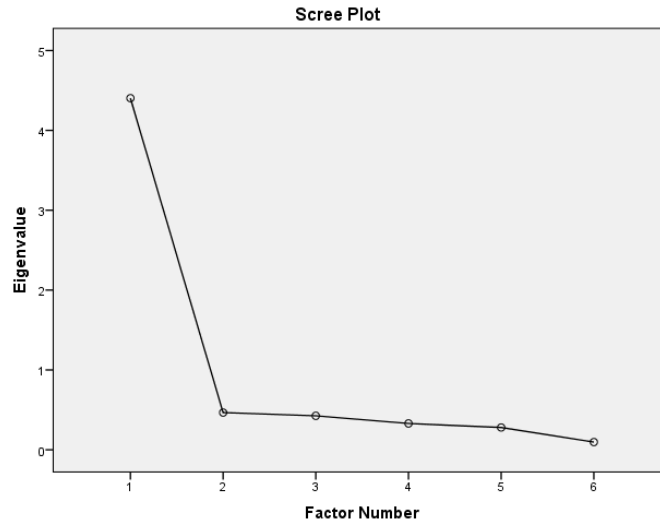
Figure 4.3 *Plot of Eigenvalues From Confirmatory Factor Analysis of the Campus Preparedness Variables*

The results of the confirmatory factor analysis confirmed the existence of a single

factor representing all six variables that explained 93.7% of the variance (Table 4.3). The

internal consistency reliability (Cronbach's alpha) of the factor was high at .923. The reliability

does not substantially increase if any additional items are deleted from the factor.

Table 4.3 *Confirmatory Factor Analysis of Campus Services*

Factor	% Variance		Cronbach's α
Campus Preparedness	.937		.923
Variables	Factor Loading	Mean	Std. Deviation
Social Stress	.898	2.76	1.06
Cultural Stress	.868	2.83	.982
Adjust to U.S.	.842	3.03	1.02
Academic Stress	.799	2.96	.988
Confidence in Speaking English	.751	3.16	1.02
Adjust to College	.742	3.14	.979

As a result of the factor analysis a new factor was created that was entitled Campus Preparedness Factor. The variable was fully standardized to produce a mean of zero and a standard deviation of one. A histogram of the Campus Preparedness Factor is provided in Figure 4.4. This new variable represented the students' beliefs about Campus Preparedness in the ANOVA and Logistic Regression analysis. The results of which are summarized later in this chapter.
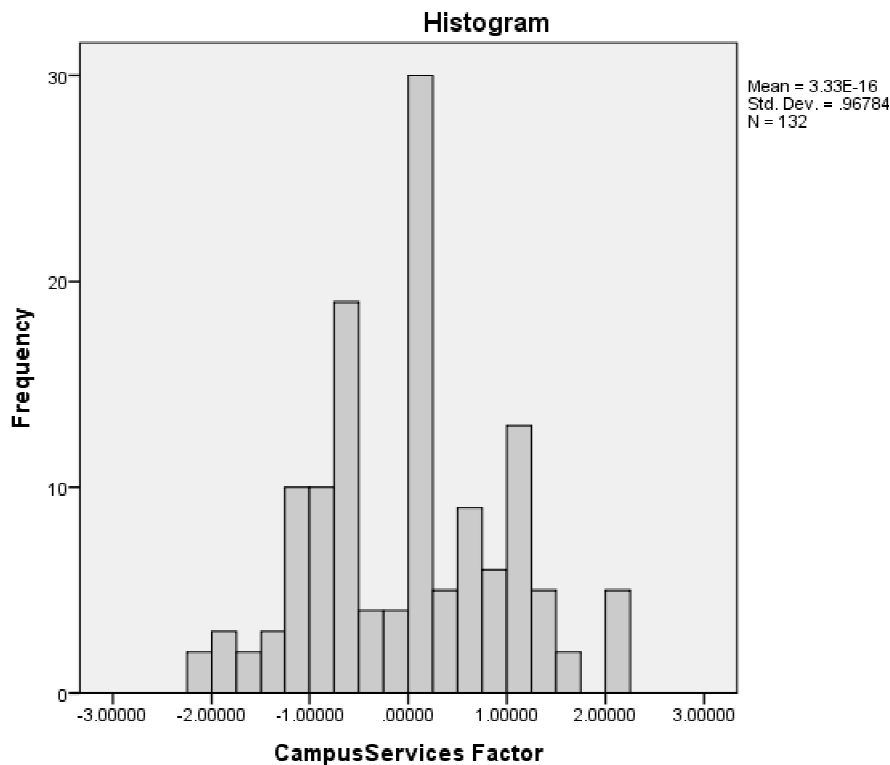
Figure 4.4 *Histogram of Campus Services Factor Variable*

Research Question 1 Results

What is the relationship between English language proficiency and how English was learned by Chinese international students?

To answer research question one, a One-Way Analysis of Variance (ANOVA) was performed on the dependent variable, English Language Proficiency Factor and one independent variable, how English was learned (watching Western television, a native English speaker,

attending high school in the U.S., or a Chinese teacher teaching English). English Language

Proficiency varied among four methods of how students learned English ($F_{(3,140)} = 3.16$ p <.05)

(Table 4.4).   In particular, the Tukey post-hoc test indicated a single difference with a p-value

less than .05. The result suggested that students who watched Western television (x□ = 0.62)

scored one standard deviation higher in English Language Proficiency than those who had a

native English speaker as their teacher (x□ = 0.38, *p* < .05).

Table 4.4 *Analysis of Variance for English Language Proficiency (ELP) by How English Was Learned*

ELP	How Learned	Sum of Squares	Df	Mean Square	F-Value	Sig
	Between Groups	9.20	3	3.07	3.16	.027
	Within Groups	136.09	140	0.97		

Research Question 2 Results

What is the relationship between the cultural values of Chinese international students

and their cultural adjustment?

To answer research question two, a One-Way Analysis of Variance (ANOVA) was

performed on the outcome variable, cultural adjustment and the independent variable, cultural

values (values different from China, sense of belonging, no friends, and use of counseling

/psychological services). As stated in the Methodology chapter, cultural adjustment was

operationalized as intent to graduate. Cultural adjustment varied among undecided or graduate

($F_{(4,134)} = 2.54$ p<.05) (Table 4.5).   The Tamhane (T2) post-hoc test indicated that two pairs of

groups had a significant difference with a p-value less than .05. The result suggested that

students who agreed or strongly agreed that they felt uncomfortable adjusting to new

surroundings where the values are different from those in China were twenty percentage points

more likely to plan to graduate (x□ = 1.00 in both cases) compared to those who neither agreed

nor disagreed about being uncomfortable (x□ = 0.80, p < .05)

Table 4.5   *Analysis of Variance for Cultural Adjustment by Cultural Values*

Cultural Adjustment	Cultural Values	Sum of Squares	df	Mean Square	F-Value	Sig
	Between Groups	0.77	4	1.93	2.54	.043
	Within Groups	10.16	134	0.08		

Research Question 3 Results

What is the relationship between gender, academic major, time in the U.S and the cultural adjustment of undergraduate Chinese international students?

To answer research question three, a Binary Logistic Regression Analysis was performed to predict cultural adjustment. Cultural adjustment as an outcome variable was operationalized by measuring "intent to graduate." The predictor variables included; sex (male/female) major (STEM/Non-STEM), and time in the U.S. in years. Control variables were added to help isolate the unique contributions of the variables of interest. These included; academic standing, friendship, adjustment to the University, and English Language Proficiency.

The regression model was significant (LR $\chi^2_{(7)}$ = 16.30, P < .05), with a goodness-of-fit Nagelkerke Pseudo R^2 of 0.28. The log likelihood for the observed data was maximized at -57.40 (Table 4.6). The coefficients and odds ratios listed in Table 4.6 indicate the effect of a change in each estimator on the probability (or odds) of a Chinese international student becoming culturally adjusted to life in the United States, as indicated by their stated intent to graduate.

Table 4.6 *Binary Logistic Regression Analysis of Cultural Adjustment by Sex, Major, Time in U.S., Academic Standing, Friendship, Adjustment to the University, and English Language Proficiency*

Variable	B	SE	Wald statistic	P	OR	Inverse OR
Male	-1.064	.749	2.02	.156	0.345	2.03
STEM Major	-0.201	.758	0.07	.791	0.818	1.22
Years in U.S.	-0.709	.289	6.04	.014*	0.492	2.03
Academic Standing	0.751	.360	4.37	.037*	2.119	
Friendship	-0.016	.947	.000	.986	0.984	1.01
Adjustment to the University	-1.036	.961	1.16	.281	0.355	2.81
English Language Proficiency	0.863	.438	3.88	.049*	2.370	
Constant	4.207	1.76 5	5.69	.017*	67.157	
Likelihood Ratio Chi-square = 16.30*			Pseudo R^2 = 0.28			

*$p<.05$

The unstandardized coefficients listed in the table may be interpreted similarly to those produced by linear regression methods, but because of the nature of the logistic regression equation, the results are in terms of log odds. For example, each additional year of academic standing increases by .75 units the log odds of a student being sure they will graduate from college. Such descriptions are difficult to interpret. Therefore, it can be easier to understand logistic regression results that are reported in terms of odds ratios (DesJardins, 2001).

Odds ratios are the comparison of the probability of one event occurring versus another. One may use odds ratios to report effect size in a similar manner to the regression coefficients (DesJardins, 2001). In fact, the coefficients (β) are the natural logs of their respective odds ratios. Odds ratios (OR) can be produced from coefficients by performing the following transformation: OR=e$^\beta$. Using the previous predicator as an example, one may report that, "The odds of an international Chinese student being sure that they will graduate from college more than doubles (OR = 2.11) for each additional year of academic standing. In the same manner, one can report that the odds of a Chinese student becoming culturally adjusted to the University increases by 2.4 times (OR = 2.37) for each standard deviation increase in English Language Proficiency.

In order to compare the relative effect of odds ratios greater than one to those less than one, a researcher can take the inverse of one set of odds ratio (DesJardins, 2001). For example, the negative effects of number of years in the U.S. can be compared to the positive effects of academic standing and English Language Proficiency by taking the inverse of the OR for the predictor with a negative coefficient (Years in the U.S.). So, the negative effect on the odds of persistence with each additional year in the U.S. (Inverse OR = 2.03) is close to that of each additional year of academic standing (OR = 2.12), while both are slightly lower than the positive effect of higher English Language Proficiency (OR = 2.37).

There are two ways to report the negative effect of the number of years in the U.S. One way is to say that for each additional year in the U.S., the odds of students being unsure about graduating doubles (Inverse OR = 2.03). The other way to think about the result is to use the original Odds Ratio and say that for each year in the U.S. students are half as likely (OR = 0.49) to say they are sure they will persist.

Interpretations of these findings and implications for policy, practice, and further study are presented in Chapter 5.

CHAPTER 5: DISCUSSION

According to the review of literature research on international students has been conducted by combing international students together as one single population. There is limited empirical research focused on Asian international students but not specifically on Chinese students (Yan & Berliner, 2013). The purpose of this study was to examine the factors that influence the cultural adjustment of undergraduate Chinese international students. Specifically it was meant to understand the relationship between distinctive factors and cultural adjustment.

Astin's (1993) Input-Environment-Output (I-E-O) model offered a means by which to examine these factors. For this study the input variables represented the control variables. The input variables were; gender, academic major, time in U.S., English language proficiency, and cultural values. For this project there were three environmental variables; acculturative stress, social/academic expectations and adjustment, and campus preparedness. Finally the outcome variable for this study was cultural adjustment measured by intent to persist.

The following sections offer the influences of the conceptual framework, informational components/constructs, implication of findings, implications for practice, implications for future research, and personal observation.

Influences of the Conceptual Framework

The conceptual framework used for this analysis was grounded in Astin's (1993) Input-Environments-Output (I-E-O) Model. This model was used "to control for initial input differences among the students by means of multivariate analysis" (Astin, 1993, p. 28). There were three informational components of the model; the inputs, the environment, and the outputs.

Based on the review of literature the I-E-O model was used in an effort to effectively synthesize and better understand the factors that influence cultural adjustment. The decision to use this model is further supported by Robinson (1996) and Tinto (2006) because the environment at a particular institution, the relationship between individuals and society, plays a significant role in a student's decision to stay or leave their current institution.

Inputs (I) represented the personal qualities and skills that the student possessed and brought into the assessment environment just as the participants brought their English Language Proficiency and cultural values (Astin, 1993). Environments (E) represented the students' actual experiences, like their exposure to acculturative stress, social/academic expectations, and campus preparedness (Astin, 1993). Outputs (O) represented the skills/knowledge to be developed through exposure to the assessment environment (Astin, 1993). This analysis attempted to demonstrate the impact the environmental variables had on cultural adjustment while keeping the input variables of English Language Proficiency and cultural values in perspective.

The I-E-O model offered a framework for this study and was adapted in an effort to provide a visual snapshot of the factors that influence the cultural adjustment of Chinese international undergraduate students. The input variables; gender, academic major, time in U.S., English language proficiency, and cultural values, in turn influence the environmental variables of acculturative stress, social/academic expectations and adjustment, and campus preparedness. The environmental variables in turn influence cultural adjustment of Chinese international students as measured by intent to persist.

Informational Components/Constructs

This study was designed to examine the factors that influence cultural adjustment. Three constructs were used to guide this research. These constructs enabled the researcher to better understand the relationship between the factors and the desired outcome, cultural adjustment. The research questions were designed using the three constructs as a guide. These constructs were present in each research question and at times it became difficult to differentiate between them. The first research question provided foundational information for the study about the relationship between English Language Proficiency and how English was learned. The second and third questions were asked to further explore the ways in which individual factors influenced cultural adjustment.

Acculturative Stress

This construct was defined as the psychological difficulties in adapting to a new culture, or psychosocial stressors resulting from unfamiliarity with new customs and social norms (Berry, 1977; Church, 1982; Lin &Yi, 1997). The construct of acculturative stress was present in each of the three research questions. The first question focused on the relationship between English Language Proficiency and how English was learned. Language deficiency is considered the "most important determinant of international student problems" because it affects every other problem area (Owen, 2008, p. 51). Therefore one can conclude that acculturative stress is heightened by a lack of English Language Proficiency.

The second research question focused specifically on the relationship between cultural values and cultural adjustment. Chinese students in the U.S. encounter a culture very different from their own. Their level of acculturative stress and ability to cope are influenced by the characteristics of the individuals as well as their cultural values (Berry, 1977; Yan & Berliner,

2011). Feeling uncomfortable adjusting to new surroundings where the values are different from those in China heightens the level of acculturative stress. This question also provided some insight into the differences between academic, cultural, and social stresses.

The third research question focused on the relationship between specific independent variables (gender, academic major, and time in the U.S.) and cultural adjustment. Though these variables were independent they each contribute to a student's level of acculturative stress. Due to their cultural backgrounds, traditions, and family influence, Chinese students have more difficulties in their adaptation and adjustment to U.S. culture and campus life than other international students (Henderson, Milhouse, & Cao, 1993).

International students retain their cultural identities even after spending considerable time in the United States. Despite retaining their cultural identities, there is a positive relationship between the length of time spent in the U.S. and international students' successful cultural adaptation (Heikinheimo & Shute, 1986; Hull, 1978; Lacina, 2002; Surdam & Collens, 1984; Yan & Berliner, 2009; Yang, Harlow, Maddux & Smaby, 2006).

Social/Academic Expectations/Adjustment

International students arrive in the U.S. unacquainted with American customs and formalities which often results in a tremendous amount of stress as they begin to adapt to a new culture. The social and academic expectations and adjustment of international students are informed by their English language proficiency (Li, Fox & Almarza, 2007). International students expect that their social lives will be enhanced by their ability to quickly establish friendships with American students. It is however not uncommon for American students to show indifference toward international students simply because they lack proficiency with the English language (Hayes & Lin, 1994; Li, Fox & Almarza, 2007).

Limited English language abilities prolong their cultural adjustment process (Andrade, 2007; Cheng, Leong, & Geist, 1993; Hayes & Lin, 1994). Because it affects every area related to cultural adjustment, language deficiency is the single-most significant factor influencing the adjustment challenges faced by international students (Owen, 2008). The construct of social/academic expectations and adjustment was present in each research question.

The first question focused on English Language Proficiency and its relationship to the students comfort level speaking English in a variety of academic and social settings. Chinese students reported that their lack of English language proficiency resulted in great difficulty penetrating already established social networks (Hayes & Lin, 1994; Sumer, Poyrazli, & Grahame, 2008). The social and academic expectations of international students continue to erode as they are not equipped with the familiarity with American conversational topics (Heggins & Jackson, 2003).

The second question focused on the relationship between cultural values and cultural adjustment and provided some valuable insight into the differences between academic, cultural, and social stresses. Academic success is the highest priority for Chinese students (Heikinheimo & Shute,1986). The Chinese education system is grounded in obedience and conformity resulting in the squelching of individual intellect. In addition, empathy and imagination are suppressed at an early age in China. The toughest question you can ask a Chinese student is also the easiest one you can ask an American: "What do you think?" (Xueqin, 2011).

The third research question focused on the relationship between specific independent variables (gender, academic major, and time in the U.S.) and cultural adjustment. A student's gender, academic major, and time in the U.S. are all factors that affect cultural adjustment. Lack of English language proficiency however, continues to be a challenge for these students

88

regardless of their length of stay in the United States. The challenges associated with a lack of language proficiency were especially prevalent on campuses where other than writing workshops, little to no attention is paid to the academic needs of these students (Yang, Harlow, Maddux & Smaby, 2006).

International students engaging in social activities may experience a tremendous amount of emotional stress, while the loss of social support networks results in tension and confusion (Hayes & Lin, 1994). Female students reported experiencing some value conflicts between their culture of origin and the U.S. culture related to gender role socialization. The female students also reported that they learned effective ways to more self-sufficient in attempting to address their cultural difficulties

Campus Preparedness

The number of Chinese undergraduates in the U.S. continues to increase each year. This rapid increase has caused angst at universities – many of them, big, public institutions with special English-language programs that are particularly welcoming to international students (Bartlett & Fisher, 2011). Given that international students pay the highest tuition, there needs to be an understood responsibility established that U.S. colleges and universities need to provide proper support services to help these students succeed, which will ultimately increase their retention/cultural adjustment (Owen, 2008). International students are typically excited about exploring a new culture which is a contributing factor to their desire to attend college in the U.S.

The construct of campus preparedness was also present is each research question, though more subtly than the previous two constructs. The first question focused on English Language Proficiency. As previously stated, language proficiency is the single-most significant factor influencing the adjustment challenges faced by international students (Owen, 2008). How

English was initially learned and how Chinese students continue to hone their language proficiency while in the U.S. was addressed in this question.

The second question focused on the relationship between cultural values and cultural adjustment and provided some valuable insight into why serving international students is a complex, multi-faceted function. College administrators and practitioners must become increasingly knowledgeable about the complicated process of culture shock and cultural adaptation in order to better understand the critical importance of supplying superior services to international students (Owen, 2008).

The third research question focused on the relationship between gender, academic major, time in the U.S., and cultural adjustment. Student affairs professionals are significant stakeholders in the relationship building efforts between the university and the international student population because they are charged with the responsibility to provide effective support services (Owen, 2008). The international reputation of an institution is dependent on its standard of international service. Satisfied international students and alumni will recruit relatives and friends to the United States (Dalton, 1999; Owen, 2008).

A crucial, and often over-looked, educational resource available to American students is the international student population on their campus (Owen, 2008). In general, international students are invaluable resources for American students because they bring diversity to their respective campuses. This in turn provides an opportunity for the "cultivation of cross-cultural relationships both in and outside of the classroom" (Owen, 2008, p. 49).

Interpretation and Implications of Findings

The analysis of the data included descriptive statistics, bivariate relationships, and binary logistic regression. The descriptive statistics provided more detailed information about the

sample population used in this study. The bivariate relationships measured the expected

independent, dependent or outcome variables.   With the exception of the cultural values

variable, all of the remaining variables were statistically significant in the bivariate analysis and

therefore were included in the binary logistic regression.

To conceptually frame the discussion of the findings, Astin's (1993) Input-Environment-

Outcome (I-E-O) model was used. The input variables included; gender, academic major, time

in the U.S., English language proficiency, and cultural values. The environmental variables were

the three constructs; Acculturative Stress, Social/Academic Expectations/Adjustment, and

Campus Preparedness. Cultural adjustment as measured by intent to persist served as the output

variable Figures 2.1 & 2.2

Research Question One

Within this sample of undergraduate Chinese international students, what is the

relationship between their English language proficiency and how they learned English? To be

considered truly proficient one should have advanced abilities in three areas; the ability to read,

write, and speak English. The analysis implied that English Language Proficiency is the most

statistically significant factor influencing the cultural adjustment of Chinese students. The

literature also supports the premise that limited English language abilities prolong the cultural

adjustment process. Language deficiency is the single-most significant factor influencing the

adjustment challenges faced by international students (Andrade, 2007; Cheng, Leong, & Geist,

1993; Hayes & Lin, 1994; Owen, 2008).

The relationship between English language proficiency and how English was learned

produced an unexpected finding. Students who watched Western television ($x_\square = 0.62$) scored

one standard deviation higher than in English Language Proficiency than those who had a native

91

English speaker as their teacher ($x\square = 0.38$, $p < .05$). Meanwhile, there was no statistical

significance between English language proficiency and learning English by attending high

school in the U.S, learning English from a Chinese teacher, enrolling in English as a Second

Language (ESL) classes, or being family taught.

Traditionally-aged (18-24) Chinese students admit to having been constantly exposed

to Western culture through the internet, television, and music. This constant exposure has

resulted in their heightened excitement to try new things, including a change in culture (Lazarus

& Folkman, 1984; Moran, Harris, & Moran, 2007; Olivas & Li, 2006; Sheehan & Pearson,

1992). Chinese students have a tendency to learn English in a manner similar to how they learn

more traditional subjects, like math or science, through very formal methods. This often results

in their ability to read and write English at a much higher level even though they continue to

struggle with their unfamiliarity of colloquial English (Alder, Talbot, & Greelhoed, 1998; Hull,

1978, Owen, 2008).

Based on these findings it is easy to understand why Chinese students would rely on

less formal methods to learn about Western culture and colloquial English. This unfamiliarity of

colloquial English drastically compromises their ability to socially interact with their American

peers (Hull, 1978). This analysis also suggests that language proficiency influences the level of

acculturative stress and the social/academic expectations and adjustment of Chinese international

students. Furthermore, the findings warrant that U.S. colleges and universities provide a wider-

array of programs and services specifically designed to help Chinese students culturally adjust.

These findings support the hypothesis that there is a statistically significant correlation between

English Language Proficiency and how English is learned.

Research Question Two

What is the relationship between the cultural values of Chinese international students and their cultural adjustment? Two significant differences were found regarding the influence of cultural values on cultural adjustment. The findings of this study suggested that students who agreed or strongly agreed that they felt uncomfortable adjusting to new surroundings where the values are different from those in China were twenty percentage points more likely to plan to graduate.

As the study neared completion, it became apparent that measuring cultural adjustment by intent to persist was not beneficial. Intent to persist might be more closely aligned with a student's level of motivation or family expectations rather than cultural adjustment. Based on these findings, cultural adjustment may be more effectively measured by how Chinese students cope with stress, specifically; academic, cultural, and social stress, each of which is directly related to cultural values

These findings do not imply that the construct of acculturative stress was present even though international students arrive in the U.S. unfamiliar with American customs and values which can result in a tremendous amount of stress as they adjust to a new culture (Li, Fox, & Almarza, 2007). Wan (1999) explained that Chinese students typically have a difficult and stressful time adjusting to life in the U.S. because of the vast differences in cultures, social norms, and values.

Social/academic expectations and adjustment and campus preparedness were not present in the findings. The relationship between the cultural values of Chinese students and their ability to cope with academic stress, cultural stress, social stress, through the use of counseling was not evident. Chinese students often experience culture shock and fatigue upon

their arrival in the U.S. (Cheng, Leong, & Geist, 1993). As a result these students may feel alienated by the cultural differences they encounter. Culture shock has many different effects, time spans, and degrees of severity and international students are at a disadvantage by its presence because they do not recognize what is bothering them.

Due to their cultural backgrounds, traditions, and family influence, Chinese students have more difficulties in their adaptation and adjustment to U.S. culture and campus life than other international students (Henderson, Milhouse, & Cao, 1993). These students tend to hold unfavorable attitudes toward the use of mental healthcare services and are therefore less likely to turn toward professional help as a means of easing their adjustment difficulties (Mitchell, Greenwood, & Guglielmi, 2007).

Research Question Three

What is the relationship between gender, academic major, time in the U.S., and the cultural adjustment of Chinese international students? This analysis implied that the only factors that have a significant influence on cultural adjustment, as measured by intent to persist, were years in U.S., academic standing, and English Language Proficiency. These findings suggested that for each additional year of academic standing that Chinese students achieved they were twice as confident that they would graduate from college.

The existence of a positive relationship between the length of time Chinese students spent in the U.S. and their ability to successfully culturally adjust is supported by this study. Chinese students who spend ample time in the U.S. are more likely to be satisfied with their international experience and cultural adjustment (Heikinheimo & Shute, 1986; Hull, 1978; Surdam & Collens, 1984). In addition, as a Chinese student's level of English language proficiency increased the odds of them becoming culturally adjusted to the University also increased.

According to the literature the acculturation process of Chinese students is also impacted by their gender, and academic major (Moran, Harris, & Moran, 2007; Olivas & Li, 2006). However, there was no statistical significance in the relationship between gender, academic major, and cultural adjustment. The literature supported the concept that female students reported having difficulty adjusting to the cultural gender-role differences between China and the United States (Abe, Talbot, & Greelhoed, 1998).

The literature also supported the idea that among Chinese students English language proficiency demands varied from major to major.   For example, students in the natural sciences were not required to have as much or as high of a competence in English language skills as the students in the social sciences. The social sciences have a tendency to require a better understanding of U.S. culture, values, and social systems (Yan & Berliner, 2011). This analysis implied that relationship between gender, academic major, and cultural adjustment is less complex than was indicated by the literature.

In an effort to provide an accurate visual snapshot of the results supported by this study, the conceptual framework (Figure 3.1) discussed in Chapter 3 was modified a second time and is reviewed in Figure 5.1.
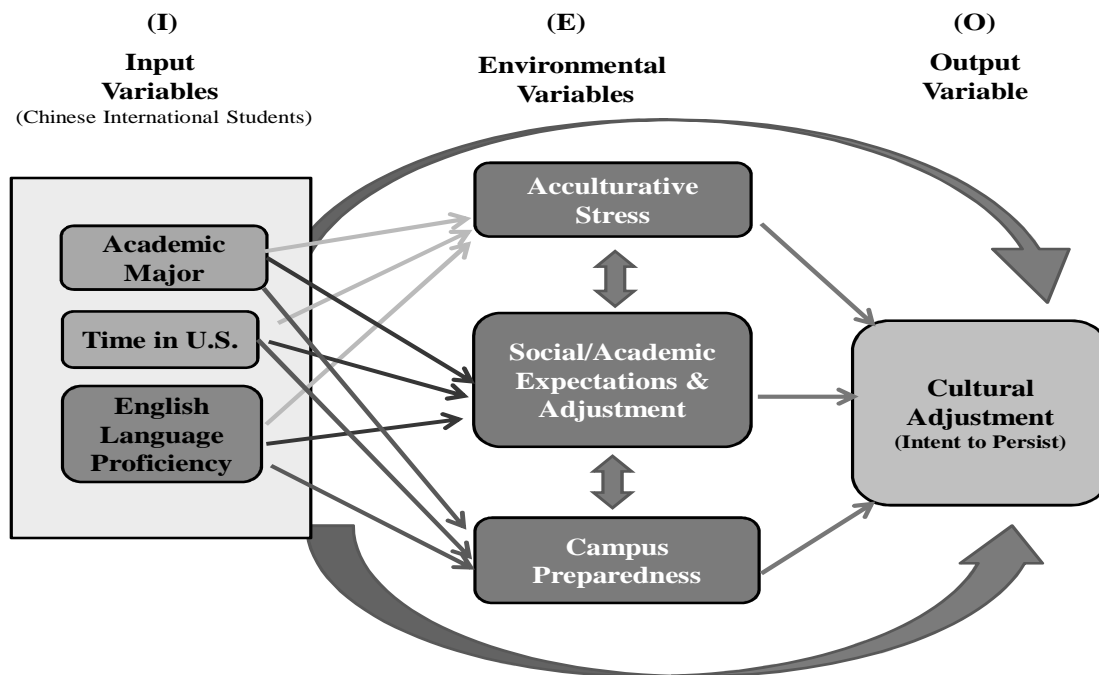
Figure 5.1 *Final Conceptual Framework (Hurny, 2013; Adapted from Astin, 1993)*

Implications for Practice

The findings of this study have a variety of implications for student affairs administrators and practitioners. Throughout much of the existing literature, international students were combined together as a single population. To date there is limited empirical research focused specifically on understanding the stress and coping processes of Asian international, specifically Chinese, students in the United States. When consideration is given to international students as a single population rather than focusing on their specific cultural identities the challenges associated with their cultural adjustment are often misinterpreted. There is no "one-size fits all" approach when trying to implement policies and practices relating to the cultural adjustment of international students.

As long as international students continue to populate American college campuses, it is the responsibility of these institutions to provide the necessary programs and services to these students so that they can culturally adjust successfully. Higher education administrators and

practitioners need to be cognizant that traditionally-aged Chinese undergraduate students between the ages of 18-24, are more prone to homesickness and loneliness, missing friends and family back home. Prior to their arrival on campus practices regarding roommate matching or live-on requirements need to be scrutinized. This examination will help to ensure that international students, specifically those from China, are set up for cultural adjustment success from the first moment they arrive on campus.

Chinese students have also been exposed to Western culture through the internet, television, and music and as a result they are typically excited by anything new, including a change in cultures. They arrive on campus thirsting for adventure and our interested in exploring their new culture. Typically, first-year, international students are more engaged in educationally purposeful activities than their American counterparts (Zhao, Kuh, & Carini, 2005). For them engaging in co-curricular activities is considered a valuable opportunity to meet domestic students. Programs, policies, and practices need to reflect this personal growth in the Chinese students of today (Lazarus & Folkman, 1984; Lee, 2010; Xueqin, 2011).

Due to the increasing Asian international student population, it is critical, that U.S. colleges and universities employ new strategies designed to ease international students' transition to U.S. academic life. One of these strategies should be the creation of peer mentoring programs that are specifically designed to help international students adjust to the cultural and academic differences they are likely to experience. Peer mentoring programs create a relationship between international and domestic students that allows both populations to engage in educational opportunities outside of the classroom as well as to develop a foundation for effective, intercultural communication (Bartlett & Fisher, 2011; Owen, 2008; Dalton, 1999; Winkelman, 1994).

The cultural adjustment of Chinese international students is directly related to their English language proficiency. For this reason alone, student affairs practitioners, as well as other service providers, need to thoroughly understand the complexities associated with a lack of English proficiency (Owen, 2008). Serving international students is a complex, multi-faceted function. It is essential for practitioners and administrators to become increasingly more knowledgeable about the complicated process of culture shock and cultural adaptation faced by Chinese students.

There is a need for these providers to understand the critical importance of supplying superior services to international students (Owen, 2008). In addition, all services provided for international students must constantly be evaluated for quality assurance. In order to offer the best quality of service to these students, student affairs practitioners must be intentional in their efforts to continually seek out improvements to the services offered (Owen, 2008).

United States institutions of higher education are faced with the challenge to create learning environments that reflect the fluid economical, geopolitical, and societal changes influenced by globalization. Institutions utilize a variety of methods to promote cultural awareness and diversity, including education abroad programs and curriculum development that reflects global perspectives. U.S. colleges and universities need to do more to develop students with a greater capacity to understand different cultures in order to prepare them to function in a globalized economy (McMurtie, 2011; Villalpando, 2002).

The magnitude of the implications that English Language Proficiency has on Chinese students' social and academic expectations and adjustment needs immediate attention. If these students do not embrace the new culture in which they study, they immediately withdraw from cultural interchange and therefore leave very much the same way they arrived (Xueqin, 2011).

International students face greater adjustment difficulties and require more help during their initial transition to U.S. campus life (Poyrazli & Grhame, 2007; Tseng & Newton, 2002).

Colleges and universities need to employ new strategies designed to ease Chinese students' transition to U.S. campus life. Programs should be established that pair Chinese international students with domestic student mentors. Furthermore, there is an on-going need to offer workshops for faculty members who have a large number of Chinese students in their classrooms. In addition, institutions should offer special courses to Chinese students that would provide extra help with English and study skills (Bartlett & Fisher, 2011).

Based on the results of this study, administrators and practitioners need to provide services that will benefit international students. Particular attention should be focused how those services are used and understood by international populations who may not have a suitable understanding of everyday English. For instance, college and universities could offer to provide critical information such as academic integrity policies, academic probation or health care information in every language that is represented by the international student population on their campus.

Additional opportunities must be provided that will encourage Chinese and U.S. students to interact socially. These opportunities are essential because both populations have misconceptions about the other that often serves as a barrier for social interactions. Perhaps special interest living options could be provided in the residence halls – this would provide both U.S. and international students, particularly those from China, to self-select to live on a floor together and potentially even share a room. There is a plethora of interest that goes unfounded – for opportunities to socially interact. If students knew their options prior to arriving on campus

99

their first year then perhaps three would not be so many students asking to be assigned a different roommate because of their cultural origin.

International students are an integral part of an institution's enrollment and development strategy (Dalton, 1999). Chinese students pay full tuition and as a result, their economic status is considered a financial windfall for U.S. institutions that have faced drastic budget cuts in recent years (Bartlett & Fisher, 2011). This situation might seem to be mutually beneficial to both, these students and the institutions where they choose to enroll, this relationship however, is tricky at best. If campuses across the United States continue to be saturated with Asian, particularly Chinese, international students there is an inherent risk that domestic students may interpret "internationalization" as meaning from Asia (Bartlett & Fisher, 2011; McMurtrie, 2011). Given that international students pay the highest tuition, there needs to be an understood responsibility established that U.S. colleges and universities need to provide proper support services to help these students succeed, which will ultimately increase their retention/cultural adjustment. The role of student affairs professionals on U.S. college campuses is to foster the growth and development of students so they become successful in a society of globally connected community (Dalton, 1999; Owen, 2008). Emphasis of institutional diversity has a positive effect on most students' level of satisfaction with their college experience (Villalpando, 2002).

Implications for Future Research

There is limited research on Chinese students as a sub-population of international students. Chinese students represent the largest number of international students in the U.S. and in turn they encounter a culture very different from their own. Stress and coping are influenced by characteristics of the individuals and their cultural values (Berry, 1977). Therefore, it is

worth developing a deeper understanding of how these students cope with stress (Yan & Berliner, 2011). While the literature explored acculturation it was often focused on international students as a single population. There is a critical need to focuses specifically on Chinese international students and the factors that influence their cultural adjustment processes.

The suggestion for future research encompasses a desire for more breadth and depth of research on the factors influencing the cultural adjustment of Chinese international students. Because little is still known specifically about Chinese international students, replication of this study is recommended. Comparison of the future key findings with the findings of this study will provide a basis for determining the key factors influencing the cultural adjustment of undergraduate Chinese international students.

In an attempt to help Chinese international students culturally adjust successfully on-going research is suggested. Current day research will provide valuable insight into what programs and services need to be provided (Constantine, Kindaichi, Ozakaki, Gainor, & Baden, 2005). The factors that were examined in this study were complicated and the influence that each had on a student's cultural adjustment varied from student to student and experience to experience. In order to garner a more robust insight into the influence of these factors on cultural adjustment, I suggest a follow-up step that would include individual interviews or focus groups.

A compelling argument exists to conduct additional analysis related to cultural values. This study demonstrated a need for a more specific definition of the variables associated with cultural values. The analysis for this study provided evidence that there was no statistical significance between cultural values and cultural adjustment as measured by intent to persist. This outcome however, is not supported by the literature and as a result, in subsequent research, I would suggest including specific cultural values rather than just an umbrella category. This

significance of the influence that cultural values had on cultural adjustment was lost because the variable of cultural values was too general. The findings from this study contradict the literature. This contradiction is a finding worth further exploration.

The variables for this study were too general and as a result provided limited responses. As a result the relationship between cultural values and cultural adjustment was ambiguous. A qualitative or mixed methods study is recommended as those research methods will allow for participants to share their actual lived-experiences and perceptions in a more vivid and detailed manner than a survey can provide. Completing college can be a complex process and Tinto (1993) stated that students must be "integrated academically and socially into the campus culture" (p. 167). It is also suggested that future research focus on the acculturation strategy of marginalization. Marginalization is the social process of being referred to as an outlier and occurs when an individual is excluded from meaningful participation in society (Berry, 1997).

The variables related to English Language Proficiency lend themselves to a stand-alone study. As evidenced by the literature and results of this study, limited English language abilities prolong the cultural adjustment process of Chinese students (Andrade, 2007; Cheng, Leong, & Geist, 1993; Hayes & Lin, 1994). Language deficiency is considered the "most important determinant of international student problems" especially because language proficiency transcends across all areas of a successful cultural adjustment (Owen, 2008, p. 51).

Finally, a component of additional research that is recommended is increasing the depth of information that is available about the factors influencing why Chinese students chose not to interact with American students. With only limited literature and minimal survey results to base assumptions on, more detailed results are needed to fully understand the influence that social interactions between American and Chinese students has on cultural adjustment.

The research presented here can provide initial insights for understanding the cultural gap between American and international students. These restricted interactions between them are due in part to international students' limited English language ability which further slows the adjustment process (Ying, 2002). International students must eventually adjust to the differences between formal and conversational English (Andrade, 2006). Chinese international students' struggle with their unfamiliarity of colloquial English and the fear of being misunderstood by others poses a major obstacle to communication between them and American students (Lacina, 2002).

It is important to reiterate that student affairs professionals play an integral role in the cultural adjustment of international students. These professionals are responsible for preparing the domestic student body to communicate effectively with the international student population and for providing opportunities for intentional interactions between the two populations (Dalton, 1999; Owens, 2008). It may also be worthwhile to conduct a study that explicitly examines the variety of roles that these practitioners and educators play in the cultural adjustment success of Chinese international students.

Limitations of Study

As discussed in Chapter 3, the limitations of this study were related to the population being studied and the method of exploration. This study had several potential limitations. The response rate for the study was low (10%). Though a ten-percent response rate is common for on-line surveys, according to Nulty (2008) a more robust response rate would have been closer to 21%. The results of this study are not generalizable across the entire population of Chinese international students because of the small sample size (N =133) and because only one type of

institution was measured.   A more robust study is needed to provide ample evidence for generalization.

This study was limited to undergraduate students between the ages of 18-24 who originated from China and were in the United States on an F1 Visa. In addition, only those students enrolled, in the spring 2014 semester, at a large, public, research, university located in the Mid-Atlantic region of the United States were invited to participate in the study.   Only the relationships between gender, academic major, time in the U.S. English language proficiency, cultural values, acculturative stress social/academic expectations, campus preparedness and cultural adjustment were examined. In addition, the participants' understanding of or lack thereof, the English language, may have resulted in additional stress and confusion when interpreting the intended connotation of the survey questions.

Surveys do not allow for participants to share their lived experiences in a manner that provided an in-depth understanding of their cultural adjustment challenges (Yan & Berliner, 2013, Creswell, 2009). Furthermore, surveys do not provide strong evidence of cause and effect because they are typically used to collect data at a single point in time, making it difficult to measure changes in the population (Creswell, 2009). In order to garner a more robust insight into the influence of these factors on cultural adjustment, I suggest a follow-up step that would include individual interviews or focus groups.

<div align="center">**Personal Observation and Conclusion**</div>

Chinese international students represent the largest number of international students on U.S college campuses and in turn they encounter a culture very different from their own. As a result, it is worth developing a deeper understanding of how these students cope with stress because they face much more anxiety than any other population of students (Sue & Zane, 1985;

<div align="center">104</div>

Yan & Berliner, 2011). Additional research is needed to understand why adjustment can be so difficult and how individual variables affect the stress-coping process. It is also worth inquiring how an individual's coping strategies and social supports influence acculturation stress and adjustment. It is paramount that service providers on U.S. college campuses fully understand the nature of the problems associated with a lack of English Language Proficiency (Owen, 2008).

This study has provided a platform for the exploration of the significant factors influence the cultural adjustment of Chinese international students. This study has also demonstrated a need for on-going research related to the cultural adjustment of Chinese international students, specifically the critical factors affecting assimilation of these students into U.S. campus life. Chinese students are a diverse group with many unique needs. It was my intent to further validate the need for faculty and staff in higher education to understand what the arrival and acculturation needs are of Chinese international students as they begin to adjust to life on U.S. college campuses.

Finally, I have been able to identify key stakeholders (administrators, practitioners, domestic students) and services (mentoring programs, roommate matching) that are important in the process of building a support network for international students. It is also worth inquiring how an individual's coping strategies and social supports influence acculturation stress and adjustment. Our understanding of the cultural adjustment challenges and experiences that Chinese international undergraduate students face, is a complex puzzle that we need to do our best to try and solve. In order to successfully achieve this goal we must continually ask ourselves "how can we reach Chinese students" / and "how can we get those same students to engage?" Additional research is needed in the area of Asian international students', particularly those of Chinese origin, cultural adjustment. Future research has the potential to help this

population of students adjust more successfully to life in the U.S and could help U.S. colleges

and universities adjust to their largest group of international students (Yan & Berliner, 2011).

REFERENCES

Abe, J., Talbot, D., & Greelhoed, R.J. (1998). Effects of a peer program on internaitonal student adjustment. *Journal of College Student Development, 39*(6), 539-546.

Adler, P. (1975). Transitional experience: An alternative view of culture shock. *Journal of Humanistic Psychology, 15*(4), 13-23.

Allen, M.P. (1997). *Understanding regression analysis.* New York, NY: Plenum Press.

Andrade, M.S., (2007). International student persistence: Integration or cultural integrity? *Journal of College Student Retention: Research, Theory and Practice, 8*(1) 57-81.

Andrade, M.S. (2006). International students in English speaking universities: Adjustment factors. *Journal of Research in International Education, 5* 131-154. doi: 10.1177/1475240906065589

Astin, A.W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25* (4), 297-308.

Astin, A. W. (1993a). *Assessmnet for excellence: The philisophy and practice of asessment and evaluation in higher educaiton.* Phoenix, AZ: Oryx Press.

Astin, A. W. (1993b). *What matters in college: Four critical years revisted.* San Francisco, CA: Jossey-Bass.

Barratt, M.F., & Huba, M.E. (1994).Factors related to international undergraduate student Adjustment in an American community. *College Student Journal, 28*(4), 422-36

Bartlett, T. & Fischer, K. (2011). The China conundrum: American colleges find the Chinese-student boom a tricky fit. Retrieved from http://chronicle.com/article/Chinese-Students-Prove- a/129628/?sid=at&utm_source=at&utm_medium=en

Berry, J.W. (1977). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review, 46,* 5-34.

Brien,M., & David, K.H. (1971). Intercultural communication and the adjustment of the sojourner. *Psychological Bulletin, 76,* 215-230.

Canisius College (2014). http://www.canisius.edu/resources/services/international-student/peer/

Cattell, R.B. (1966). The meaning and strategic use of factor analysis. In R.B. Cattell (Ed), *Handbook of multivariate experimental psychology* (pp. 174-243). Chicago,

Cheng, D., Leong, F. T., & Geist, R. (1993). Cultural differences in psychological distress between Asian and Caucasian American college students. *Journal of Multicultural Counseling and Development*, *21*(3), 182-190.

Chickering, A.W., & Reisser, L. (1993). *Education and identity (*2nd ed). San Francisco, CA; Jossey Bass.

Church, A.T. (1982). Sojourner adjustment. *Psychological Bulletin, 91*, 540-572.

Constantine, M.G., Kindaichi, M., Ozakaki, S., Gainor, K.A., & Baden, A.L., (2005). A qualitative investigation of the cultural experiences of Asian international college women, *Cultural Diversity and Ethnic Minority Psychology,* 11 (2), 162-175. doi: 1o.1037/1099-9809.11.2.162

Creswell, J. W. (2010). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage Publications, Inc.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Dalton, J.C. (1999). The significance of international issues and responsibilities in the contemporary work of student affairs. *New Directions for Student Services, 86*, p. 3-11.

Darlington, R.B. (2013). *Factor Analysis* Website: Retrieved from http://comp9.psych.cornell.edu/Darlington/factor.htm.

DesJardins, S. L. (2001). A comment on interpreting odds-ratios when logistic regression coefficients are negative. AIR Professional File: The Association for Institutional Research.

DeLeeuw, E.D., Hox, J.J., & Dillman, D.A. (2008). International handbook of survey methodology. Psychology Press, Taylor & Francis Group, LLC.

Deardorff, D. K. (2006). Identification and assessment of intercultural competence as a student outcome of internationalization. *Journal of Studies in International Education*, *10*(3), 241-266.

Dessoff, A. (2011). Supporting international students from countries dealing with trauma. *International Educator, 20*(2), 52-55.

DeVellis, R. F. (2003). *Scale Development: Theory and Applications* (Vol. 26). Thousand Oaks, CA: SAGE Publications, Inc

Dillman, D. A. (2000). *Mail and Internet surveys: The total design method* (2nd ed.). New York: Wiley.

Educational Testing Service (2014) – TOEFL Test, http://www.ets.org/toefl

Field, A. (2000). *Discovering statistics: Using SPSS for Windows.* Thousand Oaks, CA: SAGE Publications.

Fritz, M., Chin, D., & DeMarinis, V. (2008). Stressors, anxiety, acculturation and adjustment among international and North American students. *International Journal of Intercultural Relations, 32,* 244–259. doi: 10.1016/j.ijintrel.2008.01.001

Galloway, F. J., & Jenkins, J. R. (2010). The adjustment problems faced by international students in the United States: A comparison of international students and administrative perceptions at two private, religiously affiliated universities. *Journal of Student Affairs Research and Practice*, *46*(4), 1211-1223.

Garson, G. D. (2010, February 11). Factor Analysis. *Statnotes: Topics in Multivariate Analysis* Retrieved from http://faculty.chass.ncsu.edu/garson/PA765/factor.htm

Garson, G. D. (2009, August 7). Logistic Regression. *Statnotes: Topics in Multivariate Analysis.* Retrieved from http://faculty.chass.ncsu.edu/garson/PA765/logistic.htm

Gliner, J. A., Morgan, G. A., & Leech, N. L. (2009). *Research Methods in Applied Settings: An Integrated Approach to Design and Analysis* (2nd ed.). New York: Routledge

Harju, B.L., Long, T.E., & Allred, L.J. (1998). Cross cultural reactions of international students to US health care. *College Student Journal, 32*(1). 112-115.

Hayes, R.L., & Lin, H.R., (1994). Coming to America: Developing social support systems for international students. Journal *of Multicultural Counseling and Development*, 22, 7-16

Heggins, W.J., & Jackson, J.F.L. (2003). Understanding the collegiate experience for Asian international students at a Midwestern research university. *College Student Journal,* 37(3), 379-391.

Heikinheimo, P, & Shute, J. (1986). The adaptation of foreign students: Student views and institutional implications. *Journal of College Student Personnel, 27*, 399-406. *37*(3), 379-392.

Henderson, G., Milhouse, H & Cao, L. (1993). Crossing the gap: An analysis of Chinese students' culture shock in an American University. *College Student Journal, 27*, 380-389.

Hofstede, G. (1980). *Culture's consequence: International differences in work-related values.* Beverly Hills, CA; SAGE Publications.

Hull, W.F. (1978). *Foreign students in the United States of America: Coping behavior within the educational environment.* New York, NY: Praeger.

Indiana University-Purdue University Indianapolis (2014).
  http://international.iupui.edu/volunteer/peer- mentoring/

Institute of International Education (2013). *Open Doors Report on International Educational Exchange.* Retrieved from http://www.iie.org/Research-and-Publications/Open-Doors

Johanson, G.A., & Brooks, G.P. (2010). Initial scale devleopment: Sample size studies. *Educational and Psychological Measurement*, *70*(3), 394-400. doi: 10.1177/00131644093555692

Kootstra, G.J. (2004). Exploratory factor analysis. Retrieved from: http://www.let.rug.nl/~nerbonne/teach/rema-stats-meth-seminar/Factor-Analysis-L Kootstra-04.PDF

Krathwohl, D.R. (2009)*. Methods of educational and social science research* (3rd ed.). Long Grove, IL: Waveland Press, Inc.

Lacina, G.J. (2002). Preparing international students for a successful social experience in higher education. *New Directions for Higher Education*, *2002*(117), 21-28.

Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York, NY: Springer.

Lee. J.J., (2010). International students' experiences and attitudes at a US host institution: Self-reports and future recommendations. *Journal of Research in International Education, 9*(1), 66-84. doi: 10.1177/1475240909356382

Lewis, R.D., (2006). *When culture collide: Leading across cultures.* Boston, MA: Nicholas Brealey Publishing.

Li, H., Fox, R.F., & Almarza, D.J. (2007). Strangers in stranger lands: Language, learning, culture. *International Journal of Progressive Education*, 3(1), 1-44.

Lin, J.C.G., & Yi, J.K. (1997). Asian international students' adjustment: Issues and program suggestions. *College Student Journal,31* (4), 473-480.

Liu, X., Liu, S., Lee, S.-h., & Magjuka, R. J. (2010). Cultural differences in online learning: international student perceptions. *Educational Technology & Society, 13* (3), 177–188

Maslow, A. (1954). *Motivation and personality*. New York, NY: Harper and Row.

McMurtrie, B. (2011). International enrollments at U.S. colleges grow but still rely on China. Retrieved from http://chronicle.com/article/International-Enrollments-at/129747/?sid=at&utm_source=at&utm_medium=en

Menard, S., (2002). *Applied logistic regression analysis* (Vol 07-106). Thousand Oaks, CA: SAGE Publications.

Merson, D (2011). *A critical empirical examination of the construct of campus climate* (Doctoral dissertation, The Pennsylvania State University). Retrieved from: www. proquest.com.ezaccess.libraries.psu.edu/docview/902628253

Minchew, S.S., & Couvillion, M.B. (1998). A compassion of American and international students' lifestyles and their perceptions of the university experience.

Mitchell, S. L., Greenwood, A. K., & Guglielmi, M. C. (2007), Utilization of counseling services: Comparing international and U.S. college students. *Journal of College Counseling, 10*, 117–129. doi: 10.1002/j.2161-1882.2007.tb00012.x

Moran, R.T., Harris, P.R., & Moran, S.V. (2007).*Managing cultural differences: Global leadership strategies for the 21st century.* Jordan Hill, OX:Elsevier.

Morgan, G.A., Leech, N.L., Gloeckner, G.W., & Barrett, K.C. (2011). *IBM SPSS for introductory statistics: Use and interpretation.* New York, NY: Routledge.

NAFSA: Association of International Educators (2013). http://www.nafsa.org

Nulty, D.D. (2008). The adequacy of response rates to online and paper surveys: what can be done? *Assessment & Evaluation in Higher Education, 33*(3), 301-314.

Nunnally, J. C. (1978). Fundamentals of factor analysis. In R. Wright & M. Gardner (Eds) *Psychometric theory* (pp. 327-404). New York, NY: McGraw-Hill.

Olivas, M., & Li, C.S. (2006). Understaning stressors of international students in higher education: What college counselors and personnel need to know. *Journal of Instructional Psyhology, 33*(3), 217-222.

Oropeza, B.A.C., Fitzgibbon, M., & Baron, A. Jr. (1991). Managing mental health crises of foreign college students. *Journal of Counseling & Development, 69*, 280-284.

Owen, J. (2008). Serving international students. In Osfield, K.J. *Internationalization of student affairs and services: An emerging global perspective* (pp.49-56).Washington, DC: NASPA.

Padilla, R.V. (1999). College student retention: focus on success. *Journal of College Student Retention, 1*(2), 131-145.

Pascerlla, E.T., & Terenzini, P.T. (2005). *How college affects students.* San Francisco, CA: Jossey-Bass.

Poyrazli, S., & Lopez, M.D. (2007). An exploratory study of perceived discrimination and homesickness: A comparison of international students and American students. The Journal of Psychology, 141(3), 263-280

Rietveld, T., & vanHout, R. (1993). Statistical techniques for the study of language and language behavior. New York, NY: Mouton de Gruyter.

Robinson, T. N. (2003). Identity as a mediator of institutional integration variables in the prediction of undergraduate persistence intentions. *Journal of Adolescent Research, 18*(3), 3-24. doi: 10.1177/0743558402238274

Robinson, T. N. (1996). *A revision of the institutional integration model: A redefinition of "Persistence" and the introduction of developmental variables*. The Ohio State University. Columbus, OH.

Rose-Redwood, C. R. (2010). The challenge of fostering cross-cultural interactions: A case study of international graduate students' perceptions of diversity initiatives. *College Student Journal*, *44*(2), 389-399.

Salem State University (2014). http://www.salemstate.edu/academics/24602.php

SAS Institute Inc. (1999). Heywood Cases and Other Anomalies *SAS Online Doc®, Version 8*. Cary, NC: SAS Institute Inc.

Sheehan, O.T.O., & Pearson, F. (1992). Asian international and American students' psychosocial development. *Journal of College Student Development, 36*(6), 522-579.

Siu, A.F.Y., & Chang, J.F., (2011). Coping styles and psychological distress among Hong Kong University Students: Validation of the collectivist coping style inventory. *International Journal of Advanced Counseling, 33*, 88-100. Doi 10.1007/s10447-011-9114-8

Sue, S.W., & Zane, N.S. (1985). Academic achievement and social-emotional adjustment among Chinese university students. *Journal of Counseling Psychology, 32,* 570-579.

Sumer, S., Poyrazli, S., & Grahame, K. (2008). Predictors of depression and anxiety among international students. *Journal of Counseling & Development, 86*(4), 429-437.

Surdam, J.C., & Collens, J.R. (1984). Adaptation of international students: A cause for concern. *Journal of College Student Personnel, 25*, 240-241.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition.* Chicago, IL; University of Chicago Press.

Tinto, V. (1998). College communities: Taking research on student persistence seriously. *The Review of Higher Education, 21* (2), 167-177.

Tinto, V. (2006). Research and practice of student retention: What next? *Journal of College Student Retention, 8*(1), 1-19.

Tseng, W-C, & Newton, F.B. (2002). International students' strategies for well-being. *College Student Journal, 36*(4), 591-609.

University of North Dakota (2014). http://und.edu/academics/international-programs/international-student-services/peer-mentor-program.cfm

U.S. Citizenship and Immigration Services (2013). http//www.uscis.gov

Villalpando, O. (2002). The impact of diversity and multiculturalism on all students: Findings from a national study. *NASPA Journal, 40*(1), 124-144.

Vogt, W.P. (2005). Dictionary of statistics and methodology: A nontechnical guide for the social sciences. Thousand Oaks, CA: Sage Publications.

Wan, G. (1999). The learning experiences of Chinese students in American universities: A cross-cultural perspective. *College Board Journal*. *35*, 28-44

Wang, C., & Mallinckrodt, B. (2006). Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese international students. *Journal of Counseling Psychology, 53,* 422–433. doi:10.1037/0022-0167.53.4.422

Westwood, M.J., & Barker, M. (1990). Academic achievement and social adaptation among international students: A comparison groups study of the peer-pairing program. *International Journal of Intercultural Relations, 14*, 251-263.

Williams D (2006) On and off the 'Net: Scales for social capital in an online era. *Journal of Computer-mediated Communication* 11(2): 593–628.

Wilson,L, E., Coulter, B., Lunnen,K., Mallory, J., & Williams,M. (1999). Improving undergraduate student retention. *Proceedings of the Academy of Educational Leadership, 4*(2), 36-42

Winkelman, M. (1994). Culture shock and adaptation. *Journal of Counseling & Development, 73,* 121-126.

Xueqin, J. (2011). Selecting the right Chinese students. Retrieved from: http://chronicle.com/article/Selecting-the-Right-Chinese/129621/

Yakushko, O., Davidson, M. M., & Sanford-Martens, T. C. (2008). Seeking help in a foreign land: International students' use patterns for a US university counseling center. *Journal of College Counseling*, *11*(1), 6-18.

Yan, K., & Berliner, D.C. (2013). Chinese international students' personal and sociocultural stressors in the United States. *Journal of College Student Development (54)*1. 62-84. doi: 10.1353/csd.2013.0010

Yan, K., & Berliner, D.C. (2011). An examination of individual level factors in stress and coping processes: Perspectives of Chinese international students in the United States. *Journal of College Student Development, 52*(5), 523-542.

Yang, H., Harlow, S., Maddux, C., & Smaby, M. (2006), The impact of cross-cultural experiences on worldviews of Chinese international students. *Counseling and Values, 51*, 21–38. doi: 10.1002/j.2161-007X.2006.tb00063.x

Ying, Yu-Wen (2002). Formation of cross-cultural relationships of Taiwanese international students in the United States. *Journal of Community Psychology, 30*(1), 45-55.

Zhao, C., Kuh, G.D., & Carini, R.M. (2005). A comparison of international students and American student engagement in effective educational practices. *The Journal of Higher Education, 76,* 209-231.

Chinese Cultural Adjustment Survey

Q1 Informed Consent
Informed Consent Form for Social Science Research The Pennsylvania State University

 Title of Project: An Empirical Study of the Factors Influencing the Cultural Adjustment of Undergraduate Chinese International Students to the United States

Principal Investigators: Dr. Linda Kuk, College of Education at Colorado State University Gina L. Hurny, Program Director for Leadership Development at Penn State and Ph.D. student in the Educational Leadership-Higher Education Program at Colorado State 209 HUB-Robeson Center - glh17@psu.edu - (814) 865-9623

1. **Purpose of the Study:** The purpose of this research is to gather information regarding the factors influencing the cultural adjustment of undergraduate Chinese international students to the United States. The data may be used to assist campus administrators in assessing student experiences and cultural adjustment.

2. **Procedures to be followed:** You will be asked to complete an electronic survey.

3. **Discomforts and Risks:** There are no risks in participating in this research beyond those experienced in everyday life. Aside from your time, there are no other known costs of taking part in the study. Your name will not be linked to results or reports. If any questions cause discomfort, we encourage you to seek assistance from the resources provided. Participants who experience discomfort are encouraged to contact: Counseling and Psychological Services (CAPS): 814.863.0395 Centre County CAN HELP: 1.800.643.5432 Directorate of International Student and Scholar Advising (DISSA): 814.865.2950 University Office of Global Programs (UOGP): 814.863.1115

4. **Benefits:** The benefits to you include an opportunity to share your educational experience and with other students and inform scholarly work. The benefits to society include providing researchers and practitioners with a better understanding of Chinese immigrant students and their experiences, helping to better support them through the struggles they may experience. It will also provide insight into how some students have been able to adjust to an international college environment, creating opportunities to try to recreate some of the strategies which helped them to be successful in college.

 5. **Duration/Time:** The survey will take approximately 15-20 minutes.

6. **Statement of Confidentiality:** Your participation in this research is confidential. The survey results will be submitted directly to a secure server where any computer identification that might identify participants is deleted from the submissions. Any comments provided by participants are also separated at submission so that comments are not attributed to any individual demographic characteristics. These comments will be analyzed using content analysis and submitted as an appendix to the survey report. Anonymous quotes from submitted comments will also be used

throughout the report to give "voice" to the quantitative data. Electronic documents will be kept in password protected files. Survey results will be given in group form only; no individual identities or individual responses will be reported. Penn State's Office for Research Protections, the Social Science Institutional Review Board and the Office for Human Research Protections in the Department of Health and Human Services may review records related to this research study. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared.

7. **Right to Ask Questions:** Please contact Gina Hurny at (814) 865-9623 with questions, complaints or concerns about this research. You can also call this number if you feel this study has harmed you. If you have any questions, concerns, problems about your rights as a research participant or would like to offer input, please contact Penn State University's Office for Research Protections (ORP) at (814) 865-1775. The ORP cannot answer questions about research procedures. All questions about research procedures can only be answered by the principal investigators.

8. **Payment for participation:** There will be no compensation for participation in this study.
9. Eligibility: To participate in this study, you must be an undergraduate Chinese international student between the ages of 18-24 studying in the United States on an F1 Visa and currently enrolled at The Pennsylvania State University – University Park campus.

9. **Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise. You must be 18 years of age or older to consent to take part in this research study.
Thank you in advance for your willingness to participate in this study. IRB Protocol ID: 45391
To indicate your consent to participate in this research and to continue on to the survey, please type "Yes" below.

```
                                                                                          
```

Demographic Information

Q2 Are you a Chinese international undergraduate student studying in the United States on an F1 visa?
❍ Yes
❍ No
If No Is Selected, Then Skip To End of Survey

116

Q3 Please indicate where in China you are from.

```
┌────────────────────────────────────────────────────────────────┐
│                                                                  │
│                                                                  │
└────────────────────────────────────────────────────────────────┘
```

Q4 I identify as…
- ❍ Male
- ❍ Female
- ❍ Other

Q5 Please select the age that you are at the time of this survey.
- ❍ 17 or younger
- ❍ 18
- ❍ 19
- ❍ 20
- ❍ 21
- ❍ 22
- ❍ 23
- ❍ 24
- ❍ 25 or older

Q6 How long have you been in the United States?
- ❍ Less than 6 months
- ❍ 6 months - 1 year
- ❍ 1 -2 years
- ❍ 2-3 years
- ❍ 3-4 years
- ❍ 4-5 years
- ❍ 5 or more years

Q7 Please select your academic standing at the time of this survey.
- ❍ First-Year
- ❍ Sophomore
- ❍ Junior
- ❍ Senior
- ❍ 5th Year Senior
- ❍ Graduate Student

Q8 Which college is your primary major associated with?

- ○ Agricultural Sciences
- ○ Arts and Architecture
- ○ Smeal College of Business
- ○ Communications
- ○ Earth and Mineral Sciences
- ○ Education
- ○ Engineering
- ○ Health and Human Development
- ○ Information Sciences and Technology
- ○ The Liberal Arts
- ○ College of Medicine
- ○ Eberly College of Science
- ○ School of Law
- ○ School of Nursing
- ○ Schreyer Honors College
- ○ Division of Undergraduate Studies - DUS

Q9 Where do you currently live?

- ○ On Campus
- ○ Off Campus

Q10 How many roommates do you currently have?

- ○ 0
- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5 or more

Answer If How many roommates do you currently have? 0 Is Not Selected

Q11 My roommate(s) are…

- ○ International Students From China
- ○ International Students Not From China
- ○ American Students

Q12 Please select the range that best represents your TOEFL score at the time of admission to this University.
○ Less than 80
○ 80-90
○ 91-100
○ 101-110
○ 111-120
○ I do not remember

English Language Proficiency

Q13 Please described your experience with English.

		Yes	No
English is my native language		○	○
I learned English at the same time as my native language		○	○
I learned English as a second language.		○	○

Q14 In what country did you primarily learn English as a second language?

Q15 Select the response that best represents how you learned English
○ A Chinese Teacher Teaching English
○ Watching Western Television Shows
○ A Native English Speaker Teaching English
○ Enrolling in ESL Classes
○ Family Taught
○ Attending High School in the United States

Q16 The questions below are about your comfort with the English language. Please mark your response for each sentence item.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I feel nervous when communicating in English.	○	○	○	○	○
I am confident in my ability to work successfully with American students on a group project.	○	○	○	○	○
I am confident when asking questions in class.	○	○	○	○	○
I am confident contributing to class discussions.	○	○	○	○	○
I am confident in my ability to speak English in front of groups of non-Chinese students.	○	○	○	○	○
I am confident in my use of English in social settings	○	○	○	○	○
I feel confident speaking English in my classes.	○	○	○	○	○
I feel confident speaking English when meeting people who are not from China.	○	○	○	○	○

Answer If How many roommates do you currently have? 0 Is Not Selected

Q17 When speaking to my roommates I primarily speak
○ English
○ Chinese
○ Other

Q18 Please select the response that best describes how you feel about your English
○ No Proficiency
○ Somewhat Proficient
○ Proficient
○ Very Proficient
○ Extremely Proficient

Personal Perspective and Experiences

Q19 Select the response that best represents the extent that this University has helped you to…

	Not At All Helpful	Somewhat Helpful	Helpful	Very Helpful	Extremely Helpful
Adjust to college	○	○	○	○	○
Adjust to the United States	○	○	○	○	○
Cope with the **academic stress** associated with being an international student.	○	○	○	○	○
Cope with the **cultural stress** associated with being an international student.	○	○	○	○	○
Cope with the **social stress** associated with being an international student.	○	○	○	○	○
Gain confidence in your ability to speak English	○	○	○	○	○

Q20 Please rate your feelings about the following sentences.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I feel uncomfortable adjusting to new surroundings where the culture values are different from those in China.	○	○	○	○	○
I feel a sense of belonging (community) as a student at this University.	○	○	○	○	○
I feel some people do not want to befriend me because I am from China.	○	○	○	○	○
I would feel comfortable seeking assistance from Counseling & Psychological Services (CAPS) to help me cope with the stresses associated with being an international student from China.	○	○	○	○	○

Q21 Select the response that best represents why you would not want to receive psychological counseling or therapy.
○ My Cultural Values Do Not Support Counseling
○ My Family Would Not Be Supportive
○ Mental Health is Not a Recognized Concern in China
○ I Prefer To Keep My Thoughts/ Feelings To Myself
○ I Would Be Open To Receiving Counseling

Q22 Please describe you future plans.

	Very Unlikely	Unlikely	Undecided	Likely	Very Likely
I intend to graduate from this University.	○	○	○	○	○
I am planning to drop out of this University and not finish college anywhere.	○	○	○	○	○
I am considering transferring to another U.S.college or university because I have not been able to **culturally adjust to this University.**	○	○	○	○	○
I am considering transferring to a college or university outside of the U.S. because I have not been able to **culturally adjust to the United States.**	○	○	○	○	○

Q23 How often do you try to befriend American students?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Always

Q24 Please select the response that best describes your level of cultural adjustment to this University.

○ Not Adjusted

○ Somewhat adjusted

○ Adjusted

○ Well-Adjusted

○ Extremely Well-Adjusted

Q25 What were your reasons for not befriending Americans? Please drag the sentences to place them in order from most important reason (1,at the top) to least important reason (10, at the bottom). The rank order of your current list is shown to the right.

_____ I am afraid of being made fun of

_____ I am not comfortable with my proficiency of the English language

_____ I am only comfortable interacting socially with other Chinese students

_____ I think American students are disrespectful

_____ I do not understand the social behaviors of American students

_____ I devote all my time to my academics

_____ I feel disliked by American students - like I do not belong here

_____ I feel American students are not interested in getting to know me

_____ I am unsure what social settings typically attract American students

_____ I have no desire to interact with American students

Participant Invitation Letter

Date
Name
Institution

Dear (Name):

My name is Gina Hurny and I am the Program Director for Leadership Development within the Division of Student Affairs. I also happen to be a doctoral student in the Educational Leadership-Higher Education Program at Colorado State University. With the support of Kristin Thomas, University Office of Global Programs (UOGP) and Masume Assaf, Directorate of International Student & Scholar Advising (DISSA), and the Division of Student Affairs, I am conducting a study examining the factors that influence the cultural adjustment of undergraduate Chinese international students enrolled at The Pennsylvania State University.

Participation in this study is voluntary. However, to be eligible to participate in this study you must be an undergraduate Chinese international student between the ages of 18-24 studying in the United States on an F1 Visa and currently enrolled at The Pennsylvania State University – University Park campus. Participation in this study simply requires that you complete a 24-item electronic survey. To ensure confidentiality all survey responses will remain anonymous. To access the survey please click here: (insert link).

I intend to complete the entire study no later than August, 2014 and upon completion I will share the findings with both UGOP and DISSA. In addition, I will be more than happy to share my findings with anyone else who is interested. Because the participants will remain anonymous, if you are interested in reviewing my findings please email me (glh17@psu.edu) and I will be sure to include you to the findings distribution list.

Thank you in advance for your willingness to participate in this study. It is my hope that the findings will not only help to improve the cultural adjustment experience of undergraduate Chinese international students enrolled at University Park, but across the Penn State campuses located throughout the Commonwealth.

If you have any questions or need further clarification about this study please don't hesitate to contact me.

Sincerely,
Gina L. Hurny

Gina L. Hurny
209 HUB-Robeson Center
glh17@psu.edu

APPENDIX C
Survey Vocabulary List

Terms related to international students and cultural adjustment can be defined and interpreted differently. Additionally the context in which the terms are used can alter the meaning and definition. For the purpose of this research study the following vocabulary will be used as it relates specifically to cultural adjustment of international students

Comfort - the state of physical and emotional well-being
> ***Well-Being*** – the state of being happy, healthy or successful

Cultural Adjustment - the process an individual has to go through to be able to work effectively and live comfortably in a place that is new and unfamiliar to them.

English Language Proficiency - the ability to speak, read and/or write in English

Stress - anything that poses a challenge or a threat to your well-being is a stress

> ***Academic Stress*** - the anxiety and stress that comes from pursuing a degree, often includes studying, homework, tests, labs, reading, and quizzes

> ***Cultural Stress*** - the integration of more than one culture into your everyday life

> ***Social Stress*** - stems from one's relationships other people and from the social environment in general

Stress Coping Behaviors - using conscious effort to solve personal and interpersonal problems

Values - principles, standards, or qualities considered worthwhile or desirable

Pilot Study Results Summary

Summary of Items and Factor Loadings for Varimax Orthogonal Three-Factor Solution

Item	Factors		
	English Proficiency	Student Services	Cultural Values
9. I feel nervous when communicating in English.	.906		
14. I am confident in my use of English in social settings	.791		
41. I feel intimidated to participate in social activities	.657		
34. If you knew then what you know now and had to start all over again would you still enroll in this University?		.855	
33. Select the response that best represents how you would evaluate your educational experience at this University.		.749	
35. In your opinion, are there opportunities to meet American students in a socials setting?		.739	
31. Select the response that best represents the extent that this University has helped you to cope with the stress associated with being an international student.		.675	
12. I am confident contributing to class discussions.			.928
11. I am confident asking questions in class.			.760
10. I am confident in my ability to work successfully with American students on a group project.			.731

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.
Rotation converged in 3 iterations.

Pilot Study - Chinese Cultural Adjustment Survey (CCAS)

Q1 Are you a Chinese international undergraduate student studying in the United States on an F1 visa?
⭕ Yes
⭕ No

Q2 Please indicate your gender.
⭕ Male
⭕ Female

Q3 Please select the age that you are at the time of this survey.
⭕ 18
⭕ 19
⭕ 20
⭕ 21
⭕ 22
⭕ 23
⭕ 24

Q4 I am confident when asking questions in class.
⭕ Strongly Disagree
⭕ Disagree
⭕ Neither Agree nor Disagree
⭕ Agree
⭕ Strongly Agree

Q5 How long have you been in the United States?
⭕ Less than 6 months
⭕ 6 months - 1 year
⭕ 1 -2 years
⭕ 2-3 years
⭕ 3-4 years
⭕ 4-5 years
⭕ 5 or more years

Q6 Which college is your primary major associated with?
- ○ Agricultural Sciences
- ○ Arts and Architecture
- ○ Smeal College of Business
- ○ Communications
- ○ Earth and Mineral Sciences
- ○ Education
- ○ Engineering
- ○ Health and Human Development
- ○ Information Sciences and Technology
- ○ The Liberal Arts
- ○ College of Medicine
- ○ Eberly College of Science
- ○ School of Law
- ○ School of Nursing
- ○ Schreyer Honors College

Q7 English is my native language.
- ○ Yes
- ○ No

Q8 I learned English as a second language in China.
- ○ Yes
- ○ No

Q9 I learned English as a second language while in the United States.
- ○ Yes
- ○ No

Q10 I feel nervous when communicating in English.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q11 I am confident in my ability to work successfully with American students on a group project.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q12 I am confident contributing to class discussions.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q13 I am confident in my ability to speak English in front of groups of non-Chinese students.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree or Disagree
- ○ Agree
- ○ Strongly Agree

Q14 I am confident in my use of English in social settings.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q15 How many times in a typical 5-day week do you visit your professor/TA during their office hours?
- ○ Not at all
- ○ 1
- ○ 2
- ○ 3
- ○ 4 or more

Q16 Select the response that best represents the quality of your relationships with American students at this University.

○ 1 Unfriendly, Unsupported, Sense of Alienation

○ 2

○ 3

○ 4

○ 5 Friendly, Supportive, Considerate

Q17 Select the response that best represents the quality of your relationships with American professors at this University.

○ 1 Unfriendly, Unsupported, Sense of Alienation

○ 2

○ 3

○ 4

○ 5 Friendly, Supportive, Considerate

Q18 Select the response that best represents the quality of your relationships with International professors at this University

○ 1 Unfriendly, Unsupported, Sense of Alienation

○ 2

○ 3

○ 4

○ 5 Friendly, Supportive, Considerate

Q19 Select the response that best represents the quality of your relationships with student services offices

○ Unhelpful, Inconsiderate, Rigid 1 (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ Helpful, Considerate, Flexible 5 (5)

Q20 Select the response that best represents the quality of your relationships with student services staff members at this University.

❍ 1 Unhelpful, Inconsiderate, Rigid
❍ 2
❍ 3
❍ 4
❍ 5 Helpful, Considerate, Flexible

Q21 Select the response that best represents how many hours you spend in a typical 7-day week on academic activities. (Preparing for class by studying, reading, writing, doing homework, or lab work).

❍ 1-5
❍ 6-10
❍ 11-15
❍ 16-20
❍ 21 or more

Q22 Select the response that best represents how many hours you spend in a typical 7-day week on participating in co-curricular activities. (Student organizations, student government, community service, intramural sports, fraternity and sorority life, and/or religious groups.

❍ 1-5
❍ 6-10
❍ 11-15
❍ 16-20
❍ 21 or more

Q23 Select the response that best represents how many hours you spend in a typical 7-day week on relaxing and socializing. (Watching TV, playing video games or pool, hanging out with friends, or attending a sporting event).

❍ 1-5
❍ 6-10
❍ 11-15
❍ 16-20
❍ 21 or more

Q24 Select the response that best represents how many hours you spend in a typical 7-day week attending an on campus event/program. (Concert, theatrical production, art exhibit, speaker/lecturer, cultural event, comedian, etc.)
- ❍ 1-5
- ❍ 6-10
- ❍ 11-15
- ❍ 16-20
- ❍ 21 or more

Q25 Select the response box that best represents how many hours you spend in a typical 7-day week associating with other international students.
- ❍ 1-5
- ❍ 6-10
- ❍ 11-15
- ❍ 16-20
- ❍ 21 or more

Q26 Select the response that best represents how many hours you spend in a typical 7-day week associating with only Chinese international students.
- ❍ 1-5
- ❍ 6-10
- ❍ 11-15
- ❍ 16-20
- ❍ 21 or more

Q27 Select the response that best represents how many hours you spend in a typical 7-day week associating with only Asian international students.
- ❍ 1-5
- ❍ 6-10
- ❍ 11-15
- ❍ 16-20
- ❍ 21 or more

Q28 Select the response that best represents how many hours you spend in a typical 7-day week associating with American students.
- ○ 1-5
- ○ 6-10
- ○ 11-15
- ○ 16-20
- ○ 21 or more

Q29 Select the response that best represents the extent that thisUniversity has helped you in your adjustment to college.
- ○ Not At All Helpful
- ○ Somewhat Helpful
- ○ Helpful
- ○ Very Helpful
- ○ Extremely Helpful

Q30 Select the response that best represents the extent that this University has helped you in your adjustment to the United States.
- ○ Not At All Helpful
- ○ Somewhat Helpful
- ○ Helpful
- ○ Very Helpful
- ○ Extremely Helpful

Q31 Select the response that best represents the extent that this University has helped you to cope with the stress associated with being an international student.
- ○ Not At All Helpful
- ○ Somewhat Helpful
- ○ Helpful
- ○ Very Helpful
- ○ Extremely Helpful

Q32 Select the response that best represents the extent that this University has helped you to gain confidence in your ability to read, write and speak English.
- ○ Not At All Helpful
- ○ Somewhat Helpful
- ○ Helpful
- ○ Very Helpful
- ○ Extremely Helpful

Q33 Select the response that best represents how you would evaluate your educational experience at this University.
- ○ Poor
- ○ Fair
- ○ Average
- ○ Good
- ○ Excellent

Q34 If you knew then what you know now and had to start all over again would you still enroll at this University?
- ○ Definitely No
- ○ Probably No
- ○ Not Sure
- ○ Probably Yes
- ○ Definitely Yes

Q35 In your opinion are there opportunities to meet American students in a social setting. (Student organization, in the community, at a campus event, where you live, in the dining hall)
- ○ Definitely No
- ○ Probably No
- ○ Not Sure
- ○ Probably Yes
- ○ Definitely Yes

Q36 Are you involved in a student club/ organization?
- ○ Yes
- ○ No

Q37 How many American students are in your student organization?
- ○ None
- ○ 1-3
- ○ 4-6
- ○ 7-9
- ○ 10 or more

Q38 In the course of an average 7-day week, how often do you take advantage of meeting American students socially?
- ○ I Do Not Take Advantage
- ○ 1-2 Times
- ○ 3-4 Times
- ○ 5-6 Times
- ○ 6 or More Times

Q39 I feel rejected when others do not appreciate my cultural values.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q40 I get homesick living in unfamiliar surroundings.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q41 I feel intimidated to participate in social activities.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q42 I am treated differently in social situations.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q43 I feel guilty leaving my friends and family in China.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q44 I feel uncomfortable adjusting to new cultural values.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q45 I do not feel a sense of belonging (community) here.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q46 I feel some people do not associate with me because I am from China.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q47 I prefer to use my English name rather than my Chinese name.
- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

Q48 I intend to graduate from this University.
- ○ Definitely not
- ○ Probably not
- ○ Maybe
- ○ Probably yes
- ○ Definitely yes

Q49 I am considering transferring to another American college or university due to academic reasons.
- ○ Definitely not
- ○ Probably not
- ○ Maybe
- ○ Probably yes
- ○ Definitely yes

Q50 Please select your top 5 reasons for not interacting with socially with American students.
- ❏ I am afraid of being made fun of
- ❏ I am not comfortable with my proficiency of the English language
- ❏ I am only comfortable interacting socially with other Chinese students
- ❏ I think American students are disrespectful
- ❏ I do not understand the social behaviors of American students
- ❏ I devote all my time to my academics
- ❏ I feel disliked by American students - like I do not belong here
- ❏ I fell American students are not interested in getting to know me
- ❏ I am unsure what social settings typically attract American students
- ❏ I have no desire to interact with American students